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TUNISIA

AGRICULTURAL PROFITABILITY, PROTECTION, AND COMPARATIVE ADVANTAGE

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TUNISIA

AGRICULTURAL PROFITABILITY, PROTECTION, AND COMPARATIVE ADVANTAGE

Executive Summary

In February 1987, the Ministry of Agriculture's Direction of Planning, Statistics, and Economic Analysis (D/PSAE) began a comprehensive study of the impact of government pricing policy on the efficiency of resource allocation in the agricultural sector of Tunisia, focusing on nine key commodities: durum wheat, bread wheat, barley, beef, milk, maltese oranges, potatoes, deglet nour dates, and olive oil. This report presents the results of that study.

"Pricing policy" is a term encompassing all interventions in price formulation, from the compensation to agricultural producers of the cost of key agricultural inputs such as fertilizer, animal feed mixes, and irrigation water, to the fixing of official output prices paid for certain products. The term also refers inter alia to the setting of preferential transport and interest rates for the agricultural sector, to the provision of investment credits to plantation agriculture, as well as to taxation, trade, and exchange rate policies as they apply to the importation or exportation of agricultural inputs and outputs.

Agricultural Sector Adjustment Program

The dual purposes of this analysis are to assess the degree of economic efficiency with which productive resources were being allocated during the 1985/86 agricultural season and to recommend changes in pricing policies which would improve that degree of efficiency. Thus, this study fits into the objectives of the medium-term agricultural sector adjustment program, currently being undertaken by the Republic of Tunisia. These are:

-- within the agricultural sector:

(1) to encourage rainfed production of cereals, milk, and meat under efficient production systems,

(2) to promote more efficient cropping patterns and input utilization patterns in irrigated areas,

(3) to encourage efficient export and import-substitution activities, and

-- inter-sectorally:

(4) to reduce the bias against agriculture vis-a-vis industry.

Agricultural sector objectives (1) and (2) are to be accomplished via the phased elimination of input subsidy programs and via the rationalization of output price interventions in order to allow world market price trends to be reflected in domestic prices. The third and fourth objectives are to be accomplished through a package of macro-economic reforms, whereby a more flexible exchange rate policy will be practiced and trade policy will be harmonized across sectors.

Analysis of the profitability, protection, and comparative advantage indicators has suggested a number of issues which will need special attention as the agricultural sector adjustment program unfolds:

-- the improvement of basic data collection (actual input-output coefficients, base data for the calculation of production elasticities, prices at all market levels, tree crop production cycles, etc.);

-- the broadening of the cross-section of production techniques analyzed, especially in livestock;

-- the analysis of alternative resource allocation patterns in irrigated perimeters;

-- the addition of other crops and production systems which are complements or substitutes to the ones included in this study in order to better understand the agricultural alternatives in each of these systems;

-- the need to expand the knowledge of the structure and operation of the markets, both official and parallel, for each commodity; and

-- the integration of consumer issues to understand the effect of demand elasticities with respect to the price of a given commodity and its substitutes and complements on agricultural commodity markets.

Methodology

The methodology employed by this study of agricultural pricing policies in Tunisia takes as its point of departure the notion that the international border price of a commodity represents the efficiency benchmark against which Tunisian production costs should be measured. The choice of international reference price is often a subject of debate. For the purpose of analysis, it is often useful to compare results using both methods, the former representing Tunisia's short-term opportunity cost to domestic production and the latter representing a long-term efficiency benchmark. A

second issue is the choice of exchange rate. In countries with severely overvalued exchange rates, the use of the official exchange rate may overstate rates of protection and understate the degree of comparative advantage which a particular agricultural activity represents. In Tunisia, overvaluation of the dinar in the 1970's and early 1980's led to distortions greatly favoring imports over exports and import-substitution activities. Devaluation and introduction of a more flexible exchange rate policy have now alleviated this bias to a large extent.

For each commodity and each production system thereof, domestic production costs per hectare are evaluated first in financial prices, i.e. including all direct and indirect taxes and/or subsidies, and then in economic prices, i.e. deducting all direct and indirect pricing interventions. Profitability is calculated twice, first comparing financial input costs with domestic output prices, then comparing economic input costs with the domestic equivalent of international reference prices. Indicators of nominal and effective protection are then calculated to assess the degree to which producer incentives are encouraged or discouraged with respect to international markets. Finally, domestic resource cost coefficients are calculated which measure the degree of comparative advantage which a particular agricultural production activity affords Tunisia.

These economic indicators are evaluated for the degree of consistency of Tunisian pricing policies with areas of positive agricultural economic profitability, i.e. the coherence between protection and domestic resource cost coefficients. If an activity demonstrates positive economic profitability, indicating that foreign exchange resources are saved or generated through the activity, then it makes economic sense to use public resources to encourage production. On the other hand, if a particular agricultural activity does not make an efficient use of domestic resources, then positive nominal and effective protection cannot be justified on economic grounds.

Efficiency of Tunisian Agricultural Production

Cereals production -- even at the unusually low international prices of 1985-86 -- overall makes reasonably efficient use of domestic resources, with 30% of total cereals production indicating comparative advantage. When 1990 projected international prices are used to evaluate output instead, comparative advantage is indicated for almost all production systems, the exception being cereals produced in the center-south where yields are significantly lower than in the north, raising per unit production costs by a wide margin.

There is a marked distinction among beef and milk production systems efficiencies, however. Those systems which are relatively more dependent on purchased feed mixes rather than being based on an integration of agriculture with livestocking do not make efficient use of domestic resources, at current international reference prices, and should not be

encourages further. Integrated production systems are also marginally economically unprofitable, but could be efficient at international prices only 9% above current levels.

Among the export commodities analyzed here, the production of maltese oranges, potatoes, and dates, in that order, make the most efficient use of domestic resources. Even when taking long-run capital costs into consideration, comparative advantage is considerable.

On the other hand, at current levels of productivity and including plantation investment costs and yield profiles (long-run analysis), domestic resource cost coefficients for olive oil production are well above one or are negative, indicating that these production systems make an inefficient use of domestic resources. Even financial profitability, when calculated on a long-run basis, is negative for all production systems. When capital costs are ignored and only annual maintenance costs are compared against average adult yields (short-run analysis), production systems are economically profitable everywhere but in the South (yields there are half the level they are in Sfax). This distinction between short-run and long-run analyses suggests that at current levels of productivity it makes sense for Tunisia to exploit existing plantations, but NOT to consider investing in new ones. This helps to explain why farmers are not reinvesting in their olive plantations. In extreme cases there is borderline or negative financial profitability even under short-run assumptions which helps to explain the cases where farmers are said to be pulling up their old olive trees and replacing them with other fruit and nuts trees.

Incentives to Producers and Policy Issues

Input pricing. The Tunisian government has employed a variety of policy instruments in an attempt to encourage various kinds of agricultural activity. Fertilizers, certified seed, chemical inputs, irrigation water, investment credit, and animal feeds have been made available to farmers at subsidized prices -- though not all farmers can or do take advantage of these. The sensitivity analyses done on alternative input pricing scenarios demonstrates that even when subsidies are eliminated entirely financial profitability, while it will certainly decrease, will not be threatened completely. Thus, the phasing-out of subsidies is not necessary to defend positive returns to farmers. It is, however, likely to be quite important in softening the psychological impact on farmers of decreases in value-added, to which farm output is likely to be sensitive.

Exports. Yet an analysis of effective protection rates demonstrates that however well- intentioned these input subsidy policies have been, if the output price which farmers receive for their product is implicitly taxed vis-à-vis world market prices, then effective protection rates will be negative. All four export commodities enjoy positive nominal protection on

input prices. However, all four are also taxed on output prices and therefore effective protection rates for all four are negative.

Clearly, unless exports are to be subsidized the price which the export commodity producer receives for his output is by definition less than the border price in order to accommodate packaging, transport, and shipping charges and still be price-competitive internationally. However, it is the degree to which the producer is taxed, i.e. the magnitude of the wedge between producer and FOB prices which should be assessed. According to economic efficiency criteria, that wedge should be smallest for those commodities in which Tunisia has the greatest comparative advantage, i.e. the producers of these commodities should receive the greatest encouragement. Yet domestic value-added generated by the activities is also the most highly taxed. In other words, the structure of producer incentives runs exactly opposite to expectations based on an economic efficiency rationale. Reasons for the low effective protection coefficients for oranges, potatoes, and dates needs more careful consideration by the export promotion study currently being undertaken by the Ministry of Agriculture. To the extent that negative protection rates are not corrected and domestic demand for these commodities rises, Tunisia will see producers shift the destination of their output from the export to the domestic market, which could threaten agricultural export revenues.

Olive oil. The commodity most in need of "revenue enhancement" due to negative financial and economic profitabilities is olive oil, yet it is the commodity which is already the least taxed on output price, and the margin for maneuver between existing producer price levels and FOB prices is limited. The Office National des Huiles is committed to raising producer prices slightly by eliminating the ristourne system and paying a higher advance at the mills, which will improve the financial profitability picture somewhat.

Ultimately, the oil olive sector will have to improve production efficiency to lower unit production costs, rather than seeking ways to increase output prices. The key to this is farm-level productivity improvements, rather than investments in the agro-industrial sector whose costs make up a minor portion of total oil production costs. Rather than investing in new plantations at existing productivity levels, however, which have been demonstrated to make inefficient use of domestic resources, Tunisia would do better to explore possibilities for plantation regeneration credit schemes, which would bail out farmers financially and at the same time raise yields and lower costs. Only with higher yields do some of the olive oil production systems evaluated here look profitable under long-run assumptions. The alternative (without such an intervention) to farmers is to ignore long-run considerations and exploit plantations in the short-run, i.e. not allowing for future recapitalization of their plantations.

Other downstream issues which concern the olive oil sector are 1) the potential conflict in the monopoly control by the Office National des Huiles of both olive oil processing and export and importing of raw vegetable oil

for domestic refining, bottling, and distribution, and 2) the competition on the domestic consumer market of subsidized vegetable oil with (non-subsidized) olive oil.

Cereals. As for cereals, nominal and effective protection rates are positive for all three cereals. Cereals producer prices are linked to international cereals prices via a five-year moving average formula, which weights equally prices in the last three years, the current price, and the 12-month futures price. FOB prices from Canada and US markets are brought to CIF Tunis via a 15% margin to cover freight costs. Another 15% minimum tariff is applied to provide some measure of protection against subsidy policies in the exporting countries. This formula accomplishes several objectives, connecting Tunisian domestic prices to trends in the international market, while smoothing out short-term fluctuations in international market prices. However, in a period (such as the current one) when real international prices are decreasing steadily, such a formula implies that the domestic price will always be more than 15% above the current CIF price.

As discussed in section 3, continued positive nominal protection can create a budgetary burden for the national treasury and thus for the Office des Céréales. In addition to producer subsidies, the government has also been paying out on the other end for consumer subsidies. If, under increasing fiscal pressure, the Caisse de Compensation does not reimburse the Office on a regular basis, one of several things can happen. The first is that the official producer price will not be defended effectively to rural producers. The second, given that the same agency is solely responsible for both domestic procurement from producers as well as for imports in order to satisfy Tunisian consumer demand for cereals, is that there will an increasing temptation on the part of the Office des Céréales to switch the bulk of cereals procurement from domestic to foreign sources, which will be cheaper. The more bottlenecks appear in the system, the more the official market begins to break down. Grain stores, mills, even the national rail company, may get paid by the Office des Céréales only after increasing delays. In an effort to keep consumers supplied with flour, the quality of mill output may suffer as milling ratios are increased. These are some of the potential dangers which can befall a cereals sector which comes under increasing fiscal pressure.

One way to get around the problem of "always being behind the international price trend" would be to redesign the cereals producer price-setting formula, either by shortening the period of averaging to three years (last year, this year, and next year), or, preferably, by weighting the futures price more heavily in the formula, thus helping to assure that the Tunisian farmer will be more on top of international price trends.

It is also critical that parallel market grain prices be monitored in Tunisia, in order to assess the degree of divergence between them and the official producer prices. In years of exceptional harvests, the parallel market price will sink. If the Office des Céréales has sufficient financial

resources, it will find itself with a higher than usual procurement bill as it collects a far greater share of total cereals marketed output than in an average year, with more farmers seeking to take advantage of the official price. This will entail a greater storage and distribution burden on the Office as well. If the Office does not have sufficient financial resources, then farmers will see the price they receive for their output slide, unless the market is flexible enough to accommodate grain exports in such years.

A more detailed study of cereals trade and marketing is also in order to look at downstream issues. How efficiently do the present grain storage and milling subsectors operate? The extent to which inter-regional and inter-temporal producer price variation would induce a shift in the storage burden from the public to the private sector should be examined. On the import management side, there is the issue of potential conflict in the monopoly control by the Office des Céréales of both domestic procurement and imports which should be evaluated. A trade policy which regulates import quantities via prices, i.e. by applying trade tariffs, instead of via quantitative restrictions, is usually less cumbersome to administer, and would allow multiple actors to become involved in the market.

Livestock products. Not enough is yet known about the meat and milk sectors to redesign policy interventions. Yet if the limited sample of production budgets analyzed here is any indication, the trend in the data favors those systems which are better integrated with crop agriculture by cultivation of forage crops and reduced dependency on purchased animal feed mixes. Protection is positive, due primarily to protection on output prices via a fixed producer. As with the cereals sector, more detailed examination of trade policies would be useful to examine alternatives to Société Ellouhoum's current monopoly role as red meat importer. Moreover, the system of quantitative import restrictions as it currently operates limits even the ability of Ellouhoum to manage the official sub-sector efficiently.

Section 1: Introduction

In February 1987, the Ministry of Agriculture's Direction of Planning, Statistics, and Economic Analysis (D/PSAE) began a comprehensive study of the impact of government pricing policy on the efficiency of resource allocation in the agricultural sector of Tunisia. This report presents the results of that study.

"Pricing policy" is a term encompassing all interventions in price formulation, from the compensation to agricultural producers of the cost of new agricultural inputs such as fertilizer, animal feed mixes, and irrigation water, to the fixing of official output prices paid for certain products. The term also refers inter alia to the setting of preferential transport and interest rates for the agricultural sector, to the provision of investment credits to plantation agriculture, as well as to taxation, trade, and exchange rate policies as they apply to the importation or exportation of agricultural inputs and outputs.

Agricultural sector adjustment program. The dual purposes of this analysis are to assess the degree of economic efficiency with which productive resources were being allocated during the 1985/86 agricultural season[1] and to recommend changes in pricing policy which would improve that degree of efficiency. Thus, this study fits into the objectives of the medium-term agricultural sector adjustment program, currently being undertaken by the Republic of Tunisia.[2] These are:

-- within the agricultural sector:

(1) to encourage rainfed production of cereals, milk, and meat under efficient production systems,

(2) to promote more efficient cropping patterns and input utilization patterns in irrigated areas,

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[1] The most recent season for which complete data is available. Production input and output coefficients are not specific to the 1985-86 season, but reflecting rather production "norms" as assessed by D/PSAE and other government agencies. Prices, however, both official and market, are from the 1985-86 season. While the year was not a good one for cereals output (rainfall for Tunisia as a whole was anywhere from 20-50% below the 1972-1980 average), the production of other commodities did not seem to suffer (see table 1.1 below). Thus the only variables which might have been affected would have been certain market input prices, if demand for inputs was lower due to poor climatological conditions.

[2] World Bank, Report and Recommendations of the President of the International Bank for Reconstruction and Development, Report No. P-4368-TUN (Washington, DC, September 3, 1986), p. 27.

(3) to encourage efficient export and import-substitution activities, and

-- inter-sectorally:

(4) to reduce the bias against agriculture vis-a-vis industry.

Agricultural sector objectives (1) and (2) are to be accomplished via the phased elimination of input subsidy programs and via the rationalization of output price interventions in order to allow world market price trends to be reflected in domestic prices. The third and fourth objectives are to be accomplished through a package of macro-economic reforms, whereby a more flexible exchange rate policy will be practiced and trade policy will be harmonized across sectors.

Though it assumes that resource allocation is affected by prices and the markets in which they are formed, this report accepts the tenet of a recently published text by Harvard University professor C. Peter Timmer, Getting the Prices Right: The Scope and Limits of Agricultural Price Policy,[3] that the price paradigm is but a starting point for the study of agricultural resource allocation, not the conclusion. However, Timmer writes, "(i)t is essential that all participants in a policy analysis and debate start at the same point, with a common framework and set of assumptions." In section 2 of this paper, the framework and assumptions which drove the analysis of agricultural price policy in Tunisia will be introduced.

National policy makers may define agricultural price policy with a number of objectives in mind. On the production side, prices may be set so as to maximize financial returns to the farmer, as in the case of output price supports and input subsidies. At the same time, it may be important to protect the purchasing power of vulnerable consumer groups, which can be done inter alia by directly subsidizing key consumer goods. The distribution of welfare between rural and urban groups, between regions, and between intensive and traditional sectors may focus official resource allocation as well. Finally, a government may set certain macro-economic targets (growth rates, trade balances, fiscal balances). These objectives can be in contradiction with one another, requiring significant financial resources if all are to be sustained over time. When faced with resource constraints, returns will be maximized by allocating resources to those options which make most efficient use of them.

Agricultural producers, merchants, agro-industrialists, and government policy makers each have their own motives for the allocation of productive resources, motives which depend on many factors, of which economics is certainly but one. While the economist may define those motivating factors

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[3] Ithaca, NY: Cornell University Press, 1986, p. 14.

in terms of relative factor and output prices and market structures, there are clearly other factors on the agenda of farmers, traders, and national policy makers which may be more of a political or social nature. While it is not the role of the economist to rank these in order of importance, the economic cost to the society of each allocation alternative should be estimated. Evaluation of these economic costs, along with political and social ones, can then be made by the political leaders of the country. It is in this spirit that this report is written.

Study Terms of Reference. This study explores the following issues. First, it measures the private profitability (profitability to the farmer) of a range of production systems for each commodity. Second, it measures the degree of divergence between domestic agricultural prices and their world market equivalents in 1985-86. Such divergence can distort economic incentives by influencing the degree of protection (negative or positive) on outputs and inputs faced by domestic producers. The coherence between government's original price policy objectives and the extent to which actual economic protection rates have or have not contributed toward those objectives is then evaluated. Third, the agricultural commodities for which Tunisia has the greatest comparative advantage are identified, and the degree to which protection policies are aligned with Tunisia's comparative advantage is evaluated. Fourth, the study gauges the sensitivity of the profitability, protection, and comparative advantage measures with respect to changes in key parameters (world prices, domestic prices, input subsidy rates, yields, etc.).

Finally, options for policy reform are presented. Consideration is made of the timing of certain changes, such as the phasing over three years of the removal of the fertilizer subsidies. Given the difficulties in estimating future world prices, alternative formulae for linking domestic prices to the world market are also explored.

Similar issues of profitability, protection, and competitivity in the complementary areas of agro-industrial and agricultural export promotion activities are being analyzed in other studies, undertaken concurrently by the D/PSAE.

Because of its ambitious terms of reference, this study is limited in a number of ways. First, due to the limited amount of time allocated to the exercise, it was decided to base the analyses solely on readily available secondary data. In the case of most commodities, Tunisian crop budget data only exist in a "normative" form, i.e. do not reflect actual cost-of-production survey results but rather recommended technical coefficients for which the unit price vector is updated annually. It is unclear whether these budgets reflect actual input-output relationships in Tunisian agriculture or whether this cross section of budgets reflects the true degree of production system variation found in the field or not. In the case of tree crops, plantation installation costs were gathered on the basis of informal interviews. Second, the analyses focused their attention on production- level data, with but a limited attempt to place the

production systems in an integrated (analyse de filière), multi-market framework which would link production, domestic markets, imports, exports, processing, consumption, and macro-economic variables. Third, there was only limited historical analysis done to place the results of this study in context with the agricultural sector survey of 1982.[4] Fourth, shadow conversion factors for factors of production were not estimated; shadow exchange rate estimates were taken from secondary sources.

Despite the above caveats, an enormous task was accomplished in a short amount of time. The study team compiled an extensive database covering the financial and economic costs of fertilizers, seeds, seedlings, pesticides and herbicides, mechanization, aerial spraying, transport, irrigation, and animal feeds. It developed over fifty commodity/ technique models, and established international price series for all import-substitution commodities. Whereas the absolute values of the economic indicators should be interpreted loosely, the results presented in this document indicate signs, orders of magnitude, rankings, and sensitivities of economic performance indicators which will be of use to Tunisian policy makers as they design and refine the sector adjustment program.

Agricultural sector performance. Economic indicators were calculated by the study team for nine priority crops in Tunisia: durum wheat, bread wheat, barley, beef, milk, maltese oranges, potatoes, dates, olive oil.[5] Together, these products accounted for 40% of agricultural value of production during the Sixth Plan. The three tree crops accounted for 61% of agricultural sector export value in 1982-85. Table 1.1 on the following page presents production trends for these seven commodities from 1957-85.

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[4] World Bank, Tunisia: Agricultural Sector Survey, Report No. 3872-TUN (Washington, DC, September 29, 1982).

[5] The development of a micro-computer simulation model and a team of staff members trained in its use during the course of this study will permit the D/FSAE to expand this crop coverage over time.

TABLE 1.1: AGRICULTURAL PRODUCTION IN TUNISIA, 1957-1986 ('000 tons)

Year	Durum Wheat	Bread Wheat	Barley	Potatoes	Olive Oil	Dates*	Citrus*	Beef (live wt)	Milk
1957	366	133	185	32	468	38	68	16	217
1958	414	124	281	30	254	28	66	15	229
1959	419	106	236	34	521	47	65	15	236
1960	360	79	136	40	258	76	73	16	230
1961	200	42	50	42	525	48	78	15	188
1962	321	71	103	41	174	36	96	14	166
1963	529	123	260	64	227	15	93	15	187
1964	350	71	130	54	443	30	62	14	199
1965	421	100	180	59	450	42	109	15	211
1966	300	49	80	68	272	54	96	18	223
1967	280	50	70	78	52	42	130	18	227
1968	310	73	130	60	257	39	83	17	234
1969	245	91	81	61	275	18	108	45	174
1970	299	150	151	67	120	46	101	43	171
1971	460	200	160	90	450	39	77	41	178
1972	707	180	245	99	500	42	120	46	192
1973	655	165	282	71	375	52	75	52	206
1974	655	140	228	100	550	52	107	57	225
1975	803	162	310	110	468	59	131	62	245
1976	700	110	240	105	370	48	163	67	259
1977	480	90	100	85	425	58	160	74	280
1978	650	100	200	105	525	52	220	66	276
1979	600	80	270	125	400	46	183	55	222
1980	740	129	296	120	425	53	160	56	245
1981	804	159	270	140	725	50	220	57	264
1982	753	163	339	110	400	45	165	54	244
1983	509	109	303	150	275	60	138	53	277
1984	584	127	312	135	750	46	220	56	290
1985	1069	311	686	150	475	60	196	60	315
1986	378	96	132	170	525	69	252	65	325

* All varieties

On the basis of five-year moving averages, exponential growth rates were calculated as follows:

Table 1.2: AGRICULTURAL PRODUCTION GROWTH RATES

	1957-1986	1972-1986	1977-1986
Durum wheat	2.5%	-0.7%	0.1%
Bread wheat	2.1	0.6	7.6
Barley	2.8	3.1	9.3
Potatoes	5.7	4.0	4.5
Olive Oil	0.4	-2.9	-1.4
Dates	0.7	1.0	1.6
Citrus	4.2	5.0	0.6
Beef	5.4	0.1	-1.3
Milk	1.1	2.6	2.4

Over almost twenty years, potatoes and beef, two commodities which historically have benefitted significantly from input subsidies have had the highest average growth rates (5.7% and 5.4%, respectively). More recently, however, beef production growth has stagnated. Whether this is a direct result of adverse conditions within the beef sub-sector or an indirect result due to more favorable conditions in other meat sub-sectors is unclear. Comparable growth rates calculated on the basis of a more limited series (1976-1985) for mutton, goat, and poultry production are 1.7% for mutton and goat combined, and 5.4% for poultry. Thus, while overall meat production has not declined, the composition of its supply has changed.

Citrus products have performed well also, encouraged by both the export market and, increasingly, rising domestic demand. Their growth in the last five years, however, would appear to have been halted, partly due to the fact that barriers to entry to the traditional export market (EEC) have grown stricter.

Barley and bread wheat production appear to have surged in the last five years. This is primarily due to the excellent harvest of 1985 which produced output at a level 160% above the twenty-year average for bread wheat and 219% above for barley. Durum production in 1985 was also 109% above the twenty-year average; however, its growth has stagnated in recent years, possibly as a result of substitution by large farmers of bread wheat for durum wheat.

When comparing production in value terms, the livestock sub-sector and fruit production (including olive oil and wine) compete for first place in terms of gross value contributed to agricultural sector value of

production. Under "miscellaneous" are included *inter alia* pulses, sugar beet, tobacco, and cork production.

Table 1.3: GROSS VALUE OF AGRICULTURAL PRODUCTION ('000 D, constant 1980 prices)

Year	Cereals		Fruits		Vegetables		Livestock		Fish		Miscellaneous		TOTAL VALUE OF PRODUCTION
1971	64.40	12.8%	116.70	28.3%	78.21	19.0%	120.90	29.4%	20.82	5.1%	10.80	2.6%	411.83
1972	89.12	17.8%	166.90	33.3%	79.53	15.9%	129.50	25.8%	22.70	4.5%	13.98	2.8%	501.73
1973	85.67	18.5%	120.80	26.0%	81.85	17.6%	137.60	29.6%	24.30	5.2%	14.07	3.0%	464.29
1974	80.56	15.3%	157.80	30.0%	91.78	17.4%	149.10	28.3%	30.29	5.8%	16.52	3.1%	526.04
1975	99.82	18.3%	146.60	26.9%	89.56	16.4%	160.40	29.4%	29.17	5.4%	19.43	3.6%	544.98
1976	82.83	14.0%	180.70	30.6%	103.00	17.4%	172.70	29.2%	32.24	5.5%	19.20	3.3%	590.67
1977	54.11	10.0%	150.00	27.6%	103.00	18.9%	183.50	33.8%	36.99	6.8%	15.97	2.9%	543.56
1978	74.40	12.8%	176.70	30.4%	105.90	18.2%	170.20	29.3%	35.95	6.2%	18.02	3.1%	581.17
1979	73.69	13.1%	152.60	27.2%	116.60	20.7%	162.80	29.0%	37.15	6.6%	19.20	3.4%	562.05
1980	91.04	15.0%	163.90	26.9%	111.60	18.3%	182.80	30.0%	38.48	6.3%	20.79	3.4%	608.61
1981	97.32	14.9%	199.30	30.4%	120.30	18.5%	179.50	27.5%	35.87	5.5%	20.63	3.2%	651.92
1982	97.31	16.3%	149.90	25.1%	107.50	18.0%	182.90	30.6%	40.59	6.8%	20.20	3.4%	598.40
1983	70.04	11.6%	154.10	25.5%	127.20	21.1%	188.00	31.1%	45.71	7.6%	18.90	3.1%	603.95
1984	78.41	11.5%	214.70	31.4%	125.20	18.3%	196.30	28.7%	50.51	7.4%	17.84	2.6%	682.96
1985	156.40	19.7%	211.80	26.7%	138.00	17.4%	213.10	26.8%	53.29	6.7%	21.62	2.7%	794.21
1986	96.30	12.7%	209.40	27.6%	141.10	18.6%	226.80	29.9%	57.33	7.6%	27.80	3.7%	758.70
Average		14.6%		28.4%		18.2%		29.3%		6.2%		3.1%	

Source: Ministry of Agriculture

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Document organization. The rest of this document is organized in the following manner. Section 2 introduces the methodology which was employed in the study, section 3 presents the base case scenarios analyzed for each import-substitution commodity and discusses the sensitivity of the results to changes in certain key parameters, section 4 presents similar analyses for the export commodities, and section 5 summarizes the implications of the base case and sensitivity analyses for policy makers, offering conclusions and reform recommendations. It also highlights the logical extensions to this analysis which should be undertaken to fill data gaps which existed during this study and to expand into complementary analyses.

A series of annexes presents the crop budgets, international reference price calculations and input cost decomposition calculations, along with a user's guide to the microcomputer-based economic indicators model now in use in D/PSAE.

Section 2: Scope and Limits of Agricultural Pricing Studies

Methodology

The methodology employed by this study of agricultural pricing policies in Tunisia, summarized in this section, takes as its point of departure the notion that the international border price of a commodity represents the efficiency benchmark against which Tunisian production costs should be measured.

Reference prices. The choice of international reference price is often a subject of debate. By using the actual landed prices of commodities imported into Tunisia, the analyst often ends up comparing the efficiency of the Tunisian farmer with his or her subsidized counterpart in the EEC or in the United States. Arguing that the comparison should be made instead between the Tunisian farmer and the most efficient, unsubsidized international competitor, other analysts prefer to apply non-subsidized, international price equivalents (such as the New Zealand milk export prices, instead of EEC export "dumping" prices).[1] In fact, for the purpose of analysis, it is often useful to compare results using both methods, the former representing Tunisia's short-term opportunity cost to domestic production and the latter representing a long-term efficiency benchmark.

A second issue is the choice of exchange rate. In countries with severely overvalued exchange rates, the use of the official exchange rate may overstate rates of protection and understate the degree of comparative advantage which a particular agricultural activity represents. The bias touches every aspect of the economy, completely overwhelming the effect of trade and fiscal policies. When undertaking an analysis of pricing policies, corrections for trade and domestic incentives distortions can be made to estimate the equilibrium or shadow exchange rate which would eliminate current account imbalances, to be used in place of the official exchange rate.

In Tunisia, overvaluation of the dinar in the 1970's and early 1980's led to distortions greatly favoring imports over exports and import-substitution activities. Devaluation and introduction of a more flexible exchange rate policy have now alleviated to a large extent this

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[1] As the magnitude of agricultural subsidies in certain industrial nations compounds, the commodity surpluses generated by such policies are increasingly affecting the international markets for such commodities. The price difference on the international market between the FOB price from non-subsidized markets and the "dumping price" is being squeezed. Casual observation of international milk and meat prices would suggest that this may already be taking place. Determination of an equivalent FOB price under non-subsidized market conditions would require more empirical analysis, beyond the scope of this study.

bias. For the purpose of this study, an official exchange rate of 0.84 D/$ and a shadow exchange rate of 0.90 D/$, representing a 7% overvaluation of the dinar vis-a-vis the U.S. dollar, were applied for the profitability, protection, and efficiency calculations. International reference prices are converted into dinar equivalents using the official exchange rate, with subsequent adjustments made to incorporate the shadow exchange rate (see the protection discussion below).

Profitability. For each commodity and each production system[2] thereof, domestic production costs per hectare are evaluated in financial prices, that is, taking into consideration all direct and indirect taxes and/or subsidies. These are the prices which the farmer actually pays. The distinction between the two levels is a function of where in the production and marketing chain a pricing policy intervention is felt. For example, a tax on energy resources used to manufacture fertilizers is an indirect tax included in the cost of the fertilizers, whereas the compensation paid to the fertilizer factory on the basis of its per unit output cost-price (prix de revient) to decrease the effective sales price to farmers (prix de rétrocession) is considered a direct subsidy.

Two calculations are necessary to convert financial costs into economic costs, or costs measured in "reference" prices, of each input. The first is the deduction of all direct and indirect taxes and subsidies from the financial price of each input. The second is the application of shadow conversion factors, in the case of non-tradable factors of production only, which correct for distortions in other markets which may cause the financial factor price to diverge from its opportunity cost. For example, in a country where trade, fiscal, and incentives policies benefit sector A over sector B, labor will be encouraged to move into sector A activities, causing the wage rate in sector B to be greater than it would have been in the absence of the distortionary policies. A conversion factor less than 1.00 would be applied to sector B financial wage rates, while a conversion factor greater than 1.00 would be applied to financial wage rates in sector A, in order to convert them to "shadow wage rates." The sum of these economic costs is what it actually costs the Tunisian economy to produce the commodity per hectare.

From the total cost of production is deducted the value per hectare of by-products (straw, wood, manure, etc.) or joint products (potatoes, in the case of citrus production; almonds, in the case of some olive cultivation). Also considered a "by-product" is the portion of total production of an export commodity which remains in-country to be sold for domestic consumption. Seventy percent of total maltese production and 62 percent of total deglet nour date production remain in Tunisia. These non-exported products are treated as non-tradables and valued at their local price

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[2] - production system refers to a unique combination of region, production technique, and -- in the case of olive oil only -- agro-industrial processing costs.

(farmgate equivalent) from the total cost of production. The remaining net cost of production is then divided by output per hectare (or exportable output per hectare) to derive a per unit output cost of production.

It is these per unit output costs of production, in both financial and economic prices, which are compared to the domestic price and to the border price equivalent of the same commodity.[3] Care must be taken to assure that one is comparing comparables, i.e. that the domestic price and the border price equivalent have been calculated at the same physical point of comparison. For example, in the case of cereals, the analysis has been done at the Office des Céréales (OC) purchase point. To farmgate costs of production, therefore, transport costs to the Office des Céréales must be added before costs can be measured against the producer price. On the other end, to the border price of imported grain port charges and domestic transport costs from the port to the Office des Céréales rural purchase point must also be added.[4]

Table 2.1 indicates the domestic and international reference prices which were used in the base case analysis of each commodity during this study. The sources for these international reference prices are the actual C.I.F prices at foreign borders for Tunisia's export commodities, U.S. export prices for cereals, and the New Zealand export prices for beef and milk.

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[3] For further detail on the mechanics of these calculations, see the computer model user's guide in annex B.

[4] In the case of the other commodities considered in this study, the following points of comparison were assumed: potatoes - rural markets; olive oil - after olive pressing; maltese oranges - entry to the packaging center (station de conditionnement); dates - entry to the packaging center; beef - entry to the slaughterhouse; and milk - entry to the dairy.

TABLE 2.1: DOMESTIC AND INTERNATIONAL REFERENCE PRICES

Commodity	Domestic Price	International Price	Border Price Equivalent
Durum wheat	16 D/ql	127.5 $/mt CIF	13.11 D/ql
Bread wheat	16 D/ql	112.5 $/mt CIF	11.92 D/ql
Barley	11 D/ql	85.0 $/mt CIF	10.47 D/ql
Beef	2.8 D/kg	1.88 D/kg *	2.16 D/kg
Milk	255 ml/liter	236.5 $/t **	187 ml/liter
Potatoes	125-150 ml/kg	3500 FF/t CIF	295 ml/kg
Maltese oranges	150 ml/kg	4000 FF/t CIF	320 ml/kg
Dates	720 ml/kg	17350 FF/t CIF	1.6 D/kg
Olive oil- Super-Extra-Fine	897 ml/kg	1423 ECU/t CIF	***
- Bouchable	780 ml/kg	1233 ECU/t CIF	***
- Lampante	750 ml/kg	1184 ECU/t CIF	***

Notes: * Refrigerated, 1.65 D/kg CIF; frozen, 1.22 D/kg CIF; live, 2.04 D/kg CIF
** Powdered milk 0% fat, $1100/t FOB; powdered milk 26% fat, $1430/t FOB; butterfat, $2400/t FOB
*** Varies according to the average quality composition of oil produced in each region

In large countries or countries with poor (and therefore costly) transportation infrastructures, the choice of physical point of comparison can affect the results of the analysis. In a country such as Nigeria, for example, an analysis of the social profitability of domestic rice production hinges on whether rice produced in the northern part of the country is produced to satisfy local consumption or rather urban consumption in Lagos on the coast. The real cost of transport obviously varies as a function of distance, meaning that cheap Thai rice which is imported to satisfy consumer demand in the capital may not compete effectively with rice grown in Kano for Kano consumers once transport, storage, and marketing margins are added to the CIF price.[5] While transport costs were taken into account in

[5] It has been argued elsewhere (see J. Dirck Stryker and Lewis E. Brandt, "Methodology of Domestic Resource Costs Analysis," AIRD consultant report prepared for the World Bank Nigeria Agricultural Sector Review, July 30, 1986) that in calculating the international reference price for an import-substitution commodity, an adjustment should be made concerning the cost of delivery of those imports to the point of comparison. This adjustment consists of adding the tradable component of these costs to the international value-added and subtracting the nontradable cost from the value of production non-tradables of the DRC. Given the relatively minor importance of delivery costs in Tunisia, this adjustment was ignored for this study.

this study, no variation of consumption points was tested, given Tunisia's small size and the relative efficiency of its transport sector.

Cereals, meat, and milk were treated as import-substitution commodities in this study. This means that the international CIF price (at the Tunisian border) is the appropriate border price, to which are added intervening domestic port and distribution charges. The remaining products were treated as export crops using FOB prices at the Tunisian border as the appropriate reference price. To estimate the border price equivalent at the point of comparison for export crops, intervening port, distribution, packaging and processing costs are subtracted.

Financial profitability to the farmer is then calculated as the difference between the price the farmer receives for his output and the cost to the farmer of his (tradable) inputs, such as seed, fertilizer, and mechanization, and his (non-tradable) factors of production, i.e. land, labor, and capital. Except in the case of northern region cereals production systems, where a quintals/hectare rental fee for land was assessed as part of production costs, land was shadow priced at zero for this study. Labor was valued at the agricultural minimum wage (2.756 D/day), except in the case of certain tasks (tree crop pruning, for example), where daily wages are known to differ.* When output, inputs, and factors of production are valued instead at their reference prices, the profitability figure which is calculated is said to be that of economic profitability, reflecting the returns to the economy of a given production activity. A third indicator presented is the amount of economic value-added, or output price minus the value of tradable intermediate inputs, generated per man-day worked, representing returns to labor.

Protection. From the two profitability calculations, a number of financial-to- economic comparisons can be made which measure the degree of protection afforded to domestic agriculture by pricing policy. The ratio of domestic output price to reference output price, converted from international currency at the official exchange rate, yields the nominal protection coefficient (NPC/o). When the international reference price is converted into dinars at the shadow exchange rate, the indicator is referred to as the net nominal protection coefficient (NNPC/o). All protection coefficients discussed in this text are expressed in net terms.

An NPC/o which is greater than 1.00 indicates that positive protection is given to the domestic output price, whereas an NPC/o less than 1.00 indicates that negative protection is in force. Thus, an NPC/o of 0.70 would indicate 30% taxation on the output price (NPC minus 1.00), whereas an

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* It would have been desirable to disaggregated family labor, which is generally not remunerated directly, from hired labor, which is. Data of this nature are not available and so all labor input was treated as wage labor. This may overstate actual cash outflow, however, negatively biasing financial profitability calculations.

NPC/o of 1.60 would indicate that 60% positive protection is being afforded by price policy interventions. An NPC/o of 1.00 indicates a neutral impact on output price protection.

The ratio of domestic tradable input prices to reference input prices yields the nominal protection coefficient for inputs (NPC/i).[7] The interpretation of the NPC/i follows the inverse logic as for the NPC on output price. In other words, an NPC/i which is greater than 1.00 means that domestic producers are paying more for traditional inputs than they would in reference prices, i.e. are subject to net taxation on the domestic prices of inputs. An NPC/i of less than 1.00 indicates that the economic costs of inputs are subsidized to domestic producers.

A third indicator which can be calculated is the effective protection coefficient (EPC).[8] The effective protection coefficient is the ratio of value-added measured in domestic prices to the value-added measured in reference prices. Since farmers do not react solely on the basis of the output price received for their product, but rather taking into consideration both output and input prices, i.e. by considering the value-added generated by their product, this indicator is more encompassing than either nominal protection coefficient by itself. Again, an EPC of 1.00 indicates neutral effective protection, while an EPC greater than 1.00 suggests positive effective protection and an EPC which is less than 1.00 suggests negative effective protection.[9]

Comparative advantage. The result of the economic profitability calculation is presented in terms of dinars per quintal of wheat, or millimes per kilogram of olive oil, or in any other currency per unit output expression. This makes comparison across commodities difficult. To get around this problem of comparability, the economic profitability calculation (price minus inputs minus factors, or value-added minus factors) can be restated to calculate the degree of comparative advantage which a country

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[7] When calculated using shadow exchange rates, this is the net nominal input price protection coefficient (NNPC i).

[8] When calculated using shadow exchange rates, this is the net effective protection coefficient (NEPC).

[9] Note that even if inputs are subsidized (NPC/i is less than 1.00), it is possible for the EPC to be less than 1.00, indicating overall negative protection, if the NPC of the output price is less than the NPC/i. Also, if the economic cost of inputs is very close to the reference price, the value-added in reference prices will be very small, which will cause the EPC to explode. In extreme cases, value-added in reference prices can actually be negative, indicating that the input value actually exceeds the reference output price, yielding a negative EPC, or suggesting excessively high rates of protection.

enjoys in the production of a given commodity using a given production system.

The domestic resource cost ratio (DRC) calculates the ratio of the value of the non-tradable factors of production (the so-called "domestic resources"), measured in reference prices, to the value-added generated by the activity (price minus the value of tradable inputs), measured in reference prices. The ensuing coefficient is neutral with respect to units and therefore can be used to compare comparative advantage both across commodities and, within a commodity, across techniques. It reflects the value of the foreign currency generated by exporting one unit of the commodity (in the case of an export crop), or the value of the foreign currency saved by not importing one unit of the commodity (in the case of an import-substitution crop).

A DRC which is less than 1.00 (equivalent to economic profitability greater than zero) indicates that production of a given commodity using a given technique generates more in value-added than it spends in domestic resources. In other words, it indicates that the country has a comparative advantage in its production. A DRC which is greater than 1.00 (equivalent to negative economic profitability) indicates that production of a given commodity using a given technique spends more in domestic resources than it generates in value-added. In other words, this production system does not make an efficient use of domestic resources and the country is said to have a comparative <u>dis</u>advantage in this production activity.[10]

<u>Interpretation of economic indicators</u>. When evaluating the signs and orders of magnitude of each of these indicators, several rules of thumb should be kept in mind:

-- Financial profitability by definition should be positive if farmers are actively involved in the activity. If calculations indicate borderline or negative financial profitability, either 1) the analyst has inaccurately estimated input costs or the output price, or 2) the activity is not profitable on occasion (such as when occasional exceptional harvests drive down producer prices), suggesting that farmers probably hold on to their output rather than selling at the given price, or 3) the activity is no longer profitable under certain conditions, suggesting that farmers may be moving their production resources out of this activity.

-- Protection and domestic resource cost indicators should be evaluated for the degree of consistency of Tunisian pricing policies with areas of positive agricultural economic profitability. In other words, if a particular agricultural

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[10] As mentioned in the previous footnote, there are cases when the international value-added is negative. In such cases, the DRC, too, will be negative.

activity does not make an efficient use of domestic resources (economic profitability is negative, i.e. DRC is greater than one), then positive nominal and effective protection (NPCs and EPCs greater than one) cannot be justified on economic grounds. On the other hand, if an activity demonstrates positive economic profitability, i.e. has a DRC which is less than one, indicating that foreign exchange resources are saved or generated through the activity, then it makes economic sense to use public resources to encourage production.

Limitations of the Methodology

It is important to note here that there are several limitations to this methodology. Most obviously, each commodity is treated individually without explicit consideration of crop combinations or rotation patterns at the farm level. Each product is evaluated on its own, with no reflection of the possibility that certain commodities, when cultivated in rotation with others, may provide tangible agronomic benefits to the system as a whole. There are no explicit considerations of household level resource constraints nor attempts to assess complementarities of activities which may help households work around those resource constraints, though these are considered when interpreting results.

To the extent that the technical coefficients do not change between a crop produced in isolation and a crop produced as part of a system or rotation, then the crop-specific approach does not necessarily detract from the economic calculations. However, to the extent that one can expect those technical coefficients to differ significantly from coefficients in a single-stand budget, then a farm model will yield more correct results.

Second, the approach is static. There are no factor price adjustments made to changes in output price, no elasticities programmed which would indicate the sensitivity of quantity demanded of an input to a change in its own price or to a change in the price of a different input. In this sense, the analysis is confined to the short-term and cannot, or should not, be used to project over a longer period of analysis.

Third, there is no explicit programming of risk aversion scenarios. Indirectly, however, one can simulate what the effect would be of a different yield, or of different market conditions on profitability.

Fourth, the production system model alone does not analyze the institutional arrangements which shape the markets around the system. No assessment is made here of the various restrictions to market access (licensing, investment permits, quantitative trade restrictions, monopoly market domination which affect prices. In sections 3 and 4, however, the institutional "settings" for each commodity sub-sector are presented with suggestions of institutional reforms that might be considered in tandem with price policy changes. For example, when considering a change in the

fertilizer subsidy, it may be important to consider expansion of credit schemes to help farmers cope with increased short-term capital requirements. To ignore institutions and market structures completely is misleading if one is to interpret correctly the economic indicators which the model calculates. Also, such an omission can lead to confused thinking about prices versus markets, as if the two can be delinked.[11]

Fifth, it must be borne in mind that although this methodology facilitates comparisons across commodities, across techniques, and across regions, there may not be any real technical alternatives in a given region, on a given soil, to the production system which is currently being practiced there. If there is not a choice between alternative systems, then the opportunity cost of fixed resources may well be zero. For example, even if the production of dates in Tozeur were to indicate DRCs far in excess of 1.00, that does not mean that one can recommend that wheat be cultivated there instead. On the other hand, if an activity has a distinctly negative economic profitability and resources are fungible between regions, there is always the choice between continuing and discontinuing the investment altogether, if one ignores all other issues of regional development needs, employment generation, etc.

Sixth, there is nothing at this level of analysis which integrates consumer and producer price policies. It will be important in Tunisia to make this linkage at a later stage. For example, different consumer price strategies are pursued in the edible oils sector. Olive oil which is not exported is sold on the local market at cost. Alternatively, it can be mixed with vegetable oil. Raw vegetable oil is imported into Tunisia and then refined, mixed with some olive oil (in a varying percentage, depending on available supplies of olive oil), and sold at a subsidized price to consumers. The availability of a cheap alternative to olive oil can put downward pressure on the domestic demand for olive oil, affecting the price at which olive oil is sold domestically, and ultimately its supply. Other sub-sectors where similar issues arise are in cereals, milk, and meat, some percentage of which is currently sold at subsidized prices to consumers.

Seventh, an analysis restricted to farm-level production costs is incomplete without consideration of agro-industrial profitability, protection, and efficiency. While Tunisia may enjoy a comparative advantage in grains production, if the flour milling sector is inefficient, bread production overall may not make an efficient use of domestic resources. Only in the analysis of olive oil production was explicit consideration of agro-industrial costs made, for only the transformed commodity is traded

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[11] One comment made during the study about economic liberalization was the insistence that prices were going to be liberalized in Tunisia, but not the market structures which determine those prices. Economic theory suggests that the former will be ineffective or even counter-productive if the latter is not addressed at the same time.

internationally, i.e. there is no international reference price for oil olives.

Note that the same limitation is true in reverse. A study of agro-industrial efficiency which does not take into account farm-level efficiency only suggests the degree of industrial efficiency, it does not assess the efficiency of Tunisian production of the final product. An earlier AIRD study in Morocco found that total sugar refining efficiency was greatly influenced by the economic cost of production of the raw sugar beet input. Costs of production varied greatly from one irrigated perimeter to the next, meaning that when treated in an analyse filière, the economic cost of refined sugar was also quite variable. Such final product economic cost variation did not show up when the official, pan-territorial purchase price at the mills for sugar beet was used to value the raw material input. Integration of the two components of final product cost can easily be done using the D/PSAE economic indicators computer model, and it is suggested that this be done if not already incorporated in the agro-industry study to be launched by the Institut Supérieur de Gestion in July 1987.

Finally, as stated in section 1, it is clear that other factors besides profitability and comparative advantage will affect how public and private economic actors allocate their resources. In addition, there may be other economic concerns on the part of policy makers which are not directly addressed in the present methodology. For example, the government may be concerned about rural sector employment generation, and may therefore give a higher weight to the encouragement of those production systems which efficiently use more labor. The results of the analyses in this report can be used to shed some light on this issue, however, by ranking commodities and systems of production by the number of man-days per hectare they require or by the amount of value-added per man-day they generate.

Scope of the Methodology

These limitations aside, the methodology which has been implemented in the D/PSAE makes important contributions to the improved understanding of the agricultural sector in Tunisia by encouraging analysts to look more closely and more systematically at production systems and to compare results across production systems and across commodities. Computerization of the models using simple spreadsheet software[12] allows the analyst to easily vary technical coefficients and price policy parameters, thereby gaining valuable insight into the degree of sensitivity of the system to each. And in its

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[12] The Tunisian models were developed with Lotus 123 (Release 2) and Lotus HAL software. The latter was only available in English at the time of this study, and so the English version of 123 is used as well. HAL allows for explicit integration between spreadsheets, thus greatly facilitating the decomposition of input costs in the production budgets and the testing of alternative input pricing scenarios.

data-intensiveness, the application of this methodology identifies for analysts weaknesses in the existing data, allowing identification of goals for improved data collection efforts.

The methodology permits a comprehensive measure of the distinction between prices faced by the farmer and costs faced by the economy at large. Production techniques for a given commodity can be ranked by their economic cost of production per unit output. When combined with information on the percentage of total production which is supplied to the economy by each production system, a supply curve is generated. Such an analysis (see section 3 for cereals supply curve analyses) is applicable at both agricultural (field-level) and agro-industrial levels. It can be used to indicate what percentage of total production is profitably delivered to the economy, and therefore to highlight the magnitude of the economic cost of a self-sufficiency strategy.

Third, by forcing analysts to make a decision as to which physical point of comparison will be used for the analysis, development of the crop models makes analysts think about the production chain for each commodity. Making each stage explicit contributes to a much keener sense of the actual workings of the sector. For example, a price paid to producers of oil olives at the pressing plant exit, therefore covering not only on-farm production costs but transport and pressing costs as well, is clearly not the same as a producer price paid to the farmer at his farm, yet the two are both called "prix aux producteurs," despite the distinctly different implications for private profitability.

In many ways, this crop-specific analysis of profitability, protection, and comparative advantage is but the first stage of a comprehensive sector analysis program. The building block for later analyses at the farm level and at the sectoral level are crop budgets. By constructing models which expressly link domestic production to international markets, analysts begin to appreciate the chain between farmgate and the ultimate users of each commodity. As primary data collection improves over time,[13] the D/PSAE will be able to link the crop models to build farm household models. As available data in time series grows, the D/PSAE will be able to calculate elasticities and supply functions in order to better predict for policy makers what can be the expected effect on farm incomes, on demand for

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[13] In the D/PSAE, a four-year Agricultural Policy Implementation Project has just been launched, with USAID financing, which will support many of these efforts.

inputs, or commodity supply, on foreign exchange and trade balances, on fiscal flows, and on interlinking markets of a proposed policy change.[14]

In addition, this same methodology can be used to evaluate the potential economic profitability of technical innovations under consideration. Analysis of the private and social profitability of the cultivation of cereals under irrigated conditions, of stratified livestock production systems, and of olive plantation regeneration schemes are just three examples in Tunisia of potential applications of the methodology.

The protection-comparative advantage methodology is also useful in the heuristic sense that it makes a contribution toward the linkage of micro-economic and such macro-level economic issues as taxation, exchange rate, and international trade policies. Thus, comparisons of results can be made not only within the country, across production systems, but across the border with international competitors as well.

While structural changes which ensue as a result of changes in parameters are not well captured by these models as explained above, simulation of the effect of policy changes <u>at the margin</u> is possible using these models. Social profitability is directly affected by the choice of international price and exchange rate; variation of these two will be simulated in sections 3 and 4 below. Financial profitability and degree of protection are directly affected by the level of domestic prices and domestic input price subsidies. Following the guidelines set out in the government's medium-term adjustment program, changes in these parameters are also simulated below. In this way, the government is better informed as it enters policy dialogues with various domestic and international interest groups.

<u>Conclusion</u>

Price policy is not the sole sector management tool to be employed to promote an increase in agricultural production. While it is certainly important for agriculture to be aware of output/input price relationships over time and to see that the farmer is not negatively protected vis-a-vis

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[14] Until input price elasticities are calculated in Tunisia, it is difficult to understand how a 1984 consultant report could observe that "(u)ne brusque suppression des subventions sur les engrais provoquerait <u>indéniablement</u> une réduction <u>inacceptable</u> de l'utilisation des engrais..." and then in the next phrase add in parentheses "(les données sur l'élasticité des prix des engrais ne sont pas disponibles)". (Swedfarm, <u>Plan Directeur d'Approvisionnement en Intrants Agricoles</u>, Mars 1984, emphasis mine.) Such statements do not contribute to a positive understanding of producer sensitivity to input price changes, which can only be accomplished once better data is available to estimate what the real reaction has been.

his industrial counterpart and over time, exclusive focus on prices may gloss over other factors which cause the prices which the farmer really faces to deviate from those the government thinks it has established.

As will be discussed in the following sections, there are pitfalls of which to beware when designing a price intervention program. For example, continued positive nominal protection, i.e. compensation to farmers in the form of an output price set at a level higher than the border price equivalent, can lead to strain on the fiscal management of the sector.

If the output elasticity with respect to price is high, domestic prices which are linked to international CIF prices can induce such a supply response that the country actually becomes a net exporter of the commodity. As mentioned above, export commodities take FOB prices as their benchmark. In such a case, the government is committing itself to a producer price in excess of its actual reference price, the margin being the difference between CIF and FOB.

Also, an incentive to the domestic procurement agency to turn its back on the more expensive domestic producers and satisfy domestic demand with cheaper import substitutes can result if compensation funds are not readily available to the domestic procurement agency to compensate for the higher procurement cost.

This is especially true when the same agency is in charge of both procuring domestically and from abroad. If import quantities are unconstrained, the temptation will be to satisfy domestic demand with cheaper imported supplies unless compensation is received in a timely manner making the procurement agency indifferent between the two substitutes on the basis of price. On the other hand, if the domestic procurement agency is expected to cross-subsidize the higher cost of domestic procurement with the benefits derived from imports, then the system has to allow for unconstrained imports if the agency is to survive financially. These are some of the potential risks if price policies are set without due consideration to the management aspects of the sub-sectors.

In other markets, there may not be much leeway in price policy management, as in the case of an export commodity such as olive oil, for example, where the margin between the price paid to producers and the price received abroad is already quite small.

Also, where export crops are concerned, it can be expected that as domestic incomes rise there will be an increase in domestic consumer demand for commodities once considered "solely" an export crop. Such is already the case in Tunisia with citrus (and other horticultural products) for which domestic demand is both increasing and diversifying among products. The dominance of maltese oranges in the plantation profile can no longer assumed. Domestic markets fetch higher prices for sweet oranges and lemons, thus encouraging farmers to diversify their plantations into these products.

In other cases, it may be more appropriate to consider productivity-enhancing investments (agricultural research) to bring down the unit cost of production, rather than raising the price to producers. In the case of olive production, regeneration credits which would lead to increased olive yields per hectare may make more efficient use of resources than investments in new plantations alone.

However, analysis of the role of price policy in the agricultural sector cannot be based solely on an analysis of agricultural production. There may be greater room for efficiency improvements in agro-industry, rather than at the farm-level. Quality control, packaging costs, and capacity utilization rates are but three downstream variables which will affect the ultimate economic profitability of an agricultural activity. An analysis of production which stops at the farmgate, or an analysis of agro-industry which does not integrate the economic costs of domestic agricultural production of the raw material, is but a partial exercise. The true picture will come clearer upon integration of the two "halves."

Section 3: Import-Substitution Commodities:

Profitability, Protection, and Comparative Advantage

This section presents profitability, protection, and comparative advantage indicators from the base case and sensitivity scenarios analyzed for the five import-substitution commodities (durum wheat, bread wheat, barley, beef, and milk) in the study. Similar analyses of four export commodities (maltese oranges, potatoes, dates, and olive oil) are discussed in section 4.

The base case analyses have been done assuming 1985-86 production parameters and price vectors, the latest agricultural season for which a complete database exists. In the sensitivity analyses, assumptions in the base cases (in particular, yields, domestic prices, and international prices) are varied assuming alternative scenarios about domestic input and output price policy reform and changes in international commodity markets.

Cereals

Tunisia cultivates durum wheat, bread wheat, and barley for domestic human and (in the case of barley) animal consumption. In addition, limited quantities of triticale, a substitute for maize (currently imported for the animal feed sub-sector; none is grown domestically), are being grown in trials.

Cereals production until now has been done largely under rainfed conditions. Agronomic trials are currently underway to test the potential of irrigation, both full-scale and à point, for bread wheat production. During the Sixth Plan, the cultivation of cereals has occupied about one-third of total cultivable agricultural land, and has accounted for 14% of total agricultural value of production.

Table 3.1: NATIONAL PRODUCTION OF CEREALS ('000 T)

SEASON	DURUM WHEAT QTY	DURUM WHEAT % TOT	BREAD WHEAT QTY	BREAD WHEAT % TOT	BARLEY QTY	BARLEY % TOT	TOTAL
1963-64	431	62.1%	81	11.7%	182	26.2%	694
1964-65	577	60.8%	100	10.5%	272	28.7%	949
1965-66	432	70.1%	49	8.0%	135	21.9%	616
1966-67	403	70.3%	50	8.7%	120	20.9%	573
1967-68	425	60.9%	73	10.5%	200	28.7%	698
1968-69	301	61.9%	80	16.5%	105	21.6%	486
1969-70	369	51.8%	150	21.0%	194	27.2%	713
1970-71	460	56.1%	200	24.4%	160	19.5%	820
1971-72	707	62.5%	180	15.9%	245	21.6%	1132
1972-73	536	54.5%	165	16.8%	282	28.7%	983
1973-74	655	64.0%	140	13.7%	228	22.3%	1023
1974-75	803	63.0%	162	12.7%	310	24.3%	1275
1975-76	700	66.7%	110	10.5%	240	22.9%	1050
1976-77	480	71.6%	90	13.4%	100	14.9%	670
1977-78	650	68.4%	100	10.5%	200	21.1%	950
1978-79	600	63.2%	80	8.4%	270	28.4%	950
1979-80	741	63.6%	129	11.1%	296	25.4%	1166
1980-81	804	65.2%	159	12.9%	270	21.9%	1233
1981-82	753	60.0%	163	13.0%	339	27.0%	1255
1982-83	509	55.3%	109	11.8%	303	32.9%	921
1983-84	584	57.0%	128	12.5%	312	30.5%	1024
1984-85	1069	51.7%	311	15.0%	687	33.2%	2067
1985-86							
AVERAGE	590	61.8%	128	13.2%	248	25.0%	966
AVG. 80-85	743	58.8%	167	13.7%	368	28.5%	1278

Source: "La Céréaliculture: Le Bilan"
Ministry of Agriculture, January 1986

Durum accounts for about 60% of total production, bread wheat 15%, and barley 25%. Barley and bread wheat production have been more variable over time (coefficients of variation of 48% and 45%, respectively, measured over 1964-1985) than has been that of durum wheat (CV = 30%). As is to be expected, the source of this variation comes largely from variation in yields, rather than variation in area (see table 3.2).[1]

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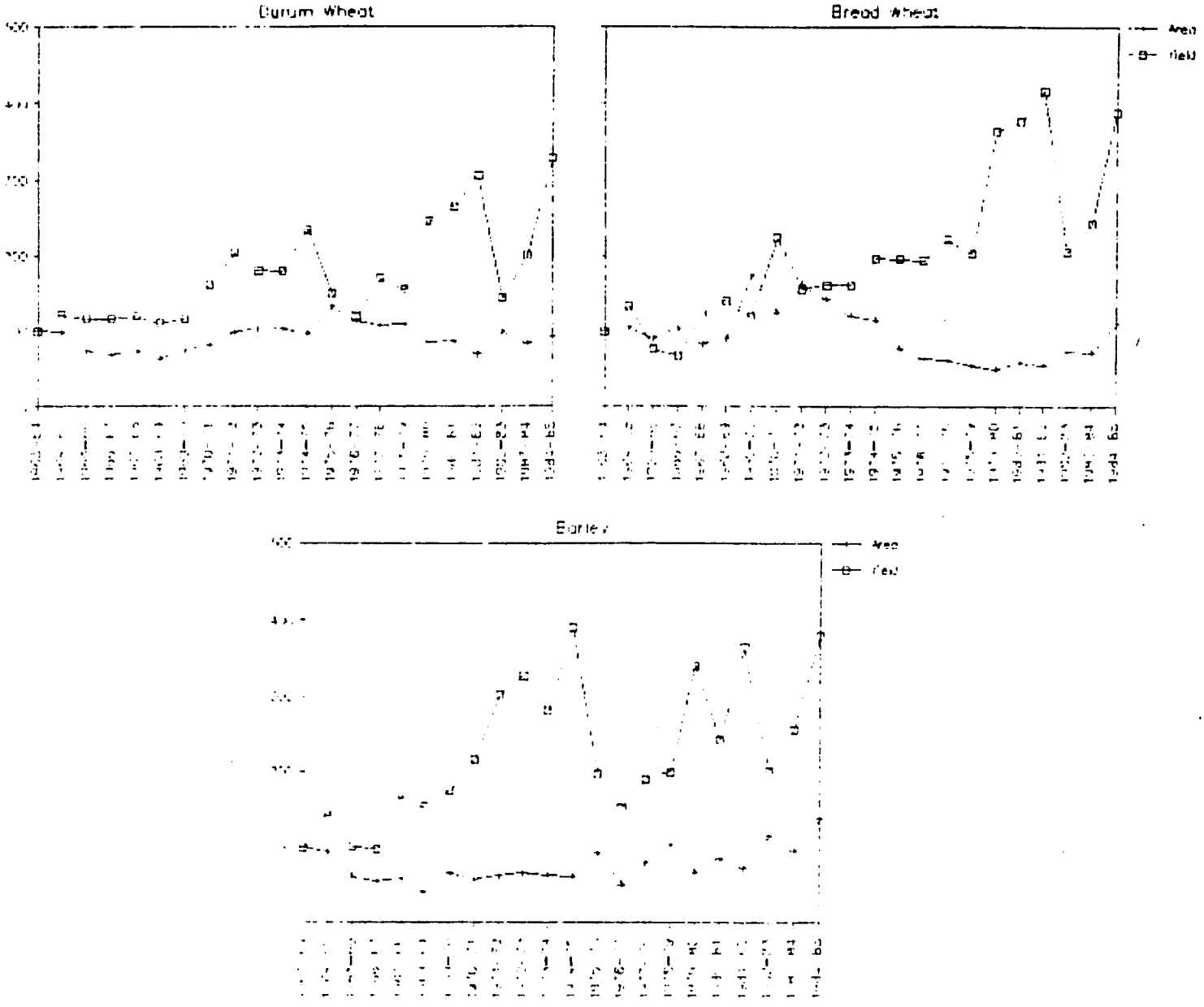
[1] Area and yield coefficients of variation have not been corrected for trend, however. Yields for all three cereals have improved over time. See figure 3.1 following the table for plots of area and yield indices.

Table 3.2: AREA AND YIELD OF CEREALS ('000 ha; qx/ha)

Season	DURUM WHEAT Area	DURUM WHEAT Yield	BREAD WHEAT Area	BREAD WHEAT Yield	BARLEY Area	BARLEY Yield
1963-64	949	3.69	160	4.44	616	2.11
1964-65	938	4.49	169	5.[illegible]	583	3.09
1965-66	699	4.29	145	3.[illegible]	377	2.12
1966-67	653	4.29	166	3.[illegible]	338	2.07
1967-68	700	4.43	133	5.[illegible]	365	3.56
1968-69	600	4.08	145	6.[illegible]	250	3.24
1969-70	700	4.27	280	5.[illegible]	410	3.68
1970-71	771	5.97	200	10.[illegible]	350	4.57
1971-72	940	7.52	260	6.[illegible]	385	6.36
1972-73	980	6.68	230	7.[illegible]	410	6.88
1973-74	990	6.62	195	7.[illegible]	384	5.94
1974-75	924	8.69	185	8.[illegible]	377	8.22
1975-76	1266	5.53	126	8.[illegible]	576	4.17
1976-77	1079	4.45	104	8.[illegible]	311	3.22
1977-78	1031	6.30	101	9.[illegible]	497	4.02
1978-79	1046	5.74	88	9.[illegible]	642	4.21
1979-80	818	9.05	80	16.[illegible]	413	7.17
1980-81	820	9.80	95	16.[illegible]	530	5.09
1981-82	666	11.31	88	18.[illegible]	442	7.67
1982-83	956	5.33	119	9.[illegible]	714	4.25
1983-84	785	7.44	117	10.[illegible]	579	5.39
1984-85	883	12.11	180	17.[illegible]	855	8.02
AVERAGE	872	6.46	153	9.[illegible]	473	4.78
C.V. (%)	19%	38%	37%	[illegible]	31%	41%

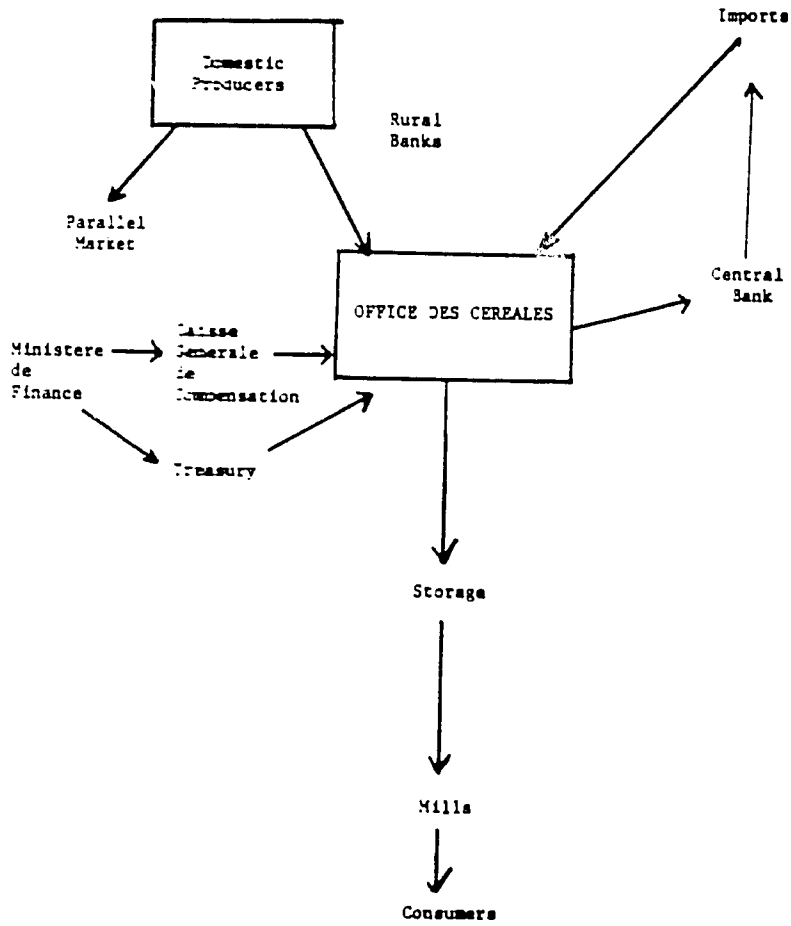
Source: Ministry of Agriculture

Figure 3.1: CEREALS AREA AND YIELD INDICES (1963-64 = 100)



Approximately sixty percent of domestic cereals consumption is satisfied by domestic production. This percentage has been decreasing, from about 75 percent in 1970-74, to 62 percent in 1975-80. The remaining forty percent is imported by the Office des Céreales (OC), which has the monopoly of cereals imports into Tunisia. Figure 3.2 on the following page depicts graphically the cereals sub-sector, which is explained in further detail below.

Figure 3.2: CEREALS SUB-SECTOR FLOWCHART



Import quantities required for the upcoming season are determined in the spring of each year by the Ministry of Agriculture on the basis of current-year production estimates. These are compared with consumption norms which have been established from national consumption surveys (the most recent of which was completed in 1985). The Ministry of Agriculture then meets with the Office des Céréales and the Ministries of National Economy and of Plan to finalize the annual import program. A limited percentage of the grain imported into Tunisia (including maize) comes from concessional sources, mostly from the United States. Disaggregated by cereal in table 3.3, imports have recently provided 12% of total barley supply, 30% of total durum supply, and as much as 77% of total bread wheat supply.

Table 3.3: IMPORTS AND NATIONAL AVAILABILITY OF CEREALS ('000 T)

	IMPORTS								AVAILABILITY			
SEASON	Durum Wheat	% IMP/ AVAIL	Bread Wheat	% IMP/ AVAIL	Barley	% IMP/ AVAIL	TOTAL	% TOT/ AVAIL	Durum	Bread	Barley	TOTAL
19[illegible]-[illegible]4			190	70.1%	37	16.9%	227	24.6%	431	271	219	921
19[illegible]4-[illegible]5			149	59.8%	8	2.9%	157	14.2%	577	249	280	1106
19[illegible]5-[illegible]6			250	83.6%	67	33.2%	317	34.0%	432	299	202	933
19[illegible]-[illegible]7	81	16.7%	339	87.1%	26	17.8%	446	43.8%	484	389	146	1019
19[illegible]7-[illegible]8	60	12.4%	212	74.4%	53	20.9%	325	31.8%	485	285	253	1023
19[illegible]-[illegible]9	119	28.3%	385	82.8%	31	22.8%	535	52.4%	420	465	136	1021
19[illegible]-70	103	21.8%	249	62.4%			352	33.1%	472	399	194	1065
19[illegible]-71	62	11.9%	167	45.5%			229	21.8%	522	367	160	1049
19[illegible]-72	76	9.7%	176	49.4%			252	18.2%	783	356	245	1384
19[illegible]-73			292	63.9%	44	13.5%	336	25.5%	536	457	326	1319
19[illegible]-74			285	67.1%	43	15.9%	328	24.3%	655	425	271	1351
19[illegible]-75			281	63.4%			281	18.1%	803	443	310	1556
19[illegible]-76	67	8.7%	396	78.3%	15	5.9%	478	31.3%	767	506	255	1528
19[illegible]-77	282	37.0%	336	78.9%	104	51.0%	722	51.9%	762	426	204	1392
19[illegible]-78	225	25.7%	360	78.3%	84	29.6%	669	41.3%	875	460	284	1619
19[illegible]-79	350	36.8%	509	86.4%	59	17.9%	918	49.1%	950	589	329	1868
19[illegible]-80	208	21.9%	402	75.7%	59	16.6%	669	36.5%	949	531	355	1835
19[illegible]-81	213	20.9%	413	72.2%	127	32.0%	753	37.9%	1017	572	397	1986
19[illegible]-82	203	21.2%	491	75.1%			694	35.6%	956	654	339	1945
19[illegible]-83	404	44.2%	522	82.7%	10	3.2%	936	50.4%	913	631	313	1857
19[illegible]-84	309	34.6%	549	81.1%	21	6.2%	879	46.2%	893	677	333	1903
4-[illegible]-85	184	19.6%	331	72.3%	49	14.[illegible]	500	34.4%	699	450	264	1414
4-[illegible] 83-84	267	28.6%	475	77.4%	54	11.[illegible]	786	41.3%	946	613	347	190[illegible]

Source: 'La Céréaliculture: Le Bilan', Ministry of Agriculture, January 1986

The Office des Céréales is also the sole agency authorized to procure cereals on the domestic market. Producers must transport their cereal output from farmgate to regional OC purchase points, of which there are about 140, largely concentrated in the northern part of the country.

It is at the official producer price, which varies according to the quality of the grain offered by the producer for purchase, that the OC is instructed to buy all domestic production. The producer price is both non-territorial and pan-seasonal, thus providing no incentive to store

grain on the farm for later disposal.[2] The bulk of the harvest therefore is sold to the OC immediately after harvest, thereby creating pressure on the OC's own storage capacity, which has been estimated at about 1.2 million metric tons inclusive of cooperatives operating under the aegis of the Office.

The price to the producer is fixed by the Ministry of Agriculture each season using a cost-plus methodology. Taking established production norms, of which two or three have been established for each cereal to represent commodity production costs over the entire country, the D/PSAE updates the price vectors each year in order to determine the producer price. Technical production coefficients are assumed to be invariate and have not been updated since the mid-1970's. Transport costs between farmgate and rural purchase point are not explicitly covered by the calculations.

TABLE 3.4: OFFICIAL PRODUCER PRICES FOR CEREALS
...In current and constant (1972) prices (D/ton)

Year	GNP Deflator (100=1972)	Durum Wheat Curr	Durum Wheat Const	Bread Wheat Curr	Bread Wheat Const	Barley Curr	Barley Const
1972	100	48	48	43	43	28	28
1973	109	48	44	43	40	28	26
1974	135	61	45	55	41	40	30
1975	142	66	47	60	42	45	32
1976	146	66	45	60	41	45	31
1977	160	71	45	65	41	50	31
1978	170	76	45	70	41	55	32
1979	188	76	40	70	37	55	29
1980	212	86	41	77	36	59	28
1981	236	96	41	87	37	69	29
1982	273	110	40	100	37	80	29
1983	299	128	43	117	39	95	32
1984	320	140	44	140	44	100	31
1985	344	150	44	145	42	105	31
1986	377	160	42	160	42	110	29
1987	416	185	44	170	41	120	29

Source: Ministry of Agriculture
10% annual increases assumed in GNP deflator for 1986, 1987

[2] It is not known what percentage of producers receive cash for their produce from the Office des Céréales and what percentage receive bons de paiement. The producer is not indifferent between the two, discounting the value of the latter by the opportunity cost of capital being tied up until the coupon can be cashed in.

Although producer prices have been increased in nominal terms every year since 1980, cereals producer prices have remained virtually unchanged in real terms from 1972 to 1987. However, assuming 10% annual inflation in years 1986-88, the projected nominal price increases for fertilizers will mean real price increases as well, by as much as 45% from 1985-86 levels (see table 3.5 below). Other input prices are also scheduled to increase as input subsidies are progressively phased out under the medium-term agricultural structural adjustment program. The decrease in value-added may be a cause for concern, depending on the strength of the producer output elasticity with respect to such decreases.

TABLE 3.5: FERTILIZER PRODUCER PRICES IN TUNISIA
...Current and constant prices, 1980 (D/ton)

Season	GNP Deflator (100=1980)	Amm.Nitr. Curr	Amm.Nitr. Const	Super 45% Curr	Super 45% Const	Super 16% Curr	Super 16% Const
1980-81	100	48.5	48.5	29.5	29.5	15.3	15.3
1981-82	111	63.0	56.6	38.5	34.6	25.4	22.8
1982-83	129	63.0	48.9	38.5	29.8	25.4	19.7
1983-84	141	63.0	44.7	38.5	27.3	25.4	18.0
1984-85	151	63.0	41.7	38.5	25.5	25.4	16.8
1985-86	162	63.0	38.8	47.4	29.2	34.0	21.0
1986-87	178	71.0	40.0	58.4	32.8	35.8	20.1
1987-88	196	93.0	41.4	83.0	42.3	48.0	24.5

Sources:

Fertilizer prices: 1980/81-1984/85 - World Bank, Report No. P-4368, Annex 1, Table 1.6
1985/86-1987/88 - World Bank, Note-memoire of March 10, 1987

GNP deflator: 1980/81-1985/86 - World Bank, Report No. P-4368
1986/87-1987/88 - Assumed 10% annual inflation

On average, the OC collects about forty percent of domestic cereals production, the remainder presumably being held on-farm for consumption or being marketed through parallel rural markets. This percentage has increased slightly over time, from 29% in the late 1960's, to 33% in the 1970's, to 38% in the 1980's, most notably for bread wheat and for barley (see table 3.6 on the following page). Collection is most effective for bread wheat production, 60-70% of which is sold to the OC. Only 25% of barley production and 35% of durum wheat production transits through the OC market.

One reason why the OC is able to collect a higher percentage of bread wheat output than durum or barley output may be a distinction in cereals consumption patterns between rural and urban consumers. Bread wheat may be primarily an urban consumption good, while durum and barley are perhaps still preferred by the rural population. This would encourage farmers to sell most of their bread wheat production, retaining a much higher percentage of the rest for their own uses. Also, barley is used not only for human consumption but as an animal feed, which would encourage farmer-herders to hold onto their stocks.

Table 3.6: CEREALE PRODUCTION AND OFFICIAL COLLECTION BY OFFICE DES CEREALES ('000 T)

	PRODUCTION				COLLECTION				COLLECTN/PRODUCTION			
SEASON	Durum	BrW	Bar	TOTAL	DurW	BrW	Bar	TOTAL	DurW	BrW	Barley	TOTAL
1963-64	[illegible]	81	182	694	135	45	19	199	31.3%	55.6%	10.4%	28.7%
1964-65	[illegible]	100	272	949	263	65	38	366	45.6%	65.0%	14.0%	38.6%
1965-66	[illegible]	49	135	616	168	31	11	210	38.9%	63.3%	8.1%	34.1%
1966-67	[illegible]	50	120	573	115	21	8	144	28.5%	42.0%	6.7%	25.1%
1967-68	[illegible]	73	200	698	123	45	22	190	28.9%	61.6%	11.0%	27.2%
1968-69	[illegible]	80	105	486	80	46	17	143	26.6%	57.5%	16.2%	29.4%
1969-70	[illegible]	150	194	713	95	87	27	209	25.7%	58.0%	13.9%	29.3%
1970-71	[illegible]	200	160	820	162	123	28	313	35.2%	61.5%	17.5%	38.2%
1971-72	[illegible]	180	245	1132	262	106	44	412	37.1%	58.9%	18.0%	36.4%
1972-73	[illegible]	165	282	983	187	75	24	286	34.9%	45.5%	8.5%	29.1%
1973-74	[illegible]	140	228	1023	253	78	26	357	38.6%	55.7%	11.4%	34.9%
1974-75	[illegible]	162	310	1275	308	70	31	409	38.4%	43.2%	10.0%	32.1%
1975-76	[illegible]	110	240	1050	257	67	39	363	36.7%	60.9%	16.3%	34.6%
1976-77	[illegible]	90	100	670	171	46	14	231	35.6%	51.1%	14.0%	34.5%
1977-78	[illegible]	100	200	950	272	65	26	363	41.8%	65.0%	13.0%	38.2%
1978-79	[illegible]	80	270	950	174	46	48	268	29.0%	57.5%	17.8%	28.2%
1979-80	[illegible]	129	296	1166	275	83	77	435	37.1%	64.3%	26.0%	37.3%
1980-81	[illegible]	159	270	1233	300	113	72	485	37.3%	71.1%	26.7%	39.3%
1981-82	[illegible]	163	339	1255	291	122	101	514	38.6%	74.8%	29.8%	41.0%
1982-83	[illegible]	109	303	921	170	72	63	305	33.4%	66.1%	20.8%	33.1%
1983-84	[illegible]	128	312	1024	249	97	68	414	42.6%	75.8%	21.8%	40.4%
1984-85	[illegible]	311	687	2067	403	173	173	749	37.7%	55.6%	25.2%	36.2%
AVERAGE	[illegible]	128	248	966	214	76	44	335	35.4%	59.5%	16.2%	33.9%
AVG. 80-85	[illegible]	167	368	1278	281	110	92	484	37.8%	68.0%	25.0%	37.9%

Source: "La Céréaliculture: Le Bilan," Ministry of Agriculture, January 1986

Nothing is officially known about other markets for grain, for it is illegal to sell to any trader but the OC. However, the Institut National des Statistiques reportedly has market price data on cereals grain prices in

these rural markets. They are said to be presented in a variety of traditional units, and have not been converted into standard dinar/kg prices. While not exploited for the purposes of this study, presumably some trend or first-differences analysis could be done to gauge how variation in the parallel market prices tracks that in official price trends. In addition, it is important to be able to assess to what degree official and parallel prices diverge in years of good harvest. The larger the difference, the greater the pressure will be on the OC to defend the producer price as a greater percentage of farmers will seek to sell their grain to it to escape depressed parallel market prices. This may require above average financial resources on the part of OC if it is to successfully intervene in the market at the official price.

Base Case Analysis. The pricing study analyzed costs of production for seven durum wheat, four bread wheat, and seven barley systems of production. After discussion with representatives of the Office des Céreales and the Direction de la Production Végétale in the Ministry of Agricultural Production and Agro-Industry, it was decided to classify cereals production by ecological zone and by farm size in order to capture some of the diversity of production around the country.

Insistence was placed by the outside consultants on the fact that durum and bread wheat production patterns be distinguished in the analyses of this study. There are usually differences in yield potentials and yield variability between the two, and one can therefore expect there to be differences in the input allocation patterns made by farmers between the two. However, the D/PSAE is neither able to confirm nor refute this distinction statistically. Data is often collected by asking for input application to "cereals" only. In addition, the two are distinct in protein content, kernel size and hardness, etc. which lead to their being sold at different prices on the international market (there has been about an 8% premium paid for durum over the last five years, see annex A). The fact that domestic durum and bread wheat producer prices have been set close to or at the same level has encouraged the tendency in Tunisia to confuse the two.

As presented in the crop budgets, the primary distinction between the two is one of yields, with bread wheat yields anywhere from 20 to 40 percent greater in the same region and for the same farm size. In addition, there are slight differences in chemical input application rates (greater in the case of bread wheat) and in the use of improved seed (bread wheat large farms only). However, the normative crop budgets assume the same labor and mechanization use rates for equivalent durum and bread wheat production systems. Whether in reality the technical homogeneity of cereals cultivation patterns across regions and across sizes (little distinction in labor time per hectare, similar fertilizer use rates per hectare across farm sizes in each region, etc.) are as similar as the labor time and fertilizer

use data would lead one to believe is uncertain, given that no survey cost-of-production data exists.[3]

Table 3.7: COMPARISON OF PRODUCTION TECHNICAL COEFFICIENTS - DURUM AND BREAD WHEATS

		HUMID / SUB-HUMID				..... SEMI-ARID			
		...Large..		..Medium..		...Large..		..Medium..	
	UNITS	DUR	BRW	DUR	BRW	DUR	BRW	DUR	BRW
MAIN D'OEUVRE	h-jours	8.00	8.00	8.00	7.00	7.00	7.00	7.00	[illegible]
SEMENCES									
...Traditionnelles	qx	1.20		1.10	1.10	1.10		1.00	[illegible]
...Certifiees	qx		1.20				1.10		
AUTRES INTRANTS									
...2,4 D	litres	1.20	1.20	1.00	1.00	1.00	1.00	1.00	[illegible]
...Polyvalents	litres	3.00	3.00	2.50	2.50				
...Engrais									
.....Super 45%	qx	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]
.....Ammonitre	qx	2.50	2.50	2.00	2.00	1.00	1.00	1.00	[illegible]
...Sacheries	nombre	22.00	27.00	16.00	22.00	14.00	19.00	11.00	[illegible]
TRACTION MECANIQUE									
...Prep du sol	heures	11.20	11.20	8.00	8.00	9.00	9.00	6.80	[illegible]
...Epandage	heures	2.00	2.00	1.50	1.50	1.50	1.50	.70	[illegible]
...Semis	heures	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]
...Entretiens	heures	1.50	1.50	1.50	1.50	.70	.70	.70	[illegible]
...Moiss-Batteuse	heures	1.10	1.10	1.00	1.00	1.00	1.00	1.00	[illegible]
...Pressage	balles	100.00	90.00	75.00	60.00	70.00	60.00	60.00	40.00
...Transport	heures	2.00	2.00	2.00	2.00	1.50	1.50	1.50	1.50
YIELD	qx/ha	22.00	27.00	16.00	22.00	14.00	19.00	11.00	[illegible]

For lack of actual cost of production data, the D/PSAE crop budgets were used by analysts as the raw data for this study. It must be cautioned that these data are not necessarily representative of actual cultivation patterns, and therefore should be supplemented with project data (from INAT's Farming Systems Project, for example) or improved survey data as they

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[3] If this is true, then the rationale for the size of Tunisia's "Enquete Agricole de Base" should be reevaluated. Survey questionnaires are distributed to 30,000 households each year, costing upwards of 600 thousand dinars annually. The size of this survey sample would seem to imply much greater heterogeneity than is evidenced in the data and their stratification used in this study.

become available. They are assumed to be indicators of orders of magnitude, however, and therefore were retained for the study.

The cereals production economy was divided into three ecological zones: North - Humid/Semi-Humid, North - Semi-Arid, and Center-South. Crop production patterns in the North were further distinguished by large (greater than 100 hectares), medium (between 20 and 100 hectares), and small (less than 20 hectares) size. For bread wheat, it was assumed that production only took place on large- and medium-sized farms. The results of the base case economic analysis of cereals production costs are summarized in table 3.8 below.

Table 3.8: ECONOMIC INDICATORS: BASE CASE SCENARIOS IN CEREALS PRODUCTION

Commodity	Region	Farm Size	Finan Cost/ql grain (D/ql)	Finan Prf/ql grain (D/ql)	Econ Cost/ql grain (D/ql)	Econ Prf/ql grain (D/ql)	Value Ad Econ/ Labor-day (D/jr)	NNPC/a	NNPC/i	NEPC	DRC
Durum Wheat	Humid-Sub-humid	Large	10.60	5.40	12.55	1.05	20.67	1.14	.70	1.52	.86
		Medium	14.18	1.82	16.72	-3.22	11.51	1.14	.69	1.78	1.56
		Small	12.65	3.35	14.22	-.57	17.40	1.14	.78	1.40	1.07
	Semi-Arid	Large	10.31	5.69	11.71	1.96	16.90	1.14	.78	1.37	.77
		Medium	11.91	4.09	13.61	.79	13.04	1.14	.84	1.35	.91
		Small	10.05	5.95	11.39	2.34	15.46	1.14	.77	1.33	.75
	Center-South	All	19.77	-3.77	20.28	-6.68	1.99	1.14	.89	1.37	1.91
Bread Wheat	Humid-Sub-humid	Large	9.47	6.53	11.18	1.21	23.62	1.25	.70	1.71	.83
		Medium	10.19	5.81	11.99	.38	21.33	1.25	.70	1.74	.94
	Semi-Arid	Large	8.65	7.35	9.80	2.68	22.07	1.25	.79	1.52	.67
		Medium	11.08	4.92	12.55	-.17	13.08	1.25	.77	1.64	1.02
Barley	Humid-Sub-humid	Large	8.92	2.08	10.00	.52	13.45	.98	.80	1.10	.86
		Medium	10.50	.50	11.81	-.92	9.85	.98	.79	1.14	1.15
		Small	11.99	-.99	13.41	-2.55	8.99	.98	.80	1.15	1.45
	Semi-Arid	Large	7.45	3.55	8.53	2.41	14.12	.98	.78	1.10	.66
		Medium	7.15	3.82	7.99	3.0[illegible]	13.35	.98	.81	1.06	.61
		Small	9.05	1.95	10.10	.82	11.38	.98	.80	1.10	.88
	Center-South	All	13.53	-2.53	13.73	-2.78	2.40	.98	.92	1.02	1.39

As seen in table 3.8 above, all but three of the systems indicate positive financial profitability.[4] In the two center-south systems, the extremely low yields (3.5 quintals/hectare for durum and 4.0 quintals/hectare for barley) account for the negative profitability, while in the other case (small farm barley production in the humid region of the North), the application of two quintals of fertilizers per hectare only yields 11 quintals of barley.

Economic profitability, when measured at 1985 CIF prices for grains (which are generally considered to be quite low), is positive for four out of seven durum wheat production systems, three out of four bread wheat systems, and four out of seven barley production systems. Correspondingly, these systems all have DRCs which are less than 1.00. Together, these economically profitable systems account for almost two-thirds of durum production, ninety percent of bread wheat production, and about half of barley production. The economic value-added generated per person-day of labor ranges from about 2 D/day in the South, or less than the official minimum agricultural wage of 2.756 D/day, to 8 to 24 D/day in the North (with bread wheat returns at the top).

The differences between financial and economic profitability estimates are due to several factors. In the financial calculation, the official domestic purchase prices for cereals of 16 D/ql for both durum and bread wheat and of 11 D/ql for barley were used. In the economic calculation, the border prices of $127.5/t for durum (for which the domestic equivalent at the OC purchase point is 13.11 D/ql), $112.5/t for bread wheat (domestic equivalent is 11.92 D/ql), and $85/t for barley (or 10.47 D/ql) were applied. In addition, all subsidies and/or taxes on domestic input costs were removed. This affects in particular the approximately 45-60% subsidies on fertilizers, the 20% subsidies on improved seed, and the 50% subsidies on herbicides and pesticides.

Given the input subsidies and the low international benchmark prices used in this base case scenario, the protection coefficients are all at or greater than 1.00. The durum wheat price is protected by 14% from the international market, while the nominal protection rate for bread wheat is estimated at 25%. Barley's NNPC/o is 0.98, indicating a neutral nominal protection rate. When input subsidies are considered as well (NNPC/i's range from 0.7 to 0.92, indicating positive 8 to 30% overall input price protection, lowest for the Center-South production systems, and highest for the large farms which use the most fertilizer), the effective rates of protection rise to 30-80% for durum, 50-75% for bread wheat, and 0-15% for barley production.

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[4] Note that "profitability" is measured at the OC point of purchase, i.e. includes on-farm costs of production plus the cost of transport to the OC.

cereals in Tunisia have not always enjoyed positive nominal protection from world prices. As recently as the early 1980's, agricultural sector reviews noted that, on the contrary, Tunisian cereals farmers were being negatively protected by official producer prices. Table 3.9 on the following page indicates the evolution of the nominal protection coefficient over the last ten years. As international prices have continued to fall and domestic producer prices have begun to be increased significantly, the rate of nominal protection has become positive.[5]

Table 3.9: HISTORICAL NOMINAL PROTECTION COEFFICIENTS FOR CEREALS

		.....Durum Wheat.....			.....Bread Wheat.....			.....Barley.....		
Year	Exchange Rate (D/$)	Dom (D/mt)	Border ($/mt)	NPC	Dom (D/mt)	Border ($/mt)	NPC	Dom (D/mt)	Border ($/mt)	NPC
1975	.42	66	N/A		60	164.0	.83	45	N/A	
1976	.43	66	N/A		60	149.5	.89	45	N/A	
1977	.42	71	N/A		65	116.7	1.27	50	N/A	
1978	.41	76	N/A		70	113.3	1.44	55	N/A	
1979	.40	76	N/A		70	137.8	1.22	55	N/A	
1980	.42	86	266.4	.74	77	173.5	1.01	59	136	[illegible]
1981	.51	96	238.[illegible]	.75	87	181.0	.89	69	148	[illegible]
1982	.61	110	179.[illegible]	.95	100	172.6	.90	80	127	[illegible]
1983	.73	128	191.[illegible]	.87	117	158.4	.97	95	121	[illegible]
1984	.35	140	193.[illegible]	.81	140	153.3	1.02	100	133	.54
1985	.75	150	174.[illegible]	1.08	145	149.5	1.21	105	123	[illegible]
1986	.85	160	151.[illegible]	1.18	160	130.5	1.37	110	83	[illegible]

Sustained negative protection due to stagnant producer prices can result in stagnant production which, in a period of rising demand, can entail an increasingly heavy balance of payments burden as the nation must satisfy consumers by purchasing more grain from abroad. This clearly can drain financial resources over time, diverting them from other purposes.

However, the "opposite" problem, that of sustained positive protection due to the setting of domestic producer prices which are consistently in excess of equivalent border prices, can have the same result: a drain on official financial resources, as the national budget (via the Caisse Generale de Compensation) seeks to encourage producers, thus still diverting

[5] Note that the NNPCs presented in table 3.9 are calculated at the border, i.e. comparing domestic purchase prices with the international reference price at the Tunisian border. Including the economic cost of domestic port and transport charges would lower the NPCs somewhat.

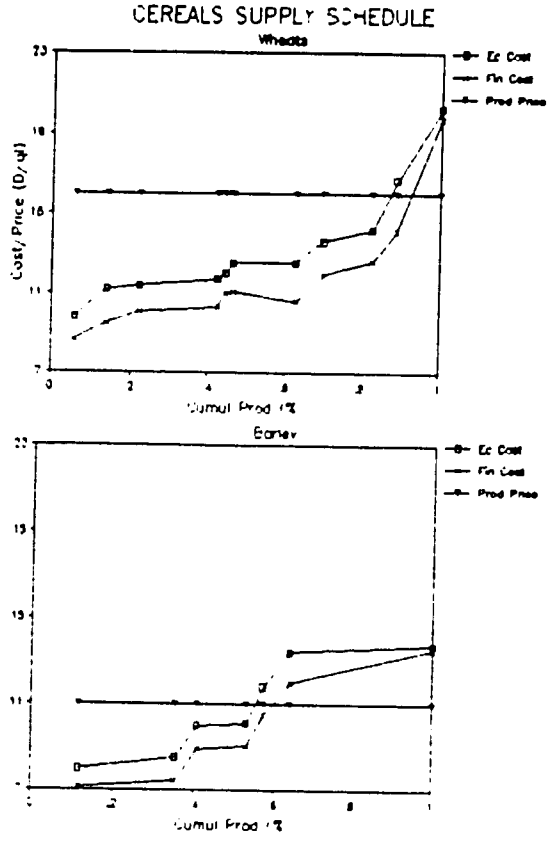
these financial resources from other purposes. In a "worst case' scenario, a domestic cereals pricing policy which sets a high official producer price referring to the CIF equivalent of international reference prices may induce such a producer response that Tunisia would actually become a net exporter of some cereals. In this case, the national treasury must compensate not only for the difference between CIF and the domestic producer price but for the difference between FOB and CIF as well.

Using table 3.10 below as a base, unit cost-prices and cumulative production figures can be compared and graphed in the form of supply curves as in figure 3.3 below. Cereals production systems are ranked in ascending order by their economic unit cost-prices. Cumulative production in percentage terms of the production systems is then plotted on the x-axis, with economic cost-price per quintal plotted on the y-axis. Two graphs are presented below, one for the two wheats and one for barley. Each graph depicts two upward sloping curves, representing economic (the higher of the two) and financial (the lower of the two) cost curves, and one horizontal schedule, representing the financial price to the producer (i.e. D/ql for wheats and 11 D/ql for barley).

Table 3.10: PERCENTAGE OF CEREALS OUTPUT BY REGION AND FARM SIZE

Commodity	Region	Farm Size	SRC	Yield (qx/ha)	Area (ha)	Prod (qx)	Cumul Prod (qx)	Cumul Prod (%)
Durum	SA	Small	.75	10	78.9	789.0	789.0	9.7%
Wheat	SA	Large	.77	14	142.7	1997.8	2786.8	34.3%
	HSH	Large	.86	22	73.2	1610.4	4397.2	54.1%
	SA	Medium	.91	11	68.1	749.1	5146.3	63.4%
	HSH	Small	1.07	15	83.1	1246.5	6392.8	78.7%
	HSH	Medium	1.56	16	38	608.0	7000.8	86.2%
	CS	All	1.91	3.5	320	1120.0	8120.8	100.0%
Bread	SA	Large	.57	19	31.3	594.7	594.7	32.8%
Wheat	HSH	Large	.83	27	30.9	834.3	1429.0	78.7%
	HSH	Medium	.94	22	9.3	204.6	1633.6	90.0%
	SA	Medium	1.02	13	14	182.0	1815.6	100.0%
Barley	SA	Medium	.61	12	36.8	441.6	441.6	11.3%
	SA	Large	.66	14	66.7	933.8	1375.4	35.2%
	HSH	Large	.36	16	13.2	211.2	1586.6	40.6%
	SA	Small	.88	10	48.2	482.0	2068.6	52.9%
	HSH	Medium	1.15	13	12.7	165.1	2233.7	57.1%
	HSH	Small	1.45	11	24.3	267.3	2501.0	64.0%
	CS	All	1.39	4	352	1408.0	3909.0	100.0%

Figure 3.3: CEREALS SUPPLY CURVES



At 18 D/ql, the economic cost of production of 85% of all wheat producers is covered. To insure positive profitability for the remaining 15% of wheat producers would require a producer price of 20 D/ql, or over 5[illegible]% protection above the border price equivalent for durum and 67% above the border price equivalent for bread wheat. At 11 D/ql, only about 55% of all barley producers cover their unit economic costs of production. A positive protection level of 15% above the border price equivalent, or a producer price of 12 D/ql would still cover less than sixty percent. Comparable coverage (85%) would require a barley producer price of over 13 D/ql, or positive protection on the order of 25%.

Sensitivity Analyses. The results of the base case analysis are quite sensitive to changes in certain key parameters. When "normal" yields of the northern region production systems are decreased to 70% of their base case levels, unit costs and protection and comparative advantage indicators rise.

Table 3.11: YIELD SENSITIVITY ANALYSIS IN CEREALS PRODUCTION

Commodity	Region	Farm Size	Yield (qx/ha)	Finan Cost/ql grain (D/ql)	Finan Prf/ql grain (D/ql)	Econ Cost/ql grain (D/ql)	Econ Prf/ql grain (D/ql)	NEPC	DRC
Durum wheat	Humid-Sub-Humid	Large	15.4	15.[illegible]4	.86	17.93	-4.55	1.88	1.96
		Medium	11.2	20.[illegible]	-4.25	23.88	-10.66	3.54	5.82
		Small	10.5	18.[illegible]	-2.08	20.32	-6.88	1.68	2.22
	Semi-Arid	Large	9.8	14.[illegible]	1.27	16.72	-3.27	1.61	1.53
		Medium	7.7	17.[illegible]	-1.01	18.39	-4.94	1.56	1.84
		Small	7.0	14.[illegible]	1.64	16.27	-2.72	1.48	1.37
Bread wheat	Humid-Sub-Humid	Large	18.9	13.[illegible]	2.52	15.93	-3.76	2.25	1.82
		Medium	15.4	14.[illegible]	1.44	17.13	-4.98	2.38	2.17
	Semi-Arid	Large	13.3	12.[illegible]	3.64	14.00	-1.72	1.76	1.27
		Medium	9.1	15.[illegible]	.17	17.93	-5.76	2.10	2.24
Barley	Humid-Sub-Humid	Large	11.2	12.[illegible]	-1.74	14.29	-3.58	1.23	1.73
		Medium	9.1	14.[illegible]	-4.00	16.87	-6.22	1.35	2.59
		Small	7.7	17.[illegible]	-6.13	19.15	-8.54	1.40	3.51
	Semi-Arid	Large	9.8	10.[illegible]	.36	12.19	-1.45	1.20	1.26
		Medium	8.4	10.[illegible]	.74	11.41	-.60	1.11	1.08
		Small	7.0	12.[illegible]	-1.93	14.43	-3.71	1.21	1.73

Other sensitivity analyses done on the cereals data focused on various pricing scenario changes. In table [illegible].12 on page 46, four scenarios are presented. In the first, the international reference price is set at a projected 1990 price in constant 1987 dollars.* FOB prices are projected to rise to $190/mt for durum, $165/mt for bread wheat, and $100/mt for barley. Such strong increases in the economic price increase the international values-added for both the protection and the comparative advantage

* Source for the projected bread wheat price (with adjustments made to approximate durum and barley prices) is World Bank commodity department projections, EPDCS, February 10, 1987. An analysis prepared by AIRD for the Government of Morocco in 1985 suggested that bread wheat projections by the World Bank/EPDCS have tended to overestimate real prices in time (t+3) by anywhere from 30-60% between 1975 and 1982. See AIRD consultant report to the Ministry of Agriculture and Agrarian Reform, Government of Morocco, La Politique de Prix et d'Incitations dans le Secteur Agricole, Annexe B, "Note sur les prévisions des prix internationaux du blé tendre," pp. 213-215.

indicators, and therefore lower all three values. Nominal protection, comparing 1985-86 domestic producer prices with projected international price levels, is now on the order of -10 to -20 percent, with effective protection somewhat higher, though still negative for all production systems but those of bread wheat in the humid/semi-humid northern regions. Comparative advantage indicators are well below 1.00 for almost all commodities and systems, indicating that at these higher reference prices Tunisia has a definite edge in domestic production.

The second scenario simulates a partial effect of the agricultural sector adjustment program currently underway. The current 45-65% subsidy to farmers of the cost of fertilizers is removed in this scenario.[7] Unlike in the adjustment program, however, which phases the removal of input subsidies over three years, the subsidy removal is simulated as a one-shot change here. While financial profitability to farmers clearly suffers, the effect is not as negative as might have been anticipated. Per quintal returns are anywhere from 13-50% (durum) to 8-15% (bread wheat) to 13-100% (barley) <u>less</u> than in the 1985-86 base case scenario. Only one additional production system actually goes to negative financial profitability. Effective protection rates are just below their 1985-86 levels.

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[7] Under the sector adjustment program, subsidies of herbicides/pesticides and improved seeds are to be phased out as well. However, their utilization according to the crop budgets used here is limited, and thus the input pricing sensitivity analyses here focus on fertilizer pricing.

Table 3.12: PRICING SENSITIVITY ANALYSES IN CEREALS PRODUCTION

			(1)			(2)		(3)			(4)	
			World Price ....1990 (a)...			Elimination of subsidies on fertilizers (b)		Column (2) plus increase in producer prices (c)			Increase in world price and producer prices, elimination of fertilizer subsidies (d)	
Commodity	Region	Farm Size	NNPC/o	NEPC	DRC	NFP	NEPC	NFP	NNPC/o	NEPC	NNPC/o	NEPC
Durum Wheat	Humid-Sub-Humid	Large	.81	.87	.49	4.68	1.47	7.18	1.22	1.81	.94	1.03
		Medium	.81	.90	.79	.94	1.69	3.44	1.22	2.12	.94	1.07
		Small	.81	.83	.63	2.44	1.33	4.94	1.22	1.63	.94	.97
	Semi-Arid	Large	.81	.83	.46	4.91	1.31	8.19	1.22	1.58	.94	.97
		Medium	.81	.83	.58	3.11	1.34	5.61	1.22	1.69	.94	.98
		Small	.81	.83	.47	5.19	1.28	7.69	1.22	1.55	.94	.97
	Center-South	All	.81	.78	1.08	no change		-1.29	1.22	1.71	.94	.97
Bread Wheat	Humid-Sub-Humid	Large	.91	1.02	.49	5.95	1.66	6.95	1.22	1.80	.97	1.08
		Medium	.91	1.03	.56	5.16	1.68	6.16	1.22	1.83	.97	1.08
	Semi-Arid	Large	.91	.96	.43	6.77	1.48	7.77	1.22	1.60	.97	1.01
		Medium	.91	.98	.61	4.16	1.57	5.16	1.22	1.71	.97	1.02
Barley	Humid-Sub-Humid	Large	.88	.86	1.17	1.40	1.04	2.40	1.37	1.19	.95	.99
		Medium	.88	.92	.72	-.33	1.05	.67	1.37	1.22	.95	1.00
		Small	.88	.94	.94	-1.98	1.03	-.98	1.37	1.20	.95	.97
	Semi-Arid	Large	.88	.93	1.17	2.77	1.03	3.77	1.37	1.17	.95	.99
		Medium	.88	.92	.55	3.31	1.02	4.31	1.37	1.15	.95	.98
		Small	.88	.90	.52	1.34	1.04	2.34	1.37	1.19	.95	.99
	Center-South	All	.88	.91	.73	no change		-1.53	1.37	1.15	.95	.97

(a) Projected price 1990, 1987 dollars:
Durum = $190/mt
Bread Wheat = $165/mt
Barley = $100/mt

(b) Super 45% = 13.4 D/ql
Amm.Nitr. = 11.0 D/ql

(c) Durum = 18.5 D/ql
Bread Wheat = 17.0 D/ql
Barley = 12.0 D/ql

(d) NFP as in column (3)
DRC as in column (1)

However, the removal of input subsidies is only one side of the sector price policy reform package. The Tunisian government is raising producer prices 1) to reflect international reference prices and 2) to incorporate a 15% minimum tariff on imports. In 1987 the official purchase prices for cereals are 18.5 D/ql for durum, 17 D/ql for bread wheat, and 12 D/ql for barley. When the higher producer prices are combined with the removal of

fertilizer subsidies in scenario #3, the effect of the former more than compensates the effect of the latter. Financial profitability per unit output and protection rates are greater than in the base case scenario.

Finally, scenario #4 combines the effect of all three previous scenarios. Domestic fertilizer prices to farmers are raised, the official purchase price is raised as well, and the international benchmark price is increased to its projected 1990 levels. The effect is felt on protection rates only, which are now in between the two extremes of the base case scenario and sensitivity scenario #3. Profitability is at the same level as in scenario #3 and DRCs are at the same level as in scenario #1.

Livestock products[a]

The livestock sector in Tunisia contributes about 30% of gross agricultural value of production, of which mutton production (34% of livestock value), poultry and eggs production (25%), beef production (23%), and milk production (18%) are the most important activities. Whereas beef and mutton production have been declining over the last fifteen years, that of poultry and eggs has more than doubled in value since 1971. It is estimated that eighty percent of all agriculturalists are engaged in some form of stockraising, either of cattle or of sheep, each of which provides about 50% of total red meat supply. Production is concentrated on small farms or in pastoral zones, where structural forage deficits predominate. Medium-sized and large farms raise fewer animals per hectare, and too cultivate forage crops as well as have access to animal feed concentrates.

Domestic production accounts now for about three-quarters of total domestic availability of beef, and close to or all of total domestic availability of mutton and poultry (see table 3.13 below). Imports are most important for satisfying domestic consumption demand for milk, satisfying over half of total domestic supply. Imports of red meat and milk powder have been increasing in recent years as demand grows more rapidly than output.

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[a] The authors gratefully acknowledge the contribution made by M. Moussa Maaref of the Institut d'Economie Quantitative in this section.

Table 3.13: TOTAL DOMESTIC AVAILABILITY OF LIVESTOCK PRODUCTS

	DOMESTIC PRODUCTION						IMPORTS		
	Slaughtered meat			Milk		Eggs	Meat		Milk
	Beef	Mutton	Poultry	Cow	Other		Beef	Mutton	
Year	('000 t)			('000 t)		(10**6)	('000 t)		('000 t)
1975	37.4	37.0	18.2	204.9	38.6	320	1.7	.2	186.7
1976	40.0	39.4	20.9	221.5	36.1	376	2.7	1.7	216.6
1977	44.6	38.5	24.8	240.4	38.6	490	3.1	0	302.0
1978	39.6	32.4	29.0	240.5	35.1	510	3.3	.7	178.2
1979	33.0	31.7	34.5	190.5	31.4	680	3.6	.6	358.5
1980	33.6	37.5	41.5	211.5	33.2	726	3.6	.7	334.8
1981	34.2	33.5	40.0	236.7	28.0	777	9.8	.1	400.3
1982	32.7	34.3	50.3	212.7	32.0	832	4.7	.7	268.9
1983	31.4	37.7	37.5	245.3	32.0	940	8.6	.5	323.9
1984	33.6	38.5	40.5			970	25.5	1.2	492.2
1985	36.0	43.6	41.6			1032	11.5	1.1	418.0
1986	41.4	42.2	42.9			995			

	TOTAL AVAILABILITY							
	Slaughtered meat				Milk			Eggs
	Beef	Mutton	Poultry	TOT	Cow	Other	TOT	
Year	('000 t)				('000 t)			(10**6)
1975	39.1	37.2	18.2	94.5	391.6	38.6	430.2	320.0
1976	42.7	41.1	20.9	104.7	438.5	36.1	474.6	376.0
1977	47.7	38.5	24.8	111.0	542.4	38.6	581.0	490.0
1978	42.9	33.1	29.0	105.0	419.1	35.1	454.2	510.0
1979	36.6	32.3	34.5	103.4	549.1	31.4	580.5	680.0
1980	37.2	38.2	41.5	116.9	546.6	33.2	579.8	726.0
1981	44.0	33.6	40.0	117.6	636.3	28.0	664.3	777.0
1982	37.4	35.0	50.3	122.7	480.9	32.0	512.9	832.0
1983	40.0	36.2	37.5	115.7	568.9	32.0	600.9	940.0
1984	59.1	39.7	40.5	139.3				970.0
1985	47.5	44.7	41.6	133.8				1032.0

Source: Ministry of Agriculture

Responsibility for oversight of the sector is shared by the Livestock Production Directorate in the Ministry of Agricultural Production and Agro-Industry and the Livestock and Forage Development Authority. The former regulates 1) veterinary services, 2) international trade in animals and animal products, 3) sanitary control of municipal slaughterhouses, and 4) animal health and production extension services. The latter implements national livestock development projects such as artificial insemination, natural breeding, and beef and poultry production.

Knowledge of the sector from systematic data collection is limited. What is known about the livestock sector is concentrated in the formal, intensive production systems. Modern livestocking tends to be concentrated in urban areas, alienated from other agricultural activity. Much of this is concentrated in production cooperatives (UCPs), agro-combinats (of which there are 30), and state farms (of which there are 13). These are the most important suppliers of meat to the "official" beef market, to be described below.

Very little is known about the traditional sector, which is usually more integrated into mixed farming operations.[9] The analysis of beef and meat production costs which is presented in this study thus focuses solely on the intensive sector. As knowledge of other systems improves, they can be examined using the same analytical format.

Policies concerning the degree of public intervention in the sector are in a state of transition. Previously, the government dominated most aspects of the production and consumption sides of both meat and milk markets via the regulation of producer and consumer prices, with the Caisse Génerale de Compensation (CGC) intervening to make up for the differences between a high producer price and a subsidized consumer price. The government also intervenes via the fixing of animal feed mix raw materials prices and the regulation of meat and milk powder imports. Today, the degree of producer and consumer pricing intervention is being reduced, the CGC no longer plays a role in maintaining price differentials, and private actors are increasingly allowed to determine the quantities and prices at which outputs are sold. Animal feed pricing (particularly via the pricing of the imported raw materials) is still regulated.

Meat production. Since 1979, the ovine/caprine meat market has been entirely liberalized. It is consequently not "surveyed" by government agencies, and the lack of available data on production costs and processing margins meant that it could not be included for analysis in this study. The rest of this discussion, therefore, will focus on beef production.

The market for beef production and distribution to consumers is disaggregated between an "organized" sector in which the Société Ellouhoum dominates and an informal sector (see figure 3.4). In the former, the government still intervenes via the setting of prices and quantities on the domestic and import markets, whereas the latter is unrestricted. However, the latter can be influenced by the degree of intervention in the former, depending on how large a share of the total market Ellouhoum manages to capture.

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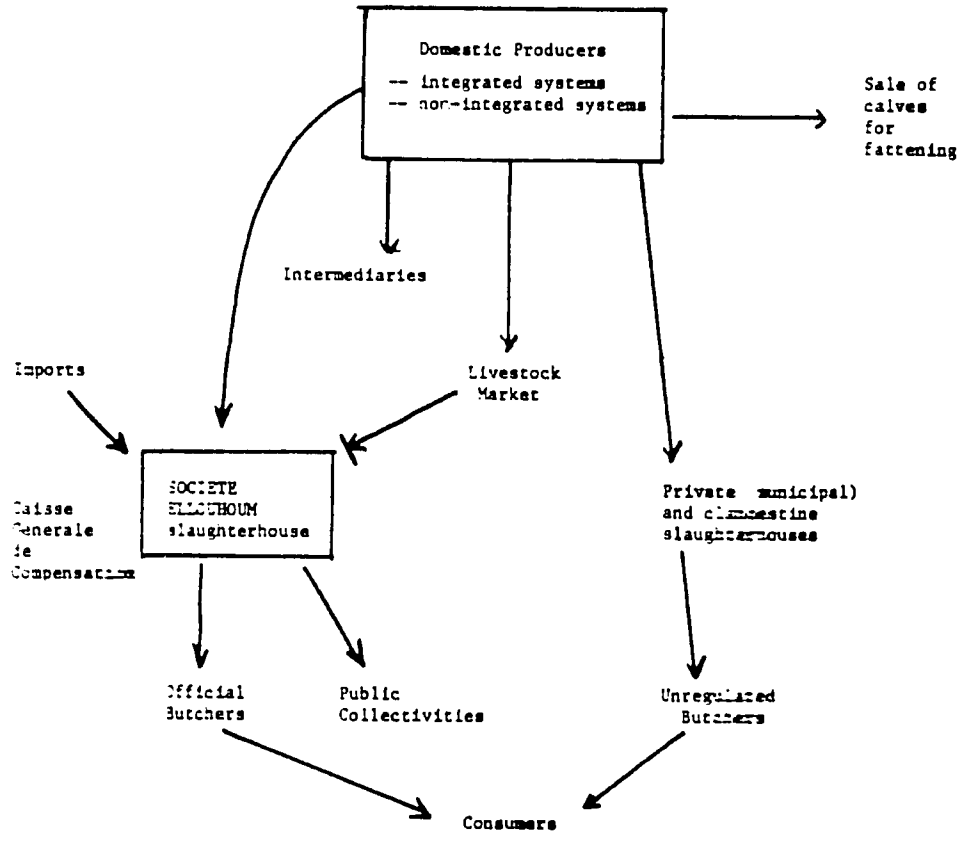
[9] It is expected that through the recently initiated Plan Fourragère and the Projet Régional de l Aménagement du Zone Pastorale (FAO-financed) a more representative cross-section of production systems data will be gathered.

Figure 3.4: BEEF SUB-SECTOR FLOWCHART



Theoretically, Ellouhoum is supposed to operate in all parts of the country. However, its slaughtering and cold storage capacities are concentrated in and around Tunis. Ellouhoum handles about 16,000 tons of red meat annually, representing about 15-20% of total domestic red meat supply. Of this, about half comes from imports (50% live; 40% fresh, refrigerated; and 10% frozen), and the rest is procured locally, mostly through contract sales with the UCPs, agro-combinats, and state farms. Ellouhoum is also allowed to procure from the local markets through which transit all privately owned livestock. However, the price at which Ellouhoum can buy from either the state agents or the local market is fixed by government. Recently that price has been set at 2.3 D/kg meat, whereas the equivalent market price was fluctuating between 2.5 and 3.0 D/kg. Clearly, Ellouhoum could not attract sellers on the open market, and the contract sales made by the collectives and state farms to Société Ellouhoum were made at a loss to the sellers.

Ellouhoum sells 50% of its beef to the collective sector (schools, hospitals, hotels) and the rest to registered butchers who are obliged to sell at fixed prices to consumers. Whereas Ellouhoum buys domestically at 2.3 D/kg, it sells at 2.0 D/kg. Registered butchers with access to Ellouhoum's sales at 2.0 D/kg sell to consumers at 2.8 (bone in) and 3.2 (bone out) D/kg, while beef bought by consumers from unregulated butchers costs about 3.5 D/kg. Quality differences between the two are said to compensate for the higher price.

The difference between Ellouhoum's purchase price of 2.3 and its selling price of 2.0 D/kg used to be picked up by the CGC. Now, however, the CGC no longer plays a role in meat price supports and Ellouhoum must cross-subsidize its domestic operation losses with profits made on imports (for which Ellouhoum pays 1.5-1.8 D/kg). The system can work when imports are allowed in as necessary. However, excessive delays on import licensing approvals can constrain Ellouhoum's ability to manage the system, and can result in meat shortages which raise domestic prices and cause excessive drawing down of domestic herds, as domestic price increases encourage slaughtering at higher than usual rates.

Animal feeds. Tunisia's Office des Céréales imports maize, soybean meal, and mineral and vitamin supplements to supply the animal feed industry. Feed mix companies purchase maize, soybean meal, barley,[10] and supplements from the Office des Céréales to mix in varying proportions into eight feed mix concentrates (four for the poultry subsector, three for beef/cow consumption, and one for ovine consumption). The prices at which the cereals are sold to feed mix companies are fixed by government. Until recently, the level of these input costs implied a subsidy to aviculturalists and herders.[11] However, with the recent decline in international grain and oilseed cake prices, the fixed domestic prices of these materials no longer translates into a subsidy on feed mixes, but rather a tax of about 18%, due to the fact that the prix revient de rétrocession at which the Office sells the grains is actually higher than the equivalent CIF price adjusted for tariffs and duties.

Calculation of the total economic cost of animal feed mixes was approximated for this study. However, the feed mix sector in general is reported to be operating at only about 20-30% capacity. A more complete

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[10] Barley is occasionally imported by the OC to supplement domestic supplies.

[11] As aviculture is highly dependent on the maize/soybean meal mixes (65% of the cost of a kilogram of poultry meat represents feed costs), it benefitted the most from feed mix subsidies, which could help to explain the industry's rapid growth in the last fifteen years. DRCs for these activities are presumably quite high, given the high tradable component of total production costs.

assessment of costs must incorporate overhead costs, adjusted per unit output according to capacity use rate. Presumably, this would greatly increase the economic cost of these inputs.

With such adjustments made, it will be important to compare the economic cost not per unit output but per forage unit equivalent (where one forage unit is equivalent to one kilogram of barley, the benchmark against which all other feeds are measured). It has long been assumed that domestically produced forage crops must be less costly than feed mixes produced largely from imported materials. However, as fertilizer and irrigation cost subsidies are being phased out, these comparisons should be made again. Without taking into account feed company operating costs and capacity use rates, current estimates suggest that with decreasing international prices imported grains turned into concentrates are a cheaper alternative. The analysis is incomplete, though, and no conclusion can yet be presented.

Base case and sensitivity analyses. With this caveat in mind, the following are preliminary estimates of profitability, protection, and comparative advantage in Tunisian intensive beef production. Production systems are distinguished by their relative degree of "integration" with other agricultural activities, i.e. the degree of reliance on purchased animal feed concentrates as opposed to the on-farm production of forage crops or the use of agricultural residues as feeds. This distinction is not clear-cut, but rather can be represented as a continuum along which producers differ to greater and lesser degrees. Table 3.14 presents the feed composition assumptions used in each model.

Table 3.14: FEED MIX COMPOSITIONS (kg/animal)

System	Straw	Hay	Silage	Concentrate
Integrated:				
Local	432.5		4671	346
Pure	432.5	75	5190	519
Non-integrated:				
Local	432.5	1384		519
Pure	432.5	1730		692

The second distinction made was according to breed stock. Pure, imported breeds are assumed to be more productive (430 kg live weight per animal) that local breeds (327 kg live weight per animal).

Table 3.15: ECONOMIC INDICATORS: BASE CASE SCENARIOS IN BEEF PRODUCTION

Production System	Yield (kg/anim)	Finan Cost/kg meat (D/kg)	Finan Profit/ kg meat (ml/kg)	Econ Cost/kg meat (D/kg)	Econ Profit/ kg meat (ml/kg)	NNPC/D	NEPC	DRC
Integrated:								
Local breedstock	327	2.508	285	2.348	-176	1.19	1.98	1.42
Pure breedstock	430	2.582	207	2.387	-222	1.19	2.27	1.75
Non-integrated:								
Local breedstock	327	2.785	15	2.633	-474	1.19	2.97	3.37
Pure breedstock	430	2.824	-29	2.648	-495	1.19	4.54	5.65

As seen in table 3.15, the most important distinction is not yields (local vs. pure breedstock) but is rather the composition of feed inputs in the production system. Financial profitability is positive for integrated activities, and borderline for non-integrated systems. In economic terms, profitability is negative, due primarily to the lower reference price used to value output. The integrated systems, with lower utilization rates of concentrates in favor of silage, indicate DRCs of 1.4 to 1.75. It is the non-integrated systems, more dependent on purchased animal feeds, which make even less efficient use of domestic resources with DRCs of 3.37 to 5.65.

While the nominal effective protection rate, measured at the slaughterhouse exit, is 19%, effective protection rates are quite high, varying from 100 to 127% in the integrated systems and from 200 to 350% in the non-integrated systems. These rates, reflecting the combination of protection on output as well as on input prices, are extremely sensitive to changes in the domestic output price. The domestic output price is assumed to be 2.75 D/kg meat in the base case scenario. When that price is reduced to 2.25 D/kg in order to achieve an NPC of 1.0, effective protection coefficients are reduced to 0.92 (integrated - local), 0.81 (integrated - pure), 1.50 (non-integrated - local), and 0.xx non-integrated - pure).

Milk production. In addition to beef production systems, two milk production systems were also included for analysis in this study. Due to time constraints, no analyse de filière was accomplished. However, the base case profitability, protection, and comparative advantage indicators are presented here for comparison with beef figures. Similar assumptions about differences in animal feed rations were incorporated here; however, the analysis assumes that only purebred cows are involved in production. Interpretation of milk economic indicators mirrors that of the beef economic indicators.

Table 3.1a: ECONOMIC INDICATORS: BASE CASE SCENARIOS IN MILK PRODUCTION

Production System	Yield (l/anim)	Finan Cost/l milk (ml/l)	Finan Profit /l milk (ml/l)	Econ Cost/l milk (ml/l)	Econ Profit /l milk (ml/l)	NNPC/o	NEPC	SRC
Integrated:								
Pure Breedstock	3400	219	38	223	-18	1.20	1.50	1.20
Non-integrated:								
Pure Breedstock	3400	275	-46	313	-10	1.20	1.99	2.97

Section 4: Export Commodities:

Profitability, Protection, and Comparative Advantage

Following section 3's discussion of the economics of agricultural import-substitution commodities, this section presents profitability, protection, and comparative advantage indicators for Tunisia's three most important export commodities: olive oil, dates, and maltese oranges. Potatoes are discussed in this section as well.[1]

Agricultural commodities have contributed 12% on average between 1975 and 1985 to Tunisia's total export profile. Olive oil has been by far the most valuable agricultural export commodity, contributing 45% of total agricultural export value (see table 4.1 on the following page), with dates (9%) and citrus (5%) lagging behind. Of rapidly increasing importance in recent years are fish and fish product exports, which have contributed 20-30% to total agricultural export value in the last few years.

The agricultural balance of trade, however, remains in deficit. Exports covered 55% of agricultural import value from 1975-1979, and still have only covered 62% from 1980-1985. The recent devaluation of the dinar should induce a change in this pattern, as exports become cheaper abroad in foreign currency terms and imports more expensive domestically.[2] There remains, however, a problem of export market penetration. The traditional market for Tunisian exports has been the European Economic Community, given its proximity and history of commercial relations with the Maghreb. EEC member countries have bought nearly 70% of Tunisian olive oil exports (of which 50% has been bought by Italy, the rest by France), [illegible] of Tunisian citrus exports (mostly France), and 75% of dates exports again, mostly France) of late.

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[1] It is recognized that Tunisia is an occasional importer of potatoes. However, evaluation of potatoes as an export commodity applies the FOB international reference price, instead of CIF. Using the lower of the two benchmarks imposes more conservative assumptions. If potato cultivation in Tunisia is competitive measuring against the FOB price, it will also be when measured against the CIF equivalent.

[2] This will be true to the extent that buyers of Tunisian exports are price responsive rather than being obligated under quota arrangements to purchase from Tunisia. The latter is the case with the bulk of EEC agricultural imports of Tunisian goods.

Table 4.1: VALUE OF AGRICULTURAL EXPORTS (million D)

Year	Olive Oil		Dates		Citrus		Fish		Wine		Other		TOT	TOTAL EXPORTS	% AG/ TOT X
1977	31.0	48.9%	2.3	3.6%	1.4	2.2%	3.6	5.7%	6.9	10.9%	18.2	28.7%	63.4	345.6	18.3%
1978	36.3	55.5%	2.6	4.0%	1.8	2.8%	4.6	7.0%	4.6	7.0%	15.5	23.7%	65.4	338.3	19.3%
1979	25.9	45.2%	2.6	4.5%	4.2	7.3%	5.2	9.1%	2.2	3.8%	17.2	30.0%	57.3	398.2	14.4%
1980	36.5	52.5%	2.6	3.7%	6.5	9.4%	8.0	11.5%	4.1	5.9%	11.8	17.0%	69.5	468.4	14.8%
1981	45.8	51.2%	5.8	6.5%	2.7	3.0%	10.1	11.3%	2.4	2.7%	22.7	25.4%	89.5	726.7	12.3%
1982	22.7	36.9%	4.5	7.3%	3.8	6.2%	12.4	20.2%	3.0	4.9%	15.1	24.6%	61.5	904.8	6.8%
1983	50.1	45.2%	15.5	14.0%	4.9	4.4%	12.0	10.8%	3.9	3.5%	24.5	22.1%	110.9	1233.0	9.0%
1984	56.7	56.4%	8.7	8.7%	3.7	3.7%	15.6	15.5%	4.1	4.1%	11.7	11.6%	100.5	1169.3	8.6%
1985	26.3	30.7%	13.4	15.6%	5.4	6.3%	26.6	31.0%	3.0	3.5%	11.1	12.9%	85.8	1263.9	6.8%
1986	57.4	41.1%	18.3	13.1%	5.7	4.1%	26.1	18.7%	3.0	2.1%	29.3	21.0%	139.8	1399.1	10.0%
1987	42.8	32.5%	20.2	15.3%	10.3	7.8%	29.8	22.6%	5.5	4.2%	23.2	17.6%	131.8	1435.1	9.2%
AVE		45.1%		8.8%		5.2%		14.9%		4.8%		21.3%			11.8%

However, by 1990 this market will have raised its tariff borders in the face of much of what Tunisia has to offer. Alternative markets around the Mediterranean basin, in Eastern Europe, and in North America are currently being explored.[3] Subsidies are currently available to Tunisian exporters seeking to sell their produce to more distant markets.

Much of Tunisia's agricultural export basket is comprised of traditional Mediterranean commodities -- olive oil, dates, citrus, fish, wine -- for which Tunisia must compete with its neighbors for export markets. In a few of these markets, however, Tunisia cultivates unique varieties which command a premium on international markets. Deglet nour dates are highly prized. This, combined with the fact that quantities issuing from the world's traditional exporters of dates, Iran and Iraq, have dropped off, has led to a surge in Tunisian exports in the last few years. Maltese oranges, a blood orange variety, are particularly favored in France, though their perishability is said to make them less popular for delivery to more distant markets.

Government intervention in agricultural exports is mixed in Tunisia. In the case of citrus and potatoes, domestic and international marketing are virtually completely liberalized. The cultivation for export of dates is somewhat more regulated by the government. Here, deglet nour producer prices are set in negotiations between producers, packagers, and exporters, with the participation of the Groupement Interprofessionel des Dattes. At

[3] These issues of export promotion are being dealt with in more detail in a separately funded export promotion study undertaken this summer.

the other extreme, in the case of olive oil, one agency, the Office Nationale des Huiles, has monopoly control over all downstream aspects of olive oil pressing, packaging, distribution, and export. Producer prices are set nationally according to quality grades, and pressing margins are negotiated at the gouvernourat level. Each of these commodities will be discussed below in turn.

Methodology of Tree Crop Analysis

For the purpose of the calculation of profitability, protection, and comparative advantage indicators of tree crop commodities, a long-term analysis was done. This takes into account not only the annual costs of operating tree crop plantations, but the installation costs (planting labor, mechanization, chemical inputs) as well. The result is inclusion of the real costs of plantation depreciation, i.e. an estimate of what level of returns to the farmer are necessary to guarantee regeneration of plantations.

Omission of investment costs can bias the analysis. A short-run analysis may indicate that on an annual basis, with trees producing at their adult yield levels and with inputs of labor, mechanization and chemicals at a minimum, a particular tree crop activity is profitable. However, depending on the commodity, it may take two to ten years before the trees achieve their maximum output. In the meantime, capital has been tied up in the investment. To bring in a return during these early years, Tunisian farmers often cultivate an annual crop (horticultural products, such as potatoes, melons) or a different tree crop which yields earlier (pistachios, almonds, fruit trees), while awaiting returns from their olive, citrus, or date trees.

When plantation investment costs are valued in current dinars and yield profiles are taken into account, the long-run analysis, done for each tree crop commodity over a thirty-year period,[4] may indicate that even with intercropping it is no longer financially profitable to the farmer to consider renewal of such investments. The short-run analysis may still look attractive from the farmer's point of view. If this is the case, the rational farmer reaction is to continue to harvest at current levels of output, but to keep maintenance activity to a minimum and to avoid making

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[4] While recognizing that production may continue well beyond the thirty years, when the discounted net present value (NPV) (valeur actualisé net, or VAN) of expenditures made thirty years into the future is calculated, the equivalent value in year 0 terms is minimal. Using an economic discount rate of 11%, the discount factor in year 30 is 0.049, i.e. the net cash flow is reduced to 5% of its future value to achieve an equivalent in present value terms. Beyond thirty years, the discounted NPV becomes insignificant.

investments in new trees, in the regeneration of old trees, etc. The result is the continual aging of plantations, with declining productivity.

In extreme cases, even the short-run analysis may indicate borderline or negative financial profitability. In this case, the rational farmer reaction would be to abandon the plantation altogether in favor of replacement with more profitable activities.

All three cases can be found in the results which are presented below. Citrus and dates cultivation are both profitable activities from a long-run perspective.[5] This explains the interest of farmers in expanding production via new plantation investments. In the case of oil olive cultivation, however, the profitability analyses are less optimistic. None of the production systems analyzed here are profitable from a long-run perspective. However, in the North, where yields per hectare are highest, and in the Sfax region, where intercropping with almonds is practiced, short-run profitability is still positive. In the Sahel, however, where trees are oldest and therefore average yields are lowest, even short-run profitability is in jeopardy. This explains the cases which have been observed in which farmers are pulling up olive trees and replacing them with fruit and nut cultivation. The degree to which pricing and incentives policies supported by public intervention can reinstate positive profitability will be explored below.

Citrus

Tunisian citrus production encompasses a variety of oranges (maltese, sweet oranges, valencias), clementines, mandarines, and lemons, with maltese oranges comprising about 60% of total citrus production. Though they account for virtually all of citrus exports, only about 26% of total maltese orange production is exported.

There is said to be a growing domestic demand for fresh consumption[6] of other citrus products (sweet oranges, lemons) which is encouraging a diversification of plantings in citrus groves. Such an evolution in consumer behavior is normal in countries with rising consumer incomes. It may, however, lead to a competition for production resources between the export and increasingly lucrative domestic markets, and should be studied more carefully.

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[5] Though positive financial profitability for dates cultivation is sensitive to assumptions about the appropriate wage rate to use to value labor.

[6] A scant 1% of total citrus production is currently processed into juice, preserves. Lack of agro-industrial capacity is cited by the Groupement Interprofessionel des Agrumes et des Fruits as being the major constraint to development of this sub-sector.

Table 4.2: EVOLUTION OF CITRUS PRODUCTION AND EXPORTS

Year	...Production ('000 t)... Total Citrus	Maltese Oranges	%	..Exports ('000 t).. Total Citrus	Maltese Oranges	%	..% Exported.. Total Citrus	Maltese Oranges
1978	220.0	126.0	57.3%	N/A	N/A			
1979	183.0	107.0	58.5%	33.1	30.3	91.4%	18.1%	28.3%
1980	160.0	87.7	54.8%	31.1	30.3	97.5%	19.4%	34.5%
1981	220.0	136.0	61.8%	26.7	26.3	98.6%	12.1%	19.3%
1982	165.0	88.5	53.6%	18.1	18.1	99.6%	11.0%	20.4%
1983	138.0	76.7	55.6%	15.0	14.9	99.4%	11.8%	19.4%
1984	220.0	129.0	58.6%	31.7	31.4	99.2%	14.4%	24.4%
1985	196.0	122.0	62.2%	41.0	40.8	99.4%	20.9%	33.4%
1986	252.0	151.0	59.9%	45.0	44.5	98.9%	17.9%	29.5%
AVG			58.0%			98.0%		26.2%

The bulk of citrus is grown in the Cap Bon region of the country (75% of all citrus area planted lies in the Nabeul gouvernorat), the peninsula just south of Tunis. Sixty percent of groves cover less than 5 hectares. Citrus groves are irrigated by water from a combination of sources, including private wells and water bought from the Office de Mise en Valeur de Nabeul (the regional public irrigation agency), either via canal (cuvette) irrigation or (still experimentally, and being adopted by farmers more slowly than anticipated) via drip irrigation. The supply of water and availability of land on Cap Bon have been the two major constraints to expanded citrus production. The arrival of a new water supply with the opening in 1986 of a major canal bringing water in from the North has eased the water constraint somewhat, however.

Credit is available from a number of sources to help farmers install irrigation systems and dig wells. The Groupement Interprofessionel des Agrumes et des Fruits (GIAF) is responsible for extension with farmers (pruning and picking labor practices, in particular), for the organization of aerial phytosanitary spraying, and for the maintenance of quality control at packing plants. It also is involved in nursery production of tree seedlings and grafts. A tax of 2 D/ton is assessed on exports to cover GIAF's costs.

Fruit production is either sold in mid-season to traders, leaving them

to organize harvest labor,[7] or harvested by farmers and marketed by them. Citrus destined for export is brought to one of 19 exporters, who sorts fruit. Citrus growers are paid for their fruit according to the size and quality of their fruit, at prices determined by the exporters according to the Marseille market. Then, according to international standards, the fruit is quality controlled, sorted by size, sprayed, and has identifying labels ("Maltaise de Tunisie") attached. Oranges are packaged according to quality and variety. The capacity of these stations de conditionnement is on the order of 200,000 t/year, which is largely underutilized (12%).

Base case analysis. Two production systems for maltese oranges were considered in this study. Both are presumed to be Cap Bon systems practiced on farms of 3-5 hectares, distinguished according to the kind of irrigation system used. Mechanization is the primary traction source for both systems. Use of drip irrigation allows farmers both to economize on the amount of water used during the season (5000 m^3 instead of 7500m^3 under conventional cuvette irrigation) and to use it more efficiently (yields at maturity are assumed to be 28 t/ha using drip irrigation and 25 t/ha using regular irrigation,[8] both assuming a 6 by 6 spacing). It also requires less labor for irrigation applications than does cuvette irrigation.

A domestic price of 150 ml/kg was used to evaluate production, which was the average price paid to maltese orange producers during the 1988-89 season. The benchmark international price was 4000 FF/t, CIF in Marseille, from which deductions were made for French port charges, international freight costs, Tunisian border taxes and loading charges, and transport between Tunis and Cap Bon. The equivalent of the border price (economic price) at the packaging center gate is 293 ml/kg (see annex A for reference price calculations).

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[7] In this way, the citrus grower avoids having to hire in picking labor, which is said to be in short supply. This also avoids a cash flow crunch for the producer, leaving the trader to finance the final operation.

[8] Average yields in the sector, over all citrus varieties, have fluctuated between 11 and 20 t/ha.

Table 4.3: ECONOMIC INDICATORS: BASE CASE SCENARIOS IN MALTESE ORANGE PRODUCTION

Production System	Adult Yield (t/ha)	Finan Cost/kg fruit (ml/kg)	Finan Prf/kg fruit (ml/kg)	Econ Cost/kg fruit (ml/kg)	Econ Prf/kg fruit (ml/kg)	Value Add Econ/ Labor-day (D/jr)*	NNPC/o	NNPC/i	NEPC	DRC
Drip Irrigation	28	72	79	79	212	6.8	0.51	0.82	0.47	0.17
Canal Irrigation	25	127	24	140	144	4.7	0.51	0.82	0.42	0.35

* Calculation based on annual output per hectare and annual labor input per hectare, averaged over 30 years.

The DRCs indicate that drip irrigation makes twice as efficient use of domestic resources as does cultivation using regular irrigation. Due primarily to its economies in water use, rather than to the increase in yield. Protection is negative for citrus producers, both on output (-48%) and on value-added (-53 to -57%), implying overall taxation of producers.[9] Negative effective protection is entirely due to the effect of negative nominal protection; in fact, input prices are protected positively by 18% (NNPC/i equals 0.82). The level of taxation notwithstanding, citrus production is nevertheless an extremely profitable activity for growers and for the Tunisian economy, and is therefore to be encouraged.

Sensitivity analyses. The sensitivity of financial profitability with respect to changes in two key input subsidies was measured. In the first scenario, the 25% subsidy on irrigation water[10] was eliminated. As seen in table 4.4, this had virtually no effect on financial profitability or on the overall effective protection rate. The second scenario includes the complete elimination of fertilizer subsidies along with the elimination of irrigation water subsidies. The combined effect is to threaten positive financial profitability, particularly in the case of the lower yielding and more water-intensive canal irrigation system. In the third scenario, maximum yields achieved in the later years of production are but 81% of their base case levels; all pricing assumptions remain invariate. This

[9] All export commodities, unless expressly subsidized for export, will by definition experience negative NPCs. This is because to the price paid to the farmer must be added domestic transport, packaging, storage, shipping, and insurance costs. The real issue is how close to 1.00 the protection coefficients are.

[10] Calculated on the basis of 1982 studies carried out by the Centre National d'Etudes Agricoles (CNEA) for the Irrigation Management Improvement Project, funded by the World Bank. More recent financial and economic cost information, including a revised assessment of water costs on Cap Bon as a result of the inauguration of the "Eaux du Nord" irrigation project, was not available.

clearly has the greatest impact on both profitability and comparative advantage calculations, doubling DRCs.

Table 4.4: PRICING AND YIELD SENSITIVITY ANALYSES FOR MALTESE ORANGE PRODUCTION

	(1) Elimination of water subsidy			(2) Elimination of water and fertilizer subsidies			(3) Yield reductions					
Production System	Finan Cost/kg fruit (ml/kg)	Finan Prf/kg fruit (ml/kg)	NEPC	Finan Cost/kg fruit (ml/kg)	Finan Prf/kg fruit (ml/kg)	NEPC	Finan Cost/kg fruit (ml/kg)	Finan Prf/kg fruit (ml/kg)	Econ Cost/kg fruit (ml/kg)	Econ Prf/kg fruit (ml/kg)	NEPC	DRC
Drip Irrigation	77	74	0.46	93	58	0.44	129	23	141	177	0.42	0.34
Canal Irrigation	134	17	0.42	151	-1	0.39	187	-47	217	99	0.36	0.64

This study did not analyze the domestic citrus market, nor was it able to assess such historical data. Issues which remain to be analyzed in a systematic way include:

1. The difference between the price farmers receive for their export quality maltese oranges and the FOB and CIF prices. How have the margins between producer price and border price, and between FOB price and CIF price evolved over time? Is the farmer receiving the same share of the final price as he was before?

2. The difference between the price farmers receive for their export quality maltese oranges and the domestic wholesale market price they receive for that portion of their output which is not exported. How have domestic prices for maltese oranges evolved over time?

3. The difference in profitability between the cultivation of maltese oranges, other citrus, and other fruit trees. Is the overall level of domestic demand for fresh fruit and fruit products rising, and are tastes diversifying in favor of other products besides maltese oranges?

Potatoes

Considered a by-product during the early years of citrus grove development, potatoes are also grown under both dryland and irrigated conditions in pure stand in Tunisia. Different varieties produce in early, regular, and late season. Along with tomatoes, melons, and peppers, they

are one of Tunisia's most important horticultural crops. Depending on the season and the year, Tunisia is both an importer and an exporter of the commodity. In the analysis for this study, however, the more conservative assumption of potatoes as an export crop was applied, thereby measuring domestic production costs against the lower international benchmark, the FOB price. Were potatoes to be considered an import-substitution commodity, their production costs would be evaluated against the equivalent of the higher CIF price. Thus, if economic indicators prove favorable when calculated assuming the FOB price to be the reference, that favorableness will simply be enhanced under switched assumptions.

Base case analysis. In fact, potatoes are on average a financially attractive crop to produce. Three production systems were evaluated, corresponding to each of the seasons in which potatoes are produced. Yields varied from a low of 12 tons/ha for late season production, to 15 tons/ha for early season production, to 20 tons/ha for regular season production. The domestic price against which on-farm production costs were measured also varied, depending on the season, from 130 ml/kg for early season production, to 125 for regular season production, to 150 ml/kg for late season production. It is not known whether there are price differences between that which is paid for production to be marketed domestically and that which is paid for production destined for export. The reference against which all three systems was evaluated was a price of 2500 FF/ton in Marseille, corresponding to an FOB equivalent at farmgate of 130 ml/kg.

Table 4.5: ECONOMIC INDICATORS: BASE CASE SCENARIOS IN POTATOES PRODUCTION

Production System	Yield (t/ha)	Finan Cost/kg (ml/kg)	Finan Prf/kg (ml/kg)	Econ Cost/kg (ml/kg)	Econ Prf/kg (ml/kg)	Value Add Econ/ Labor-day (mils)	NNPC/o	NNPC/i	NEPC	DRC
Early season	12	135	15	144	133	26.227	.53	.89	.43	.39
Regular season	20	106	19	107	171	33.165	.45	.98	.32	.25
Late season	15	137	-7	144	132	25.213	.46	.89	.31	.36

Financial profitability is positive for two out of three systems: 15 ml/kg in the early season (or 180 D/ha) and 19 ml/kg during the regular season as higher yields per hectare result in lower per unit production costs (380 D/ha). Late season production is negative, at the assumed price of 130 ml/kg. However, improvements in potato cold storage facilities are being made (by the Office de Medjerda, for example) to permit farmers to hold on to their produce longer in the season until market prices rise.

Despite the labor intensity of potatoes production (100-120 labor days per hectare), economic returns to labor at 26 to 33 D/day exceed those under cereals cultivation. Economic profitability inclusive of domestic factor

costs is high, ranging from DRCs of .39 to .25. Yet effective protection is quite low (-57 to -69%), due particularly to low nominal protection.

Sensitivity analysis. One alternative input pricing scenario was tested whereby input subsidies on fertilizer and irrigation water were removed. Results show increases in financial production costs per kilogram of only 5-7 ml/kg:

Table 4.6: PRICING SENSITIVITY ANALYSES FOR POTATOES PRODUCTION

Production System	Finan Cost/kg (ml/kg)	Finan Prf/kg (ml/kg)	NNPC/i	NEPC
Early season	135	15	.95	.42
Regular season	106	19	1.05	.31
Late season	137	-7	.94	.29

Dates

The production of dates comes from the southernmost regions of the country, primarily from the gouvernourats of Tozeur and Kebili, from traditional oases and more modern, irrigated desert plantations run by the milk company SOTIL. It is estimated that as much as one-third of the date palms have aged beyond their most productive years. The traditional oases produce a higher percentage of the dattes communes output, while the modern plantations specialize in the production of dattes Deglet Nours. Total dates production is comprised about 50-50 of the two, although it is the latter which comprises the larger percentage of total dates exports (82% of total dates exports are deglet nours) from Tunisia. Still, the export of dattes communes has been increasing in recent times, probably as a result of the international market disturbances described earlier.

Table 4.7: EVOLUTION OF TUNISIAN DATES EXPORTS

	EXPORTS							
	Deglet Nour					Total	Of which	
	Conditionnées				Dattes	Tonnage	% Dattes	% Dattes
Season	> 1 kg	3-6 kg	Standard	Marchand	Communes	Exported	Deglet Nour	Communes
1974-75	521.0	489.0	332.3	1711.0	459.5	4012.8	88.5%	[illegible]
1975-76	589.5	675.0	787.7	2400.5	385.9	4838.6	92.0%	[illegible]
1976-77	827.8	1150.6	1274.1	3684.9	180.2	7117.6	97.5%	[illegible]
1977-78	771.7	1446.0	900.1	2545.6	208.9	5772.3	96.4%	[illegible]
1978-79	1187.6	1903.2	873.2	1603.4	494.4	6061.8	91.8%	[illegible]
1979-80	1327.6	2290.4	1441.4	2310.1	776.3	8145.8	90.5%	[illegible]
1980-81	2024.7	3380.6	2235.4	2244.3	2360.0	13245.0	82.2%	[illegible]
1981-82	3536.2	3097.1	2165.5	2712.9	1375.3	12887.0	89.3%	[illegible]
1982-83	2354.4	2311.7	1710.9	1204.5	1315.7	8897.2	85.2%	[illegible]
1983-84	3832.6	3659.2	2242.7	2418.2	2795.1	14947.8	81.3%	[illegible]
1984-85	3510.8	2563.7	1350.5	496.8	3016.0	11437.8	73.6%	[illegible]
1985-86 est	5675.5	3793.5	2929.4	1295.3	2806.4	16500.0	83.0%	[illegible]
Avg. 80-86	3489.0	3134.3	2255.7	1728.7	2279.1	12985.8	82.0%	[illegible]

Source: Groupement Interprofessionel des Dattes

The Groupement Interprofessionel des Dattes helps disseminate technical information and extends phytosanitary products, in particular for the protection of ripening date bunches (régimes). It also participates in the price-setting discussions with government, for there are official producer prices fixed for deglet nour date output. The Groupement is also an actor in export market exploration.

Table 4.8: EVOLUTION OF DATES PRICES (ml/kg)

Season	Floor producer prices		Ceiling wholesale prices		Average export price FOB Tunis (ml/kg)	
	Branchées	Marchand	Branchées	Marchand	D.Nour	D.Communes
1974-75	250	200	380	300	438	252
1975-76	280	230	400	320	446	251
1976-77	320	250	420	340	498	283
1977-78	340	270	440	360	501	301
1978-79	430	270	440	360	642	297
1979-80	360	280	440	360	681	320
1980-81	420	320	550	440	990	520
1981-82	485	385	610	500	950	540
1982-83	580	470	720	600	1245	570
1983-84	650	550	libre	libre	1150	575
1984-85	750	650	libre	libre	1380	705
1985-86	820	720	libre	libre	1650	800

Source: Groupement Interprofesionel des Dattes

As with citrus, dates are either sold "on the tree" or are picked by the producers and sold. A 1985 Ministry of Agriculture report on tree crop production[11] listed six different possible marketing combinations: 1) traders who work for the exporters, 2) traders who work for local wholesalers (who presumably either sell domestically or to exporters), 3) traders who are themselves wholesalers, 4) traders who are themselves exporters, 5) intermediaries who work for large traders, and 6) producers who harvest their own output and sell it directly to wholesalers and/or exporters.

Dates are harvested and then trucked into the central and northern regions of Tunisia to be processed and packaged in the same stations de conditionnement as are citrus, helping to exploit underutilization of capacity there. GID has disseminated information on five different international market grades and packaging standards for export produce. Despite the importance of dates an export crop for Tunisia, 75% of total dates production is marketed domestically, one-third alone to satisfy the Tunis market. A greater percentage of deglet nour production is exported, however -- as much as nearly 40%.

[11] Ministry of Agriculture, Evaluation Retrospective des Réalisations du 6ème Plan: Sous Comité de l'Arboriculture, December 1985.

Table 4.9: DATES PRODUCTION AND EXPORTS

Season	Tot Prod of DATES Qty ('000 t)	% EXP	Tot Prod of DEGLET NOURS Qty ('000 t)	% EXP	Tot Prod of D.COMMUNES Qty ('000 t)	% EXP
1976-77	50.0	14.2%	24.0	28.9%	26.0	.7%
1977-78	50.0	11.5%	25.0	22.3%	25.0	.8%
1978-79	52.0	11.7%	26.0	21.4%	26.0	1.9%
1979-80	46.0	17.7%	23.0	32.0%	23.0	3.4%
1980-81	53.0	25.0%	25.0	43.5%	28.0	8.4%
1981-82	50.0	25.8%	24.0	48.0%	26.0	5.3%
1982-83	45.0	19.8%	24.0	31.6%	21.0	6.3%
1983-84	60.0	24.9%	34.5	35.2%	25.5	11.0%
1984-85	46.0	24.9%	25.0	33.7%	21.0	14.4%
1985-86 est	60.0	27.5%	36.0	38.0%	24.0	11.7%
Avg. 80-86	52.3	24.6%	28.1	38.3%	24.3	9.5%

Source: Groupement Interprofessionel des Dattes

Base case analysis. Virtually no data are available on traditional cases dattes communes production costs. Therefore, this study confined itself to an analysis of deglet nour production costs on a typical STIL plantation. The domestic producer price applied in the analysis is 720 DA/kg.[12] which is paid at the entry to the station de conditionnement. Marseille is considered to be the international commercial center for dates trade, and thus the international reference price applied here is 17,350 FF/t CIF in Marseille, implying 1.2 D/kg back at the station de conditionnement.

[12] Representing an average of prices for deglet nour branché and deglet non-marchand.

Table 4.10: ECONOMIC INDICATORS: BASE CASE SCENARIOS IN DEGLET NOUR DATES PRODUCTION

Production System	Adult Yield (t/ha)	Finan Cost/kg fruit (ml/kg)	Finan Prf/kg fruit (ml/kg)	Econ Cost/kg fruit (ml/kg)	Econ Prf/kg fruit (ml/kg)	Value Add Econ/ Labor-day (D/jr)*	NNPC/o	NNPC/i	NEPC	DRC
Modern STIL plantation										
Long term analysis	7.2	739	-20	807	403	7.1	1.59	0.75	0.51	0.53
Short term analysis	7.2	248	472	232	995	35.6	1.59	0.93	0.56	0.14

* Expressed in equivalent per hectare. Calculation based on yields and annual labor input averaged over 30 years.

At the producer price of 720 ml/kg, dates production is marginally unprofitable financially (-20 ml/kg) when calculated under long-run assumptions. This is calculated assuming that all labor is paid at least the minimum agricultural wage of 2.756 per day. Labor costs represent 24% of total production costs per kilogram, and any decrease in the wage bill assumption would clearly raise this figure.

However, with much of the investment for modern dates plantations received from outside donors, it is possible that plantation managers ignore the future needs for capital renewal and only consider short-term operating costs when assessing profitability. The short-term analysis indicates that deglet nour dates cultivation is a financially profitable activity (472 ml/kg). This latter calculation is based on annual input application rates with date palms producing at their maximum 7.2 tons/ha, assuming that all output is exported. It should be remembered, however, that despite the fact that the original investment costs may have been considered a free good, plantation amortization costs must be included in financial calculations if capital is to be available at the end of its current service life for plantation renewal.

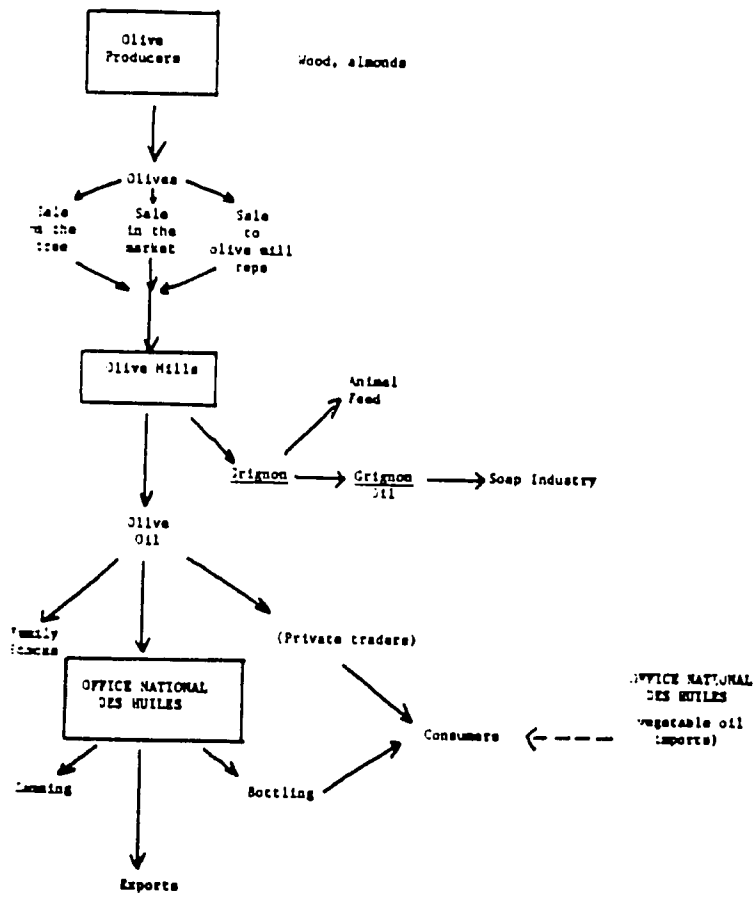
Economic profitability, on the other hand, is high given the large difference between financial and economic output prices. As for rates of protection, though producers are positively protected on input prices (NNPC/i = .75, implying 25% positive protection), the nominal protection rate of -41% results in an effective protection coefficient of 0.51. Production of deglet nour dates, however, makes an efficient use of domestic resources, with a DRC of 0.53.

Olive Oil

Oil olives have long been a staple in Tunisia's agricultural basket, and they are cultivated today throughout the country. Their cultivation was intensified during the French colonial occupation, and the Mediterranean European countries, in particular Italy and France, remain the largest

purchasers of Tunisian oil exports, using them for blends with their own oil. More limited export quantities have been shipped to other Arab states (primarily Libya), and small amounts to USSR and the United States. Recently, cultivation of table olives has been promoted in Tunisia (a total of about 3000 hectares has been planted to date), though these production costs are not considered here.

Figure 4.1: OLIVE OIL SUB-SECTOR FLOWCHART



Office National des Huiles. The edible oils sector in Tunisia is completely dominated by the Office National des Huiles (ONH) (see figure 4.1 above). On the production end, it is ONH which is responsible for annual production estimates, for extension to farmers of cultivation, pruning, tree regeneration, and plantation conversion techniques, and for the organization of aerial phytosanitary spraying. On the disposal end, the ONH has a legal monopoly on olive oil marketing (it manages to collect about 64% of total production, a figure which varies widely from year to year), both domestically and internationally, and as such, private oil mills only operate on behalf of the Office. The amount of olive oil which the farmer is allowed to retain for home consumption is officially mandated by the state as well. The ONH administers the official producer prices for olive oil, and controls domestic storage facilities. As for domestic edible oil consumption, ONH monopolizes the importation of raw soybean oil, which increasingly is serving as the primary supply of cooking oil to Tunisian consumers. Olive oil is occasionally blended with the vegetable oil, depending on the amount of oil available after the export campaign and the setting aside of domestic reserves.

Production. Olive yields per hectare are highest in the northern region of the country, where average per tree yield is about 10 tons of olives and the planting density is 100 trees per hectare. This is followed closely by per hectare yields in the Sfaxian region in the South, due to a high yield per tree (45 t/tree) rather than to the planting density (only 20 trees per hectare, due to low rainfall). Yields are lowest in the Sahelian (central coastal) area (20 t/tree * 20 trees/ha = 400 t/ha) and in the inland areas of the south (11.4 t/tree * 50 trees/ha = 570 t/ha). Some olive trees are intercropped with almond, pistachio, and other fruit trees.

Pruning and harvesting labor are in short demand, making these the most difficult (and expensive) operations for farmers to carry out. Again, olive harvests are often sold still on the tree to traders, who organize at their own expense the picking of the fruit.

There has been a slight decrease in olive oil production, and thus of exports, over the last fifteen years. This is evident when production fluctuations are smoothed out in five-year moving averages, as calculated below:[13]

[13] Olive trees produce in cycles, on average attaining a good harvest every one in two years.

Table 4.11: PRODUCTION AND DESTINATION OF OLIVE OIL EXPORTS ('000 T oil)

		Exports				FIVE-YEAR MOVING AVERAGE								
							Exports							EXPORTS
			Arab				EEC		Arab Nations		Other			AS %
Year*	Prod	EEC	Nations	Other	Total	Prod	Qty	% Tot	Qty	% Tot	Qty	% Tot	Total	OF PROD
1971	90.0	25.2	20.7	13.1	59.0									
1972	167.0	54.9	11.5	57.9	124.3									
1973	70.0	40.0	7.2	8.9	56.1	114.3	44.0	59.4%	10.7	14.4%	19.5	26.3%	74.1	64.5%
1974	130.0	64.8	4.7	11.0	80.5	132.3	51.4	67.2%	7.2	9.4%	17.9	23.4%	76.4	57.5%
1975	117.0	35.0	9.1	6.3	50.4	117.4	51.0	80.1%	5.4	8.4%	7.3	11.5%	63.6	54.2%
1976	180.0	62.1	3.3	5.3	70.7	129.4	52.6	78.6%	7.8	11.6%	6.6	9.8%	66.9	51.7%
1977	90.0	52.9	2.5	5.1	60.4	120.4	54.7	81.2%	7.4	11.0%	5.2	7.8%	67.4	56.0%
1978	130.0	47.9	19.2	5.2	72.3	114.3	55.4	82.7%	7.3	10.9%	4.3	6.4%	67.0	58.9%
1979	85.0	75.7	3.1	4.3	83.1	107.1	53.9	80.4%	9.5	14.2%	3.7	5.5%	67.1	62.6%
1980	95.0	38.6	8.3	1.8	48.6	106.1	49.3	73.2%	13.7	20.3%	4.4	6.5%	67.4	63.5%
1981	145.0	54.3	14.3	2.0	70.6	91.6	46.0	76.5%	10.5	17.4%	3.7	6.1%	60.1	65.6%
1982	85.0	30.1	23.5	8.6	62.1	105.6								
1983	58.0	31.2	3.2	1.7	36.1	99.5								
1984	155.0													
1985	56.5													

Source: BNDA, Opportunités de Financement dans le Secteur Oléicole en Tunisie, 3/87

* 1971 represents the 1970-71 season

Of great concern is the quality composition of olive oil being produced in and exported from Tunisia. Whereas in the early 1970s, nearly half of all olive oil produced was of the top quality grades (super, extra, and fine, each with levels of acidity of less than 1.5%), ten years later that proportion had declined to a little more than a third of total oil produced (see table 4.12 on the following page). The percentage of super-extra-fine in total exports is a good deal lower. Clearly, to maximize export revenues, it would be desirable to export as high a percentage of high quality oil as possible in order to capture the pricing premium. Lower grade oils are only used in blending or canning. The quality of oil produced is affected by a number of factors: timely harvesting, aerated packaging of olives during transit between farmgate and the oil mill, speedy pressing of olives, and airtight storage of oil after pressing. Delays and poor storage facilities lead to deterioration of quality.

Table 4.12: QUALITY COMPOSITION OF OLIVE OIL PRODUCTION ('000 t oil)

Year	Super-Extra-...Fine... Qty	%	...Super.. Qty	%	...Extra.. Qty	%	...Fine... Qty	%	Bouchable Qty	%	Lampante Qty	%	TOTAL
1971	46.0	51.1%							22.5	25.0%	21.5	23.9%	90.0
1972	94.0	56.3%							47.0	28.1%	26.0	15.6%	167.0
1973	31.2	44.6%							20.4	29.1%	18.4	26.3%	70.0
1974	54.0	41.5%							43.0	33.1%	33.0	25.4%	130.0
1975	43.5	37.2%							29.5	25.2%	44.0	37.6%	117.0
****													
1981	86.1	70.3%	31.6	25.8%	23.6	19.3%	30.9	25.2%	27.7	22.6%	8.6	7.0%	122.4
1982	24.3	43.1%	5.6	9.9%	7.7	13.7%	11.0	19.5%	24.2	42.9%	7.9	14.0%	56.4
1983	13.4	23.1%	3.3	5.7%	2.1	3.6%	8.0	13.8%	19.7	34.0%	24.9	42.9%	58.0
1984	40.3	26.0%	8.6	5.5%	11.3	7.3%	20.4	13.2%	56.0	36.1%	58.7	37.9%	155.0
1985	14.1	25.0%	4.5	8.0%	5.8	10.3%	3.8	6.7%	17.2	30.6%	25.1	44.4%	56.5

Pressing. Olives are pressed in 1170 trituration plants, ranging from the traditional maasras (76% of the total) to more modern operations with greater pressing capacity and higher oil-to-olives yields. Pressing capacity has historically been based in the South (today, 42% of total capacity), and it is said that plant owners will ship olives in from a great distance in order to increase capacity use rates (which is another factor which can diminish oil quality). Two important production parameters -- pressing yields (% oil per quantity olives) and the quality composition of oil -- vary from region to region. The greatest oil yields per quantity olives are in the South (22.5%), and the lowest in the North (17%). Yet the North, with its greater preponderance of modern screw press and continuous oil mills, has the highest percentage of high quality oil (65%, compared with 50% in the South, and only 15% in the Sahel).

Pricing. Producers are remunerated in terms of the quantity and quality of oil which their olives produce. This means that the official producer price, which is negotiated annually by the Ministry of Economic Affairs, the ONH, the processing sector, and the producers, implicitly covers not only costs of production at the farm but the costs of transport and pressing as well.

The producer price actually consists of two elements: 1) an advance, paid to the producer as soon as his olives are evaluated, which comprises the largest portion of the total price, and 2) a rebate (ristourne). The latter is paid to farmers after the final sales abroad have been finalized and ONH knows what the final revenue for the campaign will be. The rebate system has been an unpopular one on many accounts. It is difficult to

administer, and many producers are said not to benefit from it at all. It is likely that all kinds of negotiations between producers, intermediary traders, and oil mill operators take place to "bargain" the allocation of the rebate. ONH has been attempting over the last few years to remunerate producers more efficiently, and thus has shifted a greater percentage of the total payment to the advance paid directly upon delivery.

Table 4.13: EVOLUTION OF OLIVE OIL PRODUCER ADVANCES

Year	.....Price (mil/kg olive oil), by quality.... Super	Extra	Fine	Bouchable	Lampante	WTD AVG
1981	526	519	505	496	450	507
1982	576	568	553	551	500	549
1983	695	685	667	661	600	639
1984	794	783	762	772	700	745
1985	853	843	826	771	740	775
Acidity Range	<= 0.7%	<= 1%	<= 1.5%	<= 3%	3% +	

There is a separate price for grignons, the only part of the residue with any commercial value which remains after the pressing of the olives. The grignons can be re-pressed to obtain oil, which is used as one input into soap production. Alternatively, experiments with grignons are being run to see if they can be used as an animal feed supplement.

Base case and sensitivity analyses. The analysis of Tunisian olive production competitivity is complicated by the fact that oil olives are not an internationally traded commodity. Only their transformed product, olive oil, is. Unlike any of the other commodities considered in this study, this entails an analysis of agro-industrial costs in addition to on-farm production costs before any of the economic indicators can be calculated.

Very little published information exists on actual olive oil pressing costs. However, a study recently published by the Banque Nationale de

Développement Agricole[14] accumulated a good deal of representative data which was the source for the processing costs included here.

Five production systems were defined: the North (including both the northeast and the northwest), the Sahel, the South (inland, not including Sfax) in pure stand cultivation, the Sfax region in pure stand cultivation, and the Sfax region with olive and almond trees intercropped. Production costs were then combined with processing costs from traditional, super press and continuous oil mills, calculated according to several assumptions on oil mill capacity. All processing costs were calculated assuming 100% mill capacity use, though this is clearly a generous assumption. Fixed costs per unit of oil produced rise significantly when this rate is lower.

In all, twenty-six production/processing system combinations were analyzed in order to test the effect of processing economic cost variation on profitability, protection, and comparative advantage indicators. The official pressing margin of 19 D/ton oil was applied to financial production costs in all systems, but the actual economic cost-price varied widely depending on the kind of mill and capacity assumed. 19 D/ton represents an approximated estimate of cost for the classic mills, but is well above what it costs super press and continuous mills when operating at full capacity, and is therefore treated as an implicit tax (4 to 160%, depending on the system) on producers in this analysis.

The domestic producer prices applied in the analysis were 897 ml/kg oil for super-extra-fine qualities, 780 ml/kg oil for bouchable quality, and 750 ml/kg oil for lampante oil. These represent the "advance" payments only to producers.[15] As benchmarks, the following EEC CIF prices were applied: for super-extra-fine oil, 1423 ECU/ton of oil; for bouchable, 1232.6 ECU/ton; for lampante, 1183.7 ECU/ton.[16] These prices were weighted according to the following assumptions about distribution of oil qualities in each production system:

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[14] ENDA, Opportunités de Financement dans le Secteur Oléicole en Tunisie, Projet FAO/TCP/TUN/6EE, Mars 1987. Study recommendations include 1) an increase in credits for plantation regeneration, 2) improvement in the quality of oil exported in order to capture non-EEC export markets, and 3) encourage an increase in domestic consumotion of olive oil. Assuming these are done, the study foresees an increase in oil olive production which will require an increase in processing capacity. However, the profitability of such agro-industrial investments can only be guaranteed if the predicted resurgence in olive production occurs.

[15] It was decided that the uncertainty of producers actually receiving the ristourne was sufficiently great so as to warrant its exclusion from this analysis.

[16] Source: ONH, Rapport d'activités. The exchange rate applied was 0.908 D/ECU.

Table 4.14: DISTRIBUTION OF QUALITY PARAMETERS AMONG PRODUCTION SYSTEMS

Production System	% SEF	% BCH	% LMP
North (trad. super press)	65%	20%	15%
North (continuous)	65%	25%	10%
Sahel (trad. super press)	15%	25%	60%
Sahel (continuous)	15%	30%	55%
South* (trad. super press)	50%	30%	20%
South* (continuous)	50%	35%	15%

* All three systems

The resulting economic indicators for the base case analysis, under long-run assumptions, are presented in table 4.15. The most striking observation from a comparison of the numbers is that what distinguishes one system from another is the region, not the choice of oil processing system. Economic cost-prices per kilogram of oil never vary more than 150 mi/kg within a given region, and, correspondingly, DRCs do not vary greatly within a given region. Given the lack of variation in production costs within a given region due to processing costs, the rest of this paper will focus on olive oil processed in super press mills as proxies for the entire sector.

Another important observation made when comparing production costs (see annex A) is that processing costs account for only 10-15% of total production costs. Thus, under current assumptions about capacity use[17], it would appear that efforts to improve efficiency in the olive oil sector should be focused on improvements at the production level, rather than at the agro-industrial level.

Profitability, both financial and economic, is negative for olive oil production when calculated under long-run assumptions. This, despite the fact that nominal protection coefficients are the highest of any export commodity considered in this report, suggesting that at only -17% nominal protection, there is not much more room for increasing the producer price,

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[17] It is conceivable that one kind of system may regularly be more underutilized that the others. If, for example, the traditional maasras operate on average at 50% capacity, while modern mills are much closer to 100% capacity, then there may be more systematic distinctions observed in total production costs. There is no available data to confirm or deny this at present.

When the analysis is redone under short-run assumptions, i.e. ignoring investment costs and yield phase-ins and taking only an "average" input application rate into account, as presented in table 4.16 below, financial profitability is positive for three out of five systems, and economic profitability is positive for four out of five systems. DRCs range between 0.31 for the intercropped system, where the additional revenue from almonds production increases revenues, to 1.35 in the South, where yields are weakest.

Table 4.16: ECONOMIC INDICATORS FOR OLIVE OIL PRODUCTION - SHORT-RUN ANALYSIS

Production System	Finan Cost/kg oil (D/kg)	Finan Prf/kg oil (D/kg)	Econ Cost/kg oil (D/kg)	Econ Prf/kg oil (D/kg)	NNPC/o	NNPC/i	NEPC	DRC
North	.953	-.102	.997	.038	.82	.93	.78	.95
Sahel	.668	.112	.736	.192	.84	.84	.84	.72
South pure stand	1.151	-.318	1.222	-.216	.83	.90	.78	1.35
Sfax w/ almonds	.369	.463	.387	.619	.83	.82	.83	.31
Sfax pure stand	.637	.196	.655	.351	.83	.93	.80	.57

The base case analysis was redone assuming that all output was of the highest quality, thereby valueing output at the highest domestic producer and international reference prices. Virtually no change is observed in profitability, protection, or comparative advantage indicators:

Table 4.17: QUALITY SENSITIVITY ANALYSES FOR OLIVE OIL PRODUCTION - LONG-RUN ANALYSIS*
100% SUPER-EXTRA-FINE OUTPUT

Production System	Finan Cost/kg oil (D/kg)	Finan Prf/kg oil (D/kg)	Econ Cost/kg oil (D/kg)	Econ Prf/kg oil (D/kg)	NNPC/o	NNPC/i	NEPC	DRC
North	2.204	-1.307	2.417	-1.316	.81	.84	.71	6.48
Sahel	4.008	-3.111	4.610	-3.509	.81	.75	.57	-8.84
South / pure stand	8.702	-7.806	10.299	-9.198	.81	.77	.75	-1.19
Sfax / w/almonds	3.362	-2.466	4.224	-3.123	.81	.66	.41	-3.73
Sfax / pure stand	3.939	-3.043	4.647	-3.546	.81	.77	.72	-2.88

* To be compared with Super Press 1 systems in table 4.15

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It is increases in yields which have the greater potential impact on long-run profitability, at least in the North and the Sahel. When adult yields are raised to their maximum observed levels (and yields in earlier years phase in at correspondingly higher levels), the following results are observed:

Table 4.18: YIELD SENSITIVITY ANALYSES FOR OLIVE OIL PRODUCTION - LONG-RUN ANALYSIS*

Production System	Adult Yield (kg/tree)	Finan Cost/kg oil (D/kg)	Finan Prf/kg oil (D/kg)	Econ Cost/kg oil (D/kg)	Econ Prf/kg oil (D/kg)	DRC
North	46.0	.664	.188	.709	.326	.69
Sahel	37.5	1.237	-.458	1.417	-.489	2.02
South / pure stand	56.5	3.164	-2.332	3.727	-2.721	-3.54
Sfax / w/almonds	53.5	2.847	-2.015	3.573	-2.567	-4.36
Sfax / pure stand	56.5	3.164	-2.332	3.727	-2.721	-3.54

* To be compared with Super Press I systems in table 4.15

The financial breakeven yields would be 33 kg/tree in the North and 60 kg/tree in the Sahel. In the South and in Sfax, yields would have to exceed 150 kg/tree to break even. This suggests that resources could be used efficiently to improve oil olive plantation productivity in the northern and central sections of the country. At current levels of investment cost, however, yield improvements are not reasonably going to improve the long-run financial and economic profitabilities of oil olive production in the southern parts of Tunisia, though short-run economic profitability does become positive.

Section 5: Conclusions and Policy Issues

Structural Adjustment Program Overview

The Tunisian government has committed itself to a program of economic liberalization and structural adjustment in all sectors of the economy with several goals: 1) to render more efficient the allocation of productive resources, 2) to promote export-driven growth in order to expand the markets beyond Tunisian borders for Tunisian products, 3) to promote labor-intensive production activities in order to create more employment, particularly in the rural sector, and 4) to eliminate biases which favor industry over the agricultural sector.

Toward these ends, the government has already undertaken a number of policy reforms including the devaluation of the dinar vis-a-vis the currencies of its major trading partners, the revitalization of interest rate policy as a tool of economic resource management, the introduction of new fiscal measures to begin to reduce the overall budget deficit, the promotion of export activities through export credits and export marketing support, and the reorientation of agricultural price policy via the linking of producer prices to world markets and the phased removal of input subsidies. The program is ambitious. Careful monitoring of the effects on producer incentives, on consumer behavior, on the balance of trade, etc. will track its progress.

As a first step in that monitoring process, this study has detailed the financial and economic profitability of key agricultural activities in Tunisia as of 1985-86, just prior to the inauguration of the medium-term structural adjustment program. Analysis of Tunisian agricultural DRCs suggests that there are a number of commodities in the production of which Tunisia enjoys a comparative advantage, at the exchange rates, productivity levels, and production costs of this base year. Among these are both export and import-substitution commodities which are produced relatively efficiently with respect to the world market.

This profile confirms the potential of the sector cited in earlier sector appraisals which, while documenting the stagnation of domestic agricultural activity, called for easing of constraints on the sector to allow that potential to be realized. Such progress is in large part due to the more flexible exchange rate policy now being practiced by the Tunisian government which allows Tunisian exports to compete more effectively on the world market and at the same time provides a more realistic barrier to competing imports from abroad. With production costs and economic indicators now modelled by the Ministry of Agriculture/ D/PSAE using micro-computer technology, the effect of each pricing policy reform and international commodity market development can easily be tracked.

Analysis of the profitability, protection, and comparative advantage indicators has suggested a number of issues which will need special attention as the agricultural sector adjustment program unfolds:

-- the improvement of basic data collection (actual input-output coefficients, base data for the calculation of production elasticities, prices at all market levels, tree crop production cycles, etc.);

-- the broadening of the cross-section of production techniques analyzed, especially in livestock;

-- the analysis of alternative resource allocation patterns in irrigated perimeters;

-- the addition of other crops and production systems which are complements or substitutes to the ones included in this study in order to better understand the agricultural alternatives in each of these systems;

-- the need to extend the knowledge of the structure and operation of the markets, both official and parallel, for each commodity; and

-- the integration of consumer issues to understand the effect of demand elasticities with respect to the price of a given commodity and its substitutes and complements on agricultural commodity markets.

Efficiency of Tunisian Agricultural Production

Cereals production -- even at the unusually low international prices of 1985-86 -- overall makes reasonably efficient use of domestic resources, with 30% of total cereals production achieving DRCs of less than 1.00. At those same world prices, all cereals produced in the northern regions of the country indicate DRCs of less than 1.6. When projected international prices are used to evaluate output instead, DRCs are less than 1.00 for almost all production systems, the exception being cereals produced in the center-south where yields are significantly lower than in the north, raising per unit production costs by a wide margin.

There is a marked distinction among beef and milk production systems efficiencies, however. Those systems which are relatively more dependent on purchased feed mixes rather than being based on an integration of agriculture with livestocking do not make efficient use of domestic resources, at current international reference prices. Non-integrated systems have DRCs from 3.0 to 5.7, indicating that these are inefficient users of domestic resources and should not be encouraged further. The DRCs for integrated production systems are also above 1.00 (they range from 1.2

to 1.8), but could be efficient at international prices only 9% above current levels.

Among the export commodities analyzed here, the production of maltese oranges, potatoes, and dates, in that order, make the most efficient use of domestic resources. Even when taking long-run capital costs into consideration, DRCs are well below 1.00 (.17 and .35 for maltese orange systems under drip and cuvette irrigation respectively, from .25 to .4 for potato production systems, and .53 for deglet nour production).

On the other hand, at current levels of productivity and including plantation investment costs and yield profiles, olive oil DRCs are well above one or are negative. Even financial profitability, when calculated on a long-run basis, is negative for all production systems. When capital costs are ignored and only annual maintenance costs are compared against average adult yields, DRCs range from .3 and .57 in Sfax, to .72 and .95 in the Sahel and Northern regions respectively, to 1.35 in other areas of the south. This distinction between short-run and long-run analyses suggests that at current levels of productivity it makes sense for Tunisia to exploit existing plantations, but NOT to consider investing in new ones.

Incentives to Producers and Policy Issues

Input pricing. The Tunisian government has employed a variety of policy instruments in an attempt to encourage various kinds of agricultural activity. Fertilizers, certified seed, chemical inputs, irrigation water, investment credit, and animal feeds have been made available to farmers at subsidized prices -- though not all farmers can or do take advantage of these.[1] The sensitivity analyses done on alternative input pricing scenarios demonstrates that even when subsidies are eliminated entirely financial profitability, while it will certainly decrease, will not be threatened completely. Thus, the phasing-out of subsidies is not necessary to defend positive returns to farmers. It is, however, likely to be quite important in softening the psychological impact on farmers of decreases in value-added, to which farm output is likely to be sensitive.[2]

Exports. Yet an analysis of effective protection rates demonstrates that however well- intentioned these input subsidy policies have been, if

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[1] Very little is known about real demand for agricultural inputs, as opposed to recommended input use rates. Who are the farmers who use improved inputs? What commodities do they apply them to, on what size farms? From whom do they procure their supplies, and at what price? These are some of the questions to be addressed under the Agricultural Policy Implementation Project.

[2] Measurement of the degree of that sensitivity will be one of D/PSAE's primary focuses as the sectoral adjustment program progresses.

the output price which farmers receive for their product is implicitly taxed vis-à-vis world market prices, then effective protection rates will be negative. All four export commodities enjoy positive nominal protection on input prices. However, all four are also taxed on output prices and therefore effective protection rates for all four are negative.

Clearly, unless exports are to be subsidized the price which the export commodity producer receives for his output is by definition less than the border price in order to accommodate packaging, transport, and shipping charges and still be price-competitive internationally. However, it is the degree to which the producer is taxed, i.e. the magnitude of the wedge between producer and FOB prices which should be assessed. According to economic efficiency criteria, that wedge should be smallest for those commodities in which Tunisia has the greatest comparative advantage, i.e. the producers of these commodities should receive the greatest encouragement. Yet NEPCs are .45 for maltese oranges, .3 to .4 for potatoes, .5 for dates, and .44 (Sfax) to .75 (South) for olive oil. In other words, the structure of producer incentives runs exactly opposite to expectations based on an economic efficiency rationale. Reasons for the low NEPCs for oranges, potatoes, and dates needs more careful consideration by the export promotion study.[3] To the extent that negative protection rates are not corrected and domestic demand for these commodities rises, Tunisia will see producers shift the destination of their output from the export to the domestic market, which could threaten agricultural export revenues.

Olive oil. The commodity most in need of "revenue enhancement" due to negative financial and economic profitabilities calculated under long-run assumptions is olive oil, yet it is the commodity which is already the least protected on output price (NNPC/o's for the four export commodities are .51 for citrus, .45 to .53 for potatoes, .59 for dates, and .84 for olive oil), and the margin for maneuver between the existing producer price levels and FOB prices is limited. The ONH is committed to raising producer prices slightly by eliminating the ristourne system and paying a higher advance at the mills.

Ultimately, the oil olive sector will have to improve production efficiency to lower unit production costs, rather than seeking ways to increase output prices. The key to this is farm-level productivity improvements, rather than investments in the agro-industrial sector whose costs make up a minor portion of total oil production costs. Rather than investing in new plantations at existing productivity levels, however, which have been demonstrated to make inefficient use of domestic resources, Tunisia would do better to explore possibilities for plantation regeneration credit schemes, which would bail out farmers financially and at the same time raise yields and lower costs. Only with higher yields do some of the

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[3] For example, there may be evidence of oligopolistic behavior on the part of exporters who successfully maintain a wide margin between FOB and producer prices.

olive oil production systems evaluated here look profitable under long-run assumptions. The alternative (without such intervention) to farmers is to ignore long-run considerations and exploit plantations in the short-run, i.e. not allowing for future recapitalization of the plantations.

Other downstream issues which concern the olive oil sector are 1) the potential conflict in the monopoly control by the Office National des Huiles of both olive oil processing and export and importing of raw vegetable oil for domestic refining, bottling, and distribution, and 2) the competition on the domestic consumer market of subsidized vegetable oil with (non-subsidized) olive oil.

Cereals. As for cereals, nominal and effective protection rates are positive for all three cereals. Cereals producer prices are linked to international cereals prices via a five-year moving average formula, which weights equally prices in the last three years, the current price, and the 12-month futures price. FOB prices from Canada and US markets are brought to CIF Tunis via a 15% margin to cover freight costs. Another 15% minimum tariff is applied to provide some measure of protection against subsidy policies in the exporting countries. This formula accomplishes several objectives, connecting Tunisian domestic prices to trends in the international market, while smoothing out short-term fluctuations in international market prices. However, in a period (such as the current one) when real international prices are decreasing steadily, such a formula implies that the domestic price will always be more than 15% above the current CIF price.

As discussed in section 3, continued positive nominal protection can create a budgetary burden for the national treasury and thus for the Office des Céréales. In addition to producer subsidies, the government has also been paying out on the other end in consumer subsidies. If, under increasing fiscal pressure, the Caisse de Compensation does not reimburse the Office on a regular basis,[4] one of several things can happen. The first is that the official producer price will not be defended effectively to rural producers. The second, given that the same agency is solely responsible for both domestic procurement from producers as well as for imports in order to satisfy Tunisian consumer demand for cereals, is that there will an increasing temptation on the part of the Office des Céréales to switch the bulk of cereals procurement from domestic to foreign sources, which will be cheaper.

The more bottlenecks appear in the system, the more the official market begins to break down. Grain stores, mills, even the national rail company, may get paid by the Office des Céréales only after increasing delays. In an effort to keep consumers supplied with flour, quality of mill output may

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[4] The lack of timeliness of such reimbursements also has a cost for the OC, as cash flows financed from alternative sources such as the private banking sector will likely entail higher interest charges.

suffer as milling ratios are increased. These are some of the potential dangers which may be faced by a cereals sector which comes under increasing fiscal pressure.

One way to get around the problem of "always being behind the international price trend" would be to redesign the cereals producer price-setting formula, either by shortening the period of averaging to three years (last year, this year, and next year), or, preferably, by weighting the futures price more heavily in the formula, thus helping to assure that the Tunisian farmer will be more on top of international price trends.

It is also critical that parallel market grain prices be monitored in Tunisia, in order to assess the degree of divergence between them and the official producer prices. In years of exceptional harvests, the parallel market price will sink. If the Office des Céréales has sufficient financial resources, it will find itself with a higher than usual procurement bill as it collects a far greater share of total cereals marketed output than in an average year, with more farmers seeking to take advantage of the official price. This will entail a greater storage and distribution burden on the Office as well. If the Office does not have sufficient financial resources, then farmers will see the price they receive for their output slide, unless the market is flexible enough to accommodate grain exports in such years.

A more detailed study of cereals trade and marketing is also in order to look at downstream issues. How efficiently do the present grain storage and milling subsectors operate? The extent to which interregional and inter-temporal producer price variation would induce a shift in the storage burden from the public to the private sector should be examined. On the import management side, there is the issue of potential conflict in the monopoly control by the Office des Céréales of <u>both</u> domestic procurement <u>and</u> imports which should be evaluated. A trade policy which regulates import quantities via prices, i.e. by applying trade tariffs, instead of via quantitative restrictions, is usually less cumbersome to administer, and would allow multiple actors to become involved in the market.[5]

<u>Livestock products</u>. Not enough is yet known about the meat and milk sectors to redesign policy interventions. Yet if the limited sample of production budgets analyzed here is any indication, the trend in the data favors those systems which are better integrated with crop agriculture by cultivation of forage crops and reduced dependency on purchased animal feed mixes. Protection is positive, due primarily to protection on output prices via a fixed producer. As with the cereals sector, more detailed examination of trade policies would be useful to examine alternatives to

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[5] For an example of the kind of detailed trade policy review which one might design for Tunisia, see Associates for International Resources and Development, <u>Analysis of Tariff, Trade Taxes, and Incentives Policies in Nigerian Agriculture</u>, AIRD consultant report to the Nigerian Federal Government, forthcoming.

Société Ellouhoum's current monopoly role as red meat importer. Moreover, the system of quantitative import restrictions as it currently operates limits even the ability of Ellouhoum to manage the official sub-sector efficiently.

Annex A:

Statistical Appendix

ANNEX A.

Production Budgets

PAYS: TUNISIE

SPECULATION: BLE DUR. HUM/SHUM. GRANDE ITINERAIRE TECHNIQUE a76 ... a152	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		8.00	2.756	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.20	16.000	19.20	-3.74	-1.94	24.88	1.32	0.88	22.69	9.86	0.00	4.96	4.10	3.77
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.20	3.260	3.91	-3.61	-0.31	7.83	0.17	0.83	6.83	6.31	0.00	0.42	0.07	0.03
...Polyvalents	litres	3.00	10.000	30.00	-27.72	-2.34	60.06	1.30	6.37	52.40	48.39	0.00	3.22	0.56	0.23
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	2.50	7.855	19.64	-8.23	-7.29	35.15	6.12	0.58	28.45	15.88	0.00	4.75	7.72	0.10
...Autres															
Sacheries	nombre	22.00	0.100	2.20	0.00	0.00	2.20	0.88	0.00	1.32	1.32	0.00	0.00	0.90	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	11.20	5.900	66.08	-5.04	-3.24	74.37	2.71	2.07	69.58	42.34	0.00	16.02	11.03	0.21
...Epandage	heures	2.00	5.900	11.80	-0.90	-0.58	13.28	0.48	0.37	12.43	7.56	0.00	2.86	1.97	0.04
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Moissoneuse-Batteuse	heures	1.10	17.000	18.70	-3.94	-3.34	25.98	0.88	0.26	24.83	13.44	0.00	3.85	7.52	0.03
...Pressage	balle	100.00	0.230	23.00	-4.84	-4.11	31.95	1.09	0.32	30.55	16.53	0.00	4.73	9.25	0.04
...Transport	balle	2.00	5.900	11.80	0.27	0.19	11.34	1.19	0.77	9.38	4.58	0.00	4.54	0.23	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	4.00	16.000	64.00	0.00	0.00	64.00	0.00	0.00	64.00	0.00	0.00	0.00	0.00	64.00
...Immobilisation du capitale	D/ha	170.53	0.055	9.38	0.00	0.00	9.38	0.00	0.00	9.38	0.00	0.00	0.00	9.38	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			323.10	-65.75	-26.22	415.07	19.03	13.20	382.84	185.83	0.00	73.11	55.35	68.57
...Valeur des balles de pailles	D/ha	100.00	0.900	90.00	-18.32	-7.30	115.62	5.30	3.68	106.64	51.76	0.00	20.36	15.42	19.10
COUT NET DE PRODUCTION (grains)	D/ha			233.10	-47.44	-18.91	299.45	13.73	9.52	276.20	134.06	0.00	52.74	39.93	49.47
RENDEMENT	qx/ha	22.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			10.60	-2.16	-0.86	13.61	0.62	0.43	12.55	6.09	0.00	2.40	1.82	2.25
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			13.76	-2.80	-1.12	17.68	0.81	0.56	16.30	7.91	0.00	3.11	2.36	2.92

PAYS: TUNISIE
SPECULATION: BLE DUR. HUM/SUBHUM. MY
ITINERAIRE TECHNIQUE
a76 ... p152

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		8.00	2.756	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00
SEMENCES															
...Traditionnelles	qx	1.10	16.000	17.60	-3.43	-1.78	22.81	1.22	0.81	20.78	9.02	0.00	4.55	3.75	3.45
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.390	3.39	-3.13	-0.26	6.79	0.15	0.72	5.92	5.47	0.00	0.36	0.06	0.03
...Polyvalents	litres	2.50	10.000	25.00	-23.10	-1.95	50.05	1.08	5.30	43.66	40.32	0.00	2.69	0.46	0.19
...Engrais															
Super 45%	qx	1.00	6.240	6.24	6.88	2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitra 33%	qx	2.00	7.855	15.71	-6.58	-5.83	28.12	4.90	0.46	22.76	12.70	0.00	3.80	6.18	0.08
...Autres															
Sacheries	nombre	16.00	0.100	1.60	0.00	0.00	1.60	0.64	0.00	0.96	0.96	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	8.00	5.900	47.20	-3.60	-2.32	53.12	1.94	1.48	49.70	30.25	0.00	11.44	7.88	0.15
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	balle	75.00	0.230	17.25	-3.63	-3.08	23.96	0.81	0.24	22.91	12.40	0.00	3.55	6.93	0.03
...Transport	balle	2.00	5.900	11.80	0.27	0.19	11.34	1.19	0.77	9.38	4.58	0.00	4.54	0.23	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Location de la terre	qx/ha	4.00	16.000	64.00	0.00	0.00	64.00	0.00	0.00	64.00	0.00	0.00	0.00	0.00	64.00
...Immobilisation du capitale	D/ha	147.96	0.000	8.14	0.00	0.00	8.14	0.00	0.00	8.14	0.00	0.00	0.00	8.14	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.00	0.00	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			280.93	-55.46	-21.76	358.15	15.98	11.05	331.11	153.21	0.00	64.19	45.48	68.11
...Valeur des balles de pailles	D/ha	60.00	0.900	54.00	-10.66	-4.18	68.84	3.07	2.12	63.65	29.45	0.00	12.34	8.74	13.09
COUT NET DE PRODUCTION (grains)	D/ha			226.93	-44.80	-17.58	289.30	12.91	8.93	267.47	123.76	0.00	51.85	36.73	55.02
RENDEMENT	qx/ha	16.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			14.18	-2.80	-1.10	18.08	0.81	0.56	16.72	7.73	0.00	3.24	2.30	3.44
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			18.42	-3.64	-1.43	23.48	1.05	0.72	21.71	10.05	0.00	4.21	2.98	4.47

PAYS: TUNISIE
SPECULATION: BLE DUR. IRW/SHUM. PETI
ITINERAIRE TECHNIQUE
a76 ... p152

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D O BAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionnelles	qx	1.00	16.000	16.00	-3.12	-1.62	20.74	1.11	0.73	18.89	8.20	0.00	4.14	3.41	3.14
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.468	3.47	-3.20	-0.27	6.94	0.15	0.74	6.06	5.59	0.00	0.37	0.06	0.03
...Polyvalents	litres	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	1.80	7.855	14.14	-5.92	-5.25	25.31	4.41	0.42	20.48	11.43	0.00	3.42	5.56	0.07
...Autres															
Sacheries	nombre	15.00	0.100	1.50	0.00	0.00	1.50	0.60	0.00	0.90	0.90	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	8.00	5.900	47.20	-3.60	-2.32	53.17	1.94	1.48	49.70	30.25	0.00	11.44	7.88	0.15
...Epandage	heures	1.50	5.900	8.85	-0.68	0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	balle	50.00	0.230	11.50	-2.42	-2.05	15.98	0.54	0.16	15.27	8.26	0.00	2.37	4.62	0.02
...Transport	balle	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	D/ha	4.00	16.000	64.00	0.00	0.00	64.00	0.00	0.00	64.00	0.00	0.00	0.00	0.00	64.00
...Immobilisation du capitale	D/ha	116.03	0.055	6.38	0.00	0.00	6.38	0.00	0.00	6.38	0.00	0.00	0.00	6.38	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			234.80	-29.96	-17.86	282.62	13.50	5.23	263.90	102.56	0.00	54.64	39.15	67.57
...Valeur des balles de pailles	D/ha	50.00	0.900	45.00	-5.74	-3.42	54.17	2.59	1.00	50.58	19.66	0.00	10.47	7.50	12.95
COUT NET DE PRODUCTION (grains)	D/ha			189.80	-24.22	-14.44	228.46	10.91	4.23	213.32	82.90	0.00	44.17	31.65	54.62
RENDEMENT	qx/ha	15.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d achat			12.65	1.61	0.96	15.21	0.73	0.28	14.22	5.51	0.00	2.94	2.11	3.64
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d achat			16.43	2.10	1.25	19.78	0.94	0.37	18.47	7.18	0.00	3.82	2.74	4.73

PAYS:TUNISIE
SPECULATION:BLE DUR.SEMI-ARIDE.GRANDE
ITINERAIRE TECHNIQUE
a76 ... p140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.10	16.000	17.60	3.43	-1.78	22.81	1.22	0.81	20.78	9.02	0.00	4.55	3.75	3.45
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.260	3.26	-3.01	-0.25	6.53	0.14	0.69	5.69	5.26	0.00	0.35	0.06	0.03
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	1.00	7.855	7.86	-3.29	-2.92	14.06	2.45	0.23	11.38	6.35	0.00	1.90	3.09	0.04
...Autres															
Sacheries	nombre	14.00	0.100	1.40	0.00	0.00	1.40	0.56	0.00	0.84	0.84	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	9.00	5.900	53.10	-4.05	-2.61	59.76	2.18	1.66	55.91	34.03	0.00	12.87	8.86	0.17
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Moissoneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	balle	70.00	0.230	16.10	-3.39	-2.62	22.37	0.76	0.22	21.38	11.57	0.00	3.31	6.47	0.03
...Transport	heures	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	16.000	32.00	0.00	0.00	32.00	0.00	0.00	32.00	0.00	0.00	0.00	0.00	32.00
...Immobilisation du capitale	D/ha	97.99	0.055	5.39	0.00	0.00	5.39	0.00	0.00	5.39	0.00	0.00	0.00	5.39	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., stockage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			207.32	-28.87	-16.79	252.97	12.06	5.32	235.59	104.99	0.00	55.89	38.86	35.87
...Valeur des balles de paille	D/ha	70.00	0.900	63.00	8.77	-5.10	76.87	3.66	1.62	71.59	31.90	0.00	16.98	11.81	10.90
COUT NET DE PRODUCTION (grains)	D/ha			144.32	-20.09	-11.68	176.10	8.39	3.70	164.00	73.08	0.00	38.90	27.05	24.97
RENDEMENT	qx/ha	14.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			10.31	-1.44	-0.83	12.58	0.60	0.26	11.71	5.22	0.00	2.78	1.93	1.78
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			13.39	-1.86	-1.08	16.34	0.78	0.34	15.21	6.78	0.00	3.61	2.51	2.32

PAYS:TUNISIE
SPECULATION:BLE DUR.SEMI-ARIDE.MOYEN
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	16.000	16.00	-3.12	-1.62	20.74	1.11	0.73	18.89	8.20	0.00	4.14	3.41	3.14
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.390	3.39	-3.13	-0.26	6.79	0.15	0.72	5.92	5.47	0.00	0.36	0.06	0.03
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-0.09	-0.42	6.75	0.96	0.12	5.66	4.32	0.00	0.86	0.46	0.02
Aesonitre 33%	qx	1.00	7.855	7.86	-0.52	-0.79	9.17	1.60	0.15	7.42	4.14	0.00	1.24	2.31	0.03
...Autres															
Sacheries	nombre	11.00	0.100	1.10	0.00	0.00	1.10	0.48	0.00	0.66	0.66	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	nombre		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	6.80	5.900	40.12	-3.06	-1.97	45.15	1.65	1.26	42.25	25.71	0.00	9.72	6.69	0.12
...Epandage	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.59	6.83	0.03
...Pressage	balle	60.00	0.230	13.80	-2.91	-2.46	19.17	0.65	0.19	18.33	9.92	0.00	2.84	5.55	0.02
...Transport	balle	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	16.000	32.00	0.00	0.00	32.00	0.00	0.00	32.00	0.00	0.00	0.00	0.00	32.00
...Immobilisation du capitale	D/ha	87.37	0.055	4.81	0.00	0.00	4.81	0.00	0.00	4.81	0.00	0.00	0.00	4.81	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			184.96	17.27	11.11	213.15	8.87	4.45	200.03	83.28	0.00	48.93	32.37	35.45
...Valeur des balles de pailles	D/ha	60.00	0.900	54.00	-5.04	-3.24	62.29	2.59	1.30	58.40	24.31	0.00	14.28	9.45	10.35
COUT NET DE PRODUCTION (grains)	D/ha			130.96	-12.23	-7.87	151.06	6.28	3.15	141.63	58.97	0.00	34.64	22.92	25.10
RENDEMENT	qx/ha	11.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			11.91	-1.11	-0.72	13.73	0.57	0.29	12.88	5.36	0.00	3.15	2.08	2.28
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			15.46	-1.44	-0.93	17.83	0.74	0.37	16.72	6.96	0.00	4.09	2.71	2.96

PAYS:TUNISIE

SPECULATION:BLE DUR.SEMI-ARIDE.PETIT ITINERAIRE TECHNIQUE a76 ... a140	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		6.00	2.756	16.54	0.00	0.00	16.54	0.00	0.00	16.54	0.00	0.00	16.54	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	16.000	16.00	-3.12	-1.62	20.74	1.11	0.73	18.89	8.20	0.00	4.14	3.41	3.14
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Autres															
Sacheries	nombre	10.00	0.100	1.00	0.00	0.00	1.00	0.40	0.00	0.60	0.60	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	4.30	5.900	25.37	-1.94	-1.25	28.55	1.04	0.79	26.71	16.26	0.00	6.15	4.23	0.08
...Epandage	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	balle	50.00	0.230	11.50	-2.42	-2.05	15.98	0.54	0.16	15.27	8.26	0.00	2.37	4.62	0.02
...Transport	balle	1.00	5.900	5.90	0.14	0.09	5.67	0.60	0.38	4.69	2.79	0.00	2.27	0.11	0.01
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	16.000	32.00	0.00	0.00	32.00	0.00	0.00	32.00	0.00	0.00	0.00	0.00	32.00
...Immobilisation du capitale	D/ha	65.21	0.055	3.59	0.00	0.00	3.59	0.00	0.00	3.59	0.00	0.00	0.00	3.59	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			145.51	-18.56	-10.88	174.96	7.18	2.92	164.86	64.42	0.00	39.52	25.55	35.36
...Valeur des balles de pailles	D/ha	50.00	0.900	45.00	-5.74	-3.37	54.11	2.22	0.90	50.98	19.92	0.00	12.22	7.90	10.94
COUT NET DE PRODUCTION (grains)	D/ha			100.51	-12.82	-7.52	120.85	4.96	2.02	113.87	44.50	0.00	27.30	17.65	24.43
RENDEMENT	qx/ha	10.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			10.05	-1.28	-0.75	12.09	0.50	0.20	11.39	4.45	0.00	2.73	1.77	2.44
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			13.05	-1.66	-0.98	15.69	0.64	0.26	14.79	5.78	0.00	3.55	2.29	3.17

PAYS:TUNISIE
SPECULATION:BLE DUR CENTRE ET SUD
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	jours. de travail														
Total. Main d'Oeuvre		13.00	2.756	35.83	0.00	0.00	35.83	0.00	0.00	35.83	0.00	0.00	35.83	0.00	0.00
SEMENCES															
...Traditionelles	qx	0.80	11.000	8.80	-1.71	-0.89	11.40	0.61	0.40	10.39	4.51	0.00	2.27	1.88	1.73
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonitre 33%	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Autres															
Sacheries	nombre	4.00	0.100	0.40	0.00	0.00	0.40	0.16	0.00	0.24	0.24	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	4.00	5.900	23.60	-1.80	-1.16	26.56	0.97	0.74	24.85	15.12	0.00	5.72	3.94	0.07
...Epandage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Moissonneuse-Batteuse	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Pressage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Transport	heures	1.00	5.900	5.90	0.14	0.09	5.67	0.60	0.38	4.69	2.29	0.00	2.27	0.11	0.01
TRACTION ANIMALE	jours														
...Preparation du sol				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage		1.00	4.000	4.00	-0.32	-0.20	4.52	0.15	-0.16	4.53	1.36	0.00	0.89	1.77	0.51
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Immobilisation du capitale	D/ha	43.86	0.055	2.41	0.00	0.00	2.41	0.00	0.00	2.41	0.00	0.00	0.00	2.41	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.14	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			87.19	-4.14	-2.43	93.77	2.76	1.57	89.44	27.44	0.00	38.55	11.11	2.34
...Valeur des balles de pailles	D/ha	20.00	0.900	18.00	-0.86	-0.50	19.36	0.57	0.32	18.46	5.66	0.00	10.02	2.29	0.48
COUT NET DE PRODUCTION (grains)	D/ha			69.19	-3.29	-1.93	74.41	2.19	1.25	70.97	21.78	0.00	38.53	8.81	1.86
RENDEMENT	qx/ha	3.50													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			19.77	-0.94	-0.55	21.26	0.63	0.36	20.28	6.22	0.00	11.01	2.52	0.53
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			25.67	-1.22	-0.72	27.61	0.81	0.46	26.33	8.08	0.00	14.30	3.27	0.69

PAYS:TUNISIE
SPECULATION:BLE TENDRE.H&SUB-HUMIDE.GR
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Total. Main d'Oeuvre	journ. de travail	8.00	2.756	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00
SEMENCES															
...Traditionelles	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Certifiees	qx	1.20	24.500	29.40	-5.44	-2.91	37.74	2.15	1.46	34.13	14.30	0.00	7.91	6.39	5.52
AUTRES INTRANTS															
...2-4-D	litres	1.20	3.260	3.91	-3.61	-0.31	7.83	0.17	0.83	6.83	6.31	0.00	0.42	0.07	0.03
...Polyvalents	litres	3.00	10.000	30.00	-27.72	-2.34	60.06	1.30	6.37	52.40	48.39	0.00	3.22	0.56	0.23
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	2.50	7.855	19.64	-8.23	-7.29	35.15	6.12	0.58	28.45	15.88	0.00	4.75	7.72	0.10
...Autres															
Sacheries	nombre	27.00	0.100	2.70	0.00	0.00	2.70	1.08	0.00	1.62	1.62	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	11.20	5.900	66.08	-5.04	-3.24	74.37	2.71	2.07	69.58	42.34	0.00	16.02	11.03	0.21
...Epandage	heures	2.00	5.900	11.80	-0.90	-0.58	13.28	0.48	0.37	12.43	7.56	0.00	2.86	1.97	0.04
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Moissonneuse-Batteuse	heures	1.10	17.000	18.70	3.94	3.34	25.98	0.88	0.76	24.83	13.44	0.00	3.85	7.52	0.05
...Pressage	heures	90.00	0.230	20.70	-4.36	-3.70	28.76	0.98	0.29	27.49	14.87	0.00	4.26	8.32	0.03
...Transport	heures	2.00	5.900	11.80	0.27	0.19	11.34	1.19	0.77	9.38	4.58	0.00	4.54	0.23	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	4.00	16.000	64.00	0.00	0.00	64.00	0.00	0.00	64.00	0.00	0.00	0.00	0.00	64.00
...Immobilisation du capitale	D/ha	181.23	0.055	9.97	0.00	0.00	9.97	0.00	0.00	9.97	0.00	0.00	0.00	9.97	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Ramat., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			332.09	-66.96	-26.77	425.82	19.95	13.75	392.11	188.91	0.00	75.58	57.31	70.32
...Valeur des balles de paille	D/ha	90.00	0.850	76.50	-15.43	-6.17	98.09	4.60	3.17	90.33	43.52	0.00	17.41	13.20	16.20
COUT NET DE PRODUCTION (grains)	D/ha			255.59	-51.54	-20.60	327.73	15.36	10.58	301.79	145.40	0.00	58.17	44.11	54.12
RENDEMENT	qx/ha	27.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			9.47	-1.91	-0.76	12.14	0.57	0.39	11.18	5.39	0.00	2.15	1.63	2.00
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			12.29	-2.48	-0.99	15.76	0.74	0.51	14.52	6.99	0.00	2.80	2.12	2.60

PAYS:TUNISIE
SPECULATION:BLE TENDRE.H&SUB-HUMIDE.PMV
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	jours. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.10	16.000	17.60	-3.32	-1.76	22.68	1.31	0.89	20.48	8.71	0.00	4.82	3.58	3.37
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.390	3.39	-3.13	-0.26	6.79	0.15	0.72	5.92	5.47	0.00	0.36	0.06	0.03
...Polyvalents	litres	2.50	10.00	25.00	-23.10	1.95	50.05	1.08	5.30	43.66	40.32	0.00	2.69	0.46	0.17
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	2.00	7.855	15.71	-6.58	-5.83	28.12	4.90	0.46	22.76	12.70	0.00	3.80	6.18	0.08
...Autres															
Sacheries	nombre	22.00	0.100	2.20	0.00	0.00	2.20	0.88	0.00	1.32	1.32	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	8.00	5.900	47.20	-3.60	-2.32	53.12	1.94	1.48	49.70	30.25	0.00	11.44	7.88	0.15
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	heures	60.00	0.230	13.80	-2.91	-2.46	19.17	0.65	0.19	18.33	9.92	0.00	2.84	5.55	0.02
...Transport	heures	2.00	5.900	11.80	0.27	0.19	11.34	1.19	0.77	9.38	4.58	0.00	4.54	0.23	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Location de la terre	m/ha	4.00	16.000	64.00	0.00	0.00	64.00	0.00	0.00	64.00	0.00	0.00	0.00	0.00	64.00
...Immobilisation du capitale	D/ha	147.19	0.055	8.10	0.00	0.00	8.10	0.00	0.00	8.10	0.00	0.00	0.00	8.10	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			275.28	-54.62	-21.13	351.03	16.15	11.09	323.80	150.78	0.00	61.13	43.88	68.02
...Valeur des balles de pailles	D/ha	60.00	0.850	51.00	-10.12	-3.92	65.03	2.99	2.05	59.99	27.93	0.00	11.33	8.13	12.60
COUT NET DE PRODUCTION (grains)	D/ha			224.28	-44.50	-17.22	286.00	13.16	9.03	263.81	122.84	0.00	49.81	35.75	55.42
RENDEMENT	qx/ha	22.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			10.19	-2.02	-0.78	13.00	0.60	0.41	11.99	5.58	0.00	2.26	1.62	2.52
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			13.24	-2.63	-1.02	16.88	0.78	0.53	15.57	7.25	0.00	2.94	2.11	3.27

PAYS:TUNISIE
SPECULATION:BLE TENDRE.B-ARIDE.GRAND
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANGE	TAXES/SUBVENTIONS DIRECTES NON ECH	COUT NET DIRECTES EX/HORS	TAXES/SUBVENTIONS INDIRECTES ECHANGE	TAXES/SUBVENTIONS INDIRECTES NON ECH	COUT NET INDIRECTES EX/HORS	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M O D O LOC	M O D O NAT	CAPITAL	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	jours de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Certifiees	qx	1.10	24.500	26.95	-4.98	-2.66	34.60	1.97	1.34	31.29	13.11	0.00	7.25	5.86	5.06
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.260	3.26	-3.01	-0.25	6.53	0.14	0.69	5.69	5.26	0.00	0.35	0.06	0.03
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	1.00	7.855	7.86	-3.29	-2.92	14.06	2.45	0.23	11.38	6.35	0.00	1.90	3.09	0.04
...Autres															
Sacheries	nombre	19.00	0.100	1.90	0.00	0.00	1.90	0.76	0.00	1.14	1.14	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	9.00	5.900	53.10	4.05	2.61	59.74	2.18	1.64	55.91	34.01	0.00	12.87	8.06	0.17
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.40	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	heures	60.00	0.230	13.80	-2.91	-2.46	19.17	0.65	0.19	18.33	9.92	0.00	2.84	5.55	0.02
...Transport	heures	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	16.000	32.00	0.00	0.00	0.00	0.00	0.00	32.00	0.00	0.00	0.00	0.00	32.00
...Immobilisation du capitale	D/ha	107.84	0.055	5.93	0.00	0.00	5.93	0.00	0.00	5.93	0.00	0.00	0.00	5.93	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			215.41	-29.93	-17.26	230.60	12.90	5.82	243.88	107.72	0.00	58.12	40.58	37.48
...Valeur des balles de pailles	D/ha	60.00	0.850	51.00	-7.09	-4.09	54.60	3.05	1.38	57.74	25.50	0.00	13.76	9.61	8.87
COUT NET DE PRODUCTION (grains)	D/ha			164.41	-22.85	-13.17	176.00	9.85	4.44	186.14	82.22	0.00	44.36	30.97	28.61
RENDEMENT	qx/ha	19.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			8.65	1.20	0.69	9.26	0.52	0.23	9.80	4.33	0.00	2.33	1.63	1.51
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			11.24	-1.56	-0.90	12.03	0.67	0.30	12.72	5.62	0.00	3.03	2.12	1.96

PAYS:TUNISIE
SPECULATION:BLE TENDRE.S-ARIDE.MOYENNE
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	16.000	16.00	-3.02	-1.60	20.62	1.19	0.81	18.62	7.92	0.00	4.38	3.26	3.06
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.390	3.39	-3.13	-0.26	6.79	0.15	0.72	5.92	5.47	0.00	0.36	0.06	0.03
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	0.70	7.855	5.50	-2.30	-2.04	9.84	1.71	0.16	7.97	4.45	0.00	1.33	2.16	0.03
...Autres															
Sacheries	nombre	13.00	0.100	1.30	0.00	0.00	1.30	0.52	0.00	0.78	0.78	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	6.80	5.900	40.12	-3.06	-1.97	45.15	1.65	1.26	42.25	25.71	0.00	9.72	6.69	0.12
...Epandage	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.54	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	heures	40.00	0.230	9.20	-1.94	-1.64	12.78	0.43	0.13	12.22	6.61	0.00	1.89	3.70	0.02
...Transport	heures	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	16.000	32.00	0.00	0.00	32.00	0.00	0.00	32.00	0.00	0.00	0.00	0.00	32.00
...Immobilisation du capitale	D/ha	85.21	0.055	4.69	0.00	0.00	4.69	0.00	0.00	4.69	0.00	0.00	0.00	4.69	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut.. magasinage. marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			178.09	-24.78	-13.64	216.51	10.21	4.63	201.68	85.83	0.00	49.45	31.00	35.40
...Valeur des balles de pailles	D/ha	40.00	0.850	34.00	-4.73	-2.60	41.34	1.95	0.88	38.50	16.39	0.00	9.44	5.92	6.76
COUT NET DE PRODUCTION (grains)	D/ha			144.09	-20.05	-11.04	175.18	8.26	3.74	163.17	69.44	0.00	40.01	25.09	28.64
RENDEMENT	qx/ha	13.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			11.08	-1.54	-0.85	13.48	0.64	0.29	12.55	5.34	0.00	3.08	1.93	2.20
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			14.39	-2.00	-1.10	17.50	0.83	0.37	16.30	6.94	0.00	4.00	2.51	2.86

PAYS:TUNISIE
SPECULATION:ORGE.HASUB-HUMIDE.GRANDE
ITINERAIRE TECHNIQUE
a20 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		8.00	2.756	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	11.000	11.00	-1.40	-1.23	13.64	0.82	0.47	12.35	4.59	0.00	3.41	2.27	2.08
...Certifiees	qx														
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.260	3.26	-3.01	-0.25	6.53	0.14	0.69	5.69	5.26	0.00	0.35	0.06	0.03
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	1.00	7.855	7.86	-3.29	-2.92	14.06	2.45	0.23	11.38	6.35	0.00	1.90	3.09	0.04
...Autres															
Bacheries	nombre	16.00	0.100	1.60	0.00	0.00	1.60	0.64	0.00	0.96	0.96	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	9.00	5.900	53.10	-4.05	-2.61	59.76	2.18	1.66	55.91	34.03	0.00	12.87	8.86	0.17
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Moissonneuse-Batteuse	heures	1.10	17.000	18.70	-3.94	-3.34	25.98	0.88	0.26	24.83	13.44	0.00	3.85	7.52	0.03
...Pressage	heures	80.00	0.230	18.40	-3.87	-3.29	25.56	0.87	0.26	24.44	13.22	0.00	3.79	7.40	0.03
...Transport	heures	2.00	5.900	11.80	0.27	0.19	11.34	1.19	0.77	9.38	4.58	0.00	4.54	0.23	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	4.00	11.000	44.00	0.00	0.00	44.00	0.00	0.00	44.00	0.00	0.00	0.00	0.00	44.00
...Immobilisation du capitale	D/ha	98.97	0.055	5.44	0.00	0.00	5.44	0.00	0.00	5.44	0.00	0.00	0.00	5.44	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			222.68	27.61	16.91	267.20	12.27	5.21	249.73	104.69	0.00	59.46	39.09	46.51
...Valeur des balles de pailles	D/ha	80.00	1.000	80.00	-9.92	-6.07	93.99	4.39	1.88	89.73	37.61	0.00	21.36	14.05	16.71
COUT NET DE PRODUCTION (grains)	D/ha			142.68	-17.69	-10.83	171.20	7.83	3.35	160.02	67.08	0.00	38.10	25.05	29.80
RENDEMENT	qx/ha	16.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			8.92	-1.11	-0.68	10.70	0.49	0.21	10.00	4.19	0.00	2.38	1.57	1.86
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			11.58	-1.44	-0.88	13.90	0.64	0.27	12.99	5.44	0.00	3.09	2.03	2.42

PAYS:TUNISIE

SPECULATION:ORGE.H&SUB-HUMIDE.MOYENN

ITINERAIRE TECHNIQUE a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Total. Main d'Oeuvre	journ. de travail	8.00	2.756	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00	22.05	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	11.000	11.00	-1.40	-1.23	13.64	0.82	0.47	12.35	4.59	0.00	3.41	2.27	2.08
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.00	3.390	3.39	-3.13	-0.26	6.79	0.15	0.72	5.92	5.47	0.00	0.36	0.06	0.03
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	1.00	7.855	7.86	-3.29	-2.92	14.06	2.45	0.23	11.38	6.35	0.00	1.90	3.09	0.04
...Autres															
Sacheries	nombre	13.00	0.100	1.30	0.00	0.00	1.30	0.88	0.00	0.42	0.42	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	7.50	5.900	44.25	-3.38	-2.17	49.80	1.82	1.39	46.60	28.36	0.00	10.72	7.38	0.14
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	heures	70.00	0.230	16.10	-3.39	-2.88	22.37	0.76	0.22	21.38	11.57	0.00	3.31	6.47	0.03
...Transport	heures	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	4.00	11.000	44.00	0.00	0.00	44.00	0.00	0.00	44.00	0.00	0.00	0.00	0.00	44.00
...Immobilisation du capitale	D/ha	94.37	0.055	5.19	0.00	0.00	5.19	0.00	0.00	5.19	0.00	0.00	0.00	5.19	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			206.45	-26.29	-15.81	248.55	11.62	4.73	232.21	94.67	0.00	55.37	35.70	46.47
...Valeur des balles de pailles	D/ha	70.00	1.000	70.00	-8.91	-5.36	84.27	3.94	1.60	78.73	32.10	0.00	18.77	12.11	15.76
COUT NET DE PRODUCTION (grains)	D/ha			136.45	-17.37	-10.45	164.28	7.68	3.13	153.47	62.57	0.00	36.60	23.60	30.72
RENDEMENT	qx/ha	13.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			10.50	-1.34	-0.80	12.64	0.59	0.24	11.81	4.81	0.00	2.82	1.82	2.36
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			13.63	-1.74	-1.04	16.41	0.77	0.31	15.33	6.25	0.00	3.66	2.36	3.07

PAYS:TUNISIE
SPECULATION:ORGE.H&SUB-HUMIDE.PETITE
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	11.000	11.00	-1.40	-1.23	13.64	0.82	0.47	12.35	4.59	0.00	3.41	2.27	2.08
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	1.00	7.855	7.86	3.29	2.92	14.04	2.45	0.21	11.18	6.13	0.00	1.90	3.09	0.04
...Autres															
Sacheries	nombre	11.00	0.100	1.10	0.00	0.00	1.10	0.44	0.00	0.66	0.66	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Valorisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	6.00	5.900	35.40	-2.70	-1.74	39.84	1.45	1.11	37.28	22.68	0.00	8.58	5.91	0.11
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	heures	50.00	0.230	11.50	-2.42	-2.05	15.98	0.54	0.16	15.27	8.26	0.00	2.37	4.62	0.02
...Transport	heures	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	4.00	11.000	44.00	0.00	0.00	44.00	0.00	0.00	44.00	0.00	0.00	0.00	0.00	44.00
...Immobilisation du capitale	D/ha	82.92	0.055	4.56	0.00	0.00	4.56	0.00	0.00	4.56	0.00	0.00	0.00	4.56	0.00
LIVRAISON AU POINT D ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (graines)	D/ha			181.90	-21.19	-14.09	217.18	10.28	3.54	203.36	77.82	0.00	48.16	30.99	46.40
...Valeur des balles de pailles	D/ha	50.00	1.000	50.00	-5.83	-3.87	59.70	2.83	0.97	55.90	21.39	0.00	13.24	8.52	12.75
COUT NET DE PRODUCTION (graines)	D/ha			131.90	-15.37	-10.22	157.48	7.45	2.57	147.46	56.43	0.00	34.92	22.48	33.64
RENDEMENT	qx/ha	11.00													
COUT NET UNITAIRE DE PROD (graines)	D/qx rendu point d'achat			11.99	-1.40	-0.93	14.32	0.68	0.23	13.41	5.13	0.00	3.17	2.04	3.06
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			15.57	-1.81	-1.21	18.59	0.88	0.30	17.41	6.66	0.00	4.12	2.65	3.97

PAYS:TUNISIE
SPECULATION:ORGE.SEMI-ARIDE.GRANDE
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	11.000	11.00	-1.40	-1.23	13.64	0.82	0.47	12.35	4.59	0.00	3.41	2.27	2.08
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres	1.20	3.260	3.91	-3.61	-0.31	7.83	0.17	0.83	6.83	6.31	0.00	0.42	0.07	0.03
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	1.00	6.240	6.24	-6.88	-2.54	15.66	2.24	0.28	13.15	10.03	0.00	1.99	1.07	0.05
Ammonitre 33%	qx	1.00	7.855	7.86	-3.29	-2.92	14.06	2.45	0.23	11.38	6.35	0.00	1.90	3.09	0.04
...Autres															
Sacheries	nombre	14.00	0.100	1.40	0.00	0.00	1.40	0.56	0.00	0.84	0.84	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Valearisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	5.80	5.900	34.22	-2.61	-1.68	38.51	1.41	1.07	36.03	21.93	0.00	8.29	5.71	0.11
...Epandage	heures	1.50	5.900	8.85	-0.68	-0.43	9.96	0.36	0.28	9.32	5.67	0.00	2.14	1.48	0.03
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures	0.70	5.900	4.13	0.32	0.20	4.65	0.17	0.13	4.15	2.63	0.00	1.00	0.69	0.01
...Moissonneuse-Battuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	5.50	6.83	0.03
...Pressage	heures	70.00	0.230	16.10	-3.39	-2.88	22.37	0.76	0.22	21.38	11.57	0.00	3.31	6.47	0.03
...Transport	heures	2.00	5.900	11.80	0.27	0.19	11.34	1.19	0.77	9.38	4.58	0.00	4.54	0.23	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	11.000	22.00	0.00	0.00	22.00	0.00	0.00	22.00	0.00	0.00	0.00	0.00	22.00
...Immobilisation du capitale	D/ha	77.60	0.055	4.27	0.00	0.00	4.27	0.00	0.00	4.27	0.00	0.00	0.00	4.27	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut.. magasinage. marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			174.32	-25.93	-15.32	215.57	11.20	4.72	199.64	90.65	0.00	51.38	33.17	24.45
...Valeur des balles de paille	D/ha	70.00	1.000	70.00	-10.41	-6.15	86.56	4.50	1.89	80.17	36.40	0.00	20.63	13.32	9.82
COUT NET DE PRODUCTION (grains)	D/ha			104.32	-15.52	-9.17	129.00	6.70	2.82	119.47	54.25	0.00	30.74	19.85	14.63
RENDEMENT	qx/ha	14.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			7.45	-1.11	-0.65	9.21	0.48	0.20	8.53	3.87	0.00	2.20	1.42	1.05
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			9.68	-1.44	-0.85	11.97	0.62	0.26	11.08	5.03	0.00	2.85	1.84	1.36

PAYS:TUNISIE
SPECULATION:ORGE.SEMI-ARIDE.MOYENNE
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		7.00	2.756	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00	19.29	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	11.000	11.00	-0.84	-1.23	13.64	0.80	0.47	12.37	4.61	0.00	3.41	2.27	2.08
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	0.80	6.240	4.99	-5.51	-2.03	12.53	1.79	0.22	10.52	8.02	0.00	1.60	0.86	0.04
Ammonitre 33%	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Autres															
Sacheries	nombre	12.00	0.100	1.20	0.00	0.00	1.20	0.48	0.00	0.72	0.72	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	space		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	4.50	5.900	26.55	-2.03	-1.30	29.88	1.09	0.83	27.96	17.01	0.00	6.43	4.43	0.08
...Enfouissement	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
.. Entretient	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Moissoneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	heures	50.00	0.230	11.50	-2.42	-2.05	15.98	0.54	0.16	15.27	8.26	0.00	2.37	4.62	0.02
...Transport	heures	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	11.000	22.00	0.00	0.00	22.00	0.00	0.00	22.00	0.00	0.00	0.00	0.00	22.00
...Immobilisation du capitale	D/ha	56.13	0.055	3.09	0.00	0.00	3.09	0.00	0.00	3.09	0.00	0.00	0.00	3.09	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut.. magasinage. marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			135.85	-14.93	-10.00	161.34	6.85	2.83	151.67	60.84	0.00	42.57	23.95	24.30
...Valeur des balles de pailles	D/ha	50.00	1.000	50.00	-5.49	-3.68	59.38	2.52	1.04	55.82	22.39	0.00	15.67	8.82	8.95
COUT NET DE PRODUCTION (grains)	D/ha			85.85	-9.43	-6.32	101.96	4.33	1.79	95.85	38.45	0.00	26.90	15.14	15.36
RENDEMENT	qx/ha	12.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			7.15	-0.79	-0.53	8.50	0.36	0.15	7.99	3.20	0.00	2.24	1.26	1.28
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			9.29	-1.02	-0.68	11.03	0.47	0.19	10.37	4.16	0.00	2.91	1.64	1.66

PAYS:TUNISIE

SPECULATION:DROM.BINI-ARIDE.PETITE ITINERAIRE TECHNIQUE a7b ... a140	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAILLE/SUBVENTIONS DIRECTES ECHANG	TAILLE/SUBVENTIONS DIRECTES NON ECH	COUT NET EX/SUBV DIRECTES	TAILLE/SUBVENTIONS INDIRECTES ECHANG	TAILLE/SUBVENTIONS INDIRECTES NON ECH	COUT NET INDIRECTES EX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON ECHANGEABLES..... M O O FAM	M O O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	jours. de travail														
Total. Main d'Oeuvre		6.00	2.756	16.54	0.00	0.00	16.54	0.00	0.00	16.54	0.00	0.00	16.54	0.00	0.00
SEMENCES															
...Traditionelles	qx	1.00	11.000	11.00	-1.40	-1.23	13.64	0.82	0.47	12.35	4.59	0.00	3.41	2.27	2.08
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx	0.80	6.240	4.99	-5.51	-2.03	12.53	1.79	0.22	10.52	8.02	0.00	1.60	0.86	0.04
Ammonitre 33%	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Autres															
Sacheries	nombre	10.00	0.100	1.00	0.00	0.00	1.00	0.40	0.00	0.60	0.60	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	4.50	5.900	26.55	-2.03	-1.30	29.88	1.09	0.83	27.96	17.01	0.00	6.43	4.43	0.08
...Epandage	heures	0.70	5.900	4.13	-0.32	-0.20	4.65	0.17	0.13	4.35	2.65	0.00	1.00	0.69	0.01
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Moissonneuse-Batteuse	heures	1.00	17.000	17.00	-3.58	-3.04	23.62	0.80	0.24	22.58	12.22	0.00	3.50	6.83	0.03
...Pressage	heures	40.00	0.230	9.20	-1.94	-1.64	12.78	0.43	0.13	12.22	6.61	0.00	1.89	3.70	0.02
...Transport	heures	1.50	5.900	8.85	0.21	0.14	8.50	0.89	0.57	7.03	3.44	0.00	3.41	0.17	0.02
TRACTION ANIMALE															
...Preparation du sol	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha	2.00	11.000	22.00	0.00	0.00	22.00	0.00	0.00	22.00	0.00	0.00	0.00	0.00	22.00
...Immobilisation du capitale	D/ha	54.55	0.055	3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	0.00	3.00	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut.. magasinage. pertes	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			130.51	-15.01	-9.59	155.11	6.67	2.80	145.63	59.06	0.00	39.34	22.94	24.30
...Valeur des balles de paille	D/ha	40.00	1.000	40.00	-4.60	-2.94	47.54	2.05	0.86	44.64	18.10	0.00	12.06	7.03	7.45
COUT NET DE PRODUCTION (grains)	D/ha			90.51	10.41	6.65	107.57	4.63	1.94	101.00	40.96	0.00	27.28	15.91	16.85
RENDEMENT	qx/ha	10.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			9.05	-1.04	-0.67	10.76	0.46	0.19	10.10	4.10	0.00	2.73	1.59	1.69
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			11.75	-1.35	-0.86	13.97	0.60	0.25	13.12	5.32	0.00	3.54	2.07	2.19

PAYS:TUNISIE
SPECULATION:ORGE CENTRE ET SUD
ITINERAIRE TECHNIQUE
a76 ... a140

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	jours. de travail														
Total. Main d'Oeuvre		12.00	2.756	33.07	0.00	0.00	33.07	0.00	0.00	33.07	0.00	0.00	33.07	0.00	0.00
SEMENCES															
...Traditionnelles	qx	0.70	11.000	7.70	0.98	0.86	9.55	0.57	0.33	8.65	3.21	0.00	2.39	1.59	1.46
...Certifiees	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AUTRES INTRANTS															
...2-4-D	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Polyvalents	litres			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Engrais															
Super 45%	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ammonitre 33%	qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Autres															
Sacheries	nombre	4.00	0.100	0.40	0.00	0.00	0.40	0.16	0.00	0.24	0.24	0.00	0.00	0.00	0.00
Ficelles	nombre			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Vulgarisation	somme		0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRACTION MECANIQUE															
...Preparation du sol	heures	2.50	5.900	14.75	-1.13	-0.72	16.60	0.61	0.46	15.53	9.45	0.00	3.57	2.46	0.05
...Epandage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis	heures	1.00	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	6.21	3.78	0.00	1.43	0.98	0.02
...Entretient	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Moissonneuse-Batteuse	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Pressage	heures			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Transport	heures	1.00	5.900	5.90	0.14	0.09	5.67	0.60	0.38	4.69	2.29	0.00	2.27	0.11	0.01
TRACTION ANIMALE	jours														
...Preparation du sol				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Semis				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Battage		1.00	4.000	4.00	-0.32	-0.20	4.52	0.15	0.16	4.53	1.36	0.00	0.89	1.77	0.51
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	qx/ha			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Immobilisation du capitale	D/ha	36.96	0.055	2.03	0.00	0.00	2.03	0.00	0.00	2.03	0.00	0.00	0.00	2.03	0.00
LIVRAISON AU POINT D'ACHAT															
...Transport	D/qx	0.10	3.50	0.35	0.01	0.01	0.34	0.04	0.02	0.28	0.14	0.00	0.13	0.01	0.00
...Manut., magasinage, marges	D/qx			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE PRODUCTION (grains)	D/ha			74.10	-2.74	-1.97	78.81	2.36	1.22	75.24	20.47	0.00	43.76	8.96	2.04
...Valeur des balles de pailles	D/ha	20.00	1.000	20.00	-0.74	-0.53	21.27	0.64	0.33	20.31	5.53	0.00	11.81	2.42	0.55
COUT NET DE PRODUCTION (grains)	D/ha			54.10	-2.00	-1.44	57.54	1.72	0.89	54.93	14.95	0.00	31.95	6.54	1.49
RENDEMENT	qx/ha	4.00													
COUT NET UNITAIRE DE PROD (grains)	D/qx rendu point d'achat			13.53	-0.50	-0.36	14.39	0.43	0.22	13.73	3.74	0.00	7.99	1.64	0.37
COUT NET UNITAIRE DE PROD (farine)	D/qx rendu point d'achat			17.57	-0.65	-0.47	18.68	0.56	0.29	17.83	4.85	0.00	10.37	2.12	0.48

PAYS: TUNISIE
SPECULATION: VIANDE BOV INTEGRE LOC
ITINERAIRE TECHNIQUE
a64 ... a110

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Main d'Oeuvre	journee	173.000	0.075	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000
INTRANTS															
...Animal Maiere	kg	200.000	1.400	280.000	36.400	0.000	243.320	0.000	0.000	243.320	243.320	0.000	0.000	0.000	0.000
...Aliments															
Paille	kg	432.500	0.030	12.975	-2.310	-1.012	16.245	0.740	0.454	15.064	6.773	0.000	3.153	2.706	2.932
Ensilage	kg	4671.000	0.013	60.723	-14.695	-8.866	84.223	6.133	2.004	76.147	42.870	0.000	14.938	14.817	3.400
Concentres	kg	346.000	0.140	48.440	5.383	0.009	43.048	1.462	0.622	40.964	27.314	0.000	7.709	6.430	0.001
...Frais veterinaires	Dinars	173.000	0.012	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000
...Transport Animal	Dinars	200.000	0.025	5.000	0.116	0.080	4.804	0.505	0.324	3.974	1.942	0.000	1.925	0.096	0.010
...Transport Aliments	Dinars	346.000	0.009	3.000	0.070	0.048	2.882	0.303	0.195	2.385	1.165	0.000	1.155	0.058	0.006
...Eau	litres	35.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Assurances	% Val Animal	280.00	0.020	5.600	0.000	0.000	5.600	0.000	0.000	5.600	0.000	0.000	0.000	5.600	0.000
AMORTISSEMENT	COUT D' INVESTISS	DUREE DE VIE	COEFF D' ACTUALSTN	COUT REMPL CAPITALE											
...Etable	35.800	40.000	0.058	2.086	0.000	0.000	2.086	0.000	0.000	2.086	0.000	0.000	0.000	2.086	0.000
...Materiel	2.500	5.000	0.231	0.577	0.000	0.000	0.577	0.000	0.000	0.577	0.000	0.000	0.000	0.577	0.000
FRAIS FINANCIERS															
...Credit 8 6-mois		280.000	0.036	10.080	0.000	0.000	10.080	0.000	0.000	10.080	0.000	0.000	0.000	10.080	0.000
COUT DE PRODUCTION (vif)	D/bete			443.46	24.97	-9.74	427.64	9.14	3.60	415.17	323.39	0.00	43.36	42.01	6.35
...Valeur fumier	kg	1500.000	0.010	15.000	0.844	-0.330	14.472	0.309	0.122	14.043	10.939	0.000	1.466	1.421	0.215
COUT NET DE PRODUTION (vif)	D/bete			428.457	24.121	-9.412	413.369	8.834	3.477	401.129	312.447	0.000	41.889	40.590	6.136
RENDEMENT (vif)	kg/bete	327.000													
COUT NET UNITAIRE DE PROD (vif)	D/kg			1.310	0.074	-0.029	1.264	0.027	0.011	1.227	0.955	0.000	0.128	0.124	0.019
COUT NET UNITAIRE DE PROD (carcasse)	D/kg			2.472	0.139	-0.054	2.385	0.051	0.020	2.315	1.803	0.000	0.242	0.234	0.035
COUT DE TRANSPORT FERME MARCHE DE BETES															
TRANSPORT(vif)	D/kg			0.006	0.000	0.000	0.006	0.001	0.000	0.005	0.002	0.000	0.002	0.000	0.000
TRANSPORT(carcasse)	D/kg			0.011	0.000	0.000	0.011	0.001	0.001	0.009	0.004	0.000	0.004	0.000	0.000
TOTAL ENTREE MARCHE				2.484	0.139	0.054	2.396	0.052	0.021	2.324	1.807	0.000	0.246	0.234	0.035
COUT D'ABATTAGE															
...Cout d'Abattage	D/Kg	0.024		0.024	0.000	0.000	0.024	0.000	0.000	0.024	0.000	0.000	0.017	0.002	0.005
TOTAL SORTIE ABATTOIR	D/kg carcasse			2.508	0.139	-0.054	2.420	0.052	0.021	2.348	1.807	0.000	0.263	0.237	0.040

PAYS: TUNISIE
SPECULATION: VIANDE BOV INTEGRE PURE
ITINERAIRE TECHNIQUE
664 ... 6110

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D O GAI	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Main d'Oeuvre	journees	173.000	0.075	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000
INTRANTS															
...Animal Maigre	kg	270.000	1.500	405.000	52.650	0.000	351.945	0.000	0.000	351.945	351.945	0.000	0.000	0.000	0.000
...Aliments															
Paille	kg	432.500	0.030	12.975	-2.310	-1.012	16.245	0.740	0.454	15.064	6.773	0.000	3.153	2.206	2.932
Foin de transition	kg	75.000	0.060	4.500	-0.801	-0.351	5.634	0.257	0.158	5.225	2.349	0.000	1.094	0.765	1.017
Ensillage	kg	5190.000	0.013	67.470	-16.328	-9.851	93.581	6.814	2.227	84.607	47.634	0.000	16.598	16.530	3.778
Concentres	kg	519.000	0.140	72.660	8.075	0.013	64.572	2.193	0.933	61.446	40.971	0.000	10.813	9.645	0.002
...Frais veterinaires	Dinars	173.000	0.012	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000
...Transport Animal	Dinars	270.000	0.019	5.000	0.116	0.080	4.804	0.505	0.324	3.974	1.942	0.000	1.925	0.096	0.010
...Transport Aliments	Dinars	519.000	0.006	3.000	0.070	0.048	2.882	0.303	0.195	2.384	1.165	0.000	1.155	0.058	0.006
...Eau	litres	35.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Assurances	% Val AnimM	405.00	0.020	8.100	0.000	0.000	8.100	0.000	0.000	8.100	0.000	0.000	0.000	8.100	0.000
AMORTISSEMENT	COUT D' INVESTISS	DUREE DE VIE	COEFF D' ACTUALSTN	COUT REMPL CAPITALE											
...Etable	35.800	40.000	0.058	2.086	0.000	0.000	2.086	0.000	0.000	2.086	0.000	0.000	0.000	2.086	0.000
...Materiel	2.500	5.000	0.231	0.577	0.000	0.000	0.577	0.000	0.000	0.577	0.000	0.000	0.000	0.577	0.000
FRAIS FINANCIERS															
...Credit 6 6-mois		280.000	0.036	10.080	0.000	0.000	10.080	0.000	0.000	10.080	0.000	0.000	0.000	10.080	0.000
COUT DE PRODUCTION (vif)	D/bete			606.42	41.47	-11.07	575.48	10.81	4.29	560.46	452.78	0.00	49.71	50.14	7.75
...Valeur fumier	kg	1500.000	0.010	15.000	1.026	-0.274	14.235	0.267	0.106	13.863	11.200	0.000	1.230	1.240	0.192
COUT NET DE PRODUTION (vif)	D/bete			591.424	40.447	-10.800	561.247	10.544	4.184	546.601	441.580	0.000	48.483	48.903	7.554
RENDEMENT (vif)	kg/bete	430.000													
COUT NET UNITAIRE DE PROD (vif)	D/kg			1.375	0.094	-0.025	1.305	0.025	0.010	1.271	1.027	0.000	0.113	0.114	0.018
COUT NET UNITAIRE DE PROD (carcasse)	D/kg			2.547	0.174	-0.047	2.417	0.045	0.018	2.354	1.902	0.000	0.209	0.211	0.033
COUT DE TRANSPORT FERME MARCHE DE BETES															
TRANSPORT(vif)	D/kg			0.006	0.000	0.000	0.006	0.001	0.000	0.005	0.002	0.000	0.002	0.000	0.000
TRANSPORT(carcasse)	D/kg			0.011	0.000	0.000	0.011	0.001	0.001	0.009	0.004	0.000	0.004	0.000	0.000
TOTAL ENTREE MARCHE				2.558	0.174	-0.046	2.428	0.047	0.019	2.363	1.906	0.000	0.213	0.211	0.033
COUT D'ABATTAGE															
...Cout d'Abattage	D/Kg	0.024		0.024	0.000	0.000	0.024	0.000	0.000	0.024	0.000	0.000	0.017	0.002	0.005
TOTAL SORTIE ABATTOIR	D/kg carcasse			2.582	0.174	-0.046	2.452	0.047	0.019	2.387	1.906	0.000	0.230	0.213	0.037

PAYS: TUNISIE

SPECULATION:BOVINE NON INTEGRE LOC ITINERAIRE TECHNIQUE a64 ... a110	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'D FAM	M D'D SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Main d'Oeuvre	journee	173.000	0.075	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000
INTRANTS															
...Animal Maigre	kg	200.000	1.400	280.000	36.400	0.000	243.120	0.000	0.000	243.120	243.120	0.000	0.000	0.000	0.000
...Aliments															
Paille	kg	432.500	0.030	12.975	-2.310	-1.012	16.245	0.740	0.454	15.064	6.773	0.000	3.153	2.206	2.932
Foin	kg	1384.000	0.060	83.040	-20.096	-12.124	115.176	8.387	2.740	104.132	58.626	0.000	20.428	20.345	4.650
Concentres	kg	519.000	0.140	72.660	8.075	0.013	64.572	2.193	0.933	61.446	40.971	0.000	10.813	9.645	0.002
...Frais veterinaires	Dinars	173.000	0.012	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000
...Transport Animal	Dinars	200.000	0.025	5.000	0.116	0.080	4.804	0.505	0.324	3.974	1.942	0.000	1.925	0.096	0.010
...Transport Aliments	Dinars	519.000	0.009	4.500	0.105	0.072	4.324	0.455	0.292	3.577	1.748	0.000	1.733	0.087	0.009
...Eau	litres	35.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Assurances	% Val AnimM	280.00	0.020	5.600	0.000	0.000	5.600	0.000	0.000	5.600	0.000	0.000	0.000	5.600	0.000
AMORTISSEMENT	COUT D' INVESTISS	DUREE DE VIE	COEFF D' ACTUALSTN	COUT REMPL CAPITALE											
...Etable	35.800	40.000	0.058	2.086	0.000	0.000	2.086	0.000	0.000	2.086	0.000	0.000	0.000	2.086	0.000
...Materiel	2.500	5.000	0.231	0.577	0.000	0.000	0.577	0.000	0.000	0.577	0.000	0.000	0.000	0.577	0.000
FRAIS FINANCIERS															
...Credit @ 6-mois		280.000	0.036	10.080	0.000	0.000	10.080	0.000	0.000	10.080	0.000	0.000	0.000	10.080	0.000
COUT DE PRODUCTION (vif)	D/bete			491.49	22.29	-12.97	481.76	12.28	4.74	464.83	353.38	0.00	53.03	50.72	7.60
...Valeur fumier	kg	1500.000	0.010	15.000	0.680	-0.396	14.703	0.375	0.145	14.186	10.785	0.000	1.618	1.548	0.232
COUT NET DE PRODUTION (vif)	D/bete			476.494	21.611	-12.576	467.057	11.905	4.599	450.646	342.596	0.000	51.409	49.174	7.372
RENDEMENT (vif)	kg/bete	377.000													
COUT NET UNITAIRE DE PROD (vif)	D/kg			1.607	0.066	0.038	1.478	0.036	0.014	1.378	1.048	0.000	0.157	0.150	0.021
COUT NET UNITAIRE DE PROD (carcasse)	D/kg			2.749	0.125	0.073	2.695	0.069	0.027	2.600	1.977	0.000	0.297	0.284	0.043
COUT DE TRANSPORT FERME MARCHE DE BETES															
TRANSPORT(vif)	D/kg			0.006	0.000	0.000	0.006	0.001	0.000	0.005	0.002	0.000	0.002	0.000	0.000
TRANSPORT(carcasse)	D/kg			0.011	0.000	0.000	0.011	0.001	0.001	0.009	0.004	0.000	0.004	0.000	0.000
TOTAL ENTREE MARCHE				2.761	0.125	-0.072	2.706	0.070	0.027	2.609	1.981	0.000	0.301	0.284	0.043
COUT D'ABATTAGE															
...Cout d'Abattage	D/Kg	0.024		0.024	0.000	0.000	0.024	0.000	0.000	0.024	0.003	0.000	0.017	0.002	0.005
TOTAL SORTIE ABATTOIR	D/kg carcasse			2.785	0.125	-0.072	2.730	0.070	0.027	2.633	1.981	0.000	0.318	0.286	0.047

PAYS: TUNISIE
SPECULATION: BOVINE NON INTEGRE PURE
ITINERAIRE TECHNIQUE
a64 ... a110

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Main d'Oeuvre	Journee	173.000	0.075	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000	12.975	0.000	0.000
INTRANTS															
...Animal Maigre	kg	270.000	1.500	405.000	52.650	0.000	351.945	0.000	0.000	351.945	351.945	0.000	0.000	0.000	0.000
...Aliments															
Paille	kg	432.500	0.030	12.975	-2.310	-1.012	16.245	0.740	0.454	15.064	6.773	0.000	3.153	2.206	2.932
Foin	kg	1730.000	0.060	103.800	-25.120	-15.155	143.971	10.484	3.425	130.165	73.283	0.000	25.535	25.431	5.813
Concentres	kg	692.000	0.140	96.880	10.767	0.017	86.096	2.924	1.244	81.928	54.628	0.000	14.418	12.859	0.002
...Frais veterinaires	Dinars	173.000	0.012	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000	2.000	0.000	0.000
...Transport Animal	Dinars	270.000	0.019	5.000	0.116	0.080	4.804	0.505	0.324	3.974	1.942	0.000	1.925	0.096	0.010
...Transport Aliments	Dinars	692.000	0.004	3.000	0.070	0.048	2.882	0.303	0.195	2.384	1.165	0.000	1.155	0.058	0.006
...Eau	litres	35.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Assurances	% Val AnimM	405.00	0.020	8.100	0.000	0.000	8.100	0.000	0.000	8.100	0.000	0.000	0.000	8.100	0.000
AMORTISSEMENT	COUT D' INVESTISS	DUREE DE VIE	COEFF D' ACTUALISN	COUT REMPL CAPITALE											
...Etable	35.800	40.000	0.058	2.086	0.000	0.000	2.086	0.000	0.000	2.086	0.000	0.000	0.000	2.086	0.000
...Materiel	2.500	5.000	0.231	0.577	0.000	0.000	0.577	0.000	0.000	0.577	0.000	0.000	0.000	0.577	0.000
FRAIS FINANCIERS															
...Credit @ 6-mois		280.000	0.036	10.080	0.000	0.000	10.080	0.000	0.000	10.080	0.000	0.000	0.000	10.080	0.000
COUT DE PRODUCTION (vif)	D/bete			662.47	36.17	-16.02	641.76	14.96	5.64	621.28	489.74	0.00	61.16	61.49	8.76
...Valeur fumier	kg	1500.000	0.010	15.000	0.819	-0.363	14.531	0.339	0.128	14.067	11.089	0.000	1.385	1.392	0.198
COUT NET DE PRODUTION (vif)	D/bete			647.474	35.355	-15.660	627.231	14.617	5.515	607.213	478.648	0.000	59.776	60.102	8.566
RENDEMENT (vif)	kg/bete	430.000													
COUT NET UNITAIRE DE PROD (vif)	D/kg			1.506	0.082	-0.036	1.459	0.034	0.013	1.412	1.113	0.000	0.139	0.140	0.020
COUT NET UNITAIRE DE PROD (carcasse)	D/kg			2.788	0.152	-0.067	2.701	0.063	0.024	2.615	2.061	0.000	0.257	0.259	0.037
COUT DE TRANSPORT FERME MARCHE DE BETES															
TRANSPORT(vif)	D/kg			0.006	0.000	0.000	0.006	0.001	0.000	0.005	0.002	0.000	0.002	0.000	0.000
TRANSPORT(carcasse)	D/kg			0.011	0.000	0.000	0.011	0.001	0.001	0.009	0.004	0.000	0.004	0.000	0.000
TOTAL ENTREE MARCHE				2.800	0.153	-0.067	2.712	0.064	0.024	2.624	2.066	0.000	0.262	0.259	0.037
COUT D'ABATTAGE															
...Cout d'Abattage	D/Kg	0.024		0.024	0.000	0.000	0.024	0.000	0.000	0.024	0.000	0.000	0.017	0.002	0.005
TOTAL SORTIE ABATTOIR	D/kg carcasse			2.824	0.153	-0.067	2.736	0.064	0.024	2.648	2.066	0.000	0.279	0.261	0.042

PAYS: TUNISIE
SPECULATION: LAIT.RACE PURE.INTEGRE
ITINERAIRE TECHNIQUE
a61 ... a115

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Total. Main d'Oeuvre	journees	26.000	3.500	91.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
INTRANTS															
...Aliments															
Paille	kg	1095.000	0.030	32.850	5.847	2.562	41.178	1.877	1.150	38.139	17.148	0.000	7.981	5.583	8.738
Foin	kg	1460.000	0.065	94.900	27.966	13.855	111.676	9.583	1.137	119.005	66.999	0.000	21.345	23.251	5.314
Vert	kg	10950.000	0.012	131.400	31.799	19.184	182.257	13.271	4.336	144.774	92.768	0.000	32.324	12.193	7.358
Concentres (N°5)	kg	1642.500	0.161	264.443	27.034	0.054	237.355	6.718	3.571	227.066	147.295	0.000	43.481	36.222	0.007
...Frais veterinaires	kg	345.000	0.014	5.001	0.115	0.080	4.805	0.505	0.325	3.975	1.940	0.000	1.925	0.095	0.010
...Transport Animal	kg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Transport Aliments	kg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Eau	litres	35.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Assurances	% Val Anim	750.000	0.070	52.500	0.000	0.000	52.500	0.000	0.000	52.500	0.000	0.000	0.000	52.500	0.000
AMORTISSEMENT	COUT D' INVESTISS	DURFE DE VIE	COEFF D' ACTUALSTN	COUT REMPL CAPITALE											
...Vache	400.000	5.000	0.200	80.024	3.841	0.000	74.022	0.000	0.000	76.183	76.183	0.000	0.000	0.000	0.000
...Etable	300.000	20.000	0.050	15.016	0.000	0.000	15.016	0.000	0.000	15.016	0.000	0.000	0.000	15.016	0.000
...Materiel	100.000	5.000	0.200	20.006	0.000	0.000	20.006	0.000	0.000	20.006	0.000	0.000	0.000	20.006	0.000
COUTS D'OPERATION ET MAINTIEN															
...Maintenance	D/operation	1.000	10.000	10.000	0.000	0.000	10.000	0.000	0.000	10.000	0.000	0.000	10.000	0.000	0.000
FRAIS FINANCIERS															
...Credit @ 3-mois(Charges variables	D/operation	173.934	0.090	15.654	0.000	0.000	15.654	0.000	0.000	15.654	0.000	0.000	0.000	15.654	0.000
...Credit @ 1 Annee (Sur invest)	D/operation	1150.000	0.042	48.300	0.000	0.000	48.300	0.000	0.000	48.300	0.000	0.000	0.000	48.300	0.000
...Autres(Frais de gestion)	D/operation	682.093	0.020	13.642	0.000	0.000	13.642	1.883	0.996	10.763	2.210	0.000	5.825	2.728	0.000
COUT DE PRODUCTION TOTAL (Lait)	D/operation			874.735	-29.622	-35.468	846.306	33.835	13.509	801.382	404.543	0.000	124.884	251.550	21.428
...Valeur fumier	D/operation	8.000	11.250	90.000											
...Valeur taureaux	D/operation	28.000	3.929	110.012	3.725	4.461	106.437	4.255	1.699	100.787	50.878	0.000	15.706	31.636	2.695
COUT NET DE PRODUTION (Lait)	D/operation			674.723	-25.896	-31.007	739.870	29.579	11.810	700.595	353.665	0.000	109.177	219.913	18.733
RENDEMENT	L/operation	3400.000													
COUT NET UNITAIRE DE PROD (Lait)	D/Litre			0.198	-0.008	-0.009	0.218	0.009	0.003	0.206	0.104	0.000	0.032	0.065	0.006
COUT DE COLLECTE ET DE TRAITEMENT															
...Transport ferme-centre collecte	D/Litre	1.000	6.000	6.000	0.140	0.096	5.765	0.606	0.389	4.769	2.331	0.000	2.310	0.116	0.012
...Manut.. magasinage, marges (D/L)	D/Litre			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL PROD. COLLECTE	D/Litre			0.204	-0.007	-0.009	0.223	0.009	0.004	0.211	0.106	0.000	0.034	0.065	0.006
COUT DE DISTRIBUTION A LA LAITERIE															
...Manut.. magasinage, marges	D/Litre			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Transport centre-usine	D/Litre	1.000	15.000	15.000	0.349	0.239	14.412	1.516	0.973	11.923	5.827	0.000	5.776	0.289	0.031
TOT PRODUCTION. COLLECTE, DISTRIBUTION	D/Litre			0.219	-0.007	-0.009	0.238	0.011	0.005	0.223	0.112	0.000	0.040	0.065	0.006

PAYS: TUNISIE
SPECULATION: LAIT.RACE PURE.NON INT
ITINERAIRE TECHNIQUE
a61 ... p115

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE															
Total. Main d'Oeuvre	journees	26.000	3.500	91.000	0.000	0.000	91.000	0.000	0.000	91.000	0.000	0.000	91.000	0.000	0.000
INTRANTS															
...Aliments															
Paille	kg	1825.000	0.040	73.000	-12.994	-5.694	91.688	4.161	2.555	84.972	38.106	0.000	17.739	12.410	16.717
Foin	kg	2920.000	0.100	292.000	-70.664	-42.632	405.296	29.492	9.636	366.168	206.152	0.000	71.832	71.540	16.352
Vert	kg	4380.000	0.017	74.460	-18.019	-10.871	103.350	7.520	2.457	93.373	52.569	0.000	18.317	18.243	4.170
Concentres (N°5)	kg	1642.500	0.161	264.443	27.034	0.054	237.355	6.718	3.571	227.066	147.295	0.000	43.481	36.222	0.007
...Frais veterinaires	kg	365.000	0.014	5.001	0.116	0.080	4.804	0.505	0.324	3.975	1.942	0.000	1.925	0.095	0.010
...Transport Animal	kg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Transport Aliments	kg	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Eau	litres	35.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Assurances	% Val Anim	750.000	0.070	52.500	0.000	0.000	52.500	0.000	0.000	52.500	0.000	0.000	0.000	52.500	0.000
AMORTISSEMENT	COUT D' INVESTISS	DUREE DE VIE	COEFF D' ACTUALISTN	COUT REMPL CAPITALE											
...Vache	400.000	5.000	0.200	80.024	3.841	0.000	76.183	0.000	0.000	76.183	76.183	0.000	0.000	0.000	0.000
...Etable	300.000	20.000	0.050	15.016	0.000	0.000	15.016	0.000	0.000	15.016	0.000	0.000	0.000	15.016	0.000
...Materiel	100.000	5.000	0.200	20.006	0.000	0.000	20.006	0.000	0.000	20.006	0.000	0.000	0.000	20.006	0.000
COUTS D'OPERATION ET MAINTIEN															
...Maintenance	D/operation	1.000	10.000	10.000	0.000	0.000	10.000	0.000	0.000	10.000	0.000	0.000	10.000	0.000	0.000
FRAIS FINANCIERS															
...Credit 0 3-mois(Charges variables	D/operation	219.913	0.090	19.792	0.000	0.000	19.792	0.000	0.000	19.792	0.000	0.000	0.000	19.792	0.000
...Credit 0 1 Annee (Sur invest)	D/operation	1150.000	0.042	48.300	0.000	0.000	48.300	0.000	0.000	48.300	0.000	0.000	0.000	48.300	0.000
...Autres(Frais de gestion)	D/operation	862.403	0.020	17.248	0.000	0.000	17.248	2.380	1.259	13.609	2.794	0.000	7.365	3.450	0.000
COUT DE PRODUCTION TOTAL(Lait)	D/operation			1062.789	-70.686	-59.064	1192.538	50.777	19.802	1121.959	525.041	0.000	261.659	297.574	37.256
...Valeur fumier	D/operation	8.000	11.250	90.000											
...Valeur taureaux	D/operation	28.000	3.929	110.012	-7.317	-6.114	123.443	5.256	2.050	116.137	54.348	0.000	27.085	30.803	3.856
COUT NET DE PRODUTION (Lait)	D/operation			862.777	-63.369	-52.950	1069.096	45.521	17.753	1005.822	470.693	0.000	234.574	266.771	33.399
RENDEMENT	L/operation	3400.000													
COUT NET UNITAIRE DE PROD (Lait)	D/Litre			0.254	-0.019	-0.016	0.314	0.013	0.005	0.296	0.138	0.000	0.069	0.078	0.010
COUT DE COLLECTE ET DE TRAITEMENT															
...Transport ferme-centre collecte	D/Litre	1.000	6.000	6.000	0.140	0.096	5.765	0.606	0.389	4.769	2.331	0.000	2.310	0.116	0.012
...Manut.. magasinage, marges (D/L)	D/Litre			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL PROD. COLLECTE	D/Litre			0.260	-0.018	-0.015	0.320	0.014	0.006	0.301	0.141	0.000	0.071	0.079	0.010
COUT DE DISTRIBUTION A LA LAITERIE															
...Manut.. magasinage, marges	D/Litre			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Transport centre-usine	D/Litre	1.000	15.000	15.000	0.349	0.239	14.412	1.516	0.973	11.923	5.027	0.000	5.776	0.289	0.031
TOT PRODUCTION. COLLECTE, DISTRIBUTION	D/Litre			0.275	-0.018	-0.015	0.335	0.016	0.007	0.313	0.147	0.000	0.077	0.079	0.010

PAYS: TUNISIE
SPECULATION: AGRUMES/TRAC [illegible] GOUTTE A GOUTTE
COUTS/BENEFICES AMORTIS SUR [illegible] ANNEES 1-30
a74 ... a168
a74 ...aa168

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS PREVUS AGRUMES [illegible]				1.51	3.50	5.99	8.99	[illegible]	15.99	19.01	21.00	22.99	24.50	26.01	26.99
RENDEMENTS PREVUS P DE TERRE [illegible]	13.00	13.00	13.00	9.00	9.00										
Taux d actualisation	1.00	0.90	0.81	0.73	0.66	0.59	0.53	[illegible]	0.43	0.39	0.35	0.32	0.29	0.26	0.23
Rendements prevus actualises AGRUMES	0.00	0.00	0.00	1.11	2.31	3.56	4.81	[illegible]	6.94	7.43	7.40	7.29	7.00	6.70	6.26
Rendements prevus actualises PT	13.00	11.71	10.55	6.50	5.95	5.30	5.00	[illegible]	3.50	0.00	0.00	0.00	0.00	0.00	0.00
QUANTITES PREVUES D INTRANTS															
MAIN D OEUVRE															
...Tracage-piquetage	4.00														
...Trouaison	18.00														
...Plantation-semis	15.00	2.00	2.00	2.00	2.00										
...Epandage-fumier	14.00	14.00	14.00	12.00	12.00			4.00		14.00		14.00		14.00	
...Epandage-engrais	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.00	1.00	1.00
...Confection cuvette-semis															
...Culture de maintien	100.00	100.00	80.00	80.00	70.00	50.00	50.00	[illegible]	50.00	50.00	50.00	50.00	50.00	50.00	50.00
...Irrigation															
.....Plantes	18.00	18.00	18.00	18.00	18.00	18.00	18.00	[illegible]	18.00	18.00	18.00	18.00	18.00	18.00	18.00
.....Brise-vent	2.00	2.00	1.50	1.00	1.00	1.00	1.00	[illegible]	1.00	1.00					
.....Pompes de terre	50.00	50.00	40.00	40.00	30.00										
...Remplacement-manquant		2.00	1.00												
...Recolte	20.00	20.00	20.00	15.00	10.00		22.47	[illegible]	29.97	47.53	52.50	57.47	61.25	65.03	67.48
...Taille		2.00	6.00	7.00	8.00		14.00		15.00		20.00		25.00		25.00
...Transport															
TRACTION MECANIQUE															
...Facons culturales	10.00	10.00	10.00	10.00	10.00	10.00	10.00	[illegible]	10.00	10.00	10.00	10.00	10.00	10.00	10.00
...Traitement antiparasitaire	3.00	3.00	3.00	3.00	3.00	3.00	3.00	[illegible]	3.00	3.00	3.00	3.00	3.00	3.00	3.00
...Transport au site de commercialisation	150.00	150.00	150.00	100.00	70.00	14.98	22.47	[illegible]	29.97	47.53	52.50	57.47	61.25	65.03	67.48
...Epandage fumier	10.00	10.00	10.00	10.00	10.00			[illegible]		[illegible]		10.00		10.00	
INTRANTS ET MATERIELS															
...Plants maraicoles	275.00	30.00	15.00												
...Semences de cultures maraicheres	1.50	1.50	1.50	1.00	1.00										
...Installation brise vent	120.00														
...Fertilisants															
.....Fumier	20.00	15.00	15.00	15.00	15.00			[illegible]		20.00		20.00		20.00	
.....Super 45%	8.00	8.00	4.00	4.00	4.00	2.00	2.00	[illegible]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
.....Sulfate de Potasse	8.00	4.00	4.00	4.00	4.00	1.50	1.50	[illegible]	2.00	2.00	2.00	2.00	2.00	2.00	2.00
.....Ammonitre	5.00	10.00	10.00	10.00	6.00	6.00	6.00	[illegible]	6.00	6.00	7.00	7.00	7.00	7.00	7.00
.....Oligo-elements				20.00	20.00	20.00	20.00	[illegible]	30.00	10.00	20.00	40.00	40.00	40.00	40.00
...Petit Materiels	20.00			20.00		40.00		[illegible]		70.00		70.00		70.00	
...Traitements phytosanitaires															
.....Bromoboate 40										3.00	4.00	4.00	4.00	5.00	5.00
.....Hydrolysat Proteines						5.00	5.00	[illegible]	6.00	7.00	7.00	8.00	8.00	8.00	8.00
.....Bitracide 40										2.00			3.00		
.....Frais pulverisation				30.00	50.00	40.00	40.00	[illegible]	40.00	50.00	50.00	50.00	50.00	60.00	60.00
...Traitements phytosanitaires				1.00	1.00	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.00	1.00	1.00
...Irrigation															
.....Aspersers															
.....Au sol	0.90	0.90	1.10	1.30	1.70	1.70	1.70	[illegible]	2.00	2.30	2.30	2.30	2.30	2.70	2.70
.....de l ORV	0.40	0.40	0.50	0.60	0.90	0.90	0.90	[illegible]	1.00	1.20	1.20	1.20	1.20	1.30	1.30
.....Brise vent															
.....Au sol	0.70	0.50	0.40	0.40	0.30	0.30	0.30	[illegible]	0.30						
.....de l ORV	0.30	0.30	0.20	0.20	0.10	0.10	0.10	[illegible]	0.10						
.....Pompes de terre															
.....Au sol	2.40	2.40	2.40	2.00	2.00										
.....de l ORV	1.10	1.10	1.10	1.10	1.10										
...Infrastructure irrigation	**********														
.....Maintenance		30.00	30.00	30.00	30.00	30.00	30.00	[illegible]	30.00	30.00	30.00	30.00	30.00	30.00	30.00
COUT D OPERATION															
...Valeur locative de la terre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PAYS: TUNISIE
SPECULATION: AGRUMES/TRAC REC. GOUTTE A GOUTTE
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-30

ANNEE: 16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	....Calcul de la VAN.... Vann17	18-30	TOT
20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00			
0.21	0.19	0.17	0.15	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05			
5.85	5.27	4.75	4.28	3.85	3.47	3.13	2.82	2.54	2.29	2.06	1.86	1.67	1.51	1.36			113.29
3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			47.77
															4.00	0.00	4.00
															18.00	0.00	18.00
															21.20	0.00	21.20
14.00		14.00		14.00		14.00		14.00		14.00		14.00		4.00	77.83	5.28	83.22
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	18.75	2.43	20.68
															3.00	3.00	0.00
20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	487.93	24.32	512.25
															3.00	3.00	0.00
18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	150.82	14.59	165.42
															8.84	3.00	8.84
															176.52	3.00	176.52
															2.61	3.00	2.61
															220.84	3.00	220.84
															51.04	3.00	51.04
															0.00	0.00	0.00
10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	83.79	8.11	91.90
5.00															27.18	0.00	27.18
70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	657.59	54.76	710.35
10.00		10.00		10.00		10.00		10.00		10.00		10.00		10.00	57.59	3.84	61.43
															314.20	0.00	314.20
															5.46	0.00	5.46
															120.00	0.00	120.00
20.00		20.00		20.00		20.00		20.00		20.00		20.00		20.00	99.66	7.69	107.35
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	32.57	1.62	34.19
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	28.16	1.62	29.78
7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	60.89	5.68	66.57
40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	159.72	32.43	192.15
70.00		70.00		70.00		70.00		70.00		70.00		70.00		70.00	164.68	26.90	191.57
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	9.43	4.05	13.48
8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	28.26	6.49	34.74
3.00		3.00				4.00				4.00				4.00	2.27	0.86	3.13
60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	243.96	48.65	292.61
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.67	0.81	6.48
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	14.03	2.43	16.47
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	6.98	1.22	8.19
															2.50	0.00	2.50
															1.15	0.00	1.15
															9.29	0.00	9.29
															6.51	0.00	6.51
															1479.83	0.00	1479.83
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	221.37	24.32	245.70
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PAYS: TUNISIE
SPECULATION: AGRUMES/TMC NEC. SOUTTE
ITINERAIRE TECHNIQUE
a171 ... a263

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLE	.....INTRANTS NON-ECHANGEABLES..... M O O FAM	M O O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D OEUVRE															
...Tracage-plantage		4.00	2.756	11.02											
...Trouaison		18.00	2.756	49.61											
...Plantation-greffe		21.20	2.756	58.44											
...Epandage-fumier		83.22	2.756	229.36											
...Epandage-engrais		20.68	2.756	57.00											
...Confection cuvette-[illegible]		0.00	2.756	0.00											
...Culture de maintien		512.25	2.756	1411.77											
...Irrigation		0.00	2.756	0.00											
.....Plantes		165.42	2.756	455.90											
.....Brise-vent		8.84	2.756	24.37											
.....Pompes de terre		176.52	2.756	486.49											
...Remplacement-manquant		2.61	2.756	7.20											
...Recolte		220.84	2.756	608.64											
...Taille		51.04	7.000	357.30											
...Transport		0.00	2.756	0.00											
Total. Main d Oeuvre	JOURS	1284.64		3757.10	0.00	0.00	3757.10	0.00	0.00	3757.10	0.00	0.00	3757.10	0.00	0.00
TRACTION MECANIQUE															
...Façons culturales	HEURES	91.90	1.95	179.20	-15.67	-8.80	291.67	[illegible]	5.61	188.70	114.84	0.00	43.43	29.90	0.56
...Traitement [illegible]	HEURES	27.18	1.95	52.99	-4.04	-2.60	59.64	[illegible]	1.66	55.80	33.96	0.00	12.84	8.84	0.17
...Transport [illegible]	DIMARS	714.35	1.00	714.35	-54.51	-35.06	803.92	[illegible]	22.37	752.21	457.77	0.00	173.14	119.20	2.22
...Epandage fumier	HEURES	61.43	1.95	119.79	-9.14	-5.88	134.81	[illegible]	3.75	126.14	76.76	0.00	29.03	19.99	0.37
INTRANTS ET MATERIELS															
...Plants [illegible]	UNITES	314.20	2.00	628.40	-41.81	-11.02	681.23	[illegible]	74.07	579.67	104.86	0.00	435.74	20.42	10.56
...Semences [illegible]	TONNES	5.46	290.00	1583.03	-109.16	-12.39	1994.57	[illegible]	-5.73	1691.63	1626.45	0.00	23.20	41.98	0.00
...Installation brise-vent	D/HA	120.00		120.00	0.00	0.00	120.00	[illegible]	3.00	141.00	33.96	0.00	60.00	47.04	0.00
...Fertilisants															
.....Fumier	TONNES	107.25	13.00	1395.55	63.86	-21.05	1352.74	[illegible]	19.03	1291.76	847.30	0.00	328.23	105.09	15.36
.....Super 45%	QUINTAUX	24.19	5.77	197.10	-217.46	-80.19	494.74	[illegible]	8.69	415.33	316.80	0.00	63.01	33.83	1.69
.....Sulfate de Potasse	QUINTAUX	29.78	29.16	868.28	33.74	2.21	832.43	[illegible]	6.14	746.49	525.38	0.00	36.59	182.33	2.49
.....Ammoniac	QUINTAUX	36.57	7.29	478.95	-200.67	-177.76	857.29	[illegible]	14.18	693.87	387.28	0.00	115.78	188.38	2.51
.....Oligo-éléments	KILOGRAMM	192.15	0.70	134.51	-111.91	-22.59	269.02	[illegible]	2.80	205.39	170.89	0.00	16.75	9.10	17.65
...Petit Materiels	D/HA	191.57	1.00	191.57	0.00	0.00	191.57	[illegible]	0.00	110.75	114.75	0.00	0.00	0.00	0.00
...Traitements [illegible]															
.....Diméthoate 40	LITRES	13.48	3.60	24.27	-20.19	-4.08	48.54	[illegible]	0.51	37.06	30.83	0.00	3.02	3.02	3.18
.....Hydrolysat [illegible]	LITRES	24.74	0.70	0.00	-20.25	-4.08	24.32	[illegible]	0.51	37.13	30.90	0.00	3.03	3.02	3.19
.....Ultracide 40	LITRES	3.13	7.50	23.46	-19.52	-3.94	46.93	[illegible]	0.49	35.83	29.81	0.00	2.92	3.02	3.00
.....Frais [illegible]	D/HA	292.61	1.00	292.61	-243.46	-49.15	585.22	[illegible]	6.10	446.82	371.77	0.00	36.43	0.22	38.40
...Traitements [illegible]	D/HA	6.48	3.60	23.32	-46.20	-19.11	88.63	[illegible]	0.95	75.42	46.52	0.00	17.23	8.52	3.14
...Irrigation															
.....Aspersion	M3														
.....du sud		16465.26	0.035	576.28	0.00	0.00	576.28	[illegible]	0.00	541.71	0.00	0.00	0.00	541.71	0.00
.....de l [illegible]		8192.62	0.035	286.74	-34.68	-65.30	386.72	[illegible]	27.04	336.73	116.81	0.00	194.70	30.32	0.00
.....Brise vent	M3														
.....du sud		2578.30	0.035	90.24	0.00	0.00	90.24	[illegible]	0.00	84.83	0.00	0.00	0.00	84.83	0.00
.....de l [illegible]		1149.07	0.035	40.22	-4.86	-9.16	54.24	[illegible]	3.79	47.23	16.38	0.00	27.31	4.23	0.00
.....Pompes de terre	M3														
.....du sud		9289.90	0.035	325.15	0.00	0.00	325.15	[illegible]	0.00	305.64	0.00	0.00	0.00	305.64	0.00
.....de l [illegible]		4512.69	0.035	157.94	-19.10	-35.97	213.32	[illegible]	14.90	185.48	64.34	0.00	107.25	16.70	0.00
...Infrastructure [illegible]	D/HA	1479.83	1.00	1479.83	-679.71	-315.15	2474.69	[illegible]	0.00	2474.69	1669.60	0.00	556.53	248.56	0.00
.....Maintenance	D/HA	245.70	1.00	245.70	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT D OPERATION															
...Valeur locative de la terre	D/HA	0.00		0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Immobilisation du capital	D/HA	11329.28	0.055	623.11	0.00	0.00	623.11	[illegible]	0.00	623.11	0.00	0.00	0.00	623.11	0.00
COUT GLOBAL DE PRODUCTION (arrondissement)				14609.81	-1952.76	-881.05	17198.07	321.31	209.87	15991.52	7182.37	0.00	6043.30	2668.91	104.50
Valeur des agrumes non-exportées		79.30	75.000	5947.83	-794.99	-358.69	7001.54	415.66	85.44	6510.34	2924.03	0.00	2460.38	1086.53	42.50
Valeur des sous-produits		47.77	130.00	6210.37	-830.08	-374.52	7319.68	434.01	89.21	6797.71	3053.10	0.00	2568.99	1134.51	44.46
Cout Global Net du Prod (agrumes)				2451.61	-327.68	-147.85	2885.93	171.33	35.22	2683.47	1205.24	0.00	1014.18	447.86	17.55
RENDEMENT AGRUMES	(t/ha)	33.99													
COUT NET UNITAIRE DE PRODUCTION AGRUMES	(D/kg)	rendu station de condit		0.072	-0.010	-0.004	0.085	1.005	0.001	0.079	0.035	0.000	0.030	0.013	0.001

PAYS: TUNISIE
SPECULATION: AGRUMES - IRRIGATION CUVETTE
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-30
a74 ... a160
a74 ...an168

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS PREVUS AGRUMES (t/ha)				1.50	3.00	5.00	8.00	11.00	15.00	18.00	20.00	22.00	23.00	24.00	25.00
RENDEMENTS PREVUS P DE TERRE (t/ha)	13.00	12.00	12.00	9.00	9.00										
Taux d actualisation	1.00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.23
Rendements prevus actualises AGRUMES	3.00	2.70	2.43	1.10	1.98	2.97	4.28	5.30	6.51	7.04	7.04	6.98	6.57	6.18	5.80
Rendements prevus actualises PDT	13.00	11.71	9.55	6.58	5.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QUANTITES PREVUES D INTRANTS															
MAIN D OEUVRE															
...Tracage-piquetage	4.00														
...Trouaison	18.00														
...Plantation semis	15.00	2.00	2.00	2.00	2.00										
...Epandage fumier	14.00	4.00	4.00	12.00	12.00			14.00		14.00		14.00		14.00	
...Epandage engrais	1.00	1.00	.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
...Confection-cuvette-semis	20.00	20.00	20.00	20.00	22.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
...Culture de maintien	100.00	90.00	90.00	80.00	70.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
...Irrigation															
.....Plantes	10.00	2.00	4.00	16.00	20.00	25.00	25.00	25.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
.....Brise-vent	2.00	2.00	.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00					
.....Pommes de terre	50.00	50.00	40.00	40.00	30.00										
...Remplacement-manquant		2.00	.00												
...Recolte	20.00	20.00	20.00	15.00	10.00		20.00	27.50	37.50	45.00	50.00	55.00	57.50	60.00	62.50
...Taille		2.00	1.00	7.00	8.00		14.00		15.00		20.00		25.00		25.00
...Transport															
COUT D OPERATION ET MAINTIEN															
Traction mecanique															
...Facons culturales	10.00	8.00	8.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	5.00	10.00	10.00	10.00	10.00
...Traitement phytosanitaire	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	5.00	5.00	5.00	5.00
...Transport au sta de conseil	100.00	20.00	20.00	100.00	70.00	12.50	20.00	27.50	37.50	45.00	50.00	55.00	57.50	60.00	62.50
...Epandage fumier	10.00	5.00	5.00	10.00	10.00			10.00		10.00		10.00		10.00	
INTRANTS ET MATERIELS															
...Plants agrumicoles	275.00	22.00	5.00												
...Semences de pommes de terre	1.50	.50	.50	1.00	1.00										
...Installation brise vent	120.00														
...Fertilisants															
.....Fumier	20.00	5.00	5.00	15.00	15.00			20.00		20.00		20.00		20.00	
.....Super 45%	8.00	8.00	8.00	4.00	4.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
.....Sulfate de Potasse	8.00	4.00	4.00	4.00	4.00	1.50	1.50	1.50	2.00	2.00	2.00	2.00	2.00	2.00	2.00
.....Ammonitre	5.00	8.00	13.00	10.00	6.00	6.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	7.00	7.00
.....Oligo-elements				20.00	20.00	20.00	20.00	30.00	30.00	30.00	30.00	40.00	40.00	40.00	40.00
...Petit Materiels	20.00			20.00		40.00		50.00		70.00		70.00		70.00	
...Traitements phytosan terrestres															
.....Dimethoate 40										3.00	4.00	4.00	4.00	5.00	5.00
.....Hydrolysat Proteines						5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00	8.00	8.00
.....Ultracide 40										2.00			3.00		
.....Frais pulverisation				30.00	30.00	40.00	40.00	40.00	40.00	50.00	50.00	50.00	50.00	60.00	60.00
...Traitements phytosan aeriens				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
...Irrigation															
.....Arroses															
.....du puit	1.40	1.40	1.60	2.00	2.40	2.80	2.80	3.00	3.00	3.25	3.25	3.70	3.70	4.00	4.00
.....de l OMV	0.60	0.60	0.90	1.00	1.10	1.20	1.20	1.50	1.50	1.65	1.65	1.80	1.50	2.00	2.00
.....Brise vent															
.....du puit	0.70	0.60	1.40	0.40	0.30	0.30	0.30	0.30	0.30						
.....de l OMV	0.30	0.20	0.20	0.20	0.10	0.10	0.10	0.10	0.10						
.....Pommes de terre															
.....du puit	2.40	2.00	2.40	2.00	2.00										
.....de l OMV	1.10	1.10	1.10	1.00	1.00										
...Infrastructure irrigation	1560.51														
.....Maintenance						50.00					50.00				
COUT D OPERATION															
...Valeur locative de la terre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

PAYS: TUNISIE
SPECULATION: [illegible] - IRRIGATION CUVETTE
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-30

ANNEE: 16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	....Calculs de la [illegible] +1an17	18-30	[illegible]
25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00			
0.21	0.19	0.17	0.15	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05			
5.23	4.71	4.24	3.82	3.44	3.10	2.79	2.52	2.27	2.04	1.84	1.66	1.49	1.35	1.21			[illegible]
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			[illegible]
															6.00	0.00	[illegible]
															18.00	0.00	[illegible]
															21.20	0.00	[illegible]
14.00		14.00		14.00		14.00		4.00		14.00		14.00		14.00	77.84	5.38	[illegible]
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	18.25	1.62	[illegible]
25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	190.28	20.27	[illegible]
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	487.93	24.22	[illegible]
															0.30	0.00	[illegible]
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	177.20	24.22	[illegible]
															8.84	0.00	[illegible]
															176.52	0.00	[illegible]
															2.61	0.00	[illegible]
															211.95	0.00	[illegible]
															51.04	0.00	[illegible]
															0.00	0.00	[illegible]
10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	0.00	10.00	10.00	10.00	10.00	10.00	10.00	83.79	8.11	[illegible]
5.00															27.18	0.00	[illegible]
62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	62.50	643.26	50.68	[illegible]
10.00		10.00		10.00		10.00		0.00		10.00		10.00		10.00	57.59	2.04	[illegible]
															114.20	0.00	[illegible]
															5.46	0.00	[illegible]
															120.00	0.00	[illegible]
20.00		20.00		20.00		20.00		20.00		20.00		20.00		20.00	99.66	[illegible]	[illegible]
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	32.57	1.62	[illegible]
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	28.16	1.62	[illegible]
7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	60.89	[illegible]	[illegible]
40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	159.72	22.43	[illegible]
70.00		70.00		70.00		70.00		70.00		70.00		70.00		70.00	164.68	[illegible]	[illegible]
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	9.43	[illegible]	[illegible]
8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	78.26	[illegible]	[illegible]
3.00			3.00				4.00				4.00			4.00	2.27	[illegible]	[illegible]
60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	243.96	[illegible]	[illegible]
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.67	[illegible]	[illegible]
4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	21.18	[illegible]	[illegible]
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	10.14	[illegible]	[illegible]
															2.67	[illegible]	[illegible]
															1.06	[illegible]	[illegible]
															9.29	[illegible]	[illegible]
															4.37	[illegible]	[illegible]
															1560.51	[illegible]	[illegible]
50.00					50.00					50.00				60.00	57.73	11.82	[illegible]
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00

PAYS: TUNISIE
SPECULATION: AGRUMES - IRRIGATION CUVVUITES
ITINERAIRE TECHNIQUE
a171 ... a263

		QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M O O FAM	M O'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D OEUVRE															
...Tracage-piquetage		[illegible]	2.756	11.02											
...Trouaison		[illegible]	2.756	49.61											
...Plantation semis		[illegible]	2.756	58.74											
...Ensachage fumier		[illegible]	2.756	229.36											
...Ensachage engrais		[illegible]	2.756	57.00											
...Confection-cuvette-semis		[illegible]	2.756	580.29											
...Culture de maintien		[illegible]	2.756	1411.77											
...Irrigation		[illegible]	2.756	3.00											
.....Plantes		[illegible]	2.756	555.68											
.....Brise-vent		[illegible]	2.756	24.37											
.....Pommes de terre		[illegible]	2.756	486.49											
...Remplacement-manquant		[illegible]	2.756	[illegible]											
...Recolte		[illegible]	2.756	581.67											
...Taille		[illegible]	[illegible]	257.30											
...Transport		[illegible]	2.756	3.00											
Total. Main d Oeuvre		[illegible]		4410.20	0.00	0.00	4410.20	0.00	0.00	[illegible]	0.00	0.00	4410.20	0.00	0.00
COUT D OPERATION ET MAINTIEN															
Traction mecanique															
...Façons culturales	HEURES	[illegible]	1.950	179.20	-13.67	-8.80	201.67	7.36	5.61	[illegible]	114.84	0.00	43.43	29.90	0.56
...Traitement antisanitaire	HEURES	[illegible]	1.950	52.99	-4.04	-2.60	59.64	2.18	1.66	[illegible]	23.56	0.00	12.84	9.84	0.17
...Transport de sta de conduit	DINARS	[illegible]	1.000	694.03	-52.96	-34.06	781.06	28.51	21.74	[illegible]	444.74	0.00	168.21	115.81	2.16
...Ensachage fumier		[illegible]	1.950	119.79	-9.14	-5.88	134.81	4.92	3.75	[illegible]	76.76	0.00	29.03	19.99	0.37
INTRANTS ET MATERIELS															
...Plants agrumicoles	UNITES	[illegible]	2.000	628.40	-41.81	-11.02	681.23	27.49	74.87	[illegible]	154.86	0.00	435.74	28.42	10.56
...Semences de pommes de terre	TONNES	[illegible]	290.000	1583.03	-209.16	-12.39	1904.57	218.67	-5.73	[illegible]	1626.45	0.00	23.20	41.98	0.00
...Installation brise vent	DINARS	29.00		120.00	0.00	0.00	120.00	-24.00	3.00	[illegible]	23.96	0.00	60.00	47.04	0.00
...Fertilisants															
.....Fumier	TONNES	[illegible]	13.000	1395.55	63.86	-21.05	1352.74	41.94	19.03	[illegible]	842.00	0.00	328.23	105.09	15.36
.....Super 45%	QUINTAUX	[illegible]	5.765	197.10	-217.46	-30.19	494.74	70.72	8.69	[illegible]	216.83	0.00	63.01	33.83	1.69
.....Sulfate de Potasse	QUINTAUX	[illegible]	29.160	868.58	33.74	2.21	832.43	79.80	6.14	[illegible]	525.38	0.00	56.59	182.33	2.49
.....Amoniaque	QUINTAUX	[illegible]	7.195	478.95	-200.67	-177.76	857.29	149.34	14.18	[illegible]	387.28	0.00	115.78	188.38	2.51
.....Oligo-elements	KILOGRAMME	[illegible]	3.700	134.51	-111.91	-22.59	269.35	60.86	2.80	[illegible]	170.89	0.00	16.75	0.10	17.65
...Petit Materiels	DINARS	[illegible]	1.000	191.57	0.00	0.00	191.57	76.82	0.00	[illegible]	114.75	0.00	0.00	0.00	0.00
...Traitements antiparasitaires terrestres															
.....Dimethoate 40	LITRES	[illegible]	3.600	24.27	-20.19	-4.08	48.54	10.98	0.51	[illegible]	30.83	0.00	3.02	0.02	3.18
.....Hydrolysat Proteines	LITRES	[illegible]	0.700	3.00	-20.23	-4.08	24.32	11.00	0.51	[illegible]	30.98	0.00	3.03	0.02	3.19
.....Ultracide 40	LITRES	[illegible]	7.500	23.46	-19.52	-3.94	46.93	10.62	0.49	[illegible]	29.81	0.00	2.92	0.02	3.08
.....Frais pulverisation	DINARS	[illegible]	1.000	292.61	-243.46	-49.15	585.32	132.41	6.10	[illegible]	371.77	0.00	36.43	0.22	38.40
...Traitements antiparasitaires	DINARS	[illegible]	3.600	23.32	-46.20	-19.11	88.63	12.25	0.95	[illegible]	46.52	0.00	17.25	8.52	3.14
...Irrigation															
.....Agrumes	M3														
.....de nuit		[illegible]	0.035	954.70	0.00	0.00	954.70	51.28	0.00	[illegible]	0.00	0.00	0.00	803.42	0.00
.....de 1 DHW		[illegible]	0.035	411.63	-49.79	-43.74	555.16	32.94	38.82	[illegible]	167.69	0.00	279.50	43.53	0.00
.....Brise vent	M3														
.....de nuit		[illegible]	0.035	93.39	0.00	0.00	93.39	5.60	0.00	[illegible]	0.00	0.00	0.00	87.79	0.00
.....de 1 DHW		[illegible]	0.035	37.06	-4.48	-8.44	49.99	2.97	3.50	[illegible]	15.13	0.00	25.17	3.92	0.00
.....Pomme de terre	M3														
.....de nuit		[illegible]	0.035	325.15	0.00	0.00	325.15	19.51	0.00	[illegible]	0.00	0.00	0.00	305.64	0.00
.....de 1 DHW		[illegible]	0.035	153.08	-18.52	-34.86	206.46	12.25	14.44	[illegible]	62.26	0.00	103.94	16.19	0.00
...Infrastructure irrigation	DINARS	560.51	1.000	1560.51	-707.84	-328.33	2596.68	0.00	0.00	[illegible]	1752.64	0.00	584.21	259.83	0.00
.....Maintenance	DINARS	[illegible]	1.000	69.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT D OPERATION															
...Valeur locative de la terre	DINARS	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Immobilisation du capital	DINARS	[illegible]	0.055	647.78	0.00	0.00	647.78	0.00	0.00	[illegible]	0.00	0.00	0.00	647.78	0.00
COUT GLOBAL DE PRODUCTION (agrumes+pdt)				15570.23	-1993.47	-919.85	18414.15	1046.42	220.26	[illegible]	7300.00	0.00	6798.51	2978.58	104.52
Valeur des agrumes non-exportes		72.41	75.00	5430.90	-695.32	-320.84	6422.86	364.99	76.83	[illegible]	2546.24	0.00	2371.32	1038.90	36.46
Valeur des pommes de terre		47.77	130.00	6210.37	-795.12	-366.89	7344.78	417.38	87.85	[illegible]	2911.69	0.00	2711.67	1188.01	41.69
Cout Global Net de Prod (agrumes)				3928.96	-503.03	-232.11	4646.59	264.05	55.58	[illegible]	1842.07	0.00	1715.52	751.59	26.37
RENDEMENT AGRUMES		71.03													
COUT NET UNITAIRE DE PRODUCTN AGRUMES (D/kg)		[illegible] station de conduit		0.127	-0.016	-0.007	0.150	0.009	0.002	1.148	0.059	0.000	0.055	0.024	0.001

PAYS: TUNISIE

SPECULATION: P DE TERRE. ARRIERE SAI ITINERAIRE TECHNIQUE a64 ... a119	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		100.000	2.756	275.600	0.000	0.000	275.600	0.000	0.000	275.600	0.000	0.000	275.600	0.000	0.000
SEMENCES															
...IMPORTEES	TONNE	1.500	210.000	315.000	-61.518	-2.465	378.983	43.512	-1.139	336.610	323.642	0.000	4.616	8.353	0.000
AUTRES INTRANTS															
...BYFONATE	KG	25.000	1.800	45.000	37.442	7.558	90.014	20.362	0.938	68.714	57.173	0.000	5.603	0.033	5.906
...Cuivre	kG	15.000	0.761	11.415	-10.531	0.884	22.835	5.095	0.111	17.630	16.265	0.000	0.201	0.020	1.144
...Engrais															
SUPER 45%	QX	2.000	5.765	11.530	-12.721	-4.691	28.942	4.137	6.508	24.297	18.532	0.000	3.686	1.979	0.099
Ammonitre 33%	QX	3.000	7.195	21.585	-9.044	-8.011	38.640	6.730	0.639	31.271	17.453	0.000	5.218	8.486	0.113
SULFATE DE POTASSE	QX	3.000	29.160	87.480	3.399	0.223	83.858	8.039	0.619	75.201	52.896	0.000	3.686	18.367	0.251
...EAU	M3	6000.00	0.026	156.000	-15.688	-49.014	220.702	15.246	22.057	183.399	44.467	0.000	123.690	15.558	0.000
...Fumier	TONNE	10.000	13.000	130.000	0.849	-1.961	131.112	3.907	1.773	125.432	83.736	0.000	30.576	9.789	1.431
...Vulnarisation	sonde		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...CAISSE	DINARS	1.000	4.500	4.500	0.000	0.000	4.500	1.787	0.000	2.714	2.714	0.000	0.000	0.000	0.000
TRACTION MECANIQUE															
...Labour moyen	HEURE	4.000	5.900	23.600	-1.801	-1.158	26.559	0.969	0.739	24.851	15.123	0.000	5.720	3.938	0.073
...Cover-crop	HEURE	4.000	5.900	23.600	-1.801	-1.158	26.559	0.969	0.739	24.851	15.123	0.000	5.720	3.938	0.073
...Scarification	HEURE	2.000	5.900	11.800	-0.900	-0.579	13.280	0.485	0.370	12.425	7.562	0.000	2.860	1.969	0.037
TRACTION ANIMALE															
...Plantation & recolte	JOUR	20.000	7.000	140.000	-11.298	-6.877	158.176	5.193	-5.684	158.667	47.509	0.000	31.228	62.034	17.825
COUTS D'OPERATION ET MAINTIEN															
...Localisation de la terre	D/ha	1.000	300.000	300.000	0.000	0.000	300.000	0.000	0.000	300.000	0.000	0.000	0.000	0.000	300.000
...Immobilisation du capital		1169.810	0.055	64.340	0.000	0.000	64.340	0.000	0.000	64.340	0.000	0.000	0.000	64.340	0.000
COUT DE PRODUCTION (ndt)	D/ha			1621.450	158.496	82.167	1864.100	116.431	21.669	1725.999	702.194	0.000	498.405	198.804	326.953
...Valeur sous produit	D/ha			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
COUT NET DE PRODUCTION (ndt)	D/ha			1621.450	158.496	82.167	1864.100	116.431	21.669	1725.999	702.194	0.000	498.405	198.804	326.953
RENDEMENT	kg/ha	12000.000													
COUT NET UNITAIRE DE PROD (ndt)	D/kg			0.135	-0.013	-0.007	0.155	0.010	0.002	0.144	0.059	0.000	0.042	0.017	0.027

PAYS: TUNISIE
SPECULATION: P DE TERRE. SAISON
ITINERAIRE TECHNIQUE :SAISON
a64 ... a120

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	Journ. de travail														
Total. Main d'Oeuvre		120.000	2.756	330.720	0.000	0.000	330.720	0.000	0.000	330.720	0.000	0.000	330.720	0.000	0.000
SEMENCES															
...LOCALES	TONNE			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...IMPORTEES	TONNE	2.000	290.000	580.000	0.000	0.000	580.000	66.583	-1.324	514.740	495.417	0.000	7.006	12.317	0.000
AUTRES INTRANTS															
...DYFONATE	KG	25.000	1.800	45.000	-37.442	-7.558	90.014	20.362	0.938	68.714	57.173	0.000	5.603	0.033	5.906
...Cuivox	KG	15.000	0.761	11.415	-10.531	0.884	22.835	5.095	0.111	17.630	16.265	0.000	0.201	0.020	1.144
...Engrais															
SUPER 45%	QX	4.000	5.765	23.060	-25.442	-9.382	57.884	8.274	1.017	48.593	37.065	0.000	7.372	3.958	0.198
Amonitre 33%	QX	4.000	7.195	28.780	-12.058	-10.682	51.520	8.974	0.852	41.694	23.271	0.000	6.957	11.315	0.151
SULFATE DE POTASSE	QX	3.500	29.160	102.060	3.965	0.260	97.835	9.379	0.722	87.734	61.712	0.000	4.301	21.429	0.293
...EAU	M3	5500.00	0.026	143.000	-14.380	-44.930	202.310	13.975	20.219	168.115	40.761	0.000	113.383	14.262	0.000
...Fumier	TONNE	20.000	13.000	260.000	1.698	3.927	267.224	7.014	1.546	250.864	167.471	0.000	61.152	19.578	2.862
...Vulgarisation	somme		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...CAISSE	DINARS	1.000	4.500	4.500	0.000	0.000	4.500	1.787	0.000	2.714	2.714	0.000	0.000	0.000	0.000
TRACTION MECANIQUE															
...Labour moyen	HEURES	4.000	5.900	23.600	-1.801	-1.158	26.559	0.969	0.739	24.851	15.123	0.000	5.720	3.938	0.073
...Cover-crop	HEURES	4.000	5.900	23.600	-1.801	-1.158	26.559	0.969	0.739	24.851	15.123	0.000	5.720	3.938	0.073
...Scarification	HEURES	2.000	5.900	11.800	-0.900	-0.579	13.280	0.485	0.370	12.425	7.562	0.000	2.860	1.969	0.037
TRACTION ANIMALE															
...Plantation & recolte	JOURS	20.000	7.000	140.000	-11.298	-6.877	158.176	5.193	-4.362	157.344	45.725	0.000	31.690	62.034	17.825
COUTS D'OPERATION ET MAINTIEN															
...Location de la terre	D/ha	1.000	300.000	300.000	0.000	0.000	300.000	0.000	0.000	300.000	0.000	0.000	0.000	0.000	300.000
...Immobilisation du capital		1612.675	0.055	88.697	0.000	0.000	88.697	0.000	0.000	88.697	0.000	0.000	0.000	88.697	0.000
COUT DE PRODUCTION (odt)	D/ha			2116.23	-109.99	-85.10	2313.11	149.86	23.57	2139.69	985.38	0.00	582.68	243.49	328.56
...Valeur sous-produit	D/ha			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT NET DE PRODUTION (odt)	D/ha			2116.23	-109.99	-85.10	2313.11	149.86	23.57	2139.69	985.38	0.00	582.68	243.49	328.56
RENDEMENT	kg/ha	20000.000													
COUT NET UNITAIRE DE PROD (odt)	D/kg			0.106	-0.005	-0.004	0.116	0.007	0.001	0.107	0.049	0.000	0.029	0.012	0.016

PAYS: TUNISIE
SPECULATION: P DE TERRE. PRIMEUR
ITINERAIRE TECHNIQUE :PRIMEUR
a64 ... a120

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	journ. de travail														
Total. Main d'Oeuvre		120.000	2.756	330.720	0.000	0.000	330.720	0.000	0.000	330.720	0.000	0.000	330.720	0.000	0.000
SEMENCES															
...LOCALES	TONNE			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...IMPORTEES	TONNE	2.000	290.000	580.000	-113.271	-4.539	697.810	80.118	-2.098	619.790	595.912	0.000	8.499	15.379	0.000
AUTRES INTRANTS															
...BYFOMATE	KG	25.000	1.800	45.000	-37.442	-7.558	90.014	20.362	0.938	68.714	57.173	0.000	5.603	0.033	5.906
...Cuivox	KG	15.000	0.761	11.415	-10.531	0.884	22.835	5.095	0.111	17.630	16.265	0.000	0.201	0.020	1.144
...Engrais															
SUPER 45%	QX	4.000	5.765	23.060	-25.442	-9.382	57.884	8.274	1.017	48.593	37.065	0.000	7.372	3.958	0.198
Ammonitre 33%	QX	4.000	7.195	28.780	-12.058	-10.682	51.520	8.974	0.852	41.694	23.271	0.000	6.957	11.315	0.151
SULFATE DE POTASSE	QX	3.500	29.160	102.060	3.965	0.260	97.835	9.379	0.722	87.734	61.712	0.000	4.301	21.429	0.293
...EAU	M3	3000.00	0.026	78.000	-7.844	-24.507	110.351	7.623	11.029	91.699	22.233	0.000	61.845	7.779	0.000
...Fumier	TONNE	20.000	13.000	260.000	1.698	-3.922	262.224	7.814	3.546	250.864	167.471	0.000	61.152	19.578	2.862
...Valearisation	SOMME		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...CAISSE	DINARS	1.000	4.500	4.500	0.000	0.000	4.500	1.787	0.000	2.714	2.714	0.000	0.000	0.000	0.000
TRACTION MECANIQUE															
...Labour moyen	HEURES	4.000	5.900	23.600	-1.801	-1.158	26.559	0.969	0.739	24.851	15.123	0.000	5.720	3.938	0.073
...Cover-crop	HEURES	4.000	5.900	23.600	-1.801	-1.158	26.559	0.969	0.739	24.851	15.123	0.000	5.720	3.938	0.073
...Scarification	HEURES	2.000	5.900	11.800	-0.900	-0.579	13.280	0.485	0.370	12.425	7.562	0.000	2.860	1.969	0.037
TRACTION ANIMALE															
...Plantation & recolte	JOUR	20.000	7.000	140.000	-11.298	-6.877	158.176	5.193	-5.684	158.667	47.509	0.000	31.228	62.034	17.825
COUTS D'OPERATION ET MAINTIEN															
...Location de la terre	D/HA	1.000	300.000	300.000	0.000	0.000	300.000	0.000	0.000	300.000	0.000	0.000	0.000	0.000	300.000
...Immobilisation du capital	D/HA	1547.675	0.055	85.122	0.000	0.000	85.122	0.000	0.000	85.122	0.000	0.000	0.000	85.122	0.000
COUT DE PRODUCTION (pdt)	D/ha			2047.66	-216.73	-69.22	2335.39	157.04	12.28	2166.07	1069.13	0.00	532.18	236.49	328.56
...Valeur sous-produit	D/ha			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT NET DE PRODUTION (pdt)	D/ha			2047.66	-216.73	-69.22	2335.39	157.04	12.28	2166.07	1069.13	0.00	532.18	236.49	328.56
RENDEMENT	kg/ha	15000.000													
COUT NET UNITAIRE DE PROD (pdt)	D/kg			0.137	-0.014	-0.005	0.156	0.010	0.001	0.144	0.071	0.000	0.035	0.016	0.022

PAYS:TUNISIE
SPECULATION:DATTES-DEGLET NOUR
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-30
a71 ... a134
a71 ...ah134

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS PREVUS DATTES (kg/arbre)	0.00	0.00	0.00	4.02	7.98	12.00	20.00	28.20	40.00	48.00	52.20	55.98	58.20	60.00	60.00
Taux d'actualisation	1.00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.23
Rendats prevus actualises (kg/arbre)	0.00	0.00	0.00	2.94	5.26	7.12	10.69	13.58	17.36	18.76	18.38	17.76	16.64	15.45	13.92
QUANTITES PREVUES D'INTRANTS:															
MAIN D'OEUVRE															
...Tracage-alignetage	4.00														
...Trouaison	30.00	4.00	3.00												
...Plantation	5.00	1.00	1.00												
...Installation-brise vent	30.00	5.00	5.00												
...Entretien du drain		2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
...Irrigation	40.00	45.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00
...Travail du sol	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
...Fumure	2.00	2.00	2.00	2.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
...Elagage			2.00	4.00	5.00	5.00	6.00	6.00	6.00	6.00	8.00	8.00	8.00	10.00	12.00
...Pollinisation				5.00	5.00	6.00	8.00	12.00	18.00	25.00	30.00	35.00	35.00	35.00	35.00
...Protection des regimes					2.00	4.00	8.00	10.00	12.00	12.00	15.00	15.00	15.00	15.00	15.00
...Entretien du regime				1.00	1.00	2.00	6.00	6.00	8.00	9.00	10.00	12.00	13.00	14.00	15.00
...Recolte															
.....Cueillette				5.00	10.00	14.00	20.00	25.00	35.00	40.00	45.00	50.00	50.00	50.00	50.00
.....Triage				1.00	2.00	3.00	4.00	6.00	8.00	10.00	15.00	18.00	20.00	20.00	20.00
...Total Main D Oeuvre	141.00	89.00	95.00	100.00	111.00	120.00	138.00	151.00	173.00	188.00	209.00	224.00	227.00	230.00	233.00
MECANISATION															
...Transport dans l'exploitation	50.00	10.00	10.00	12.00	14.00	15.00	15.00	18.00	18.00	20.00	25.00	25.00	25.00	25.00	25.00
...Defrichement	3.00														
...Nivellement	5.00														
...Lutte contre ensablement	50.00														
...Travail du sol	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
...Drainage						30.00	30.00	30.00							
IRRIGATION															
...Investissements															
.....Installation sondage	3000.00														
.....Systeme de distribution	2500.00														
.....Entretien du sys hyd		20.00	20.00	30.00	40.00	50.00	70.00	100.00	130.00	140.00	170.00	200.00	200.00	200.00	200.00
...Eau (1000 m3)	12.00	13.00	14.00	15.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
INTRANTS ET MATERIELS															
...Valeur locative de terre	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
...Rejets	123.00	15.00	12.00												
...Plants forest. et palme seche	1500.00	500.00	500.00												
...Fumier	5.00	3.00	3.00	3.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
...Azote			1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00	3.00	3.00	3.00
...Plastique						100.00	200.00	500.00	800.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00
COUT DE LIVRAISON AU STATION DE CONDITIONNEMENT															
...Frais de collecte				41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54

PAYS:TUNISIE
SPECULATION:DATTES-DEGLET NOUR
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-30

ANNEE: 16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	....Calculs de la VAN.... ->ann17	18-30	TOT
60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00	60.00			
0.21	0.19	0.17	0.15	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05			
12.54	11.30	10.18	9.17	8.26	7.44	6.70	6.04	5.44	4.90	4.42	3.98	3.58	3.23	2.91			257.96
															4.00	0.00	4.00
															36.04	0.00	36.04
															6.71	0.00	6.71
															38.56	0.00	38.56
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	14.76	1.62	16.38
50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	404.45	40.54	444.99
30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	251.37	24.32	275.70
4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	26.63	3.24	29.87
12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	39.62	9.73	49.35
35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	100.86	28.38	129.24
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	50.31	12.16	62.48
15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	39.75	12.16	51.92
50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	162.46	40.54	203.00
20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	50.68	16.22	66.90
233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	233.00	1226.23	188.92	1415.15
25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	172.40	20.27	192.67
															3.00	0.00	3.00
															5.00	0.00	5.00
															50.00	0.00	50.00
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	25.14	2.43	27.57
															48.29	0.00	48.29
															3000.00	0.00	3000.00
															2500.00	0.00	2500.00
200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	200.00	666.80	162.16	828.96
16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	125.01	12.97	137.98
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	8.38	0.81	9.19
															146.25	0.00	146.25
															2356.26	0.00	2356.26
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	37.01	4.05	41.06
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	12.60	2.43	15.03
1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	1000.00	2987.28	810.82	3798.10
41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	41.54	235.38	33.68	269.06

PAYS: TUNISIE
SPECULATION: DATTES/DEGLET.NOUR
ITINERAIRE TECHNIQUE
a130 ... a211

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	jours. de travail														
...Tracage-piquetage		4.00	2.756	11.02											
...Trouaison		36.04	2.756	99.32											
...Plantation		6.71	2.756	18.50											
...Installation-brise vent		38.56	2.756	106.28											
...Entretien du drain		16.38	3.500	57.33											
...Irrigation		444.99	4.000	1779.98											
...Travail du sol		275.70	2.756	759.83											
...Fumure		29.87	4.000	119.49											
...Etamage		49.35	2.756	136.02											
...Pollinisation		129.24	4.000	516.97											
...Protection des regimes		62.48	5.000	312.39											
...Entretien du regime		51.92	4.000	207.67											
...Recolte															
.....Cueillette		203.00	5.000	1014.98											
.....Triage		66.90	3.000	200.70											
...Total Main D'Oeuvre		1415.15		5340.48	0.00	0.00	5340.48	0.00	774.37	4566.11	0.00	0.00	4566.11	0.00	0.00
MECANISATION															
...Transport dans l'exploitation	heures	192.67	5.90	1136.73	-86.74	-55.79	1270.26	46.69	35.60	1196.97	728.43	0.00	275.50	189.69	3.54
...Defrichement	heures	3.00	20.00	60.00	-4.58	-2.94	67.52	2.46	1.88	63.18	38.45	0.00	14.54	10.01	0.19
...Nivellement	heures	5.00	20.00	100.00	-7.63	-4.91	112.54	4.11	3.13	105.30	64.08	0.00	24.24	16.69	0.31
...Lutte contre ensablement	heures	50.00	5.90	295.00	-22.51	-14.48	331.99	12.12	9.24	310.63	189.04	0.00	71.50	49.23	0.92
...Travail du sol	heures	27.57	5.90	162.66	-12.41	-7.98	183.06	6.68	5.09	171.28	104.24	0.00	39.42	27.14	0.51
...Drainage	heures	48.29	20.00	965.85	-73.70	-47.41	1086.96	39.67	30.25	1017.04	618.93	0.00	234.09	161.17	3.01
IRRIGATION															
...Investissements															
.....Installation sondage	D/ha	3000.00		3000.00	-900.00	-300.00	4200.00	0.00	0.00	4200.00	3150.00	0.00	0.00	1050.00	0.00
.....Systeme de distribution	D/ha	2500.00		2500.00	-750.00	-250.00	3500.00	0.00	0.00	3500.00	2625.00	0.00	0.00	875.00	0.00
.....Entretien du sys hyd	D/ha	828.96		828.96	-248.69	-82.90	1160.54	0.00	0.00	1160.54	870.41	0.00	0.00	290.14	0.00
...Eau	M3	137982.50	0.015	2069.74	-359.69	-522.30	2951.73	69.18	157.37	2725.18	1111.38	0.00	1154.89	472.75	0.00
INTRANTS ET MATERIELS															
...Valeur locative de terre	D/ha	9.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Rejets	Plants	146.25	15.00	2193.79	-145.95	-38.47	2378.21	95.96	258.59	2023.67	366.08	0.00	1521.21	99.20	36.86
...Plants forest. et palme seche	D/ha	2356.26		2356.26	-156.76	-41.32	2554.34	103.06	277.74	2173.53	393.19	0.00	1633.87	106.55	39.59
...Fumier	tonnes	41.06	20.00	821.25	37.58	-12.39	796.06	24.68	11.20	760.17	495.50	0.00	193.16	61.84	9.04
...Azote	ux	15.03	7.20	108.21	-45.34	-40.16	193.71	33.74	3.20	156.77	87.50	0.00	26.16	42.54	0.57
...Plastique	unites	3798.10	0.04	151.92	0.00	0.00	151.92	59.25	0.00	92.67	92.67	0.00	0.00	0.00	0.00
IMMOBILISATION DU CAPITALE															
...Cout/hectare		5111.74	0.055	281.15	0.00	0.00	281.15	0.00	0.00	281.15	0.00	0.00	0.00	281.15	0.00
COUT GLOBAL DE PRODUCTION	D/ha			22372.00	-2776.41	-1421.05	26569.46	497.60	1567.67	24504.19	10934.89	0.00	9754.69	3733.09	94.52
Valeur des dattes non-exportees		19192.31	0.720	13818.47	-1714.90	-877.74	16411.10	307.35	968.30	15135.45	6754.13	0.00	6025.16	2305.81	58.38
COUT NET GLOBAL DE PRODUCTION	D/ha			8553.53	-1061.51	-543.31	10158.36	190.25	599.37	9368.74	4180.76	0.00	3729.53	1427.28	36.14
RENDEMENT	kg/ha	11763.03													
COUT NET DE PRODUCTION	D/kg			0.727	-0.090	-0.046	0.864	0.016	0.051	0.796	0.355	0.000	0.317	0.121	0.003
COUT DE LIVRAISON AU STATION DE CONDITIONNEMENT															
...Frais de collecte	D/t	12.23		12.23	0.28	0.19	11.75	1.24	0.79	9.72	4.75	0.00	4.71	0.24	0.03
TOTAL ENTREE STAT CONDITIONNEMENT	D/kg			0.739	-0.090	-0.046	0.875	0.017	0.052	0.806	0.360	0.000	0.322	0.122	0.003

PAYS: TUNISIE
SPECULATION: OLIVES-NORD-SUP PRESSE 1
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-15
a75 ... a147
a75 ...ab147

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS (KG/ARBRE)															
...RENDEMENTS POTENTIELS EN OLIVES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.50	4.00	6.50	8.00	10.00	13.00
...RENDEMENTS PREVUS EN OLIVES	0.00	0.00	0.00	0.00	0.00	1.01	2.33	3.04	4.06	5.17	6.08	7.10	8.11	9.13	10.14
...RENDEMENTS PREVUS EN SACS BOIS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Taux d actualisation	1.00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.23
RENDEMENTS ACTUALISES (KG/ARBRE)															
...RENDEMENTS PREVUS EN OLIVES	0.00	0.00	0.00	0.00	0.00	0.60	1.08	1.47	1.76	1.99	2.14	2.25	2.32	2.35	2.35
...RENDEMENTS PREVUS EN SACS BOIS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QUANTITES PREVUES D INTRANTS															
...Main d Oeuvre															
.....Defrichement	20.00														
.....Tracage + piquetage	2.00														
.....Trouaison	7.00														
.....Plantation	2.00														
.....ier Arrosage	4.00														
.....Soins des jeunes	4.00														
.....Remplacements des manquants	3.25														
.....Destruction chiendent						0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
.....Ecourrendage						0.50	0.50	0.50	0.50	0.50	1.00	1.00	1.00	1.00	1.00
.....Fertilisation					0.50	0.50	0.50	0.50	0.50	0.50	1.00	1.00	1.00	1.00	1.00
.....Taille (Secateur puis scie)					4.00	5.00	6.00	7.00	8.00	8.00	9.00	9.00	9.00	9.00	9.00
.....Cueillette (90 fois)	0.00	0.00	0.00	0.00	0.00	1.13	2.25	3.38	4.51	5.63	6.76	7.89	9.01	10.14	11.27
.....Sardinemage														3.00	3.00
.....Surveillance (1 jour 20 : de cueill)					0.00	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51	0.56
.....Evacuation du bois								0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
INTRANTS															
...Plants	100.00	0.00													
...Fumier (Qx)					0.50	0.50	0.50	0.50	0.50	0.50	1.00	1.00	1.00	1.50	1.50
...Produits de traitements (Litres)					1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
...Engrais (Qx)															
Super 45	10.00														
Ammoniac Nitrate					0.50	0.50	0.50	0.50	0.50	0.50	1.00	1.00	1.00	1.00	1.50
...Eau d arrosage (m3)	50.00														
...Vulgarisation															
MECANISATION															
...Tracteur 120 cv															
.....Sous solage	5.00														
.....Defoncement	5.00														
...Tracteur agricole															
.....Defrichement	2.00														
.....Ecalisation	4.00														
.....Labour d etablissement															
.....Plantation	1.50														
.....1 er arrosage	20.00														
.....Remplacement des manquants	0.50														
.....Facon culturale	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
.....Traitement aerien	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
.....Taille et evacuation des dechets															
COUT D OPERATION ET MAINTIEN															
...Location de la terre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE LIVRAISON A L HUILERIE															
...Transport (olives)						7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
COUT DE TRITURATION															
...Trituration A l huilerie						19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00

TUNISIE
EXPLOITATION OLIVES-HOMO-SUP PRESSE 1
COUTS BENEFICES AMORTIS SUR LES ANNEES 16-30

	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	Calculs de la 400 - année 7	8-30	TOT
	22.00	22.00	24.00	29.00	41.50	43.00	44.00	44.50	45.00	45.00	45.50	45.50	46.00	46.00			
	10.14	10.14	10.14	10.14	10.14	10.14	10.14	10.14	10.14	10.14	10.14	10.14	10.14	10.14			
	2.00	2.00	3.00	4.00	6.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00			
	0.19	0.17	0.15	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05			
	1.91	1.72	1.55	1.40	1.26	1.13	1.02	0.92	0.83	0.75	0.67	0.61	0.55	0.49			25.23
	0.28	0.51	0.46	0.55	0.50	0.45	0.40	0.36	0.33	0.29	0.27	0.24	0.22	0.19			5.25
															29.00	1.00	29.00
															2.00	1.00	2.00
															7.00	1.00	7.00
															2.00	1.00	2.00
															4.00	1.00	4.00
															4.00	1.00	4.00
															3.20	1.00	3.20
	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	2.77	1.64	2.77
	1.00	1.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	4.08	.82	4.08
	1.00	1.00	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	5.21	.82	5.21
	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	18.17	1.19	18.17
	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	11.27	19.14	4.22	19.14
	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	6.47	2.11	6.47
	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	1.76	1.72	1.76
	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	2.21	1.64	2.21
	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	109.01	1.30	109.01
	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	5.93	.91	5.93
															6.21	.27	6.21
	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	10.00	1.30	10.00
															5.81	.91	5.81
															50.00	1.30	50.00
															0.00	1.30	0.00
															1.00	1.30	1.00
															7.00	1.30	7.00
															2.00	1.30	2.00
															4.00	1.30	4.00
															1.50	1.30	1.50
															20.00	1.30	20.00
															0.20	1.30	0.20
	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	18.60	1.30	18.60
	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.97	1.13	0.97
	0.50	0.50	0.50	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.24	.93	1.24
															0.00	1.30	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.00
	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	29.00	6.90	38.83
	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	81.26	20.15	105.41

126

PAYS: TUNISIE

SPECULATION: OLIVES-HUILE-SUP PRESSE : ITINERAIRE TECHNIQUE a150 ... a210	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M O'O FAM	M O'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D OEUVRE	nbre. de travail														
.....Defrichement		20.00	2.756	55.12											
.....Tracage + piquetage		2.00	2.756	5.51											
.....Trouaison		7.00	2.756	19.29											
.....Plantation		2.00	2.756	5.51											
.....1er Arrosage		4.00	2.756	11.02											
.....Soins des jeunes		4.00	2.756	11.02											
.....Remplacements des manquants		0.20	2.756	0.55											
.....Destruction cairnement		2.77	2.756	7.64											
.....Ecourmondage		4.00	2.756	11.45											
.....Fertilisation		5.21	2.756	14.36											
.....Taille (Secateur puis scie)		38.17	7.000	267.16											
.....Cueillette (90 Kg/j)		39.14	2.756	107.87											
.....Gardiennage		6.47	2.756	17.84											
.....Surveillance (1 jour 20 m cueill)		1.96	2.756	5.39											
.....Evacuation du bois		2.21	2.756	6.09											
Total. Main d Oeuvre		140.01		547.85	0.00	0.00	547.85	0.00	0.00	547.85	0.00	0.00	547.85	0.00	0.00
INTRANTS															
...Plants	nombre	109.01	0.600	65.41	-4.35	-1.15	70.90	2.86	[illegible]	60.33	10.91	0.00	45.33	2.96	1.10
...Fumier	m	5.93	13.000	77.14	3.53	-1.16	74.78	2.22	[illegible]	71.41	44.54	0.00	18.10	5.81	0.85
...Insecticides	litres	6.21	3.500	0.00	-18.07	-3.65	21.72	0.41	0.23	16.58	13.30	0.00	1.35	3.01	1.43
...Engrais															
Super 45	m	10.30	5.765	57.65	-63.61	-23.45	144.71	20.69	2.56	121.48	92.66	0.00	18.43	9.89	0.49
Ammonium Nitrate	m	5.81	5.700	33.39	-22.83	-18.83	74.75	13.32	[illegible]	60.49	33.76	0.00	10.09	16.42	0.22
...Eau d arrosage	m3	50.00	0.035	0.00	0.00	-1.75	1.75	0.00	0.00	1.75	0.00	0.00	0.00	1.75	0.00
...Vulgarisation	somme	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MECANISATION															
...Tracteur 120 cv															
.....Sous solage	heures	3.00	9.470	28.41	-2.17	-1.39	31.97	1.17	1.29	29.92	18.21	0.00	6.89	4.74	0.09
.....Defoncement	heures	7.00	9.470	66.29	-5.06	-1.25	74.60	2.72	2.78	69.80	42.48	0.00	16.07	11.06	0.21
...Tracteur agricole															
.....Defrichement	heures	2.00	5.900	11.80	-0.90	-0.58	13.28	0.48	1.27	12.43	7.56	0.00	2.86	1.97	0.04
.....Ebalisation	heures	4.00	5.900	23.60	-1.80	-1.16	26.56	0.97	1.74	24.85	15.12	0.00	5.72	3.94	0.07
.....Labour d etablissement	heures	0.50	5.900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
.....Plantation	heures	1.30	5.900	7.67	-0.59	-0.38	8.63	0.22	1.24	8.08	4.92	0.00	1.86	1.28	0.02
.....1 er arrosage	heures	20.00	5.900	118.00	-9.00	-5.79	132.80	4.85	2.78	124.25	75.62	0.00	28.60	19.69	0.37
.....Remplacement des manquants	heures	0.20	5.900	1.18	-0.09	-0.06	1.33	0.05	1.14	1.24	0.76	0.00	0.29	0.20	0.00
.....Facon culturale	heures	38.60	5.900	227.74	-17.38	-11.18	256.30	9.23	[illegible]	239.81	145.94	0.00	55.20	38.00	0.71
.....Traitement aerien	D/HA	0.97	6.482	6.30	-1.99	-2.26	6.26	0.26	1.37	5.93	3.52	0.00	2.16	1.27	0.01
.....Taille et evacuation des sarments	heures	1.24	5.900	7.31	-0.56	-0.36	8.23	0.30	1.23	7.70	4.69	0.00	1.77	1.22	0.02
COUT D OPERATION ET MAINTIEN															
...Location de la terre	D/ha	0.00		0.00	0.00	0.00	0.00	0.00	1.30	0.00	0.00	0.00	0.00	0.00	0.00
...Immobilisation du cheptel	D/ha	753.21	0.055	41.43	0.00	0.00	41.43	0.00	1.30	41.43	0.00	0.00	0.00	41.43	0.00
COUT DE PRODUCTION BRUT olives+bois	D/ha			1314.57	-144.86	-76.60	1537.84	64.26	38.26	1445.33	515.40	0.00	762.60	161.63	5.63
Valeur du Gros bois	D/ha	534.69	0.028	14.97	-1.67	-0.87	17.51	0.73	1.22	16.46	5.87	0.00	8.69	1.84	0.06
COUT DE PRODUCTION NET olives	D/ha			1299.60	-143.19	-75.53	1520.32	63.53	37.92	1428.87	509.61	0.00	753.92	159.79	5.57
RENDEMENT PREVU ACTUALISE en olives	kg/ha	3522.52													
COUT NET DE PRODUCTION olives	D/kg			0.369	-0.041	-0.021	0.432	0.018	1.308	0.406	0.145	0.000	0.214	0.045	0.002
COUT NET DE PRODUCTION huile	D/kg			2.170	-0.242	-0.126	2.539	0.106	1.347	2.386	0.851	0.000	1.259	0.267	0.009
COUT DE LIVRAISON A L HUILERIE en [illegible]															
...Transport (olives)	m3	1.55		1.55	0.04	0.02	1.49	0.16	1.10	1.23	0.60	0.00	1.60	0.03	0.00
TOTAL ENTREE HUILERIE (huile)	D/kg			2.179	-0.242	-0.126	2.548	0.107	1.347	2.393	0.855	0.000	1.263	0.267	0.009
COUT DE TRITURATION															
...Trituration A l huilerie	D/t	4.22		4.22	0.05	0.13	4.04	0.08	1.30	4.04	1.12	0.00	1.56	1.56	0.00
TOTAL SORTIE HUILERIE (huile)	D/kg			2.204	-0.242	-0.125	2.571	0.107	1.347	2.417	0.861	0.000	1.272	0.275	0.009

PAYS: TUNISIE
SPECULATION: OLIVES-SAHEL-SUPER PRESSE
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-15
a75 ... a156
a75 ...ab156

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS (KG/ARBRE)															
...RENDEMENTS POTENTIELS EN OLIVES				50	2.50	4.00	5.50	8.50	10.00	15.00	20.00	22.00	25.00	26.40	27.90
...RENDEMENTS PREVUS EN OLIVES								0.80	1.71	2.62	3.42	4.22	5.26	6.34	7.07
..RENDEMENTS PREVUS EN GROS BOIS (kg)													..00	2.00	3.00
Taux d actualisation	1.00	0.90	0.81	[illegible]	0.66	0.59	0.53	0.48	0.43	0.39	0.35	[illegible]	0.29	0.26	0.23
RENDEMENTS ACTUALISES (KG/ARBRE)															
..RENDEMENTS PREVUS EN OLIVES	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.38	0.74	1.03	1.20	[illegible]	..50	1.56	1.66
..RENDEMENTS PREVUS EN GROS BOIS (kg)	0.00	0.00	0.00	00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.29	0.52	0.70
QUANTITES PREVUES D INTRANTS															
...Main d Oeuvre															
.....Ramassage souchet	56.00														
.....Tracage + situation	2.00														
.....Trouaison	6.00														
.....Plantation	2.00														
.....Sarclage + cuvette	4.00														
.....1er Arrosage	2.00														
.....Soins des jeunes	2.00														
.....Remplacements des manquants	0.60														
.....Facon culturale	6.00														
.....Fertilisation		2.00													
.....Traitement antiparasitaire		2.00													
.....Diverses soins divers	2.00														
.....Taille de formation		2.00													
.....Lutte contre chlorose		1.00													
..... Gardiennage															
.....Surveillance															
...Entretien															
.....Main d oeuvre ordinaire			4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
.....Main d oeuvre specialisee			4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
INTRANTS															
...Plants	50.00	10.00													
...Fumier (Tonnes)	1.00														
...Produits de traitements (Litres)			1.00	00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	00	1.00	1.00	1.00
...Engrais (Qx)															
Super 45	10.00														
Ammonium Nitrate			0.50	50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	50	1.50	1.50	1.50
...Eau d arrosage (m3)	10.00														
...Vulgarisation															
MECANISATION															
...Tracteur 120 cv															
.....Sous soleuse															
.....Defoncement	6.00														
...Tracteur agricole															
.....Defrichement															
.....Enherbage															
.....Egalisation	2.50														
.....Labour d etablissement															
.....Recroisement	1.00														
...Tracteur 30-45 cv															
.....Plantation															
.....1 er arrosage	1.00														
.....Remplacement des manquants															
.....Facon culturale	5.00	6.00													
.....Labour			3.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	[illegible]	3.00	3.00	3.00
.....H hacha			3.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	[illegible]	3.00	3.00	3.00
.....Traitement aerien	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	0.10	0.10	0.10
.....Taille et evacuation des rameaux									0.10	0.10	0.10	[illegible]	0.10	0.20	0.20
COUT D OPERATION ET MAINTIEN															
...Location de la terre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00
COUT DE LIVRAISON A L HUILERIE															
...Transport (olives)								7.00	7.00	7.00	7.00	[illegible]	7.00	7.00	7.00
COUT DE TRITURATION															
...Trituration A l huilerie								19.00	19.00	19.00	19.00	[illegible]	19.00	[illegible]	19.00

PAYS: TUNISIE
SPECULATION: BL.NEF-SAHEL-SUPER PRESSE
COUTS/BENEFICES ANNUTIS SUR LES ANNEES 16-30

ANNEE: 16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	....Calculs de ... 17	18-30	...
29.50	30.70	32.10	33.50	35.00	35.20	35.50	35.70	36.00	36.20	36.50	36.70	37.00	37.20	37.50			
[illegible]	9.78	9.69	10.37	11.40	11.40	11.40	11.40	[illegible].40	11.40	11.40	11.40	11.40	11.40	11.40			
4.20	5.00	6.00	6.00	6.00	6.00	7.00	7.00	7.00	7.00	8.00	8.00	8.00	8.00	8.00			
0.21	0.19	0.17	0.15	0.14	0.12	0.11	0.11	0.09	0.08	0.07	0.07	0.06	0.05	0.05			
1.64	1.65	1.64	1.59	1.57	1.41	1.37	1.25	1.13	0.93	0.84	0.76	0.68	0.61	0.55			[illegible]
0.64	0.94	1.02	0.92	0.83	0.74	0.70	0.73	0.63	0.57	0.59	0.53	0.48	0.43	0.39			[illegible]
															56.00	0.00	[illegible]
															2.50	0.00	[illegible]
															6.50	0.00	[illegible]
															3.50	0.00	[illegible]
															4.00	0.00	[illegible]
															2.50	0.00	[illegible]
															2.50	0.00	[illegible]
															0.60	0.00	[illegible]
															6.00	0.00	[illegible]
															1.00	0.00	[illegible]
															1.00	0.00	[illegible]
															2.00	0.00	[illegible]
															2.70	0.00	[illegible]
															0.90	0.00	[illegible]
															0.00	0.00	[illegible]
															0.00	0.00	[illegible]
4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	25.91	5.00	[illegible]
4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	25.91	5.00	[illegible]
															59.01	0.00	[illegible]
															1.00	0.00	[illegible]
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	6.40	[illegible]	[illegible]
															10.00	0.00	[illegible]
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	0.91	[illegible]	[illegible]
															10.00	0.00	[illegible]
															0.00	0.00	[illegible]
															0.00	0.00	[illegible]
															6.00	0.00	[illegible]
															0.00	0.00	[illegible]
															0.00	0.00	[illegible]
															2.50	0.00	[illegible]
															0.00	0.00	[illegible]
															1.00	0.00	[illegible]
															0.00	0.00	[illegible]
															1.00	0.00	[illegible]
															0.00	0.00	[illegible]
															10.41	0.00	[illegible]
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	19.43	[illegible]	[illegible]
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	19.43	[illegible]	[illegible]
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.04	[illegible]	[illegible]
0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.36	[illegible]	[illegible]
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]
7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	22.04	[illegible]	[illegible]
19.50	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	59.02	[illegible]	[illegible]

PAYS: TUNISIE
SPECULATION: OLIVES-SAHEL-SUPER PRESSE
ITINERAIRE TECHNIQUE
a159 ... a236

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TT/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TT.SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... N O'O FAM	N O'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D OEUVRE	Journ. de travai.														
.....Ramassage souchet		[illegible]	2.756	154.34											
.....Fraisage + cuvetage		[illegible]	2.756	5.51											
.....Trouaison		[illegible]	2.756	16.54											
.....Plantation		[illegible]	2.756	8.27											
.....Sarclage + cuvette		[illegible]	2.756	11.02											
.....1er Arrosage		[illegible]	2.756	5.51											
.....Soins des jeunes		[illegible]	2.756	5.51											
.....Remplacements des manquants		[illegible]	2.756	1.65											
.....Façon culturale		[illegible]	2.756	16.54											
.....Fertilisation		[illegible]	2.756	4.97											
.....Traitement antiparasitaire		[illegible]	2.756	0.00											
.....Binage Soins divers		[illegible]	2.756	5.51											
.....Taille de rénovation		[illegible]	1.000	18.92											
.....Lutte contre chlendent		[illegible]	2.756	2.48											
.....Gardiennage		[illegible]	2.756	0.00											
.....Surveillance		[illegible]	2.756	0.00											
...Entretien		[illegible]	2.756	0.00											
.....Main d oeuvre ordinaire		[illegible]	2.756	95.43											
.....Main d oeuvre specialisee		[illegible]	6.000	185.98											
Total. Main d Oeuvre		[illegible]		528.18	0.00	0.00	528.18	[illegible]	0.00	[illegible]	0.00	0.00	528.18	0.00	0.00
INTRANTS															
...Plants	nombre	[illegible]	0.600	35.41	-2.36	-0.62	28.38	1.55	4.17	[illegible]	5.91	0.00	24.55	1.60	0.59
...Fumier	tonnes	[illegible]	13.000	13.00	0.59	-0.20	12.69	0.39	0.18	[illegible]	7.84	0.00	3.06	0.98	0.14
.Insecticides	litres	[illegible]	3.500	0.00	-22.56	-4.55	27.12	6.14	0.28	[illegible]	17.23	0.00	1.69	0.01	1.78
...Engrais															
Super 45	qx	[illegible]	5.765	57.65	-63.61	-23.45	144.71	20.69	2.54	[illegible]	72.66	0.00	18.43	9.89	0.49
Nitromitre	qx	[illegible]	5.700	61.63	-42.52	-35.97	129.22	24.25	2.30	[illegible]	62.88	0.00	18.80	30.58	0.41
...Eau d arrosage	m3	[illegible]	0.035	0.00	0.00	-0.35	0.35	0.00	0.00	[illegible]	0.00	0.00	0.00	0.35	0.00
...Vulgarisation	somme	[illegible]		0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
MECANISATION															
...Tracteur 120 cv															
.....Sous soleuse	heures	[illegible]	9.470	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
.....Defoncement	heures	[illegible]	9.470	56.82	-4.34	-2.79	63.94	2.33	1.78	[illegible]	26.41	0.00	13.77	9.48	0.18
...Tracteur agricole															
.....Defriche ment	heures	[illegible]	5.900	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
.....Enterrage	heures	[illegible]	5.900	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
.....Ensilasiage	heures	[illegible]	5.900	14.75	-1.13	-0.72	16.60	0.61	0.46	[illegible]	9.45	0.00	3.37	2.46	0.05
.....Labour d etablissement	heures	[illegible]	5.900	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
.....Recroisement	heures	[illegible]	5.900	5.90	-0.45	-0.29	6.64	0.24	0.18	[illegible]	3.78	0.00	1.43	0.98	0.02
...Tracteur 30-45 cv															
.....Plantation	heures	[illegible]	3.370	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
.....1 er arrosage	heures	[illegible]	3.370	3.37	-0.26	-0.17	3.79	0.14	0.11	[illegible]	2.16	0.00	0.92	0.56	0.01
.....Remplacement des manquants	heures	[illegible]	3.370	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
.....Façon culturale	heures	3.41	3.370	35.07	-2.68	-1.72	39.46	1.44	1.10	[illegible]	22.47	0.00	8.58	5.85	0.11
.....Labour	heures	[illegible]	3.370	78.34	-5.98	-3.85	88.17	3.22	2.45	[illegible]	50.20	0.00	18.99	13.07	0.24
.....Ahacha	heures	[illegible]	3.370	78.34	-5.98	-3.85	88.17	3.22	2.45	[illegible]	50.20	0.00	18.99	13.07	0.24
.....Traitement aerien	D/HA	[illegible]	6.482	0.00	-3.99	-2.26	6.26	0.26	0.07	[illegible]	2.52	0.00	2.14	1.27	0.01
.....Taille et evacuation des dechets	heures	[illegible]	3.370	2.43	-0.19	-0.12	2.73	0.10	0.08	[illegible]	1.55	0.00	0.59	0.40	0.01
COUT D'OPERATION ET MAINTIEN															
...Location de la terre	D/ha	[illegible]		0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00
...Immobilisation du capital	D/ha	569.28	0.055	31.31	0.00	0.00	31.31	0.00	0.00	[illegible]	0.00	0.00	0.00	31.31	0.00
COUT DE PRODUCTION BRUT (olives+bois)	D/ha			1002.19	-155.43	-80.01	1237.63	64.56	18.16	[illegible]	263.28	0.00	663.58	121.88	4.29
Valeur du Gros bois	D/ha	590.00	0.028	16.64	-2.58	-1.33	20.55	1.07	0.30	[illegible]	6.07	0.00	11.02	2.02	0.07
COUT DE PRODUCTION NET (olives)	D/ha			985.55	-152.85	-78.68	1217.08	63.49	17.86	[illegible]	259.21	0.00	652.48	119.86	4.22
RENDEMENT PREVU ACTUALISE	kg/ha	[illegible]													
COUT NET DE PRODUCTION (olives)	D/kg			0.736	-0.114	-0.059	0.909	0.047	0.013	[illegible]	0.268	0.000	0.488	0.090	0.003
COUT NET DE PRODUCTION (huile)	D/kg			3.981	-0.617	-0.318	4.916	0.256	0.072	[illegible]	1.451	0.000	2.636	0.484	0.017
COUT DE LIVRAISON A L HUILERIE															
...Transport (olives)	D/t	[illegible]		1.35	0.03	0.02	1.29	0.10	0.09	[illegible]	0.52	0.00	0.52	0.03	0.00
TOTAL A L ENTREE HUILERIE (huile)	D/kg			3.980	-0.617	-0.318	4.923	0.257	0.073	[illegible]	1.454	0.000	2.638	0.484	0.017
COUT DE TRITURATION															
...Trituration A l huilerie	D/t	[illegible]		3.65	0.16	0.41	3.18	0.00	0.00	[illegible]	0.80	0.00	1.27	1.01	0.00
TOTAL SORTIE HUILERIE (huile)	D/kg			4.000	-0.616	-0.315	4.940	0.257	0.073	[illegible]	1.458	0.000	2.645	0.490	0.017

TUNISIE

SPECULATION: OLIVES-SUB-SUPER PRESSE 1

COUTS BENEFICES AMORTIS SUR LES ANNEES 1-15

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS (G/ARBRE)															
RENDEMENTS POTENTIELS EN OLIVES	3.00	3.00	0.00	0.00	3.00	3.00	3.00	3.50	2.00	2.00	4.50	6.50	8.50	10.00	13.50
RENDEMENTS PREVUS EN OLIVES	3.00	3.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	1.00	2.00	2.00	2.00	4.00	5.00
RENDEMENTS PREVUS EN GROS BOIS	3.00	3.00	0.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	3.00	[illegible]	1.00
Taux d'actualisation	1.00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29	[illegible]	0.23
RENDEMENTS ACTUALISES (G/ARBRE)															
RENDEMENTS PREVUS EN OLIVES	3.00	3.00	0.00	0.00	0.00	3.00	3.00	3.00	0.00	0.39	0.70	0.89	1.09	[illegible]	1.25
RENDEMENTS PREVUS EN GROS BOIS	3.00	3.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	[illegible]	0.23
COUTS PREVUS D'INTRANTS															
Main d'oeuvre															
Défrichement	50.00														
Esserrage															
Trouaison + plantage	2.00														
Trouaison	4.00														
Plantation	2.00														
Mise en arrosage	2.00														
Soins des jeunes	1.00														
Remplacements des manquants	0.00														
Traitement antiparasitaire															
Evacuation du bois										0.30	0.30	0.30	0.30	[illegible]	0.30
Taille					1.00	1.00	1.50	2.00	2.50	3.00	3.00	3.50	3.50	[illegible]	4.50
Cueillette (20 Kg/J)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.33	0.67	0.83	[illegible]	0.97
Surveillance														[illegible]	1.00
Surveillance (1 J pour 20 l de cueill)							0.00	0.00	0.00	0.01	0.02	0.02	0.03	[illegible]	0.05
Tri sécat + Ensacondage											0.70	0.70	0.70	[illegible]	0.70
Fertilisation					0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	[illegible]	0.50
Destruction du chiendent									0.50	0.50	0.50	0.50	0.50	[illegible]	0.50
AUTRES INTRANTS															
Plants (unités)	20.00	0.00													
Insecticides	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	0.10
Produits de traitement			0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	[illegible]	0.50
Engrais (kg)															
Super 45	20.00														
Nitrate d'ammoniaque					0.25	0.25	0.25	0.25	0.25	0.50	0.50	0.50	0.50	[illegible]	0.50
Eau d'arrosage (m3)	12.00														
MECANISATION															
Tracteur 120 cv															
Sous soleuse															
Défonceuse															
Tracteur agricole															
Défrichement	2.00														
Esserrage															
Etalisation															
Labour d'établissement	4.00														
Plantation	0.60														
Mise en arrosage	9.00														
Remplacement des manquants															
Façon culturale	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	[illegible]	6.00
Traitement aérien	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	0.10
Taille et evacuation des dechets															
COUT D'OPERATION ET MAINTIEN															
Location de la terre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00
COUT DE LIVRAISON A L'HUILERIE															
Transport (olives)										7.00	7.00	7.00	7.00	[illegible]	7.00
COUT DE TRITURATION															
Trituration à l'huilerie										19.00	19.00	19.00	19.00	[illegible]	19.00

PAYS:TUNISIE
SPECULATION: OLIVES-SUD-SUPER PRESSE .
COUTS/BENEFICES AMORTIS SUR LES ANNEES 16-50

ANNEE:																....Calcule en la ANN.	
16.50	[illegible]	18.50	19.00	20.00	21.00	22.00	23.50	24.00	25.50	26.50	27.00	28.00	29.00	30.00	- année	18-50	
17.00	[illegible]	25.50	28.50	32.00	36.00	38.50	42.50	44.00	46.50	48.50	50.50	51.50	52.50	53.50			
8.60	[illegible]	8.60	9.40	10.60	11.40	12.20	13.40	14.40	15.25	16.30	17.20	18.20	19.30	20.00			
1.50	[illegible]	2.50	3.00	3.00	4.00	4.00	5.00	5.00	6.50	6.50	7.50	7.00	8.50	8.50			
0.21	[illegible]	0.17	0.15	0.14	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05			
1.28	[illegible]	1.46	1.44	1.46	1.41	1.36	1.35	1.31	1.29	[illegible]	1.14	1.08	1.02	0.97			[illegible]
0.21	[illegible]	0.34	0.46	0.41	0.50	0.45	0.50	0.45	0.49	1.44	0.46	0.42	0.43	0.39			[illegible]
															50.00	0.00	[illegible]
															0.00	0.00	[illegible]
															2.00	0.00	[illegible]
															4.00	0.00	[illegible]
															2.00	0.00	[illegible]
															2.00	0.00	[illegible]
															1.00	0.00	[illegible]
															3.00	0.00	[illegible]
0.50	[illegible]	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.00	[illegible]
0.50	[illegible]	0.50	6.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.67	0.28	
1.10	[illegible]	1.42	1.57	1.77	1.90	2.03	2.22	2.40	2.52	2.67	2.87	3.00	3.17	3.32	12.40	4.70	[illegible]
2.00	[illegible]	2.00	2.00	2.00	2.00	2.10	2.00	2.00	2.00	2.00	2.00	2.00	3.00	3.00	1.40	2.74	[illegible]
0.06	[illegible]	0.07	0.08	0.09	0.09	0.10	0.11	0.12	[illegible]	[illegible]	0.14	0.15	0.16	0.17	2.66	3.81	[illegible]
0.70	[illegible]	0.70	0.70	0.70	0.70	0.70	0.70	0.70	[illegible]	[illegible]	0.70	0.70	0.70	0.70	0.07	0.14	[illegible]
0.50	[illegible]	0.50	0.50	1.00	1.00	1.00	1.00	1.00	[illegible]	[illegible]	1.00	1.00	1.00	1.00	1.29	0.89	[illegible]
0.50	[illegible]	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	2.47	1.11	[illegible]
															1.33	0.64	[illegible]
0.10	[illegible]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	21.00	0.00	[illegible]
0.50	[illegible]	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.84	0.13	[illegible]
															3.24	0.64	[illegible]
0.50	[illegible]	0.50	0.50	1.00	1.00	1.00	1.00	1.00	[illegible]	[illegible]	1.00	1.00	1.00	1.00	20.00	0.00	[illegible]
															1.79	1.11	[illegible]
															12.00	0.00	[illegible]
															0.00	0.00	[illegible]
															0.00	0.00	[illegible]
															2.00	0.00	[illegible]
															0.00	0.00	[illegible]
															0.00	0.00	[illegible]
															4.00	0.00	[illegible]
															0.60	0.00	[illegible]
															9.00	0.00	[illegible]
6.00	[illegible]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	[illegible]	[illegible]	6.00	6.00	6.00	6.00	0.00	0.00	[illegible]
0.10	[illegible]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	[illegible]	0.10	0.10	0.10	0.10	50.27	7.63	[illegible]
0.10	[illegible]	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.84	0.13	[illegible]
															0.04	0.29	[illegible]
0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]
7.00	[illegible]	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	15.63	8.90	[illegible]
19.00	[illegible]	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	42.43	24.15	[illegible]

PAYS:TUNISIE
SPECULATION: OLIVES-SUD-SUPER PRESSE 1
ITINERAIRE TECHNIQUE
a152 ... a222

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TT/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TT/SUBV	INTRANTS ECHANGEABLES	INTRANTS NON-ECHANGEABLES A B'O FAM	INTRANTS NON-ECHANGEABLES V I I JOL	INTRANTS NON-ECHANGEABLES CAPITALE	INTRANTS NON-ECHANGEABLES TERRE
COUT DE PRODUCTION **********															
MAIN D OEUVRE	ouvr. de travail														
.....Defrichement		50.00	2.756	137.80											
.....Ebierrage		3.30	2.756	3.30											
.....Tracage + piquetage		2.00	2.756	5.51											
.....Trouaison		4.00	2.756	11.02											
.....Plantation		2.00	2.756	5.51											
.....1er Arrosage		2.00	2.756	5.51											
.....Soins des jeunes		1.00	2.756	2.76											
.....Remplacements des manquants		0.00	2.756	0.00											
.....Traitement antiparasitaire		0.00	2.756	0.00											
.....Evacuation du bois		1.05	2.756	2.90											
.....Taille		17.29	[illegible]	[illegible]											
.....Cueillette (120 kg/J)		4.14	2.756	11.40											
.....Gardiennage		6.47	2.756	17.84											
.....Surveillance (1 J sur 20 : de cueill)		0.21	2.756	0.57											
.....Transport + Ecourrendage		2.18	2.756	6.01											
.....Fertilisation		2.58	2.756	[illegible]											
.....Destruction du chiendent		1.97	2.756	5.43											
Total. main d oeuvre		97.69		241.78	0.00	0.00	241.78	0.00	0.00	241.78	0.00	0.00	241.78	0.00	0.00
AUTRES INTRANTS															
..Plants	unites	21.00	0.600	12.60	-1.87	-0.23	14.18	0.57	1.56	12.07	2.18	0.00	[illegible]	0.59	0.22
..Fumier	tonnes	0.97	18.000	17.27	1.79	-0.26	16.84	0.52	0.24	16.30	10.48	0.00	[illegible]	1.21	0.19
...Produits de traitement	litres	2.87	2.500	0.00	[illegible]	-2.20	13.56	3.07	0.14	10.25	8.61	0.00	[illegible]	0.31	0.09
...Engrais															
Super 45	"	20.00	5.765	115.30	[illegible]	-46.91	209.42	41.37	5.00	242.97	185.32	0.00	[illegible]	19.79	0.99
Ammoniac Nitrate	"	2.00	5.700	10.54	[illegible]	-0.41	57.26	6.51	0.62	50.24	16.80	0.00	[illegible]	8.21	0.11
..Eau d arrosage	m3	12.00	0.035	0.00	0.00	-0.42	0.42	0.00	0.00	0.42	0.00	0.00	[illegible]	0.42	0.00
MECANISATION															
...Tracteur 120 cv															
.....Sous solage	heures	0.00	9.470	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00
.....Defoncement	heures	0.00	9.470	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00
...Tracteur agricole															
....Defrichement	heures	2.00	5.900	11.80	-1.40	-0.58	13.28	3.48	0.37	12.43	7.56	0.00	[illegible]	1.97	0.04
.....Ebierrage	heures	0.00	5.900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00
.....Ebalisation	heures	0.00	5.900	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00
.....Labour d etablissement	heures	4.00	5.900	23.60	[illegible]	-1.16	26.56	0.97	0.74	24.85	15.12	0.00	[illegible]	2.94	0.07
.....Plantation	heures	0.60	5.900	3.54	-1.27	-0.17	3.98	0.15	0.11	3.73	2.27	0.00	[illegible]	0.59	0.01
.....1 er arrosage	heures	9.00	5.900	53.10	-4.95	-2.61	59.76	2.18	1.66	55.91	24.03	0.00	[illegible]	8.86	0.17
.....Remplacement des manquants	heures	0.00	5.900	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	[illegible]	0.00	0.00
.....Facon culturale	heures	57.90	5.900	341.61	-26.37	-16.77	384.45	14.03	10.70	359.72	218.91	0.00	[illegible]	57.01	1.06
.....Traitement aerien	D/HA	0.97	6.482	0.00	-2.99	-2.26	6.26	0.26	0.07	5.93	2.52	0.00	[illegible]	1.27	0.01
.....Taille et evacuation des dechets	heures	0.23	5.900	1.36	-4.15	-0.10	5.21	0.08	0.06	2.36	1.26	0.00	[illegible]	0.33	0.01
COUT D OPERATION ET MAINTIEN															
...Location de la terre	D/ha	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00
...Immobilisation du capital		550.99	0.055	30.30	0.00	0.00	30.30	0.00	0.00	30.30	0.00	0.00	[illegible]	30.30	0.00
COUT DE PRODUCTION BRUT (olives+bois)	D/ha			969.99	-87.21	-83.15	1240.36	70.19	21.33	1148.83	505.14	0.00	[illegible]	134.58	3.77
Valeur du Gros bois	D/ha	131.22	0.020	2.67	-4.71	-0.31	4.70	0.27	0.08	4.35	1.91	0.00	[illegible]	0.51	0.01
COUT DE PRODUCTION NET (olives)	D/ha			966.31	[illegible]	-82.84	1235.66	69.92	21.25	1144.48	503.23	0.00	[illegible]	134.07	3.75
RENDEMENT	kg/ha	496.51													
COUT NET DE PRODUCTION (olives)	D/kg (olives)			1.954	-0.177	-0.167	2.498	0.141	0.043	2.314	1.017	0.000	[illegible]	0.271	0.008
COUT NET DE PRODUCTION (huile)	D/kg (huile)			8.683	-1.676	-0.744	11.103	0.628	0.191	10.284	4.522	0.000	[illegible]	1.205	0.034
COUT DE LIVRAISON A L HUILERIE **********															
...Transport (olives)	D/t	3.17		3.17	3.93	0.02	1.12	0.12	0.08	0.93	0.45	0.00	[illegible]	0.02	0.00
TOTAL A L ENTREE HUILERIE (huile)	D/kg			8.688	-1.676	-0.744	11.108	0.629	0.191	10.288	4.524	0.000	[illegible]	1.205	0.034
COUT DE TRITURATION **********															
...Trituration @ l huilerie	D/t	3.17		3.17	3.17	0.48	2.52	0.00	0.00	2.52	0.66	0.00	[illegible]	0.77	0.00
TOTAL A LA SORTIE HUILERIE (huile)	D/kg			8.782	-1.675	-0.742	11.119	0.629	0.191	10.299	4.527	0.000	[illegible]	1.208	0.034

PAYS: TUNISIE
SPECULATION: OLIVES-INTERCOL-SUPER PRESSE 1
COUTS/BENEFICES ANNUELS SUR LES ANNEES 1-15
.00 ... olio7
:00 ...olio7

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS (KG.HA/HA)															
...RENDEMENTS POTENTIELS EN OLIVES	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.50	2.00	3.00	4.50	6.50	8.50	12.00	12.50
...RENDEMENTS PREVUS EN OLIVES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	2.25	4.50	6.50	8.55	10.25	11.95
...RENDEMENTS POTENTIELS EN AMANDES															
...RENDEMENTS PREVUS EN AMANDES	0.00	0.00	0.00	0.00	0.40	0.60	0.80	1.00	1.60	2.00	2.20	2.30	2.50	2.50	2.50
...RENDEMENTS EN SACS NETS 1 AMANDE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.50	0.50
...RENDEMENTS EN SACS NETS 1 OLIVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Taux d'actualisation	1.00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.23
RENDEMENTS ACTUALISES (KG.HA/HA)															
...RENDEMENTS PREVUS EN OLIVES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	1.58	2.00	2.44	2.67	3.03
...RENDEMENTS PREVUS EN AMANDES	0.00	0.00	0.00	0.00	0.26	0.36	0.48	0.53	0.69	0.78	0.77	0.75	0.71	0.64	0.58
...RENDEMENTS EN SACS NETS 1 AMANDE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.16	0.14	0.13	0.12
...RENDEMENTS EN SACS NETS 1 OLIVE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
QUANTITES PREVUES 1 HECTARE															
...Main d'oeuvre															
.....Défrichement	50.00														
.....Enlèvement															
.....Traçage + piquetage	2.00														
.....Trouaison	8.00														
.....Plantation	3.00														
.....1er arrosage	4.00														
.....Soins des jeunes	1.00														
.....Remplacements des manquants	0.00														
.....Taille			3.00	3.00	3.50	3.50	3.00	3.50	3.00	3.50	3.50	4.00	4.00	4.00	4.00
.....Cueillette à la main	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.59	0.82	1.12	1.23	1.71
.....Cueillette à gaulage	0.00	0.00	0.00	0.00	0.08	0.12	0.18	0.26	0.22	0.40	0.44	0.48	0.50	0.50	0.50
.....Surveillance														1.00	1.00
.....Surveillance	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.02	0.03	0.05	0.06	0.08	0.09	0.11
.....Evacuation des sacs			0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.40	0.40	0.40	0.40
.....Achat + pose manchons				0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	1.00	1.00	1.00	1.00
.....Fertilisation				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
.....Destruction du tronc					0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
AUTRES INTRANTS															
...Plants d'olivier	17.00	2.00													
...Plants d'amandier	20.00	2.00													
...Fumier (tonnes)	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
...Produits de traitements (litres)															
.....Diméthoate				0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
.....Oléiracine				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
.....Poudre à olivier			0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
...Engrais (kg)															
Super 45	20.00														
Ammonium Nitrate					0.50	0.50	0.50	0.50	0.50	0.75	0.75	0.75	0.75	0.75	0.75
...Eau d'arrosage (m3)	21.50														
...Vulgarisation															
MECANISATION															
...Tracteur 20 cv															
.....Sous soleuse															
.....Défoncement															
...Tracteur agricole															
.....Défrichement	2.00														
.....Enlèvement															
.....Ensilisation	4.00														
.....Labour d'établissement	4.00														
...Tracteur 30-45 cv															
.....Plantation	2.50														
.....1er arrosage	20.00														
.....Remplacement des manquants															
.....Façon cuvettes	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
.....Traitement aérien	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
.....Traitement anticryptogamique	0.00	0.00	0.00	0.00	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30
.....Taille et évacuation des déchets				0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30
COUT D'OPERATION ET MAINTENIR															
...Location de la terre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE COLLECTE															
...Transport olives										7.00	7.00	7.00	7.00	7.00	7.00
COUT DE TRITURATION															
...Trituration à l'huilerie										19.00	19.00	19.00	19.00	19.00	19.00

PAYS: TUNISIE
SPECULATION: OLIVES-INTERCAL-SUPER PRESSE I
COUTS/BENEFICES AMORTIS SUR LES ANNEES 16-50

ANNEE: 16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	....Calculs de la VAN.... Année17	18-30	TOT
17.00	31.50	35.00	38.50	[illegible]	36.00	38.50	42.50	44.00	46.50	48.50	50.50	51.50	[illegible]	53.50			
14.85	17.10	19.25	21.15	[illegible]	25.65	27.45	30.15	32.40	34.20	36.00	38.70	40.50	[illegible]	45.00			
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50			
0.50	1.00	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.50	1.50	1.50	2.00	[illegible]	2.00			
1.00	2.00	2.00	2.00	[illegible]	4.00	4.00	5.00	5.00	6.00	6.00	7.00	[illegible]	8.00	8.00			
0.21	0.19	0.17	0.15	[illegible]	0.12	0.11	0.10	0.09	0.08	0.07	0.07	0.06	[illegible]	0.05			
3.10	3.22	3.28	3.23	[illegible]	3.18	3.07	3.04	2.98	2.79	2.65	2.57	2.42	[illegible]	2.18			55.86
0.52	0.47	0.42	0.38	[illegible]	0.31	0.28	0.25	0.23	0.20	0.18	0.17	[illegible]	[illegible]	0.12			10.84
0.10	0.19	0.17	0.15	[illegible]	0.12	0.11	0.10	0.09	0.12	0.11	0.10	[illegible]	[illegible]	0.10			2.56
0.21	0.38	0.34	0.46	[illegible]	0.50	0.45	0.50	0.45	0.49	0.44	0.46	0.42	0.43	0.39			6.56
															50.00	0.00	50.00
															3.00	3.00	0.00
															2.00	0.00	2.00
															8.00	0.00	8.00
															3.00	0.00	3.00
															4.00	0.00	4.00
															1.00	0.00	1.00
															0.00	0.00	0.00
4.00	4.00	4.00	4.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	14.75	6.03	20.78
1.94	2.24	2.53	2.77	[illegible]	3.25	3.59	3.94	4.24	4.47	4.71	5.36	5.20	5.59	5.88	2.47	4.83	7.30
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.53	0.64	2.17
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.66	3.81	6.47
0.12	0.14	0.15	0.16	0.18	0.19	0.20	0.22	0.24	0.25	0.26	0.28	[illegible]	0.30	0.32	0.20	0.27	0.47
0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	2.09	0.60	2.70
1.00	1.00	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]	1.00	4.41	1.27	5.68
1.00	1.00	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]	[illegible]	1.00	5.67	1.27	6.94
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	2.47	0.64	3.10
															18.00	0.00	18.00
															21.00	0.00	21.00
0.10	0.10	0.10	0.10	[illegible]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	[illegible]	0.10	0.84	0.13	0.97
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	2.83	0.64	3.47
1.00	1.00	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]	[illegible]	1.00	5.67	1.27	6.94
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	3.24	0.64	3.87
															20.00	0.00	20.00
0.75	0.75	0.75	0.75	[illegible]	0.75	0.75	0.75	0.75	0.75	0.75	0.75	[illegible]	[illegible]	0.75	3.03	0.95	3.98
															21.50	0.00	21.50
															0.00	0.00	0.00
															0.00	0.00	0.00
															0.00	0.00	0.00
															2.00	0.00	2.00
															0.00	0.00	0.00
															4.00	0.00	4.00
															4.00	0.00	4.00
															2.50	0.00	2.50
															20.00	0.00	20.00
															0.00	0.00	0.00
6.00	6.00	6.00	6.00	[illegible]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	[illegible]	[illegible]	6.00	50.27	7.63	57.90
0.10	0.10	0.10	0.10	[illegible]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	[illegible]	0.10	0.84	0.13	0.97
0.50	0.50	0.50	0.50	[illegible]	0.70	0.70	0.70	0.70	1.00	1.00	1.00	[illegible]	[illegible]	1.00	1.38	0.91	2.29
0.30	0.30	0.30	0.30	[illegible]	0.30	0.30	0.30	0.30	2.00	2.00	2.00	[illegible]	[illegible]	2.00	1.36	1.03	2.39
0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	[illegible]	0.00	0.00	0.00	0.00
7.00	7.00	7.00	7.00	[illegible]	7.00	7.00	7.00	7.00	7.00	7.00	7.00	[illegible]	[illegible]	7.00	15.63	8.90	24.53
19.00	19.00	19.00	19.00	[illegible]	19.00	19.00	19.00	19.00	19.00	19.00	19.00	[illegible]	[illegible]	19.00	42.43	24.15	66.58

PAYS: [illegible]
SPECULATION: OLIVES-INTERCAL-SUPER PRE
ITINERAIRE TECHNIQUE
[illegible]

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET T/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLS	INTRANTS NON-ECHANGEABLES R D'O FAM	R D'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D'OEUVRE	Journ. de travail														
[illegible]		50.50	2.756	137.80											
[illegible]		0.00	2.756	0.00											
[illegible]		2.00	2.756	5.51											
[illegible]		8.00	2.756	22.05											
[illegible]		3.00	2.756	8.27											
[illegible]		4.00	2.756	11.02											
[illegible]		1.00	2.756	2.76											
[illegible]		0.00	2.756	3.30											
[illegible]		20.78	7.000	145.44											
[illegible]		7.50	2.756	20.13											
[illegible]		2.17	2.756	5.98											
[illegible]		6.47	2.756	17.84											
[illegible]		3.47	2.756	1.21											
[illegible]		2.70	2.756	7.43											
[illegible]		5.68	2.756	15.67											
[illegible]		6.94	2.756	19.12											
[illegible]		3.10	2.756	8.55											
TOTAL MAIN D'OEUVRE		123.62		428.07	0.00	[illegible]	428.07	0.00	0.00	428.07	0.00	0.00	428.07	0.00	[illegible]
AUTRES INTRANTS															
[illegible]	nombre	18.00	0.600	11.20	-0.75	[illegible]	12.23	0.49	1.33	10.41	1.00	0.00	7.02	0.51	[illegible]
[illegible]	nombre	21.00	0.500	10.90	-0.75	[illegible]	11.82	0.48	1.28	10.06	1.02	0.00	7.56	0.49	[illegible]
[illegible]	tonnes	0.97	13.000	12.55	1.57	[illegible]	12.16	0.38	0.17	11.61	7.57	0.00	2.95	0.94	[illegible]
[illegible]															
[illegible]	litres	3.47	5.400	0.00	-15.58	[illegible]	18.73	4.24	0.20	14.50	11.90	0.00	1.17	0.04	[illegible]
[illegible]	litres	6.94	11.187	0.00	-64.56	[illegible]	77.61	17.56	0.81	59.25	49.29	0.00	4.83	0.83	[illegible]
[illegible]	litres	3.87	3.500	0.00	-11.28	[illegible]	13.56	3.07	0.14	10.35	8.61	0.00	0.84	0.01	[illegible]
[illegible]															
[illegible]	kg	20.00	5.765	115.30	-127.21	[illegible]	289.42	41.37	5.00	242.97	185.32	0.00	36.86	[illegible]	[illegible]
[illegible]	kg	3.90	6.000	23.00	-16.47	[illegible]	53.93	9.39	0.89	43.65	24.36	0.00	7.28	11.28	[illegible]
[illegible]	m3	21.50	0.035	0.00	0.00	[illegible]	0.75	0.00	0.00	0.75	0.00	0.00	0.00	0.75	0.00
[illegible]	somme	0.00		0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MECANISATION															
[illegible]															
[illegible]	heures	0.00	9.470	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[illegible]	heures	0.00	9.470	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[illegible]															
[illegible]	heures	2.00	5.900	11.80	-0.90	[illegible]	13.20	0.48	0.37	12.43	7.56	0.00	2.86	1.97	0.00
[illegible]	heures	0.00	5.900	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[illegible]	heures	4.00	5.900	23.60	-1.00	[illegible]	26.56	0.97	0.74	24.85	15.12	0.00	5.72	3.94	0.00
[illegible]	heures	4.00	5.900	23.60	-1.00	[illegible]	26.56	0.97	0.74	24.85	15.12	0.00	5.72	3.94	0.00
[illegible]															
[illegible]	heures	2.50	3.370	8.43	-0.64	[illegible]	9.40	0.35	0.26	8.87	5.40	0.00	2.04	1.41	0.00
[illegible]	heures	20.00	3.370	67.40	-5.16	[illegible]	75.85	2.77	2.11	70.97	43.19	0.00	16.34	11.25	0.00
[illegible]	heures	0.00	3.370	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[illegible]	heures	57.90	3.370	195.13	-14.89	[illegible]	219.59	8.01	6.11	205.47	125.04	0.00	47.29	32.56	0.00
[illegible]	D/HA	0.97	6.482	0.00	-3.99	[illegible]	6.26	0.26	0.07	5.93	2.52	0.00	2.14	1.27	0.00
[illegible]	heures	2.29	3.370	7.73	-0.59	[illegible]	8.69	0.32	0.24	8.13	4.95	0.00	1.87	1.29	0.00
[illegible]	heures	2.39	3.370	8.05	-0.61	[illegible]	9.06	0.33	0.25	8.48	5.16	0.00	1.95	1.34	0.00
COUT D'OPERATION ET MAINTIEN															
[illegible]	D/ha	0.00		0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
[illegible]	D/ha	561.20	0.055	30.87	0.00	[illegible]	30.87	0.00	0.00	30.87	0.00	0.00	0.00	30.87	0.00
COUT DE PRODUCTION BRUT (olives+sous)	D/ha			979.37	-266.39	[illegible]	1245.29	91.43	20.80	1233.06	514.83	0.00	584.12	120.20	[illegible]
Valeur des amandes		216.81	1.200	260.17											
Valeur du bois bois. amandes		51.18	0.020	1.02											
Valeur du bois bois. olives		111.54	0.035	3.90											
Valeur totale des sous-produits	D/ha			265.10	-77.11	[illegible]	344.10	24.75	5.63	333.76	139.35	0.00	158.11	33.62	2.70
COUT DE PRODUCTION NET (olives)	D/ha			714.27	-194.28	[illegible]	901.15	66.68	15.17	899.29	375.47	0.00	426.01	90.58	7.26
RENDEMENT en olives	kg/ha	949.57													
COUT NET DE PRODUCTION (olives)	D/kg (olives)			0.752	-0.205	[illegible]	1.033	0.070	0.016	0.947	0.395	0.000	0.449	0.095	0.008
COUT NET DE PRODUCTION (huile)	D/kg (huile)			3.343	-0.909	[illegible]	4.592	0.312	0.071	4.209	1.757	0.000	1.996	0.420	0.034
COUT DE TRANSFORMATION A L'HUILERIE															
[illegible] (olives)	D/t	1.17		1.17	0.03	[illegible]	1.12	0.12	0.00	0.93	0.45	0.00	0.45	0.02	0.00
TOTAL SORTIE HUILERIE (huile)	D/kg			3.348	-0.909	[illegible]	4.597	0.313	0.071	4.213	1.759	0.000	1.996	0.420	0.034
COUT DE COMMERCIALISATION															
[illegible] à l'huilerie	D/t	3.17		3.17	0.17	[illegible]	2.52	0.00	0.00	2.52	0.66	0.00	1.09	0.77	0.00
TOTAL SORTIE HUILERIE (huile)	D/kg			3.362	-0.908	[illegible]	4.600	0.313	0.071	4.226	1.762	0.000	2.001	0.427	0.034

PAYS:TUNISIE
SPECULATION: OLIVES-SFAX-SUP PRESSE)
COUTS/BENEFICES AMORTIS SUR LES ANNEES 1-15
a76 ... a149
a76 ...ab149

ANNEE:	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00
RENDEMENTS (KG/ARBRE)															
...RENDEMENTS POTENTIELS EN OLIVES	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.50	2.00	2.00	4.50	6.50	8.50	12.00	13.50
...RENDEMENTS PREVUS EN OLIVES	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.25	4.50	6.30	8.55	10.35	13.05
...RENDEMENTS PREVUS EN GROS BOIS	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Taux d actualisation	00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35	0.32	0.29	0.26	0.23
RENDEMENTS ACTUALISES (KG/ARBRE)															
...RENDEMENTS PREVUS EN OLIVES	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.98	1.58	2.00	2.44	2.67	3.03
...RENDEMENTS PREVUS EN GROS BOIS	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
QUANTITES PREVUES D INTRANTS															
...Main d Oeuvre															
.....Defrichement	50.00														
.....Enterrage															
.....Tracage + piquetage	1.00														
.....Trouaison	1.00														
.....Plantation	1.00														
.....1er Arrosage	1.00														
.....Soins des jeunes	00														
.....Remplacements des manquants	1.00														
.....Traitement antiparasitaire															
.....Evacuation du bois															
.....Taille										0.30	0.30	0.30	0.30	0.30	0.30
.....Cueillette (120 Kg/J)	1.00	0.00	0.00	0.00	1.00	1.00	1.50	2.00	2.50	2.00	3.00	3.50	3.50	4.00	4.50
.....Gardiennage					0.00	0.00	0.00	0.00	0.00	0.58	0.75	1.05	1.43	1.72	2.10
.....Surveillance (1 J pour 20 + de ceui...														3.00	3.00
.....I achat + Epouvantage							0.00	0.00	0.00	0.02	0.04	0.05	0.07	0.09	0.11
.....Fertilisation											0.70	0.70	0.70	0.70	0.70
.....Destruction du chiendent					0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
									0.50	0.50	0.50	0.50	0.50	0.50	0.50
AUTRES INTRANTS															
...Plants (unites)	50.00	2.00													
...Fumier(T/HA)	5.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
...Produits de traitement			0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
...Engrais (Dx)															
Super 45	50.00														
Ammonium Nitrate					0.25	0.25	0.25	0.25	0.25	0.50	0.50	0.50	0.50	0.50	0.50
...Eau d arrosage (m3)	2.00														
MECANISATION															
...Tracteur 120 cv															
.....Sous soleuse															
.....Defoncement															
...Tracteur agricole															
.....Defrichement	2.00														
.....Enterrage															
.....Egalisation															
.....Labour d etablissement	4.00														
.....Plantation	1.00														
.....1 er arrosage	0.00														
.....Remplacement des manquants															
.....Façon culturale	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
.....Traitement aerien	2.00	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
.....Taille et evacuation des dechets															
COUT D OPERATION ET MAINTIEN															
...Location de la terre	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COUT DE LIVRAISON A L HUILERIE															
...Transport (olives)										7.00	7.00	7.00	7.00	7.00	7.00
COUT DE TRITURATION															
...Trituration D I huilerie										19.00	19.00	19.00	19.00	19.00	19.00

PAYS: TUNISIE
SPECULATION: OLIVES-SFAX-SUP PRESSE 1
COUTS/BENEFICES AMORTIS SUR LES ANNEES 16-30

ANNEE: 6.30	17.00	18.00	19.00	20.00	21.00	[illegible]	23.00	24.00	25.00	26.00	27.00	28.00	29.00	30.00	...Cumulés de la VAR.... 1-[illegible]7	16-30	TOT
[illegible]	21.50	25.00	28.50	32.00	36.00	[illegible]	42.50	44.00	46.50	48.50	50.50	51.50	52.50	53.50			
[illegible]	17.10	19.25	21.15	23.85	25.65	[illegible]	30.15	32.40	34.20	36.00	38.70	40.50	42.75	45.00			
[illegible]	2.00	2.00	3.00	3.00	4.00	[illegible]	5.00	5.00	6.00	6.00	7.00	7.00	8.00	8.00			
[illegible]	0.19	0.17	[illegible]	0.14	0.12	[illegible]	0.10	0.09	0.08	0.07	0.07	0.06	0.05	0.05			
[illegible]	3.22	3.28	3.23	3.28	3.18	[illegible]	3.04	2.94	2.79	2.65	2.57	2.42	2.30	2.18			55.86
[illegible]	0.38	0.34	0.44	0.41	0.50	[illegible]	0.50	0.45	0.49	0.44	0.46	0.42	0.43	0.39			6.56
															[illegible]	0.00	50.00
															[illegible]	0.00	0.00
															[illegible]	0.00	2.00
															[illegible]	0.00	4.00
															[illegible]	0.00	2.00
															[illegible]	0.00	2.00
															[illegible]	0.00	1.00
															[illegible]	0.00	0.00
															[illegible]	0.00	0.00
[illegible]	0.30	0.30	0.30	0.30	0.30	[illegible]	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	[illegible]	0.38	1.05
[illegible]	5.00	5.50	6.00	3.00	3.00	[illegible]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	[illegible]	4.78	17.09
[illegible]	2.85	3.23	3.53	3.78	4.27	[illegible]	5.03	5.40	5.70	6.00	6.45	6.75	7.13	7.50	[illegible]	6.16	9.31
[illegible]	3.00	3.00	3.00	3.00	3.00	[illegible]	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	[illegible]	3.81	6.47
[illegible]	0.14	0.16	[illegible]	0.20	0.21	[illegible]	0.25	0.27	0.29	0.30	0.32	0.34	0.36	0.38	[illegible]	0.31	0.47
[illegible]	0.70	0.70	0.70	0.70	0.70	[illegible]	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	[illegible]	0.89	2.18
[illegible]	0.50	0.50	0.50	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]	1.11	3.58
[illegible]	0.50	0.50	0.50	0.50	0.50	[illegible]	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	[illegible]	0.64	1.97
															[illegible]	0.00	21.80
[illegible]	0.10	0.10	[illegible]	0.10	0.10	[illegible]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	0.13	0.97
[illegible]	0.50	0.50	0.50	0.50	0.50	[illegible]	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	[illegible]	0.64	3.87
															[illegible]	0.00	20.00
[illegible]	0.50	0.50	0.50	1.00	1.00	[illegible]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	[illegible]	1.11	2.90
															[illegible]	0.00	12.00
															[illegible]	0.00	0.00
															[illegible]	0.00	0.00
															[illegible]	0.00	2.00
															[illegible]	0.00	0.00
															[illegible]	0.00	0.00
															[illegible]	0.00	4.00
															[illegible]	0.00	0.60
															[illegible]	0.00	9.00
[illegible]	6.00	6.00	6.00	6.00	6.00	[illegible]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	[illegible]	0.00	0.00
[illegible]	0.10	0.10	0.10	0.10	0.10	[illegible]	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	[illegible]	7.63	57.90
[illegible]	0.10	0.20	0.20	0.20	0.20	[illegible]	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	[illegible]	0.13	0.97
															[illegible]	0.29	0.33
[illegible]	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00
[illegible]	7.00	7.00	7.00	7.00	7.00	[illegible]	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	[illegible]	0.90	24.53
[illegible]	19.00	19.00	19.00	19.00	19.00	[illegible]	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	[illegible]	24.15	66.50

PAYS:TUNISIE
SPECULATION: OLIVES-SFAX-SUP PRESSE 1
ITINERAIRE TECHNIQUE
a152 ... a222

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TT/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TT/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M O'O FAM	M O'O SAL	CAPITALE	TERRE
COUT DE PRODUCTION															
MAIN D OEUVRE	Journ. de travail														
.....Defrichement		50.00	2.756	137.80											
.....Esserrage		0.00	2.756	0.00											
.....Fracage + disvetage		2.00	2.756	5.51											
.....Trouaison		4.00	2.756	11.02											
.....Plantation		2.00	2.756	5.51											
.....1er Arrosage		2.00	2.756	5.51											
.....Soins des jeunes		1.00	2.756	2.76											
.....Remplacements des manquants		0.00	2.756	0.00											
.....Traitement antiparasitaire		0.00	2.756	0.00											
.....Evacuation du bois		1.05	2.756	2.90											
.....Taille		17.29	7.000	119.66											
.....Cueillette (120 kg/J)		9.31	2.756	25.66											
..... Gardiennage		6.47	2.756	17.84											
.....Surveillance (1 J sur 20 + de [illegible]		0.47	2.756	1.28											
.....Ramassage + Ecourgeonnage		2.18	2.756	6.01											
.....Fertilisation		3.58	2.756	9.86											
.....Destruction du cuivement		1.97	2.756	5.43											
Total. main d oeuvre		103.12		256.74	0.00	0.00	256.74	0.00	[illegible]	256.74	0.00	0.00	256.74	0.00	0.00
AUTRES INTRANTS															
...Plants	[illegible]	21.80	0.600	13.08	-0.87	-0.23	14.18	0.57	[illegible]	12.97	2.18	0.00	9.07	0.59	0.22
...Fumier	[illegible]	0.97	18.000	17.37	0.79	-0.26	16.84	0.52	[illegible]	16.98	10.48	0.00	4.09	1.21	0.19
...Produits de traitement	[illegible]	3.87	2.500	9.00	-11.28	-2.28	13.56	3.37	[illegible]	10.35	8.61	0.00	0.84	0.01	0.89
...Engrais															
Sucer 45	[illegible]	20.00	5.765	115.30	-127.21	-46.91	289.42	41.37	[illegible]	242.97	185.32	0.00	56.86	19.79	0.99
Nodonion Nitrate	[illegible]	2.90	5.700	16.54	-11.41	-4.41	37.36	6.51	[illegible]	30.24	16.88	0.00	5.05	8.21	0.11
...Eau d arrosage	[illegible]	12.00	0.035	0.00	0.00	-0.42	0.42	0.00	[illegible]	0.42	0.00	0.00	0.00	0.42	0.00
MECANISATION															
...Tracteur 120 cv															
.....Sous solage	[illegible]	0.00	9.470	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00
.....Defoncement	[illegible]	0.00	9.470	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00
...Tracteur agricole															
.....Defrichement	[illegible]	2.00	5.900	11.80	-0.90	-0.58	13.28	3.48	[illegible]	12.43	7.56	0.00	2.86	1.97	0.04
.....Esserrage	[illegible]	0.00	5.900	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00
.....Epaisiation	[illegible]	0.00	5.900	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00
.....Labour d etablissement	[illegible]	4.00	5.900	23.60	-1.80	-1.16	26.56	3.97	[illegible]	24.85	15.12	0.00	5.72	3.94	0.07
.....Plantation	[illegible]	0.60	5.900	3.54	-0.27	-0.17	3.98	0.15	[illegible]	3.73	2.27	0.00	0.86	0.59	0.01
.....1 er arrosage	[illegible]	9.00	5.900	53.10	-4.05	-2.61	59.76	2.18	[illegible]	55.91	34.03	0.00	12.87	8.86	0.17
.....Remplacement des manquants	[illegible]	0.00	5.900	0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00
.....Facon culturale	[illegible]	57.90	5.900	341.61	-26.07	-16.77	384.45	14.83	[illegible]	359.72	218.91	0.00	82.80	57.01	1.06
.....Traitement aerien	[illegible]	0.97	6.482	0.00	-3.99	-2.26	6.26	0.26	[illegible]	5.93	3.52	0.00	2.14	1.27	0.01
.....Taille et evacuation des dechets	[illegible]	0.33	5.900	1.96	-0.15	-0.10	2.21	0.08	[illegible]	2.06	1.26	0.00	0.48	0.33	0.01
COUT D OPERATION ET MAINTIEN															
....ocation de la terre	[illegible]	0.00		0.00	0.00	0.00	0.00	0.00	[illegible]	0.00	0.00	0.00	0.00	0.00	0.00
...Immobilisation du capital		558.47	0.055	30.72	0.00	0.00	30.72	0.00	[illegible]	30.72	0.00	0.00	0.00	30.72	0.00
COUT DE PRODUCTION BRUT (olives+bois)	D/ha			985.36	-187.21	-83.15	1255.73	70.19	[illegible]	1164.21	505.14	0.00	520.37	134.99	3.77
Valeur du Gros bois	D/ha	131.22	0.028	3.67	-0.70	-0.31	4.68	0.26	[illegible]	4.34	1.88	0.00	1.94	0.50	0.01
COUT DE PRODUCTION NET (olives)	D/ha			981.69	-186.52	-82.84	1251.05	69.93	[illegible]	1159.87	503.26	0.00	518.43	134.49	3.75
RENDEMENT	[illegible]	1117.10													
COUT NET DE PRODUCTION (olives)	D/kg (olives)			0.882	-0.168	-0.074	1.124	0.063	[illegible]	1.042	0.452	0.000	0.466	0.121	0.003
COUT NET DE PRODUCTION (huile)	D/kg (huile)			3.920	-0.745	-0.331	4.996	0.279	[illegible]	4.632	2.010	0.000	2.078	0.537	0.015
COUT DE LIVRAISON A L HUILERIE															
...Transport (olives)	D/t	1.17		1.17	0.03	0.02	1.12	0.12	[illegible]	9.93	0.45	0.00	0.45	0.02	0.00
TOTAL A L ENTREE HUILERIE (huile)	D/kg			3.925	-0.745	-0.331	5.001	0.280	[illegible]	4.636	2.012	0.000	2.072	0.537	0.015
COUT DE TRITURATION															
...Trituration @ l huilerie	D/t	3.17		3.17	0.17	0.48	2.52	0.00	[illegible]	2.52	0.66	0.00	1.09	0.77	0.00
TOTAL A LA SORTIE HUILERIE (huile)	D/kg			3.939	-0.744	-0.329	5.012	0.280	[illegible]	4.647	2.015	0.000	2.077	0.541	0.015

Input Cost Decompositions

SEMENCES DE BLE DUR

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DES SEMENCES CERTIFIEES DE BLE DUR

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
PRODUCTION					
Prix normal retrocession	19.857	100%	Selon ble dur hum. minum. grande		19.857
Prime de selection	2.383	100%	Capitale		2.383
Prime de triage	0.993	100%	Main d'oeuvre		0.849
			Charges Sociales	17.00%	0.144
Frais de traitement	0.252	50%	Equipement		0.109
			Taxe sur les mach. agro-aliment.	16.00%	0.017
		30%	Produits chimiques		0.065
			Taxe inter. sur acide sulfurique	16.82%	0.011
		20%	Main d'oeuvre		0.043
			Charges Sociales	17.00%	0.007
COLLECTE					
Frais de sacherie	1.682	65%	Matieres de sacherie		0.651
			Taxe sur les tissus en jute	67.90%	0.442
		35%	Main d'oeuvre		0.503
			Charges Sociales	17.00%	0.086
Etiquettes, coutures	0.034	100%	Echangeables		0.034
Frais de chargement	0.280	70%	Main d'oeuvre		0.168
			Charges Sociales	17.00%	0.029
		30%	Materiaux roulant etc.		0.079
			Tax sur les tracteurs importes	6.00%	0.005
Frais de mise en lots	0.100	100%	Main d oeuvre		0.086
			Charges Sociales	17.00%	0.015
Transport pergque	0.560	100%	Selon transports routiers		0.560
MARGE DE RETROCESSION (Cout de stockage)	0.741	72%	Terre		0.534
		18%	Capitale		0.133
		5%	Main d'oeuvre		0.032
			Charges Sociales	17.00%	0.005
		5%	Insecticides		0.028
			Taxe sur l'ammoniaque liquifie	34.00%	0.010
Total	26.882				26.882

COUT DE PRODUCTION DES SEMENCES CERTIFIEES: BLE DUR (D/QL)

	QUANTITE	PRIX UNITAIRE	COUT PAR QL	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLE	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
PRODUCTION															
Prix normal de rétrocession	1.000	19.857	19.857	-4.207	-1.619	25.683	1.200	0.829	23.655	11.833		4.589	2.858	4.374	(a)
Prime de selection (12%)	1.000	2.383	2.383			2.383			2.383				2.383		(b)
Prime de triage (5%)	1.000	0.993	0.993			0.993		0.144	0.849			0.849			(c)
Frais de traitement	1.000	0.252	0.252			0.252	0.028	0.007	0.216	0.174		0.043			(d)
COLLECTE															
Frais de sacherie	1.000	1.682	1.682			1.682	0.442	0.086	1.154	0.651		0.503			(e)
Etiquettes, coutures	1.000	0.034	0.034			0.034			0.034	0.034					
Manipulation															
...Frais de Chargement	1.000	0.280	0.280			0.280	0.005	0.029	0.247	0.079		0.168			
...Frais de mise en lots	1.000	0.100	0.100			0.100		0.015	0.086			0.086			(f)
Transport perequa	1.000	0.560	0.560	(0.004)	(0.010)	0.573	0.067	0.044	0.462	0.146		0.259	0.012	0.045	(g)
MARGE DE RETROCESSION	1.000	0.741	0.741			0.741	0.010	0.005	0.726	0.028		0.031	0.133	0.534	(h)
Prix de Revient			26.882	(4.211)	(1.628)	32.721	1.752	1.158	29.811	12.944	0.000	6.527	5.386	4.954	
Compensatrice (C.G.C.)			(1.633)	(0.709)	(0.924)	0.000									
Prix a l'agriculteur			25.249	(4.920)	(2.552)	32.721	1.752	1.158	29.811	12.944	0.000	6.527	5.386	4.954	
COEFFICIENTS DE DECOMPOSITION			1.000	(0.195)	(0.101)	1.296	0.069	0.046	1.181	0.513	0.000	0.259	0.213	0.196	
% du cout economique									1.000	0.434	0.000	0.219	0.181	0.166	

RENVOIS:

a. Reparti selon la decomposition moyenne du ble dur (humide/sub-humide grande exploitation)
b. Paye a l'agriculteur pour la multiplication des semences
c. 100% main d'oeuvre
d. Utilisation de 200 grammes de Kinolate 15
   50% machines agro-alimentaires, 30% produits chimiques, 20% main d'oeuvre
e. A raison de 2 sacs de 50 Kgs et 0,841 par sac
   65% matieres de sacherie et 35% main d'oeuvre
f. Mise en lots de 200 Qx chacun dans le magasin de stockage
g. Suppose transport ferrovier
h. 90% capital/terre, 5% main d'oeuvre, et 5% insecticides

SOURCE: COSEN
semb4

SEMENCES DE BLE TENDRE ORDINAIRE

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DES SEMENCES CERTIFIEES DE BLE TENDRE ORDINAIRE

POSTE	COUT		REPARTITION	TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
PRODUCTION					
Prix normal retrocession	18.193	100%	Selon ble tendre hum/subhum. grande		18.193
Prime de selection	2.183	100%	Capitale		2.183
Prime de triage	0.910	100%	Main d'oeuvre		0.778
			Charges Sociales	17.00%	0.132
Frais de traitement	0.252	50%	Equipement		0.109
			Taxe sur les mach. agro-aliment	16.00%	0.017
		30%	Produits chimiques		0.065
			Taxe sur acide sulfurique inter	16.82%	0.011
		20%	Main d'oeuvre		0.043
			Charges Sociales	17.00%	0.007
COLLECTE					
Frais de sacherie	1.682	65%	Matieres de sacherie		0.651
			Taxe sur les tissus en jute	67.90%	0.442
		35%	Main d'oeuvre		0.503
			Charges Sociales	17.00%	0.086
Etiquettes, coutures	0.034	100%	Echangeables		0.034
Frais de chargement	0.280	70%	Main d'oeuvre		0.168
			Charges Sociales	17.00%	0.029
		30%	Materiaux roulant etc.		0.079
			Taxe sur les tracteurs importes	6.00%	0.005
Frais de mise en lots	0.100	100%	Main d'oeuvre		0.086
			Charges Sociales	17.00%	0.015
Transport pergue	0.560	100%	Selon transports routiers		0.560
MARGE DE RETROCESSION (Cout de stockage)	0.741	72%	Terre		0.534
		18%	Capitale		0.133
		5%	Main d'oeuvre		0.032
			Charges Sociales	17.00%	0.005
		5%	Insecticides		0.028
			Taxe sur l'ammoniaque liquifie	34.00%	0.010
Bonification poids specifique	0.673	100%	Main d'oeuvre		0.673
PRIME DE RECITE	0.132	100%	Taxe directe		0.132
Total	25.740				25.740

COUT DE PRODUCTION DES SEMENCES CERTIFIEES: BLE TENDRE ORDINAIRE (D/QL)

	QUANTITE	PRIX UNITAIRE	COUT PAR QL	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O GAM	CAPITALE	TERRE	REMVOIS
PRODUCTION															
Prix normal de retrocession	1.000	18.193	18.193	-3.848	-1.467	23.508	1.112	0.762	21.634	10.824		4.201	2.577	4.032	(a)
Prime de selection (12%)	1.000	2.183	2.183			2.183			2.183				2.183		(b)
Prime de triage (5%)	1.000	0.910	0.910			0.910		0.132	0.778			0.778			(c)
Frais de traitement	1.000	0.252	0.252			0.252	0.028	0.007	0.216	0.174		0.043			(d)
COLLECTE															
Frais de sacherie	1.000	1.682	1.682			1.682	0.442	0.086	1.154	0.651		0.503			(e)
Etiquettes, coutures	1.000	0.034	0.034			0.034			0.034	0.034					
Manipulation															
...Frais de Chargement	1.000	0.280	0.280			0.280	0.005	0.168	0.108	0.079		0.029			
...Frais de mise en lots	1.000	0.100	0.100			0.100		0.015	0.086			0.086			(f)
Transport aerequ	1.000	0.560	0.560	(0.004)	(0.010)	0.573	0.067	0.044	0.462	0.146		0.259	0.012	0.045	(g)
MARGE DE RETROCESSION	1.000	0.741	0.741			0.741	0.010	0.005	0.726	0.028		0.032	0.133	0.534	(h)
Bonification poids specifiques	1.000	0.673	0.673			0.673			0.673			0.673			
PRIME DE RECITE	1.000	0.132	0.132			0.132	0.132		0.000						
Prix de revient			25.740	(3.852)	(1.476)	31.068	1.796	1.218	28.054	11.935	0.000	6.602	4.905	4.611	
Compensatrice (C.G.C.)			(1.633)	(0.695)	(0.938)	0.000									
Prix a l'agriculteur			24.107	(4.547)	(2.414)	31.068	1.796	1.218	28.054	11.935	0.000	6.602	4.905	4.611	
COEFFICIENTS DE DECOMPOSITION			1.000	(0.189)	(0.100)	1.289	0.074	0.051	1.164	0.495	0.000	0.274	0.203	0.191	
% du cout economique									1.000	0.425	0.000	0.235	0.175	0.164	

REMVOIS:

a. Reparti selon les couts de production du ble tendre (humide/sub-humide grande exploitation)
b. Paye a l'agriculteur pour la multiplication des semences
c. 100% main d'oeuvre
d. Utilisation de 200 grammes de Kinolate 15
50% machines agro-alimentaire, 30% produits chimiques, 20% main d'oeuvre
e. A raison de 2 sacs de 50 Kgs et 0,841 par sac
65% matieres de sacherie et 35% main d'oeuvre
f. Mise en lots de 200 Qx chacun dans le magasin de stockage
g. Suppose transport ferrovier
h. 90% capital/terre, 5% main d'oeuvre, et 5% insecticides

SOURCE: COSEM
sembto

SEMENCES DE BLE TENDRE FLORENCE

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DES SEMENCES CERTIFIEES DE BLE TENDRE FLORENCE

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
PRODUCTION					
Prix normal retrocession	18.193	100%	Selon ble tendre hum/subhum. grande		18.193
Prime de selection	2.183	100%	Capitale		2.183
Prime de triage	0.910	100%	Main d'oeuvre		0.778
			Charges Sociales	17.00%	0.132
Frais de traitement	0.252	50%	Emballement		0.109
			Taxe sur les mach. agro-aliment.	16.00%	0.017
		30%	Produits chimiques		0.065
			Taxe inter. sur acide sulfurique	16.82%	0.011
		20%	Main d'oeuvre		0.043
			Charges Sociales	17.00%	0.007
COLLECTE					
Frais de sacherie	1.682	65%	Matieres de sacherie		0.651
			Taxe sur les tissus en jute	67.90%	0.442
		35%	Main d'oeuvre		0.503
			Charges Sociales	17.00%	0.086
Etiquettes, coutures	0.034	100%	Echangeables		0.034
Frais de chargement	0.280	70%	Main d'oeuvre		0.166
			Charges Sociales	17.00%	0.029
		30%	Materiaux roulant etc.		0.079
			Tax sur les tracteurs importes	6.00%	0.005
Frais de mise en lots	0.100	100%	Main d'oeuvre		0.085
			Charges Sociales	17.00%	0.015
Transport pergque	0.560	100%	Selon transports routiers		0.560
MARGE DE RETROCESSION (Cout de stockage)	0.741	72%	Terre		0.534
		18%	Capitale		0.133
		5%	Main d'oeuvre		0.032
			Charges Sociales	17.00%	0.005
		5%	Insecticides		0.028
			Taxe sur l'ammoniaque liquifie	34.00%	0.010
Bonification poids specifique	0.673	100%	Main d'oeuvre		0.673
PRIME DE RECITE	0.132	100%	Taxe directe		0.132
PRIME DE BOULANGERIE	0.430	100%	Capitale		0.430
Total	26.170				26.170

COUT DE PRODUCTION DES SEMENCES CERTIFIEES: BLE TENDRE FLORENCE (HAUT RENDEMENT) (D/QL)

	QUANTITE	PRIX UNITAIRE	COUT PAR QL	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	REMVOIS
PRODUCTION															
Prix normal de retrocession	1.000	18.193	18.193	-3.848	-1.467	23.508	1.112	0.762	21.634	10.824		4.201	2.577	4.032	(a)
Prime de selection (12%)	1.000	2.183	2.183			2.183			2.183				2.183		(b)
Prime de triage 15%)	1.000	0.910	0.910			0.910		0.132	0.778			0.778			(c)
Frais de traitement	1.000	0.252	0.252			0.252	0.028	0.007	0.216	0.174		0.043			(d)
COLLECTE															
Frais de sacherie	1.000	1.682	1.682			1.682	0.442	0.086	1.154	0.651		0.503			(e)
Etiquettes,coutures	1.000	0.034	0.034			0.034			0.034	0.034					
Manipulation															
...Frais de Chargement	1.000	0.280	0.280			0.280	0.005	0.168	0.108	0.079		0.029			
...Frais de mise en lots	1.000	0.100	0.100			0.100		0.015	0.086			0.086			(f)
Transport perreque	1.000	0.560	0.560	(0.004)	(0.010)	0.573	0.067	0.044	0.462	0.146		0.259	0.012	0.045	(g)
MARGE DE RETROCESSION	1.000	0.741	0.741			0.741	0.010	0.005	0.726	0.028		0.032	0.133	0.534	(h)
Bonification poids specifiques	1.000	0.673	0.673			0.673			0.673			0.673			
PRIME DE RECITE	1.000	0.132	0.132			0.132	0.132		0.000						
PRIME DE BOULANGERIE	1.000	0.430	0.430			0.430			0.430				0.430		
Prix de Revient			26.170	(3.852)	(1.476)	31.498	1.796	1.218	28.484	11.935	0.000	6.602	5.335	4.611	
Compensatrice (C.G.C.)			(1.633)	(0.684)	(0.949)	0.000									
Prix a l'agriculteur			24.537	(4.537)	(2.425)	31.498	1.796	1.218	28.484	11.935	0.000	6.602	5.335	4.611	
COEFFICIENTS DE DECOMPOSITION			1.000	(0.185)	(0.099)	1.284	0.073	0.050	1.161	0.486	0.000	0.269	0.217	0.188	
% du cout economique									1.000	0.419	0.000	0.232	0.187	0.162	

REMVOIS:

a. Reparti selon les couts de production du ble tendre (humide/sub-humide,grande exploitation)
b. Paye a l'agriculteur pour la multiplication des semences
c. 100% main d'oeuvre
d. Utilisation de 200 grammes de Kinolate 15
   50% machines agro-alimentaire, 30% produits chimiques, 20% main d'oeuvre
e. A raison de 2 sacs de 50 Kgs et 0,841 par sac
   65% matieres de sacherie et 35% main d'oeuvre
f. Mise en lots de 200 Qx chacun dans le magasin de stockage
g. Suppose transport ferrovier
h. 90% capital/terre, 5% main d'oeuvre et 5% insecticides

SOURCE: COSEM
sembti

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DES SEMENCES CERTIFIEES DES ORGES

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DE BASE
PRODUCTION					
Prix normal retrocession	13.043	100%	Selon orge hum/subhum. grande		13.043
Prime de selection	1.565	100%	Capitale		1.565
Prime de triage	0.652	100%	Main d'oeuvre		0.520
			Charges Sociales	17.00%	0.132
Frais de traitement	0.252	50%	Equipement		0.109
			Taxe sur les mach. agro-aliment	16.00%	0.017
		30%	Produits chimiques		0.065
			Taxe interieur acide sulfurique	16.82%	0.011
		20%	Main d'oeuvre		0.043
			Charges Sociales	17.00%	0.007
COLLECTE					
Frais de sacherie	1.860	65%	Matieres de sacherie		0.720
			Taxe sur les tissus en jute	67.90%	0.489
		35%	Main d'oeuvre		0.556
			Charges Sociales	17.00%	0.095
Etiquettes. coutures	0.034	100%	Echangeables		0.034
Frais de chargement	0.280	70%	Main d'oeuvre		0.168
			Charges Sociales	17.00%	0.029
		30%	Materiaux roulant etc.		0.079
			Tax sur les tracteurs importes	6.00%	0.005
Frais de mise en lots	0.100	100%	Main d'oeuvre		0.086
			Charges Sociales	17.00%	0.015
Transport pergque	0.560	100%	Selon transports routiers		0.560
MARGE DE RETROCESSION (Cout de stockage)	0.741	72%	Terre		0.534
		18%	Capitale		0.133
		5%	Main d'oeuvre		0.032
			Charges Sociales	17.00%	0.005
		5%	Insecticides		0.028
			Taxe sur l'ammoniaque liquifie	34.00%	0.010
Bonification poids specifique	0.494	100%	Main d'oeuvre		0.494
Total	19.581				19.581

COUT DE PRODUCTION DES SEMENCES CERTIFIEES: ORGES (D/QL)

	QUANTITE	PRIX UNITAIRE	COUT PAR QL	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
PRODUCTION															
Prix normal de retrocession	1.000	13.043	13.043	-1.682	-0.974	15.698	0.731	0.299	14.668	6.311		3.542	1.999	2.816	(a)
Prime de selection (12%)	1.000	1.565	1.565			1.565			1.565				1.565		(b)
Prime de triage (5%)	1.000	0.652	0.652			0.652		0.132	0.520			0.520			(c)
Frais de traitement	1.000	0.252	0.252			0.252	0.028	0.007	0.216	0.174		0.043			(d)
COLLECTE															
Frais de sacherie	1.000	1.860	1.860			1.860	0.489	0.095	1.276	0.720		0.556			(e)
Etiquettes,coutures	1.000	0.034	0.034			0.034			0.034	0.034					
Manutention															
...Frais de Chargement	1.000	0.280	0.280			0.280	0.005	0.168	0.108	0.079		0.029			
...Frais de mise en lots	1.000	0.100	0.100			0.100		0.015	0.086			0.086			(f)
Transport perequa	1.000	0.560	0.560	(0.004)	(0.010)	0.573	0.067	0.044	0.462	0.146		0.259	0.012	0.045	(g)
MARGE DE RETROCESSION	1.000	0.741	0.741			0.741	0.010	0.005	0.776	0.078		0.037	0.133	0.534	(h)
Bonification poids specifiques	1.000	0.494	0.494			0.494			0.494			0.494			
Prix de Revient			19.581	(1.685)	(0.983)	22.250	1.330	0.765	20.155	7.491	0.000	5.559	3.709	3.394	
Compensatrice (C.G.C.)			(1.633)	(0.607)	(1.026)	0.000									
Prix a l'agriculteur			17.948	(2.292)	(2.009)	22.250	1.330	0.765	20.155	7.491	0.000	5.559	3.709	3.394	
COEFFICIENTS DE DECOMPOSITION			1.000	(0.128)	(0.112)	1.240	0.074	0.043	1.123	0.417	0.000	0.310	0.207	0.189	
% du cout economique									1.000	0.372	0.000	0.276	0.184	0.168	

RENVOIS:

a. Repartit selon les couts de production de l'orge (humide/sub-humide grande exploitation)
b. Paye a l'agriculteur pour la multiplication des semences
c. 100% main d'oeuvre
d. Utilisation de 200 grammes de Kinolate 15
50% machines agro-alimentaire. 30% produits chimiques, 20% main d'oeuvre
e. 65% matieres de sacherie et 35% main d'oeuvre
f. Mise en lots de 200 Qx chacun dans le magasin de stockage
g. Suppose transport ferrovier
h. 90% capital/terre, 5% main d'oeuvre, et 5% insecticides

SOURCE: COSEM
smorge

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DES SEMENCES IMPORTES DE POMME DE TERRE

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Prix CAF	294.870	100%	Echangeable		294.870
Frais Bancaire	2.814	163%	Capitale		4.586
		-63%	Subvention de l'interet	-[illegible]	(1.772)
Debarquement	2.395	60%	Main d'oeuvre		2.049
			Charges Sociales	[illegible]	0.349
		40%	Equipement		1.508
			Taxe sur tracteurs importes	[illegible]	0.090
Peage	1.259	70%	Main d'oeuvre		0.155
			Charges Sociales	[illegible]	0.026
		30%	Equipement		0.073
			Taxe sur tracteurs importes	[illegible]	0.005
Douane	39.874	100%	Taxe indirecte		39.874
Frais a quai reglage	2.398	60%	Main d'oeuvre		2.045
			Charges Sociales	[illegible]	0.348
		40%	Equipement		1.505
			Taxe sur tracteurs importes	[illegible]	0.090
Assurance	1.305	100%	Capitale		0.305
Stationnement	2.799	100%	Capitale		2.799
Total	348.905				348.905

COUT DES SEMENCES IMPORTEES DE POMME DE TERRE (D/T)

TONNAGE: 17.000	QUANTITE	PRIX UNITAIRE	COUT PAR TONNE	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVO
Prix CAF	1.000	294.870	294.870			294.870			294.870	294.870					
Frais Bancaire	1.000	2.814	2.814			2.814		-1.772	4.586				4.586		(a)
Debarquement	1.000	3.996	3.996			3.996	0.090	0.349	3.557	1.508		2.049			(b)
Pesage	1.000	0.259	0.259			0.259	0.005	0.026	0.228	0.073		0.155			(c)
Douane	1.000	39.874	39.874			39.874	39.874		0.000						
Frais à quai reglage	1.000	3.988	3.988			3.988	0.090	0.348	3.550	1.505		2.045			(d)
Assurance	1.000	0.305	0.305			0.305			0.305				0.305		
Stationnement	1.000	2.799	2.799			2.799			2.799				2.799		(e)
Prix de Revient			348.905	0.000	0.000	348.905	40.059	-1.049	309.895	297.956	0.000	4.250	7.690	0.000	
Compensation avant prix de vente			-58.905	-56.636	-2.269	0.000									
Prix de vente			290.000	-56.636	-2.269	348.905	40.059	-1.049	309.895	297.956	0.000	4.250	7.690	0.000	
COEFFICIENTS DE DECOMPOSITION			1.000	-0.195	-0.008	1.203	0.138	-0.004	1.069	1.027	0.000	0.015	0.027	0.000	
% du cout economique									1.000	0.961	0.000	0.014	0.025	0.000	

RENVOIS:

a. 38.6% subvention entre taux preferentiel d'interet dans le secteur agricole (6.75%) et les taux financiers (11.0%)
b. 60% main d'oeuvre, 40% machines
c. 70% main d'oeuvre, 30% echangeable
d. 60% main d'oeuvre, 40% machines
e. 90% capital,5% main d'oeuvre,5% echangeable

SOURCE: OFFICE DES CEREALES
seapdt

SCHEMATIQUE DE LA DECOMPOSITION DU COUT D'UN PLANT D'AGRUME

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Main d'oeuvre et salaires	1.553	100%	Main d'oeuvre		1.327
			Charges Sociales	17.00%	0.226
Lover du terrain et batiment	0.024	100%	Terre		0.024
Eau	0.047	100%	Capitale		0.047
Electricite	0.018	100%	Electricite		0.017
			Taxe sur l'electricite a l intar.	6.38%	0.001
Entretien et rep. machines	0.088	70%	Machines		0.045
			Taxe sur les parties et pieces det	37.91%	0.017
		30%	Main d'oeuvre		0.022
			Charges Sociales	17.00%	0.004
Carburant	0.067	100%	Selon gas-oil		0.067
Materiels et outillages	0.032	100%	Outils agricoles		0.019
			Taxe sur les outils agricoles	66.88%	0.013
Assurance	0.024	100%	Capitale		0.024
Frais de transport	0.014	100%	Selon transport routier		0.014
Engrais	0.067	100%	Selon Super 45		0.067
Traitement	0.067	100%	Selon phytoate		0.067
TOTAL	2.001				2.001

COUT DE PRODUCTION D'UN PLANT D'AGRUME

Nombre de pieds mis a la vente	1985-86:	45,000	PRIX	TAXES/SUBVENTIONS		COUT NET	TAXES/SUBVENTIONS		COUT NET	INTRANTS	.....INTRANTS NON-ECHANGEABLES.....				
Nombre d'autres arbres	1985-86:	40,000	UNITAIRE	DIRECTES		TX/SUBV	INDIRECTES		TOUTES	ECHANGBLS	M D'O	M D'O	CAPITALE	TERRE	
Total nombre d'arbres	1985-86:	85,000		ECHANG	NON-ECH	DIRECTES	ECHANG	NON-ECH	TX/SUBV		FAM	SAL			REMVOIS
Main d'oeuvre et salaris fonctionnaires			1.553			1.553		0.226	1.327			1.327			
Loyer du terrain et batiments			0.024			0.024			0.024					0.024	
Eau			0.047			0.047			0.047				0.047		
Electricite			0.018			0.018	0.001		0.017	0.017					
Entretien et reparation machine			0.088			0.088	0.017	0.004	0.067	0.045		0.022			(a)
Carburant			0.067			0.067	0.001	0.000	0.066	0.055		0.003	0.008	0.001	(b)
Materiels et outillages			0.032			0.032	0.013		0.019	0.019					
Assurance			0.024			0.024			0.024				0.024		
Frais de transport			0.014	0.000		0.014	0.002	0.001	0.011	0.005		0.005	0.000	0.000	(c)
Engrais			0.067	(0.078)	(0.024)	0.168	0.024	0.003	0.142	0.108		0.022	0.012	0.001	(d)
Traitement			0.067	(0.056)	(0.011)	0.134	0.030	0.001	0.102	0.085		0.008	0.000	0.009	(e)
Prix de vente d'un plant d'agrume			2.000	(0.133)	(0.035)	2.168	0.087	0.236	1.845	0.334	0.000	1.387	0.090	0.034	
COEFFICIENTS DE DECOMPOSITION			1.000	(0.067)	(0.018)	1.084	0.044	0.118	0.922	0.167	0.000	0.693	0.045	0.017	
% du cout economique									1.000	0.181	0.000	0.752	0.049	0.018	

REMVOIS:

a. 70% parties et pieces detachees, 30% main d'oeuvre
b. Voir gas-oil agricole
c. Voir transports routiers
d. Selon la decomposition de Super 45
e. Selon la decomposition de phytosate

Source: BIAF

COUT D'UNE TONNE DE FUMIER

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	REMVOIS
Matieres Premieres	tonnes	1.000	10.000	10.000	0.560	(0.220)	9.650	0.210	0.080	9.360	7.290		0.980	0.950	0.140	(a)
Cout de transport		1.000	1.500	1.500	0.035	0.024	1.441	0.181	0.097	1.163	0.554		0.578	0.029	0.003	
Main d'oeuvre		1.000	1.500	1.500			1.500			1.500			1.500			
Prix de revient				13.000	0.595	(0.196)	12.601	0.391	0.177	12.033	7.844	0.000	3.058	0.979	0.143	
COEFFICIENTS DE DECOMPOSITION				1.000	0.046	(0.015)	0.969	0.030	0.014	0.926	0.603	0.000	0.235	0.075	0.011	
% du cout economique										1.000	0.652	0.000	0.254	0.081	0.012	

(a) Calcule a partir des couts de production, viande bovine, race locale

SOURCE: Estimations de la mission

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE L'AMMONITRE

POSTE	COUT		REPARTITION	TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
MATIERES PREMIERES:					
Ammoniac	72.756	100%	Echangeable		54.458
			Taxe cumule a l'importation	33.60%	18.298
Matieres de charge	0.084	100%	Echangeable		0.063
			Taxe cumule a l'importation	33.60%	0.021
Enrobant	0.923	100%	Echangeable		0.691
			Taxe cumule a l'importation	33.60%	0.232
Antimottant	0.832	100%	Echangeable		0.623
			Taxe cumule a l'importation	33.60%	0.209
Acide sulfurique	0.508	100%	Echangeable		0.435
			Taxe interieur sur l'acide sulf	16.82%	0.073
FRAIS D EXPLOITATION					
Energie	2.632	50%	Echangeables		1.237
			Taxe sur l'electricite	6.38%	0.079
		25%	Main d'oeuvre		0.562
			Charges Sociales	17.00%	0.096
		25%	Capitale		0.658
Gaz	6.656	100%	Echangeable		4.119
			Taxe cumule a l'importation	61.60%	2.537
Eau	0.393	100%	Capitale		0.393
Matieres Consommables	0.699	95%	Echangeable		0.497
			Taxe cumule a l'importation	33.60%	0.167
		5%	Main d'oeuvre		0.030
			Charges Sociales	17.00%	0.005
Pieces de rechange	0.388	100%	Pieces de rechange		0.287
			Taxe sur les pieces rech-usines	35.30%	0.101
Achats Directs	0.836	100%	Echangeables		0.618
			Taxe sur les pieces rech-usines	35.30%	0.218
Frais du personnel	9.005	100%	Main d'oeuvre		7.697
			Charges Sociales	17.00%	1.308
Travaux des tiers	1.564	50%	Echangeables		0.578
			Taxe sur les pieces rech-usines	35.30%	0.204
		50%	Main d'oeuvre		0.668
			Charges Sociales	17.00%	0.114

Frais Divers	3.195	100%	Selon les moyens du tableau		3.195
Frais Financiers de fonc.	9.283	100%	Capitale		9.283
Frais hors Prix de revient	(19.446)	100%	Selon les moyens du tableau		(19.446)
AUTRES FRAIS					
Emballage	27.032	65%	Matieres de l'ensachage		10.465
			Taxe sur les tissus en jute	67.90%	7.106
		35%	Main d'oeuvre		8.086
			Charges Sociales	17.00%	1.375
Charges de Financement	22.440	100%	Capitale		22.440
Amortissement	27.640	40%	Parties et Pieces Detachees		8.064
			Taxe sur les parties/pieces det	37.10%	2.992
		40%	Pieces de rechange pour usines		8.171
			Taxe sur les pieces rech-usines	35.30%	2.885
		20%	Capitale		5.528
Frais	0.950	100%	Selon les moyens du tableau		0.950
SOUS-TOTAL	168.370				168.370
Explosifs	4.049	100%	Subvention Direct		3.266
			Taxe interieure explosifs	23.98%	0.783
Transport	7.800	67%	Subvention direct non-echangeable		5.226
		33%	Subvention direct echangeable		2.574
			(Selon transports ferroviers)		
TOTAL	180.219				180.219

COUT DE PRODUCTION D'UNE TONNE D'AMMONITRE

TONNES PRODUITES (1985): 137,461		QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEAS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O GAL	CAPITALE	TERRE	RENVOIS
MATIERES PREMIERES																
...Ammoniac	tonnes	0.452	161.040	72.756			72.756	18.298		54.458	54.458					
...Matieres de Charge	tonnes	0.002	54.974	0.084			0.084	0.021		0.063	0.063					
...Enrobant	tonnes	0.009	103.262	0.923			0.923	0.232		0.691	0.691					
...Antimottant	tonnes	0.001	1,386.605	0.832			0.832	0.209		0.623	0.623					
...Acide Sulfurique	tonnes	0.012	41.167	0.508			0.508	0.073		0.435	0.435					
FRAIS D'EXPLOITATION																
...Energie		1.000	2.632	2.632			2.632	0.079	0.096	2.457	1.237		0.562	0.658		(a)
...Gaz		1.000	6.656	6.656			6.656	2.537		4.119	4.119					(b)
...Eau		1.000	0.393	0.393			0.393			0.393				0.393		
...Matieres Consommables		1.000	0.699	0.699			0.699	0.167	0.005	0.527	0.497		0.030			(c)
...Pieces de Rechange		1.000	0.388	0.388			0.388	0.101		0.287	0.287					
...Achats Directs		1.000	0.836	0.836			0.836	0.218		0.618	0.618					(d)
...Frais du Personnel		1.000	9.005	9.005			9.005		1.308	7.697			7.697			
...Travaux des tiers		1.000	1.564	1.564			1.564	0.204	0.114	1.246	0.578		0.668			(e)
...Frais Divers		1.000	3.195	3.195			3.195	0.598	0.058	2.540	1.564		0.336	0.630	0.010	(f)
...Frais Financiers de Fonctionnement		1.000	9.283	9.283			9.283			9.283				9.283		
...Explosifs		1.000	0.000	0.000	(4.049)		4.049	0.783		3.266	3.266					(g)
...Frais hors Prix de Revient		1.000	(19.446)	(19.446)			(19.446)	(3.636)	(0.350)	(15.460)	(9.529)		-2.042	(3.831)	(0.058)	(f)
AUTRES FRAIS																
...Ensachage		1.000	27.032	27.032			27.032	7.106	1.375	18.551	10.465		8.086			(h)
...Charges de Financement		1.000	22.440	22.440			22.440			22.440				22.440		
...Amortissement		1.000	27.640	27.640			27.640	5.877		21.763	16.235			5.528		(i)
...Transport		1.000	7.800	0.000	(2.457)	(5.343)	7.800	0.913	0.601	6.287	1.981		3.526	0.164	0.616	
...Frainte		1.000	0.950	0.950			0.950	0.178	0.017	0.755	0.465		0.100	0.187	0.003	(j)
Prix de Revient en Tunisie				168.371	(6.506)	(5.343)	180.220	33.956	3.223	143.041	88.057	0.000	18.963	35.451	0.570	
Taxe implicite (Prix de Revient - Prix FOB)				0.000	37.644	23.506	(61.150)	(11.522)	(1.094)	(48.535)	(29.878)	0.000	(6.434)	(12.029)	(0.194)	
Prix Equivalent a la Frontiere, Office des Cereales				168.371	31.138	18.163	119.070	22.435	2.130	94.506	58.178	0.000	12.529	23.422	0.377	
C.B.C.				(99.551)	(61.284)	(38.267)	0.000									
Prix de Cession, Office des Cereales				68.820	(30.146)	(20.104)	119.070	22.435	2.130	94.506	58.178	0.000	17.378	23.422	0.377	
Marge de Vente				3.130		(6.600)	9.730			9.730			4.865	4.865		(k)
Prix de Detail				71.950	(30.146)	(26.704)	128.800	22.435	2.130	104.236	58.178	0.000	17.393	28.287	0.377	
CREFFICIENTS DE DECOMPOSITION				1.000	(0.419)	(0.371)	1.790	0.312	0.030	1.449	0.809	0.000	0.242	0.393	0.005	
% cout economique										1.000	0.558	0.000	0.167	0.271	0.004	
Cas des olives seulement:																
Compensation supplementaire, OMM				(114.484)	(70.477)	(44.007)	0.000									
Prix de Detail aux oleiculteurs				57.017	(39.339)	(32.444)	128.800	22.435	2.130	104.236	58.178	0.000	17.393	28.287	0.377	(l)
CREFFICIENTS DE DECOMPOSITION				1.000	(0.690)	(0.569)	2.259	0.393	0.037	1.828	1.020	0.000	0.305	0.496	0.007	
% cout economique										1.000	0.558	0.000	0.167	0.271	0.004	

RENVOIS

a. Energie supposee 50% matieres de l'electricite echangeables, 25% main d'oeuvre, et 25% capital
b. Gaz supposé taxe au meme niveau que l'acide sulfurique importee
c. Matieres Consommables supposees 95% echangeable, 5% main-d'oeuvre
d. Achats Directs supposes les pieces de rechange pour les usines
e. Travaux des tiers supposes 50% echangeable (pieces de rechange pour les usines), 50% main d'oeuvre
f. Frais Divers et Frais hors Prix de revient [illegible]
g. Explosifs gratuits de l'usine de l'etat a Gafsa
h. Ensachage assume 65% materiaux d'ensachage et 35% main d'oeuvre
i. Amortissement suppose 40% pieces de rechange, 40% parties et pieces detachees, 20% batiment/cap
j. Frainte repartie d'apres (Matieres Premieres + Frais d'exploitation)
k. Estime selon l'analyse de la structure du prix, BM P-4368, p. 156.
l. [illegible] 197 coefficient du prix subventionne aux oleiculteurs

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SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE SUPER 45

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
MATIERES PREMIERES:					
Soufre	42.105	100%	Echangeable		31.516
			Taxe sur l'import. de soufre	33.60%	10.589
Phosphate brut	40.326	100%	Echangeable		34.520
			Taxe interieure sur le phosphate	16.82%	5.806
Fuel-Oil	5.545	100%	Echangeable		5.545
Acide Sulfurique	0.780	100%	Echangeable		0.668
			Taxe interieure sur l'acide sul.	16.82%	0.112
Variations des stocks	0.186	100%	Capitale		0.186
Acide phosphate	1.598	100%	Echangeable		1.368
			Taxe interieure sur l'acide phos	16.82%	0.230
FRAIS DE PRODUCTION					
Voyages et logement	0.357	100%	Selon transports routiers		0.357
Frais de personnel	4.518	100%	Main d'oeuvre		3.862
			Charges Sociales	17.00%	0.656
PTT etc.	4.935	100%	Energie		4.639
			Taxe sur l'electricite	6.38%	0.296
Fuel-vapeur	1.364	100%	Echangeable		1.364
Lubrifiant	2.606	100%	Echangeable		2.606
Taxes	0.006	50%	Echangeables		0.003
		50%	Non-echangeables		0.003
Manutention	0.760	70%	Main d'oeuvre		0.455
			Charges Sociales	17.00%	0.077
		30%	Materiel		0.215
			Taxe sur les tracteurs importes	6.00%	0.013
Reparations	3.398	80%	Main d'oeuvre		2.323
			Charges Sociales	17.00%	0.395
		20%	Pieces de rechange		0.502
			Taxe sur pieces de rech.-usines	35.30%	0.178
Brassage, stockage	0.896	70%	Main d'oeuvre		0.536
			Charges Sociales	17.00%	0.091
		30%	Materiel		0.254
			Taxe sur les tracteurs importes	6.00%	0.015
Brovage	1.389	100%	Echangeable		1.197

			Taxe sur les mach. agro-aliment.	16.00%	0.192
Assurance	0.240	100%	Capitale		0.240
Frais du parc auto.	0.032	100%	Echangeables		0.023
			Taxe sur parties et pieces ret.	37.10%	0.009
Amortissements	3.387	40%	Pieces de rech. pour les usines		1.001
			Taxe sur les pieces rech-usines	35.30%	0.354
		40%	Parties et pieces detachees		0.988
			Taxe sur parties et pieces det.	37.10%	0.367
		20%	Capitale		0.677
Divers	2.559	100%	Selon les moyens du tableau		2.559
AUTRES FRAIS					
Frais financiers de fonc.	4.992	100%	Capitale		4.992
Frais d'admin. generale	3.706	100%	Main d'oeuvre		3.168
			Charges Sociales	17.00%	0.538
Frais de sacherie	4.770	65%	Materiaux		1.847
			Taxe sur les tissus en jute	67.90%	1.254
		35%	Main d'oeuvre		1.429
			Charges Sociales	17.00%	0.243
Pertes	1.155	100%	Selon les moyens du tableau		1.155
SOUS-TOTAL	131.610				131.613
Frais de transport	6.100	67%	Subvention non-echangeable		4.087
		33%	Subvention echangeable		2.013
			(Selon transports ferroviaires)		
TOTAL	137.710				137.713

COUT DE PRODUCTION D'UNE TONNE DE SUPER 45

TONNES PRODUITES (1986): 515,098
TONNES TRANSPORTEES (1986): 451,259

	QUANTITE PAR TONNE DE S45	PRIX UNITAIRE	COUT PAR TONNE DE S45	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
MATIERES PREMIERES															
...Soufre	1.000	42.105	42.105			42.105	10.589		31.516	31.516					
...Phosphate brut	1.000	40.326	40.326			40.326	5.806		34.520	34.520					
...Fuel-Oil	1.000	5.545	5.545			5.545			5.545	5.545					(a)
...Acide sulfurique	1.000	0.780	0.780			0.780	0.112		0.668	0.668					
...Variation des stocks - produits semi-finis	1.000	0.186	0.186			0.186			0.186				0.186		
...Acide phosphate	1.000	1.598	1.598			1.598	0.230		1.368	1.368					
FRAIS DE PRODUCTION															
...Voyages et logement	1.000	0.357	0.357			0.357			0.357	0.357					(b)
...Frais de personnel	1.000	4.518	4.518			4.518		0.656	3.862			3.862			
...PTT, fournitures, eaux, gaz, elec., air comprime	1.000	4.935	4.935			4.935	0.296		4.639	4.639					(c)
...Fuel vapeur	1.000	1.364	1.364			1.364			1.364	1.364					
...Lubrifiant	1.000		2.606			2.606			2.606	2.606					
...Taxes	1.000	0.006	0.006			0.006	0.003	0.003	0.000						(d)
...Manutention	1.000	0.760	0.760			0.760	0.013	0.077	0.670	0.215		0.455			(e)
...Reparations, services, consultations	1.000	3.398	3.398			3.398	0.178	0.393	2.873	0.502		2.373			(f)
...Brassage, stock etc.	1.000	0.876	0.876			0.876	0.015	0.091	0.790	0.254		0.536			(g)
...Broyage	1.000	1.389	1.389			1.389	0.192		1.197	1.197					(h)
...Assurances	1.000	0.240	0.240			0.240			0.240				0.240		
...Frais d'exploitation du parc automobiles	1.000	0.032	0.032			0.032	0.009		0.023	0.023					
...Amortissements	1.000	3.387	3.387			3.387	0.721		2.666	1.989			0.677		(i)
...Divers	1.000	2.559	2.559			2.559	0.381	0.049	2.129	1.725		0.279	0.118	0.008	(j)
AUTRES FRAIS															
...Frais financiers de fonctionnement	1.000	4.992	4.992			4.992			4.992				4.992		
...Frais d'administration generale	1.000	3.706	3.706			3.706		0.538	3.168			3.168			
...Frais de sacherie	1.000	4.770	4.770			4.770	1.254	0.243	3.273	1.847		1.426			(k)
...Frais de transport	1.000	6.100	0.000	(1.922)	(4.179)	6.100	0.714	0.470	4.917	1.549		2.757	0.128	0.482	(l)
...Pertes	1.000	1.155	1.155			1.155	0.172	0.021	0.962	0.778		0.125	0.053	0.005	
Prix de Revient			131.610	(1.922)	(4.179)	137.710	20.685	2.542	114.483	92.662	0.000	14.931	6.394	0.494	
C.B.C.			(76.210)	(61.684)	(14.526)	0.000									
Prix de Cession. Office des Cereales			55.400	(63.606)	(18.704)	137.710	20.685	2.542	114.483	92.662	0.000	14.931	6.394	0.494	
Marge de Vente			2.250		(4.750)	7.000			7.000			3.500	3.500		(m)
Prix de Detail			57.650	(63.606)	(23.454)	144.710	20.685	2.542	121.483	92.662	0.000	18.431	9.894	0.494	
COEFFICIENTS DE DECOMPOSITION			1.000	(1.103)	(0.407)	2.510	0.359	0.044	2.107	1.607	0.000	0.320	0.172	0.009	
% cout economique									1.000	0.763	0.000	0.152	0.081	0.004	

RENVOIS:

a. Suppose degreve, etant intrant agricole
b. Voyages et logement repartis selon la repartition des transports de chemin de fer
c. PTT etc. suppose taxe au niveau de l'electricite domestique
d. Taxes supposees reparties 50% echangeables, 50% non-echangeables
e. Manutention suppose 70% main d'oeuvre, 30% materiels
f. Reparations et consultations supposees 80% main d'oeuvre et 20% pieces de rechange
g. Brassage et stockage suppose 70% main d'oeuvre, 30% materiel; materiel suppose taxe au niveau des tracteurs montes en Tunisie
h. Broyage suppose taxe au niveau des machines agro-alimentaires
i. Amortissement suppose 40% pieces de rechange pour les usines, 40% pieces de rechange pour les usines, 40% parties et pieces detachees, 20% terre
j. Frais Divers repartis selon le moyen des autres Frais de Production
k. Frais de sacherie supposes 65% materiaux de sacherie et 35% salaires
l. Selon la repartition des transports ferroviers
m. Estime selon l'analyse de la structure du prix, BM P-4368, p. 156.

SOURCE: SIAPE - Prix de Revient a l'Exportation, FOB VRAC, au 30 Novembre 1986
super45

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE SULFATE DE POTASSE IMPORTE

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Prix CIF	161.250	100%	Echangeable		161.250
Assurance	1.700	100%	Capitale		1.700
Droits de Douane	20.155	100%	Taxe directe		20.155
Taxes Diverses	0.240	100%	Taxes Indirectes		0.240
Frais de debarquement	1.768	60%	Main d'oeuvre		0.907
			Charges Sociales	17.00%	0.160
		40%	Materiel roulant de port		0.661
			Taxe sur les camions importes	6.00%	0.040
Transport du quai au Gramphos	2.000	100%	Selon transports routiers		2.000
Estompage	0.200	100%	Main d'oeuvre		0.166
			Charges Sociales	17.00%	0.034
Frais de sacherie	10.000	100%	Echangeables		5.956
			Taxe sur les tissus en jute	67.90%	4.044
Frais d ensachage	2.074	100%	Main d'oeuvre		1.773
			Charges Sociales	17.00%	0.301
Frais de chargement	1.500	70%	Main d'oeuvre		0.897
			Charges Sociales	17.00%	0.153
		30%	Materiel		0.425
			Taxe sur les camions importes	6.00%	0.025
Transport de Sfax a Tunis	10.000	100%	Selon transports ferroviers		10.000
Freinte	1.613	100%	Selon les moyens du tableau		1.613
Transport au grossiste	8.000	100%	Selon transport routier		8.000
Marge de gros	44.100	100%	Capital		44.100
Marge de detail	15.000	100%	Capital		15.000
Transfert (taxes interieures)	12.000	94%	Echangeable		11.223
		6%	Non-echangeable		0.777
Total	291.600				291.600

COUT DE REVIENT DU SULFATE DE POTASSE IMPORTE

	QUANTITE PAR TONNE	PRIX UNITAIRE	COUT PAR TONNE	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O BAL	CAPITALE	TERRE	RENVOIS
Prix CIF ($/t)		187.500													
Taux de change $/DT		0.860													
Prix CIF (D/t)	1.000	161.250	161.250			161.250			161.250	161.250					
Assurance	1.000	1.700	1.700			1.700			1.700				1.700		
Droits de douane	1.000	20.155	20.155			20.155	20.155		0.000						
Taxes Diverses	1.000	0.240	0.240			0.240	0.240		0.000						
Frais de debarquement	1.000	1.768	1.768			1.768	0.040	0.160	1.568	0.661		0.907			(a)
Transport du quai au Grandhos	1.000	2.000	2.000			2.000	0.238	0.128	1.634	0.824		0.760	0.046	0.004	(b)
Estompage	1.000	0.200	0.200			0.200	0.029		0.171			0.171			(c)
Frais de sacherie	1.000	10.000	10.000			10.000	4.044		5.956	5.956					(d)
Frais d'ensachage	1.000	2.074	2.074			2.074		0.301	1.773			1.773			(d)
Frais de chargement	1.000	1.500	1.500			1.500	0.025	0.153	1.322	0.425		0.697			(e)
Frais de transport de Sfax a Tunis	1.000	10.000	10.000	(0.080)	(0.160)	10.240	1.020	0.790	8.430	2.780		4.630	0.210	0.810	(f)
Freinte	1.000	1.613	1.613		(0.002)	1.614	0.197	0.011	1.406	1.316		0.069	0.015	0.006	(g)
Prix de revient			212.500	(0.080)	(0.162)	212.741	25.988	1.543	185.210	173.212	0.000	9.207	1.971	0.820	
Transport			8.000	0.186	0.127	7.686	0.808	0.519	6.359	3.108	0.000	3.081	0.154	0.017	(b)
Marge de gros (20%)			44.100			44.100			44.100				44.100		
Marge de detail			15.000			15.000			15.000				15.000		
Transfert			12.001	11.223	0.777	0.000									(h)
Prix de Detail			291.600	11.329	0.743	279.527	26.796	2.062	250.669	176.319	0.000	12.288	61.225	0.837	
COEFFICIENTS DE DECOMPOSITION			1.000	0.039	0.003	0.959	0.092	0.007	0.860	0.605	0.000	0.042	0.210	0.003	
% du cout economique									1.000	0.703	0.000	0.049	0.244	0.003	

RENVOIS:

a. Supposes 60% main d'oeuvre,40% materiel
b. Selon transports routiers
c. Estompage suppose 100% main d'oeuvre
d. Frais d'ensachage supposes le composant de main d'oeuvre, tandis que les frais de sacherie supposes la composant de matieres
e. 70% main d'oeuvre,30% echangeables
f. Selon la decomposition des couts de transports ferroviers
g. Selon le moyen des autres charges
h. Suppose la somme des taxes interieures

SOURCE: Ministere de l'Agriculture/BPSAE
sulfpot

SCHEMATIQUE DE LA DECOMPOSITION DE LA TRACTION ANIMALE

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Amortissement bete/ustensils	0.405	100%	Capitale		0.405
Interet de bete/ustensils	0.165	172%	Capitale		0.283
		-72%	Subvention d'interet -		-0.118
Foin et orge	1.300	100%	Selon deccem. des orges hum/subhum. moyenne		1.300
Soins medicaux	0.125	60%	Medicaments		0.075
		40%	Main d'oeuvre		0.043
			Charges Sociales	17.00%	0.007
TOTAL	1.995				1.995

DECOMPOSITION DU COUT DE LA TRACTION ANIMAL (DT/JOUR)

	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
Amortissement de bete et des utensils	1.000	0.405	0.405			0.405			0.405				0.405		(a)
Interet de bete et des utensils	1.000	0.165	0.165			0.165		(0.118)	0.283				0.283		
Entretien bete															
...Foin et Orges	1.000	1.300	1.300	(0.161)	(0.098)	1.559	0.074	0.030	1.455	0.602		0.402	0.196	0.254	
...Soins medicaux	1.000	0.125	0.125			0.125		0.007	0.118	0.075		0.043			
Prix de vente			1.995	(0.161)	(0.098)	2.254	0.074	(0.081)	2.261	0.677	0.000	0.445	0.884	0.254	
COEFFICIENTS DE DECOMPOSITION			1.000	(0.081)	(0.049)	1.130	0.037	(0.041)	1.133	0.339	0.000	0.223	0.443	0.127	
% du cout economique									1.000	0.299	0.000	0.197	0.391	0.112	

CALCULS DE L'AMORTISSEMENT ET DE L'INTERET:

PRIX D'ACHAT:

Bete	350	Jours d'operation/annee	200	Facteur recouvrement de capital			
2 charrues et necessaires	160	Duree de vie (annees/equip)	10	par annee:	113.997	Interet	0.165
Charette	300	Taux d'Interet (pondere)	6.75%	par jour:	0.570	Amortissement	0.405
Couts d'Investissement	810						

RENVOIS:

a. Veuillez voir l'annexe methodologique pour une explication de ces calculs

SOURCE: Ministere de l'Agriculture, D/PBAE
tracania

TRACTEUR DE 70 CV

SCHEMATIQUE DE LA DECOMPOSITION DU COUT D'UN TRACTEUR DE 70 CHEVAUX

POSTE	COUT	PARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Amortissement	1.836	100%	Tracteur		[illegible]
			Taxe aux tract. montes en Tun.	6.00%	[illegible]
Interet	0.400	100%	Capitale		[illegible]
Carburant	1.701	100%	Selon decomp. du gas-oil		[illegible]
Lubrifiant et Graisse	0.340	100%	Selon decomp. du gas-oil		[illegible]
Main d'oeuvre					
Salaire de base	0.313	100%	Main d'oeuvre		[illegible]
Prime de technicite	0.094	100%	Main d'oeuvre		[illegible]
Indemnite complementaire	0.146	100%	Main d'oeuvre		[illegible]
Deplacement	0.031	100%	Main d'oeuvre		[illegible]
Prime de rendement	0.046	100%	Main d'oeuvre		[illegible]
Prime d'entretien	0.031	100%	Main d'oeuvre		[illegible]
Allocation familiale	0.104	100%	Main d'oeuvre		[illegible]
Charges Sociales	0.054	100%	Taxe indirect non-ech. (=17% de salaire de base)		[illegible]
Entretien et Reparations	0.754	50%	Pieces detachees		[illegible]
			Taxe sur les pieces detachees	37.10%	[illegible]
		50%	Main d'oeuvre		[illegible]
			Charges Sociales	17.00%	[illegible]
Autres Charges Directes	0.042	50%	Assurance (capitale)		[illegible]
		50%	Taxe de circulation (taxe indirecte non-ech.)		[illegible]
Autres Charges Indirectes	0.725	24%	Salaires		[illegible]
			Charges Sociales	17.00%	[illegible]
		56%	Frais Generaux - siege		[illegible]
			Selon les moyens du tableau		
		20%	Frais generaux - ateliers		[illegible]
			Selon les moyens du tableau		
Marge Beneficiare	0.241	100%	Capitale		[illegible]
Valeur Residuelle	-0.226	100%	Echangeables		[illegible]
TOTAL	6.642				[illegible]

COUT HORAIRE D'UN TRACTEUR DE 70 CV

	UNITE	QUANTITE	PRIX UNITAIRE	COUT HORAIRE	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON ECHANGEABLES..... M D'O FAM	M D O SAL	CAPITALE	TERRE	RENVOIS
Amortissement	D/hr	1.000	1.836	1.836			1.836	0.104		1.732	1.732					
Interet	D/hr	1.000	0.400	0.400			0.400			0.400				0.400		(a)
Carburant	L/hr	7.000	0.243	1.701			1.701	0.014	0.012	1.675	1.393		0.065	0.202	0.015	(a)
Lubrifiant + Graisse	L/hr			0.340			0.340	0.003	0.002	0.335	0.279		0.013	0.040	0.003	(b)
Main d'Oeuvre																(b)
...Salaire de base	D/hr	1.000	0.313	0.313			0.313			0.313			0.313			
...Prime de Technicite	D/hr	1.000	0.094	0.094			0.094			0.094			0.094			
...Indemnite Complementaire	D/hr	1.000	0.146	0.146			0.146			0.146			0.146			
...Deplacement	D/hr	1.000	0.031	0.031			0.031			0.031			0.031			
...Prime de Rendement	D/hr	1.000	0.046	0.046			0.046			0.046			0.046			
...Prime d'entretien	D/hr	1.000	0.031	0.031			0.031			0.031			0.031			
...Allocation Familiale	D/hr	1.000	0.104	0.104			0.104			0.104			0.104			
...Charges Sociales	D/hr	1.000	0.054	0.054			0.054		0.054	0.000						
Entretien et Reparations																
...Pieces	D/hr	1.000	0.382	0.382			0.382	0.103		0.279	0.279					(c)
...Main d'Oeuvre	D/hr	1.000	0.382	0.382			0.382		0.056	0.326			0.326			(c)
Autres Charges Directes																
...Assurance	D/hr	1.000	0.021	0.021			0.021			0.021				0.021		(d)
...Taxe de Circulation	D/hr	1.000	0.021	0.021			0.021		0.021	0.000						(d)
Autres Charges Indirectes																
...Salaires	D/hr	1.000	0.174	0.174			0.174		0.025	0.149			0.149			(e)
...Frais Generaux - Bureaux	D/hr	1.000	0.408	0.408			0.408	0.014	0.011	0.383	0.241		0.084	0.039		(e)
...Frais Generaux - Ateliers	D/hr	1.000	0.143	0.143			0.143	0.005	0.004	0.134	0.084		0.029	0.021		(e)
Marge Beneficiaire	D/hr	1.000	0.241	0.241			0.241			0.241				0.241		(f)
Valeur Residuelle	D/hr	1.000	(0.226)	(0.226)			(0.226)			(0.226)	(0.226)					(g)
Prix de Revient				6.640	0.000	0.000	6.640	0.242	0.185	6.213	3.781	0.000	1.430	0.985	0.018	
Compensation avant prix de vente				(0.740)												
Prix a l'agriculteur				5.900	(0.450)	(0.290)	6.640	0.242	0.185	6.213	3.781	0.000	1.430	0.985	0.018	
COEFFICIENTS DE DECOMPOSITION				1.000	(0.076)	(0.049)	1.125	0.041	0.031	1.053	0.641	0.000	0.242	0.167	0.003	
% du cout economique										1.000	0.609	0.000	0.230	0.158	0.003	

CALCULS DE L'AMORTISSEMENT ET DE L'INTERET:

Prix Unitaire d'Achat (TTC) 12.390.000

Heures d'operation/annee (tract) 1.350.000
Duree de vie (annees/tracteur) 5.000
Taux d'Interet (pondere) 0.070

Facteur de recouvrement de capital
par annee 3,017.761
par heure 2.235

Interet 0.400
Amortissement 1.836

RENVOIS:

a. Veuillez voir l'annexe methodologique pour les details de ce calcul
Prix unitaire du Nouveau Tarif General des Materiels CRT a Partir de 15.10.1986
Nombres d'unites du Plan d'Assainissement 1986
Heures d'operation par annee et duree de vie du Plan d'Assainissement (PA) 1986, p. 40
Taux d'interet pondere du PA 1981 (interet prevu 1986), p. 24

b. Carburant: quantite du PA 1986, p. 40; prix de la BOMAR
Lubrifiant a 20% du cout du carburant

c. 50% pieces et 50% main d'oeuvre

d. 50% assurance et 50% taxe de circulation

e. Selon la repartition du PA 1981, p. 26
Les salaires representent 24% du montant total
Charges restant reparties entre la ville et les ateliers a 74% et 24%
Ayant le meme pourcentage des charges sociales que main d'oeuvre ci-dessus
Decomposition des frais generaux selon les moyens des autres couts

f. Marge beneficiaire egale a 5% des couts

SCHEMATIQUE DE LA DECOMPOSITION DU COUT D'UNE MOISSONEUSE BATTEUSE

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Amortissement	8.214	100%	Tracteur		7.823
			Taxe a l'importt. des mois-bats	5.00%	0.391
Interet	5.600	100%	Capitale		5.600
Carburant	2.673	100%	Selon decomp. du gas-oil		2.673
Lubrifiant et Graisse	0.535	100%	Selon decomp. du gas-oil		0.535
Main d oeuvre					
Salaire base (conducteur)	0.470	100%	Main d'oeuvre		0.470
Salaire base (ouvrier)	0.375	100%	Main d'oeuvre		0.375
Prime de technicite	0.141	100%	Main d'oeuvre		0.141
Indemnite complementaire	0.146	100%	Main d'oeuvre		0.146
Deplacement	0.047	100%	Main d'oeuvre		0.047
Prime de rendement	0.068	100%	Main d'oeuvre		0.068
Prime d'entretien	0.047	100%	Main d'oeuvre		0.047
Prime d'interessement	0.104	100%	Main d'oeuvre		0.104
Charges Sociales	0.080	100%	Taxe indirect non-ech.		0.080
Entretien et Reparations	2.450	50%	Pieces detachees		0.894
			Taxe sur les pieces detachees	37.10%	0.331
		50%	Main d'oeuvre		1.047
			Charges Sociales	17.00%	0.178
Autres Charges Directes	0.062	50%	Assurance (capitale)		0.031
		50%	Taxe de circulation (taxe indirecte non-ech.)		0.031
Autres Charges Indirectes	2.530	24%	Salaires		0.519
			Charges Sociales	17.00%	0.088
		56%	Frais Generaux - siege		1.423
			Selon les moyens du tableau		
		20%	Frais generaux - ateliers		0.500
			Selon les moyens du tableau		
Marge Beneficiare	1.440	100%	Capitale		1.440
Valeur Residuelle	-1.088	100%	Echangeables		-1.088
TOTAL	23.894				23.894

COUT HORAIRE D'UNE MOISSONNEUSE BATTEUSE

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON ECHANGEABLES..... M O D O FAM	M O D O SAL	CAPITALE	TERRE	RENVOIS
Amortissement	D/hr	1.0	8.214	8.214			8.214	0.391		7.823	7.823					(a)
Interet	D/hr	1.0	5.600	5.600			5.600			5.600				5.600		(a)
Carburant	L/hr	11.0	0.243	2.673			2.673	0.021	0.019	2.633	2.189		0.102	0.318	0.024	(b)
Lubrifiant et Graisse	L/hr			0.535			0.535	0.004	0.004	0.527	0.438		0.020	0.064	0.005	(b)
Main d'Oeuvre																
...Salaire de base (conducteur)	D/hr	1.0	0.470	0.470			0.470			0.470			0.470			
...Salaire de base (ouvrier)	D/hr	1.0	0.375	0.375			0.375			0.375			0.375			
...Prime de Technicite	D/hr	1.0	0.141	0.141			0.141			0.141			0.141			
...Indemnite Complementaire	D/hr	1.0	0.146	0.146			0.146			0.146			0.146			
...Deplacement	D/hr	1.0	0.047	0.047			0.047			0.047			0.047			
...Prime de Rendement	D/hr	1.0	0.068	0.068			0.068			0.068			0.068			
...Prime d'Entretien	D/hr	1.0	0.047	0.047			0.047			0.047			0.047			
...Prime d'interessement	D/hr	1.0	0.104	0.104			0.104			0.104			0.104			
...Charges Sociales	D/hr	1.0	0.080	0.080			0.080		0.080	0.000						
Entretien et Reparations																
...Pieces	D/hr	1.0	1.225	1.225			1.225	0.331		0.894	0.894					(c)
...Main d'Oeuvre	D/hr	1.0	1.225	1.225			1.225			1.225			1.225			(c)
Autres Charges Directes																
...Assurance	D/hr	1.0	0.031	0.031			0.031			0.031				0.031		(d)
...Taxe de Circulation	D/hr	1.0	0.031	0.031			0.031		0.031	0.000						(d)
Autres Charges Indirectes																
...Salaires	D/hr	1.0	0.607	0.607			0.607		0.088	0.519			0.519			(e)
...Frais Generaux - Siege	D/hr	1.0	1.423	1.423			1.423	0.047	0.013	1.363	0.751		0.705	0.406		(e)
...Frais Generaux - Ateliers	D/hr	1.0	0.500	0.500			0.500	0.017	0.005	0.478	0.264		0.072	0.143		(e)
Marge Beneficiaire (7% des couts)	D/hr	1.0	1.440	1.440			1.440			1.440				1.440		(f)
Valeur Residuelle	D/hr	1.0	(1.088)	(1.088)			(1.088)			(1.088)				(1.088)		(g)
Prix de Revient				23.894	0.000	0.000	23.894	0.812	0.239	22.843	12.359	0.000	3.541	6.914	0.029	
Compensation avant prix de vente				(6.694)												
Prix a l'agriculteur				17.200	(3.622)	(3.072)	23.894	0.812	0.239	22.843	12.359	0.000	3.541	6.914	0.029	
COEFFICIENTS DE DECOMPOSITION				1.000	(0.211)	(0.179)	1.389	0.047	0.014	1.328	0.719	0.000	0.206	0.402	0.002	
% du cout economique										1.000	0.541	0.000	0.155	0.303	0.001	

CALCULS DE L'AMORTISSEMENT ET DE L'INTERET:

		Heures d'operation/annee (tract)	400	Facteur recouvrement de capital		Interet	5.600
		Duree de vie (annees/tracteur)	7	par annee	5,525.635	Amortissement	8.214
Prix Unitaire d'Achat	23,000	Taux d'Interet (pondere)	6.44%	par heure	13.814		

REMVOIS:

a. Veuillez voir l'annexe methodologique pour les details de ce calcul
   Prix unitaire d'achat verifiee par la SOMAR
   Nombre d'unites d'apres une discussion a la SOMAR
   Heures d'operation par annee et duree de vie du PA 1981, p.34
   Taux d'interet pondere du PA 1981 (interet prevu 1986), p.34
b. Carburant: quantite du PA 1986, p. 40; prix du table "Couts d'un Tracteur".
   Lubrifiant a 20% du cout du carburant

c. 50% pieces et 50% main d'oeuvre
d. 50% assurance et 50% taxe de circulation
e. Selon la repartition du PA 1981, p. 26
   Les salaires representent 24% du montant total
   Charges restant sont reparties entre le siege et les ateliers a 74% et 24%, respectivement
   Ayant le meme pourcentage des charges sociales que main d'oeuvre ci-dessus
   Decomposition des frais generaux selon les moyens des autres couts
f. Marge beneficiaire egale a 7% des couts
g. Valeur residuelle basee sur la valeur du marche du vehicule a l'annee de vente

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SOURCE: SOMAR

IRRIGATION DE GAFSA

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE L'EAU DE L'IRRIGATION DE GAFSA

POSTE	COUT PAR M3		REPARTITION	TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
COUTS DIRECTS					
Personnel	0.0047	100%	Main d'oeuvre		0.0042
			Charges Sociales	17.00%	0.0005
Energie (electricite)	0.0078	50%	Electricite et cables echang.		0.0051
			Taxe sur l'electricite	2.38%	0.0003
		25%	Main d'oeuvre		0.0023
			Charges Sociales	17.00%	0.0004
		25%	Capitale		0.0027
Materiaux	0.0012	100%	Echangeables		0.0011
			Taxe sur les pompes pour l'irri	2.00%	0.0001
Entretien vehicules	0.0002	50%	Pieces de rechange		0.0001
			Taxe sur les pieces de rechange	37.00%	nul
		50%	Main d'oeuvre		0.0001
			Charges Sociales	17.00%	nul
FRAIS GENERAUX	0.0002	50%	Main d'oeuvre		0.0001
			Charges Sociales	17.00%	nul
		30%	Fournitures de bureau		0.0001
			Taxe sur l'import des fourns	85.00%	nul
		20%	Capital		nul
AMORTISSEMENT	0.0001	100%	Materiaux importes		0.0001
			Taxe sur l'import tubes.tuyaux	44.08%	nul
Total	0.0172				0.0172

COUT D'IRRIGATION EN GAFSA EN 1982
POUR LES DATTES

	COUT PAR m3	TAXES/SUBVENTIONS DIRECTES		COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES		COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES.....			
		ECHANG	NON-ECH		ECHANG	NON-ECH			M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUTS DIRECTS												
Personnel	0.0047			0.0047		0.0005	0.0042			0.0042		
Energie (electricite)	0.0108			0.0108	0.0003	0.0004	0.0101	0.0051		0.0023	0.0027	
Materiels (tuyaux, pompes)	0.0012			0.0012	0.0001		0.0011	0.0011				
Entretien vehicules	0.0002			0.0002			0.0002	0.0001		0.0001		
FRAIS GENERAUX	0.0002			0.0002			0.0002	0.0001		0.0001	0.0000	
AMORTISSEMENT	0.0001			0.0001			0.0001	0.0001				
Prix de revient	0.0171	0.0000	0.0000	0.0171	0.0004	0.0009	0.0158	0.0064	0.0000	0.0067	0.0027	0.0000
Compensation	-0.0051											
Prix de vente	0.0120	-0.0021	-0.0030	0.0171	0.0004	0.0009	0.0158	0.0064	0.0000	0.0067	0.0027	0.0000
COEFFICIENTS DE DECOMPOSITION	1.000	-0.174	-0.252	1.426	0.033	0.076	1.317	0.537	0.000	0.558	0.228	0.000
% du cout economique							1.000	0.408	0.000	0.424	0.173	0.000

SOURCE: Documents de la Banque Mondiale
irriggaf

IRRISATION DE MEDJERDA

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE L'EAU DE L'IRRIGATION DE MEDJERDA

POSTE	COUT PAR M3		REPARTITION	TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
COUTS DIRECTS					
Personnel	0.0149	100%	Main d oeuvre		0.0127
			Charges Sociales	17.00%	0.0022
Energie (electricite)	0.0041	50%	Electricite et cables echang.		0.0019
			Taxe sur l'electricite	6.38%	0.0002
		25%	Main d'oeuvre		0.0009
			Charges Sociales	17.00%	0.0002
		25%	Capitale		0.0010
Materiaux	0.0004	100%	Echangeables		0.0004
			Taxe sur les pompes pour l'irri	6.00%	negl
Entretien vehicules	0.0022	50%	Pieces de rechange		0.0008
			Taxe sur les pieces de rechange	37.10%	0.0003
		50%	Main d'oeuvre		0.0008
			Charges Sociales	17.00%	0.0002
FRAIS GENERAUX	0.0055	50%	Main d'oeuvre		0.0024
			Charges Sociales	17.00%	0.0004
		30%	Fournitures de bureau		0.0009
			Taxe sur l'import des fourns	85.00%	0.0007
		20%	Capital		0.0011
AMORTISSEMENT	0.0027	100%	Materiaux importes		0.0020
			Taxe sur l'import tubes.tuyaux	44.08%	0.0008
Total	0.0298				0.0298

COUT D'IRRIGATION EN MEDJERDA EN 1982
POUR LES BLES ET LES POMMES DE TERRE

	COUT PAR m3	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUTS DIRECTS												
Personnel	0.0149			0.0149		0.0022	0.0127			0.0127		
Energie (electricite)	0.0041			0.0041	0.0002	0.0002	0.0037	0.0019		0.0009	0.0010	
Materiaux (tuyaux, pompes)	0.0004			0.0004			0.0004	0.0004				
Entretien vehicules	0.0022			0.0022	0.0003	0.0002	0.0016	0.0008		0.0008		
FRAIS GENERAUX	0.0055			0.0055	0.0007	0.0004	0.0043	0.0009		0.0023	0.0011	
AMORTISSEMENT	0.0027			0.0027	0.0008		0.0019	0.0019				
Prix de revient	0.0297	0.0000	0.0000	0.0297	0.0021	0.0030	0.0247	0.0060	0.0000	0.0166	0.0021	0.0000
Compensation	-0.0087											
Prix de vente	0.0210	-0.0021	-0.0066	0.0297	0.0021	0.0030	0.0247	0.0060	0.0000	0.0166	0.0021	0.0000
COEFFICIENTS DE DECOMPOSITION	1.000	-0.101	-0.314	1.415	0.098	0.141	1.176	0.285	0.000	0.793	0.100	0.000
% du cout economique							1.000	0.242	0.000	0.674	0.085	0.000

Superficie irr. (ha)	1982	18,772
m3 livre	1982	59.000,000
m3/ha equippe	1982	3,143

SOURCE: Documents de la Banque Mondiale
Irrigaed

IRRIGATION DE NABEUL

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE L'EAU DE L'IRRIGATION DE NABEUL

POSTE	COUT PAR M3		REPARTITION	TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
COUTS DIRECTS					
Personnel	0.0204	100%	Main d oeuvre		0.0182
			Charges Sociales	17.00%	0.0022
Energie (electricite)	0.0087	50%	Electricite et cables echang.		0.0041
			Taxe sur l'electricite	6.38%	0.0003
		25%	Main d'oeuvre		0.0019
			Charges Sociales	17.00%	0.0003
		25%	Capitale		0.0022
Materiaux	0.0051	100%	Echangeables		0.0049
			Taxe sur les pompes pour l'irri	6.00%	0.0002
Entretien vehicules	0.0022	50%	Pieces de rechange		0.0008
			Taxe sur les pieces de rechange	37.10%	0.0002
		50%	Main d'oeuvre		0.0009
			Charges Sociales	17.00%	0.0003
FRAIS GENERAUX	0.0059	50%	Main d oeuvre		0.0025
			Charges Sociales	17.00%	0.0005
		30%	Fournitures de bureau		0.0008
			Taxe sur l'import des fourns	85.00%	0.0007
		20%	Capital		0.0015
AMORTISSEMENT	0.0048	100%	Materiaux importes		0.0033
			Taxe sur l'import tubes.tuyaux	44.08%	0.0013
Total	0.0471				0.0471

COUT D'IRRIGATION EN NABEUL EN 1985-86
POUR LES AGRUMES ET LES POMMES DE TERRE

	COUT PAR m3	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
COUTS DIRECTS												
Personnel	0.0204			0.0204		0.0022	0.0182			0.0182		
Energie (electricite)	0.0087			0.0087	0.0003	0.0003	0.0081	0.0044		0.0022	0.0022	
Materiaux (tuyaux, pompes)	0.0051			0.0051	0.0002		0.0049	0.0049				
Entretien vehicules	0.0022			0.0022	0.0002	0.0003	0.0017	0.0008		0.0009		
FRAIS GENERAUX	0.0059			0.0059	0.0007	0.0005	0.0047	0.0007		0.0025	0.0015	
AMORTISSEMENT	0.0048			0.0048	0.0014		0.0034	0.0034				
Prix de revient	0.0472	0.0000	0.0000	0.0472	0.0028	0.0033	0.0411	0.0143	0.0000	0.0238	0.0037	0.0000
Compensation	-0.0122											
Prix de vente	0.0350	-0.0042	-0.0080	0.0472	0.0028	0.0033	0.0411	0.0143	0.0000	0.0238	0.0037	0.0000
COEFFICIENTS DE DECOMPOSITION	1.000	-0.121	-0.228	1.349	0.080	0.094	1.174	0.407	0.000	0.679	0.106	0.000
% du cout economique							1.000	0.347	0.000	0.578	0.090	0.000

Superficie irr. (ha)	1982	6,042
m3 livre	1982	12,000,000
m3/ha equippe	1982	1,986

SOURCE: Documents de la Banque Mondiale, DPSAE
irrignab

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE 2-4-D

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Prix CIF	1.935	100%	Echangeable		1.935
Assurance	0.020	100%	Capitale		0.020
Droits de douane	0.242	100%	Taxe indirecte echangeable		0.242
Taxes diverses	0.003	100%	Taxe indirecte echangeable		0.003
Frais de débarquement	0.020	100%	Main d'oeuvre		0.017
			Charges Sociales	17.00%	0.003
Transport au quai	0.023	100%	Selon transport routier		0.023
Estompage	0.003	100%	Main d'oeuvre		0.003
Frais d'emballage	0.145	65%	Matieres d'emballage		0.056
			Taxe sur les tissus en jute	67.90%	0.038
		35%	Main d'oeuvre		0.044
			Charges Sociales	17.00%	0.007
Frais de chargement	0.018	55%	Main d'oeuvre		0.008
			Charges Sociales	17.00%	0.002
		45%	Materiel		0.008
			Taxe sur les materiel roulant	6.00%	0.000
Frais de transport	0.120	100%	Selon transport routier		0.120
Freinte	0.020	100%	Selon les moyens du tableau		0.020
TOTAL	2.549				2.549

COUT D'UN LITRE DE 2-4-D

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O BAI	CAPITALE	TERRE	RENVOIS
Prix à OC et BIEC		1.000	1.180	1.180			1.180			1.180						
Prix au public		1.000	1.274	1.274			1.274			1.274						
Prix de revient (2 * prix au public)		1.000	2.549	2.549												
Prix CIF		1.000	1.935	1.935			1.935			1.935	1.935					
Assurance		1.000	0.020	0.020			0.020			0.020				0.020		(a)
Droits de Douane		1.000	0.242	0.242			0.242		0.242	0.000						
Taxes Diverses		1.000	0.003	0.003			0.003		0.003	0.000						
Frais de debarquement		1.000	0.020	0.020			0.020		0.003	0.017		0.017				
Transport du quai		1.000	0.023	0.023			0.023	0.003	0.001	0.019	0.009	0.009	0.001	0.000		(b)
Estompage		1.000	0.003	0.003			0.003			0.003		0.003				
Frais d'emballage		1.000	0.145	0.145			0.145	0.038	0.007	0.100	0.056	0.044				(c)
Frais de chargement		1.000	0.018	0.018			0.018		0.003	0.015	0.008	0.008				(d)
Frais de transport		1.000	0.120	0.120	(0.001)	(0.002)	0.123	0.014	0.009	0.099	0.031	0.055	0.003	0.010		(e)
Freinte		1.000	0.020	0.020			0.020	0.000	0.002	0.018	0.016	0.001	0.000	0.000		
Prix de revient			2.548	2.548	(0.001)	(0.002)	2.551	0.055	0.270	2.226	2.055	0.000	0.137	0.024	0.010	
Compensation avant prix de vente				(1.274)	(1.177)	(0.097)	0.000									
Prix de vente				1.274	(1.177)	(0.100)	2.551	0.055	0.270	2.226	2.055	0.000	0.137	0.024	0.010	(f)
COEFFICIENTS DE DECOMPOSITION				1.000	(0.924)	(0.078)	2.002	0.043	0.212	1.747	1.613	0.000	0.107	0.019	0.008	
% du cout economique										1.000	0.923	0.000	0.061	0.011	0.004	

RENVOIS:

a. Frais de debarquement supposes 100% main d'oeuvre
b. Voir decomposition des couts de transport routier
c. Suppose 65% materiel (taxe comme les tracteurs importes) et 35% main d'oeuvre
d. Supposes 50% echangeables, 50% main d'oeuvre
e. Selon transports ferroviers
f. Suppose subventionne a 50%

SOURCES: Adaptation de la decomposition des couts d'importation de sulfate de potasse
24d

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE CUIVOX

POSTE	COUT	REPARTITION		TAUX DE TAXE/SUBV.	MONTANT DETAILLE
MATIERES PREMIERES					
Inv. Cuivox	1.205	100%	Illman Tech.		0.902
			Taxes cumulees a l'importation	33.60%	0.303
Autres Matieres	0.035	100%	Matieres chimiques		0.026
			Taxes cumulees a l'importation	33.60%	0.009
FRAIS D'EXPLOITATION					
Matieres Consommes	0.029	100%	Matieres chimiques		0.024
			Taxes cumulees a l'importation	16.82%	0.005
Ouvriers	0.023	100%	Main d oeuvre		0.020
			Charges Sociales	17.00%	0.003
Mensuels	0.016	100%	Main d oeuvre		0.014
			Charges Sociales	17.00%	0.002
Ateliers	0.003	50%	Pieces de rechange pour usines		0.001
			Taxe sur pieces de rech.-usines	35.30%	0.001
		50%	Main d oeuvre		0.001
			Charges Sociales	17.00%	0.000
Energie	0.018	100%	Echangeable		0.018
Eau	0.001	100%	Capitale		0.001
Frais de laboratoire	0.003	100%	Echangeable		0.003
Fourches	0.009	100%	Echangeable		0.009
AUTRES FRAIS					
Amortissements	0.150	50%	Batiment/terre		0.075
		50%	Machines agro-alim.		0.056
			Taxe sur les machines agro-alim.	35.00%	0.019
Frais d'Administration	0.003	100%	Main d'oeuvre		0.003
Emballage	0.011	70%	Matieres d'emballage		0.008
		30%	Main d'oeuvre		0.003
Frais de livraison	0.015	100%	Selon transport ferrovier		0.015
TOTAL	1.521				1.521

DECOMPOSITION DU COUT DE CUIVOX (DT/KG)

KGS PRODUITS: 63,300		QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEBLES	.....INTRANTS NON ECHANGEABLES..... M D'O FAM	M D O SAL	CAPITALE	TERRE	RENVOIS
MATIERES PREMIERES																
...Oxy. Cuiv.		1.000	1.205	1.205			1.205	0.303		0.902	0.902					(a)
...Autres Matieres		1.000	0.035	0.035			0.035	0.009		0.026	0.026					(a)
FRAIS D'EXPLOITATION																
...Matieres Consommes		1.000	0.029	0.029			0.029	0.005		0.024	0.024					(b)
...Ouvriers		1.000	0.023	0.023			0.023		0.003	0.020	0.020					
...Mensuels		1.000	0.016	0.016			0.016		0.002	0.014	0.014					
...Ateliers	heures	0.001	2 [illegible]40	0.003			0.003	0.000	0.001	0.002	0.001	0.001				
...Energie	kwh	0.254	0.071	0.018			0.018	0.001		0.017	0.017					
...Eau	m3	0.002	0.600	0.001			0.001			0.001			0.001			(c)
...Frais de laboratoire		1.000	0.003	0.003			0.003			0.003	0.003					
...Fourches		1.000	0.009	0.009			0.009			0.009	0.009					
AUTRES FRAIS																
...Amortissements		1.000	0.150	0.150			0.150	0.019		0.131	0.056			0.075		(d)
...Frais d'Administration		1.000	0.003	0.003			0.003			0.003		0.003				
...Emballage		1.000	0.011	0.011			0.011			0.011	0.008	0.003				(e)
...Frais de Livraison		1.000	0.015	0.015	(0.000)	(0.000)	0.015	0.002	0.001	0.012	0.004	0.007	0.000	0.001		(f)
Prix de revient avant compensation				1.522	(0.000)	(0.000)	1.523	0.340	0.007	1.175	1.084	0.000	0.013	0.001	0.076	
Compensation avant prix de vente				(0.761)												
Prix de vente				0.761	(0.702)	0.059	1.523	0.340	0.007	1.175	1.084	0.000	0.013	0.001	0.076	(g)
COEFFICIENTS DE DECOMPOSITION				1.000	(0.923)	0.077	2.000	0.446	0.010	1.544	1.425	0.000	0.018	0.002	0.100	
% du cout economique										1.000	0.923	0.000	0.011	0.001	0.065	

RENVOIS:

a. Taxe a 33.6%
b. Taxes a 16.82%
c. Taxe a 6.38% (electricite)
d. 50% batiment/terre, 50% machines agro-alimentaires
e. 70% matieres d'emballage et 30% main d'oeuvre
f. Transport ferroviar
g. Suppose subventionne a 50%

SOURCE: Ministere de l'Agriculture, D/PSAE
cuivox

ILLOXAN

SCHEMATIQUE DE LA DECOMPOSITION DU COUT D'ILLOXAN

POSTE	COUT	REPARTITION		TAUX DE TAXE/SUBV.	MONTANT DETAILLE
MATIERES PREMIERES					
Illoxan Tech.	7.197	100%	Illoxan Tech.		5.787
			Taxes cumulees a l'importation	33.60%	1.410
Autres Matieres	0.349	100%	Matieres chimiques		.261
			Taxes cumulees a l'importation	33.60%	.088
FRAIS D'EXPLOITATION					
Matieres Consommes	0.026	100%	Matieres chimiques		.022
			Taxes cumulees a l'importation	16.82%	.004
Ouvriers	0.058	100%	Main d'oeuvre		.050
			Charges Sociales	17.00%	.008
Mensuels	0.069	100%	Main d oeuvre		.059
			Charges Sociales	17.00%	.010
Entretien par les tiers	0.002	50%	Echangeable		.001
		50%	Main d'oeuvre		.001
Ateliers	0.007	50%	Pieces de rechange pour usines		.003
			Taxe sur pieces de rech.-usines	35.30%	.001
		50%	Main d'oeuvre		.003
			Charges Sociales	17.00%	.001
Energie	0.006	100%	Echangeable		.006
Eau	0.001	100%	Capitale		.001
Frais de laboratoire	0.010	100%	Echangeable		.010
Fourches	0.003	100%	Echangeable		.003
AUTRES FRAIS					
Amortissements	0.388	50%	Batiment/terre		.194
		50%	Machines agro-alim.		.144
			Taxe sur les machines agro-alim.	35.00%	.050
Frais d'Administration	0.004	100%	Main d'oeuvre		.004
Emballage	0.228	70%	Matieres d'emballage		.095
			Taxe sur les tissus en jute	68.00%	.065
		30%	Main d'oeuvre		.058
			Charges Sociales	17.00%	.010
Frais de livraison	0.020	100%	Selon transport ferrovier		.020
TOTAL	8.368				8.368

DECOMPOSITION DU COUT D'ILLOIAN (DT/L)

LITRES PRODUIT: 95.430		QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
MATIERES PRENIERES																
...Illoxan Tech.		1.000	7.197	7.197			7.197	1.810		5.387	5.387					
...Autres Matieres		1.000	0.349	0.349			0.349	0.088		0.261	0.261					(a)
FRAIS D'EXPLOITATION																(a)
...Matieres Consommees		1.000	0.026	0.026			0.026	0.004		0.022	0.022					
...Ouvriers		1.000	0.058	0.058			0.058		0.008	0.050	0.050					(b)
...Mensuels		1.000	0.069	0.069			0.069		0.010	0.059	0.059					
...Entretien par les tiers		1.000	0.002	0.002			0.002			0.002	0.001		0.001			
...Ateliers	heures	0.003	2.640	0.007			0.007	0.001	0.001	0.005	0.003		0.003			
...Energie	kwh	0.085	0.071	0.006			0.006	0.000		0.006	0.006					
...Eau	m3	0.001	0.600	0.001			0.001			0.001				0.001		(c)
...Frais de laboratoire		1.000	0.010	0.010			0.010			0.010	0.010					
...Fourches		1.000	0.003	0.003			0.003			0.003	0.003					
AUTRES FRAIS																
...Amortissements		1.000	0.388	0.388			0.388	0.050		0.338	0.144				0.194	(d)
...Frais d'Administration		1.000	0.004	0.004			0.004			0.004			0.004			
...Emballage		1.000	0.228	0.228			0.228	0.065	0.010	0.153	0.095		0.058			(e)
...Frais de Livraison		1.000	0.020	0.020	(0.000)	(0.000)	0.020	0.002	0.002	0.017	0.005		0.009	0.000	0.002	(f)
Prix de revient avant compensation				8.367	(0.000)	(0.000)	8.367	2.021	0.030	6.316	6.045	0.000	0.074	0.001	0.196	
Compensation avant prix de vente				(3.617)												
Prix de vente				4.750	(3.461)	(0.155)	8.367	2.021	0.030	6.316	6.045	0.000	0.074	0.001	0.196	
COEFFICIENTS DE DECOMPOSITION				1.000	(0.729)	(0.033)	1.762	0.425	0.006	1.330	1.273	0.000	0.016	0.000	0.041	
% du cout economique										1.000	0.957	0.000	0.012	0.000	0.031	

RENVOIS:

a. Taxe a 33.6% (taux cumule a l'importation)
b. Taxes a 16.82%
c. Taxe a 6.38% (electricite)
d. 50% batiment/terre, 50% machines agro-alimentaires
e. 70% matieres d'emballage et 30% main d'oeuvre
f. Transport ferroviar

SOURCE: Ministere de l'Agriculture, D/PSAE
illoxan

PHYTOATE

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE PHYTOATE

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
MATIERES PREMIERES					
Dimethoate Tech.	1.414	100%	Illoxan Tech.		1.059
			Taxes cumulees a l importation	[illegible]	0.355
Autres Matieres	0.687	100%	Matieres chimiques		0.514
			Taxes cumulees a l'importation	[illegible]	0.173
FRAIS D EXPLOITATION					
Matieres Consommes	0.016	100%	Matieres chimiques		0.014
			Taxes cumulees a l'importation	[illegible]	0.002
Ouvriers	0.041	100%	Main d'oeuvre		0.035
			Charges Sociales	[illegible]	0.006
Mensuels	0.065	100%	Main d'oeuvre		0.056
			Charges Sociales	[illegible]	0.009
Entretien par les tiers	0.001	100%	Main d'oeuvre		0.001
Ateliers	0.007	50%	Pieces de rechange pour usines		0.003
			Taxe sur pieces de rech.-usines	[illegible]	0.001
		50%	Main d'oeuvre		0.003
			Charges Sociales	[illegible]	0.001
Energie	0.006	100%	Echangeable		0.006
Eau	0.001	100%	Capitale		0.001
Frais de laboratoire	0.010	100%	Echangeable		0.010
Fourches	0.003	100%	Echangeable		0.003
AUTRES FRAIS					
Amortissements	0.388	50%	Batiment/terre		0.194
		50%	Machines agro-alim.		0.144
			Taxe sur les machines agro-alim.	35.00%	0.050
Frais d'Administration	0.004	100%	Main d'oeuvre		0.004
Emballage	0.320	70%	Matieres d'emballage		0.133
			Taxe sur les tissus en jute	68.00%	0.091
		30%	Main d'oeuvre		0.082
			Charges Sociales	17.00%	0.014
Frais de livraison	0.020	100%	Selon transport ferrovier		0.020
TOTAL	2.983				2.983

DECOMPOSITION DU COUT DE PHYTOATE (DT/L)

LITRES PRODUIT: 61.520		QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
MATIERES PRENIERES																
...Dimethoate Tech		1.000	1.414	1.414			1.414	0.355		1.059	1.059					(a)
...Autres Matieres		1.000	0.687	0.687			0.687	0.173		0.514	0.514					(a)
FRAIS D'EXPLOITATION																
...Matieres Consommees		1.000	0.016	0.016			0.016	0.002		0.014	0.014					(b)
...Ouvriers		1.000	0.041	0.041			0.041		0.006	0.035			0.035			
...Mensuels		1.000	0.065	0.065			0.065		0.009	0.056			0.056			
...Entretien par les tiers		1.000	0.001	0.001			0.001			0.001			0.001			
...Ateliers	heures	0.003	2.640	0.007			0.007	0.001	0.001	0.005	0.003		0.003			
...Energie	kwh	0.085	0.071	0.006			0.006	0.0004		0.006	0.006					(c)
...Eau	m3	0.001	0.600	0.001			0.001			0.001				0.001		
...Frais de laboratoire		1.000	0.010	0.010			0.010			0.010	0.010					
...Fourches		1.000	0.003	0.003			0.003			0.003	0.003					
AUTRES FRAIS																
...Amortissements		1.000	0.388	0.388			0.388	0.050		0.338	0.144				0.194	(d)
...Frais d'Administration		1.000	0.004	0.004			0.004			0.004	0.004					
...Emballage		1.000	0.319	0.319			0.319	0.091	0.014	0.214	0.133		0.081			(e)
...Frais de Livraison		1.000	0.020	0.020	(0.000)	(0.000)	0.020	0.002	0.002	0.017	0.005		0.009	0.000	0.002	(f)
Prix de revient avant compensation				2.982	(0.000)	(0.000)	2.983	0.675	0.031	2.277	1.894	0.000	0.186	0.001	0.196	
Compensation avant prix de vente				(1.491)												
Prix de vente				1.491	(1.241)	(0.250)	2.983	0.675	0.031	2.277	1.894	0.000	0.186	0.001	0.196	(g)
COEFFICIENTS DE DECOMPOSITION				1.000	(0.832)	(0.168)	2.000	0.452	0.021	1.527	1.271	0.000	0.125	0.001	0.131	
% du cout economique										1.000	0.832	0.000	0.082	0.000	0.086	

RENVOIS:

a. Taxe a 33.6% (cumule a l'exportation)
b. Taxes a 16.82%
c. Taxe a 6.39% (electricite)
d. 50% batiment/terre, 50% machines agro-alimentaires
e. 70% matieres d'emballage et 30% main d'oeuvre
f. Transport ferrovier
g. Supposee subventionne a 50%

SOURCE: Ministere de l'Agriculture, D/PBAM
phytoate

18

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE TRAITEMENT AERIENNE (SONAPROV) POUR LES OLIVIERS ET LES AGRUMES

POSTE	COUT	REPARTITION		TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Amortissement	1.053	100%	Avions		
			Subven. directement (echange)	100.00%	1.053
Interet	0.735	100%	Subven. directement (non-echange)	100.00%	0.735
Carburant et Lubrifiant	1.300	77%	Pour les avions (Selon le gas-oil secteur agricole)		1.000
		23%	Pour les vehicules d'assistance		0.300
Frais d'assurance	0.325	100%	Capitale		0.325
Pieces de rechange	0.400	100%	Parties et Pieces de rechange		0.292
			Taxe sur parties et pieces de rech	37.10%	0.108
Salaires					
Pilotes	0.900	100%	Main d'oeuvre		0.769
			Charges Sociales	17.00%	0.131
Mecaniciens	0.250	100%	Main d'oeuvre		0.214
			Charges Sociales	17.00%	0.036
Encadrement technique	0.300	100%	Main d'oeuvre		0.256
			Charges Sociales	17.00%	0.044
Personnel d'assist.	0.450	100%	Main d'oeuvre		0.385
			Charges Sociales	17.00%	0.065
Frais de deplacement	0.300	100%	Main d'oeuvre		0.256
			Charges Sociales	17.00%	0.044
Amenagement des pistes	0.275	70%	Materiel		0.116
			Taxe sur autres outils agricoles	66.90%	0.077
		30%	Main d'oeuvre		0.070
			Charges Sociales	17.00%	0.012
Frais de gestion	0.500	50%	Salaire des cadres		0.214
			Charges Sociales	17.00%	0.036
		30%	Materiel		0.081
			Taxe sur les articles de bureau	85.00%	0.069
		20%	Capitale		0.100
Dimethoate	3.600	100%	Selon le decomp. de 2-4-D		3.600
SOUS-TOTAL	10.388				10.388
MOINS: Subventions Directes:					
Amortissement	1.053				
Interet	0.735				
TOTAL	8.600				

COUT DE TRAITEMENT PHYTOSANITAIRE AERIEN: OLIVIERS ET AGRUMES ($/HA)

	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D O FAM	M D O SAL	CAPITALE	TERRE	RENVOIS
Amortissement	1.000	1.053	0.000	-1.053		1.053			1.053	1.053					(a)
Interet	1.000	0.429	0.000		-0.429	0.429		-0.306	0.735				0.735		(a,b)
Carburant et Lubrifiant															
...Avions	1.000	1.000	1.000			1.000	0.008	0.007	0.985	0.819		0.038	0.119	0.010	(c)
...Vehicules d'assistance	1.000	0.300	0.300			0.300	0.002	0.002	0.296	0.246		0.011	0.036	0.003	(c)
Frais d'assurance	1.000	0.325	0.325			0.325			0.325				0.325		
Pieces de rechanges. vehicles d'assistance	1.000	0.400	0.400			0.400	0.108		0.292	0.292					
Salaires et Accessoires															
...Pilotes	1.000	0.900	0.900			0.900		0.131	0.769			0.769			(d)
...Mecaniciens	1.000	0.250	0.250			0.250		0.036	0.214			0.214			(d)
...Encadrement technique	1.000	0.300	0.300			0.300		0.044	0.256			0.256			(d)
...Personnel d'assistance	1.000	0.450	0.450			0.450		0.065	0.385			0.385			(d)
...Frais de deplacement	1.000	0.300	0.300			0.300		0.044	0.256			0.256			
Amenagement des pistes	1.000	0.275	0.275			0.275	0.077	0.012	0.186	0.116		0.070			(e)
Frais de gestion	1.000	0.500	0.500			0.500	0.069	0.036	0.395	0.081		0.214	0.100		(f)
Dimethoate (litres)	1.000	3.600	3.600	(2.995)	(0.605)	7.200	1.627	0.076	5.497	4.576		0.450		0.472	(g)
Prix de revient avant compensation			8.600	(4.048)	(1.034)	13.682	1.892	0.147	11.644	7.182	0.000	2.663	1.315	0.485	
Compensation avant prix de vente			(5.000)	(3.084)	(1.916)										
Prix de vente			3.600	(7.133)	(2.950)	13.682	1.892	0.147	11.644	7.182	0.000	2.663	1.315	0.485	
COEFFICIENTS DE DECOMPOSITION			1.000	(1.981)	(0.819)	3.801	0.525	0.041	3.234	1.995	0.000	0.740	0.365	0.135	
% du cout economique									1.000	0.617	0.000	0.229	0.113	0.042	
Dans le cas des oleiculteurs:															
Prix de revient avant compensation			5.000	(1.053)	(0.429)	6.482	0.264	0.071	6.147	2.607	0.000	2.213	1.315	0.013	
Compensation avant prix de vente			(5.000)	(3.084)	(1.916)	0.000									
Prix de vente			0.000	(4.137)	(2.345)	6.482	0.264	0.071	6.147	2.607	0.000	2.213	1.315	0.013	
COEFFICIENTS DE DECOMPOSITION				(0.638)	(0.362)	1.000	0.041	0.011	0.948	0.402	0.000	0.341	0.203	0.002	
% du cout economique									1.000	0.424	0.000	0.360	0.214	0.002	

CALCULS DE L'AMORTISSEMENT ET DE L'INTERET:

		Hectares/annee	131.981	Facteur recouvrement de capital			
Prix Unitaire d'Achat d'un avion	139,000	Duree de vie (annees/avion)	10		par annee	195.624	Interet 0.429
Nombre d'unites	10	Taux d'Interet	6.75%		par hectare	1.482	Amortissement 1.053

RENVOIS:

a. Veuillez voir l'annexe methodologique pour explication ces calculs
b. Cout economique de ressources financiers suppose 11%
c. Voir decomposition du gas-oil
d. Selon la decomposition des couts de main d'oeuvre pour la DUNAM
e. 70% materiel ("autres outils agricoles") et 30% main d'oeuvre
f. 50% salaires, 30% materiel, et 20% capital
g. Selon Departement de la Protection Vegetale
h. Selon la decomposition de phytoate

SOURCES: SONAPROV et DPV

sonaprov

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE TRANSPORT ROUTIER

POSTE	COUT		REPARTITION	TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
Personnel	0.400	100%	Main d'oeuvre		0.342
			Charges Sociales	17.00%	0.058
Consommations Intermediares	0.350	50%	Parties et Pieces Detachees		0.128
			Taxe sur parties et pieces det.	37.10%	0.047
		50%	Gas-oil		0.175
			(Selon gas-oil secteur agricole)		
Amortissements du materiel	0.150	100%	Camions		0.109
			Taxe a l'importation (vehicules	37.10%	0.041
			(pour transp. marchandises)		
Autres Frais Divers	0.100	33%	Parties et Pieces Detachees		0.025
			Taxe sur parties et pieces det.	37.10%	0.009
		33%	Pieces de rechange usine		0.025
			Taxe sur pieces de rech.-usines	35.30%	0.009
		33%	Electricite		0.032
			Taxe a l'electricite	6.38%	0.000
TOTAL	1.000				1.000

COUT DE TRANSPORT ROUTIER

	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
Personnel	1.000	0.400	0.400			0.400		0.058	0.342			0.342			
Consommations Intermediaire															
...Parties et Pieces Detachees	1.000	0.175	0.175			0.175	0.047		0.128	0.128					(a)
...Gas-oil	1.000	0.175	0.175	0.023	0.016	0.136	0.001	0.001	0.134	0.110		0.005	0.017	0.002	(b)
Amortissements du Materiel	1.000	0.150	0.150			0.150	0.041		0.109	0.109					
Autres Frais Divers	1.000	0.100	0.100			0.100	0.012	0.006	0.082	0.041		0.038	0.002	0.001	(c)
COEFFICIENTS DE DECOMPOSITION			1.000	0.023	0.016	0.961	0.101	0.065	0.795	0.388	0.000	0.385	0.019	0.002	
% du cout economique									1.000	0.489	0.000	0.484	0.024	0.003	

RENVOIS:

a. Supposes 50% parties et pieces detachees, 50% gas-oil

b. Voir decomposition gas-oil, destination secteur non-agricole

c. Autres Frais Divers: 1/3 parties et pieces detachees, 1/3 pieces de rechange pour les usines, et 1/3 electricite

SOURCE: Direction des Transports Terrestres

transrou

SCHEMATIQUE DE LA DECOMPOSITION DU COUT DE TRANSPORT FERROVIER

POSTE	COUT		REPARTITION	TAUX DE TAXE OU DE SUBVENTION	MONTANT DETAILLE
ENERGIE ET CARBURANTS					
Electricite	299.152	100%	Electricite		281.211
			Taxe a l'electricite	6.38%	17.941
Eau	96.327	100%	Capitale		96.327
Essence	23.711	100%	Essence		11.521
			Taxe a l essence normale non-ag	105.82%	12.190
Gas-oil	95.587	100%	Gas-oil		95.587
			(Selon gas-oil non-agricole)		
Fuel Lourd	1.285.173	100%	Fuel Lourd		1.001.694
			Taxe sur le fuel lourd agr.	28.30%	283.479
Huiles et graisses	311.264	100%	Huiles et graisses		253.969
			Taxe huiles et graisses non-ag.	22.56%	57.295
MATERIAUX					
Ingrisses	93.197	100%	Echangeable		93.197
Peinture et Vernis	43.296	100%	Echangeable		43.296
Articles de fonderie	175.007	100%	Echangeable		104.867
			Taxe autres outils agricoles	66.88%	70.140
Petit Outillage	91.789	100%	Echangeable		55.002
			Taxe autres outils agricoles	66.88%	36.787
Materiel Electrique	361.723	100%	Echangeable		340.029
			Taxe sur l'electricite	6.38%	21.694
Produits en caoutchouc	144.882	100%	Parties et Pieces Detachees		105.676
			Taxe sur parties et pieces det.	37.10%	39.206
Pieces Detachees	4.271.521	100%	Parties et Pieces Detachees		3.115.738
			Taxe sur parties et pieces det.	37.10%	1.155.783
FRAIS D EXPLOITATION					
Lover et charges locative	183.842	100%	Capitale		183.842
Reparation mecanique	102.386	100%	Main d'oeuvre		87.509
			Charges Sociales	17.00%	14.877
Reparations Batiment	124.321	50%	Main d'oeuvre		53.128
			Charges Sociales	17.00%	9.032
		50%	Echangeables		62.161
Assurance	8.914	100%	Capitale		8.914

Transport Personnel	56.303	100%	Selon transport routier		56.303
Transport marchandises	325.262	100%	Selon les moyens du tableau		325.262
FRAIS GENERAUX					
Fourniture du bureau	8.311	100%	Fournitures du bureau		4.492
			Taxe sur les fourn. du bureau	85.00%	3.819
Frais de PTT	145.909	100%	Capitale		145.909
Frais Financiers	38.734	100%	Capitale		38.734
Travaux executes a l'ext.	216.743	100%	Main d'oeuvre		185.250
			Charges Sociales	17.00%	31.493
Remunerations interseed.	109.543	100%	Capitale		109.543
Publicite	27.102	100%	Echangeable		27.102
Mission	32.786	100%	Main d'oeuvre		28.022
			Charges Sociales	17.00%	4.764
Autres Frais de Personnel	31.301	100%	Main d'oeuvre		26.753
			Charges Sociales	17.00%	4.548
Salaires	14.619.487	100%	Main d'oeuvre		12.495.288
			Charges Sociales	17.00%	2.124.199
Impots et Taxes Indir.	1.038.312	100%	Taxes Indirectes		1.038.312
Frais divers d'exploit.	350.773	100%	Selon les moyens du tableau		350.773
Amortissements	4.517.231	50%	Pieces Detachees		1.643.570
			Taxe sur les pieces detachees		608.121
		50%	Batiment/terre		2.251.690
TOTAL	29.216.039				29.216.039

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COUT DE TRANSPORT FERROVIAIR

	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEBLS	.....INTRANTS NON-ECHANGEABLES... ... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
ENERGIE ET CARBURANTS													
Electricite	299,152			299,152	17,941		281,211	281,211					
Eau	96,327			96,327			96,327				96,327		
Essence	23,711			23,711	12,190		11,521	11,521					
Gas-Oil	95,587	12,809	8,794	73,984			73,984	64,425		96	9,176	287	(a)
Fuel Lourd	1,285,173			1,285,173	283,479		1,001,694	1,001,694					(b)
Huiles et Graisses	311,264			311,264	57,295		253,969	253,969					(c)
MATERIAUX													
Imprimes	93,197			93,197			93,197	93,197					
Peinture et Vernis	43,296			43,296			43,296	43,296					
Articles de fonderie	175,007			175,007	70,140		104,867	104,867					
Petit Outillage	91,789			91,789	36,787		55,002	55,002					(d)
Materiel Electrique	361,723			361,723	21,694		340,029	340,029					(e)
Produits en caoutchouc	144,882			144,882	39,206		105,676	105,676					
Pieces detachees	4,271,521			4,271,521	1,155,783		3,115,738	3,115,738					(f)
FRAIS D'EXPLOITATION													
Loyer et charges locatives	183,842			183,842			183,842				183,842		
Reparation mecanique et electrique	102,366			102,386		14,877	87,509			87,509			
Reparations Batiment	124,321			124,321		9,032	115,289	62,161		53,128			
Assurance	8,914			8,914			8,914				8,914		(g)
Transport Personnel	56,303			56,303	6,700	3,603	21,417	23,197		21,395	1,295	(13	(h)
Transport Marchandises	325,262	325		324,937	32,201	25,045	267,691	88,146		147,018	6,831	25,696	(i)
FRAIS GENERAUX													
Fourniture de Bureau	8,311			8,311	3,819		4,492	4,492					
Frais de PTT	145,909			145,909			145,909				145,909		(j)
Frais Financiers	38,734			38,734			38,734				38,734		
Travaux executes a l'exterieur	216,743			216,743		31,493	185,250			185,250			
Remunerations intermediaires	109,543			109,543			109,543				109,543		
Publicite	27,102			27,102			27,102	27,102					
Mission	32,786			32,786		4,764	28,022			28,022			
Autres FBP	31,301			31,301		4,548	26,753			26,753			
Salaires	14,619,487			14,619,487		2,124,199	12,495,288			12,495,288			
Impots et Taxes Indirectes	1,038,312			1,038,312	1,038,312		0						
Frais divers d'exploitation	350,773	351		350,422	34,727	27,010	288,685	95,059		158,549	7,366	27,711	(j)
Amortissements	4,503,381			4,503,381	608,121		3,895,260	1,643,570				2,251,690	(k)
Prix de Revient	29,216,038	13,485	8,794	29,193,760	3,418,395	2,244,571	23,530,794	7,414,353	0	13,203,007	607,937	2,305,497	
Compensation avant prix de vente	(704,000)	(221,824)	(482,176)	0									
Prix de vente	28,512,038	(208,340)	(473,382)	29,193,760	3,418,395	2,244,571	23,530,794	7,414,353	0	13,203,007	607,937	2,305,497	
COEFFICIENTS DE DECOMPOSITION	1.000	(0.007)	(0.017)	1.024	0.120	0.079	0.825	0.260	0.000	0.463	0.021	0.081	
% du cout economique							1.000	0.315	0.000	0.561	0.026	0.098	

RENVOIS:

a. Pas ajuste pour l'agriculture
b. Voir decomposition de gas-oil
c. Ajuste pour l'agriculture
d. Taxes comme autres outils agricoles
e. Taxes comme outils a main agricole
f. Taxes comme les pieces detachees
g. 50% main d'oeuvre, 50% echangeables
h. Voir transports routiers
i. Selon le moyen des autres couts
j. Taxes comme les articles de bureaux
k. 50% pieces detachees, 50% batiment et terre

SOURCE: Direction des Transports Terrestres
transcdi

International Reference Price Calculations

PAYS: TUNISIE
SPECULATION: BLE DUR, HUM/SHUM, GRANDE
PRIX EQUIVALENT A LA FRONTIERE
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	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX FOB	$/t	1.00	127.50	127.50			127.50			127.50	127.50				
Fret, Assurance	$/t	1.00	15.00	15.00			15.00			15.00	15.00				
Ajustement pour la Qualite	$/t		0.00	0.00			0.00			0.00	0.00				
Prix CAF	$/t			142.50			142.50			142.50	142.50				
Taux de change officiel	D/$			0.84			0.84			0.84	0.84				
Prix CAF en Divers	DT/ql			11.97			11.97			11.97	11.97				
Charges Portuaires															
Frais bancaires		1.00	0.423	0.42	0.00	0.00	0.42	0.00	-0.27	0.69	0.00	0.00	0.00	0.69	0.00
Debarquement		1.00	0.416	0.42	0.00	0.00	0.42	0.01	0.04	0.37	0.16	0.00	0.21	0.09	0.00
Peage		1.00	0.190	0.19	0.00	0.00	0.19	0.00	0.02	0.17	0.05	0.00	0.11	0.00	0.00
Douane		1.00	11.797	11.80	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Frais a quai		1.00	0.299	0.30	0.00	0.00	0.30	0.01	0.03	0.27	0.11	0.00	0.15	0.00	0.00
Assurance		1.00	0.083	0.08	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.00	0.08	0.00
Surestaries		1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationnement		1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cadence		1.00	0.324	0.32	0.00	0.00	0.32	0.01	0.03	0.29	0.09	0.00	0.19	0.00	0.00
Subvention des dockeurs		1.00	0.115	0.12	0.00	-0.12	-0.12	0.00	0.00	-0.12	0.00	0.00	0.00	0.00	0.00
Marge de l'Office des Cereales		1.00	2.118	2.12	0.00	0.00	2.12	0.00	0.00	2.12	0.00	0.00	0.00	2.12	0.00
Charges de Livraison, Tunis-marche rural															
Transport	D/t	100.00	5.95	5.95	0.14	0.09	5.72	0.60	0.39	4.73	2.31	0.00	2.29	0.11	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charges de Livraison, marche rural-ferme															
Transport	D/t	30.00	3.50	3.50	0.08	0.06	3.36	0.35	0.23	2.78	1.36	0.00	1.35	0.07	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/t grains)				15.77	11.80	-0.12	3.74	0.03	-0.15	3.86	0.41	0.00	0.67	2.89	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/qx grains)				1.58	1.18	-0.01	0.37	0.00	-0.02	0.39	0.04	0.00	0.07	0.29	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/t grains)				21.72	11.94	-0.02	9.45	0.63	0.23	8.59	2.73	0.00	2.97	3.01	0.01
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/qx grains)				2.17	1.19	-0.00	0.95	0.06	0.02	0.86	0.27	0.00	0.30	0.30	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/t grains)				25.22	12.02	0.04	12.82	0.98	0.46	11.38	4.09	0.00	[illegible]	3.07	0.02
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/qx grains)				2.52	1.20	0.00	1.28	0.10	0.05	1.14	0.41	0.00	0.43	0.31	0.00

PAYS:TUNISIE
SPECULATION:BLE TENDRE,HASUR-HUMIDE,
PRIX EQUIVALENT A LA FRONTIERE
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	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX FOB	$/t	1.00	112.50	112.50			112.50			112.50	112.50				
Fret, Assurance	$/t	1.00	15.00	15.00			15.00			15.00	15.00				
Ajustement pour la Qualite	$/t		0.00	0.00			0.00			0.00	0.00				
Prix CAF	$/t			127.50			127.50			127.50	127.50				
Taux de change officiel	D/$			0.84			0.84			0.84	0.84				
Prix CAF en dinars	DT/ql			10.71			10.71			10.71	10.71				
Charges Portuaires															
Frais bancaires		1.00	0.360	0.36	0.00	0.00	0.36	0.00	-0.23	0.59	0.00	0.00	0.00	0.59	0.00
Debarquement		1.00	0.910	0.91	0.00	0.00	0.91	0.02	0.08	0.81	0.34	0.00	0.47	0.00	0.00
Peage		1.00	0.190	0.19	0.00	0.00	0.19	0.00	0.02	0.17	0.05	0.00	0.11	0.00	0.00
Douane		1.00	10.178	10.18	10.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Frais a quai		1.00	0.372	0.37	0.00	0.00	0.37	0.01	0.03	0.33	0.14	0.00	0.19	0.00	0.00
Assurance		1.00	0.120	0.12	0.00	0.00	0.12	0.00	0.00	0.12	0.00	0.00	0.00	0.12	0.00
Surestaries		1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationnement		1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cadence		1.00	0.577	0.58	0.00	0.00	0.58	0.01	0.06	0.51	0.16	0.00	0.35	0.00	0.00
Subvention des docheurs		1.00	0.069	0.07	0.00	-0.07	0.07	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
Marge de l'Office des Cereales		1.00	2.106	2.11	0.00	0.00	2.11	0.00	0.00	2.11	0.00	0.00	0.00	2.11	0.00
Charges de Livraison, Tuais-marche rural															
Transport	D/t	100.00	5.95	5.95	0.14	0.09	5.72	0.60	0.39	4.73	2.31	0.00	2.29	0.11	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charges de Livraison, marche rural-ferme															
Transport	D/t	30.00	3.50	3.50	0.06	0.06	3.36	0.35	0.23	2.78	1.36	0.00	1.35	0.07	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/t grains				14.39	10.18	-0.07	4.57	0.04	-0.04	4.56	0.70	0.00	1.12	2.81	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/qx grain				1.49	1.02	-0.01	0.46	0.00	-0.00	0.46	0.07	0.00	0.11	0.28	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/t grains)				20.83	10.32	0.03	10.28	0.64	0.35	9.29	3.01	0.00	3.41	2.93	0.01
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/qx grains)				2.08	1.03	0.00	1.03	0.06	0.03	0.93	0.30	0.00	0.34	0.29	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/t grains)				24.33	10.40	0.08	13.65	1.00	0.58	12.07	4.37	0.00	4.76	2.99	0.02
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/qx grains)				2.43	1.04	0.01	1.36	0.10	0.06	1.21	0.44	0.00	0.48	0.30	0.00

PAYS:TUNISIE
SPECULATION:ORGE,H&SUB-HUMIDE,GRANDE
PRIX EQUIVALENT A LA FRONTIERE
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	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX FOB	$/t	1.00	85.00	85.00			85.00			85.00	85.00				
Fret, Assurance	$/t	1.00	15.00	15.00			15.00			15.00	15.00				
Ajustement pour la Qualite	$/t		0.00	0.00			0.00			0.00	0.00				
Prix CAF	$/t			100.00			100.00			100.00	100.00				
Taux de change officiel	D/$			0.84			0.84			0.84	0.84				
Prix CAF en dinars	DT/ql			8.40			8.40			8.40	8.40				
Charges Portuaires															
Frais bancaires		1.00	0.382	0.38	0.00	0.00	0.38	0.00	-0.24	0.62	0.00	0.00	0.00	0.62	0.00
Debarquement		1.00	7.512	7.51	0.00	0.00	7.51	0.17	0.66	6.69	2.83	0.00	3.85	0.00	0.00
Peages		1.00	0.190	0.19	0.00	0.00	0.19	0.00	0.02	0.17	0.05	0.00	0.11	0.00	0.00
Douane		1.00	8.527	8.53	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Frais a quai		1.00	1.655	1.66	0.00	0.00	1.66	0.04	0.14	1.47	0.62	0.00	0.85	0.00	0.00
Assurance		1.00	0.095	0.10	0.00	0.00	0.10	0.00	0.00	0.10	0.00	0.00	0.00	0.10	0.00
Surestaries		1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationnement		1.00	1.04	1.04	0.00	0.00	1.04	0.00	0.00	1.04	0.00	0.00	0.00	1.04	0.00
Cadence		1.00	1.411	1.41	0.00	0.00	1.41	0.03	0.14	1.24	0.40	0.00	0.85	0.00	0.00
Subvention des dockeurs		1.00	0.115	0.12	0.00	-0.12	-0.12	0.00	0.00	-0.12	0.00	0.00	0.00	0.00	0.00
Marge de l'Office des Cereales		1.00	1.986	1.99	0.00	0.00	1.99	0.00	0.00	1.99	0.00	0.00	0.00	1.99	0.00
Charges de Livraison, Tunis-marche rural															
Transport	D/t	100.00	5.95	5.95	0.14	0.09	5.72	0.60	0.39	4.73	2.31	0.00	2.29	0.11	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charges de Livraison, marche rural-ferme															
Transport	D/t	30.00	3.50	3.50	0.08	0.06	3.36	0.35	0.23	2.78	1.36	0.00	1.35	0.07	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/t grains				22.91	8.53	-0.12	14.15	0.24	0.72	13.19	3.91	0.00	5.66	3.74	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/qx grain				2.29	0.85	-0.01	1.42	0.02	0.07	1.32	0.39	0.00	0.57	0.37	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/t grains)				28.86	8.67	-0.02	19.87	0.84	1.11	17.92	6.22	0.00	7.95	3.86	0.01
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/qx grains)				2.89	0.07	-0.00	1.99	0.08	0.11	1.79	0.62	0.00	0.80	0.39	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/t grains)				32.36	8.75	0.04	23.23	1.19	1.33	20.71	7.58	0.00	9.30	3.92	0.02
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/qx grains)				3.24	0.87	0.00	2.32	0.12	0.13	2.07	0.76	0.00	0.93	0.39	0.00

PAYS: TUNISIE

SPECULATION: VIANDE BOV INTEGRE RACE PRIX EQUIVALENT A LA FRONTIERE a113 ... p131	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O GAL	CAPITALE	TERRE
Prix CIF Tunis	D/kg			1.881			1.881			1.881	1.881				
Fret, assurance	$/t			0.000			0.000			0.000	0.000				
Ajustement pour la Qualite				0.000			0.000			0.000	0.000				
Prix CIF	D/kg			1.881			1.881			1.881	1.881				
Taux de Change Officiel	D/$						0.000			0.000	0.000				
Prix CIF en dinars	D/kg			1.881			1.881			1.881	1.881				
Charges Portuaires et de Livraison															
TFD + DD	16% du prix CIF			0.301	0.301	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Frais generaux (y inclu transport)				0.356	0.000	0.000	0.356	0.049	0.026	0.281	0.058	0.000	0.152	0.071	0.000
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-ABBATOIR (D/kg)				0.657	0.301	0.000	0.356	0.049	0.026	0.281	0.058	0.000	0.152	0.071	0.000

PAYS: TUNISIE

SPECULATION: LAIT.RACE PURE.INTEGRE PRIX EQUIVALENT A LA FRONTIERE a110 ... p157	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX FOB, LAIT EN POUDRE 0°	$/t			1100.000			1100.000			1100.000	1100.000				
Fret, Assurance	$/t			100.000			100.000			100.000	100.000				
Teneur en lait en poudre 0° dans un litre de lait frais				6.25%			6.25%			6.25%	6.25%				
PRIX FOB, LAIT EN POUDRE 26°	$/t			1430.000			1430.000			1430.000	1430.000				
Fret, Assurance	$/t			100.000			100.000			100.000	100.000				
Teneur en lait en poudre 26° dans un litre de lait frais				5.00%			5.00%			5.00%	5.00%				
PRIX FOB, MATIERE GRASSE	$/t			2400.000			2400.000			2400.000	2400.000				
Fret, Assurance	$/t			100.000			100.000			100.000	100.000				
Teneur en matiere grasse dans un litre de lait frais				3.40%			3.40%			3.40%	3.40%				
Prix CAF	$/t			236.500			236.500			236.500	236.500				
Taux de Change Officiel	D/$			0.840			0.840			0.840	0.840				
Prix CAF en dinars	D/kg			0.199			0.199			0.199	0.199				
Prix CAF en dinars	D/l			0.199			0.199			0.199	0.199				
Charges Portuaires															
...BD, TFB, TPEA	(%)	13% du prix cif		0.026	0.000	0.000	0.026	0.000	0.000	0.026	0.000	0.000	0.000	0.000	0.000
...Frais de debarquement	D/l			0.004	0.000	0.000	0.004	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000
...Pertes	(%)	2% du prix cif		0.004	0.000	0.000	0.004	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.000
Charges de Livraison, port-laiterie															
Transport	D/l			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Distribution	D/l			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Frais de reconstitution															
Matieres consommables	D/l			0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TFSE	D/l			0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Frais de personnel	D/l			0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Amortissements	D/l			0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Charges de financement	D/l			0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Prime pour le lait frais	20% du prix CAF			0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-ENTREE LAITERIE	(D/t)			0.134	0.000	0.000	0.034	0.000	0.000	0.034	0.004	0.000	0.000	0.000	0.000
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-ENTREE LAITERIE	(D/kg)			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

PAYS: TUNISIE

SPECULATION: AGRUMES PRIX EQUIVALENT A LA FRONTIERE a266 ... p300	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX CIF, Marseille				4000.00			4000.00			4000.00	4000.00				
...Fret	(FF/t)	1.00	176.00	176.00	0.00	0.00	176.00	0.00	0.00	176.00	176.00	0.00	0.00	0.00	0.00
...Debarquement	(FF/t)	1.00	117.60	117.60	0.00	0.00	117.60	0.00	0.00	117.60	117.60	0.00	0.00	0.00	0.00
...Transit	(FF/t)	1.00	172.00	172.00	0.00	0.00	172.00	0.00	0.00	172.00	172.00	0.00	0.00	0.00	0.00
...Incidence tare	(FF/t)	1.00	50.00	50.00	0.00	0.00	50.00	0.00	0.00	50.00	50.00	0.00	0.00	0.00	0.00
...Droits et taxes	(FF/t)	1.00	135.00	135.00	0.00	0.00	135.00	0.00	0.00	135.00	135.00	0.00	0.00	0.00	0.00
...Commission	(FF/t)	1.00	280.00	280.00	0.00	0.00	280.00	0.00	0.00	280.00	280.00	0.00	0.00	0.00	0.00
Prix, FOB Tunis	(FF/t)			3069.40			3069.40			3069.40	3069.40				
Taux de Change Officiel	(D/FF)			0.10			0.10			0.10	0.10				
Prix, FOB Tunis	(D/kg)			0.307			0.307			0.307	0.307				
Charges Portuaires en Tunisie															
...Embarquement	(D/t)	1.00	2.42	2.42	0.00	0.00	2.42	0.05	0.21	2.16	0.91	0.00	1.24	0.00	0.00
...T.P.S.(7.53% de l'embqmt)	(D/t)	1.00	0.18	0.18	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Peage	(D/t)	1.00	0.20	0.20	0.00	0.00	0.20	0.00	0.02	0.17	0.06	0.00	0.12	0.00	0.00
...Extra frais	(D/t)	1.00	0.30	0.30	0.00	0.00	0.30	0.01	0.03	0.26	0.08	0.00	0.18	0.00	0.00
...MAN	(D/t)	1.00	0.32	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Timbre connaissement Extr.	(D/t)	1.00	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...Transit	(D/t)	1.00	4.00	4.00	0.09	0.06	3.84	0.48	0.26	3.10	1.48	0.00	1.54	0.08	0.01
...Incidence tare	(D/t)	1.00	0.67	0.67	0.00	0.00	0.67	0.01	0.07	0.59	0.19	0.00	0.40	0.00	0.00
...Droits et taxes	(D/t)			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...T.F.D.	(D/t)	1.00	0.30	0.30	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...OFITEC	(D/t)	1.00	1.37	1.37	0.00	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...TCA	(D/t)	1.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charges de Livraison, port-stn de condit															
...Transport	(D/t)			3.78	0.09	0.06	3.63	0.38	0.24	3.00	1.47	0.00	1.45	0.07	0.01
...Distribution	(D/t)	1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cout du Conditionnement	(D/t)			27.12	0.03	0.02	27.08	6.02	0.21	20.85	11.93	0.00	8.43	0.49	0.00
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DE GROS	(D/t)			11.851	2.992	1.437	7.477	0.559	0.588	6.281	2.718	0.000	3.478	0.077	0.008
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DE GROS	(D/kg)			0.012	0.003	0.001	0.007	0.001	0.001	0.006	0.003	0.000	0.003	0.000	0.000
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-STN DE CONDIT	(D/t)			42.750	3.108	1.511	38.132	6.957	1.040	30.135	16.116	0.000	13.361	0.641	0.019
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-STN DE CONDIT	(D/kg)			0.043	0.003	0.002	0.036	0.007	0.001	0.030	0.016	0.000	0.013	0.001	0.000

PAYS: TUNISIE
SPECULATION: POMMES DE TERRE
PRIX EQUIVALENT A LA FRONTIERE
a122 ... p162

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGEABLES	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX CIF, Marseille	(FF/t)	1.00	3500.00	3500.00			3500.00			3500.00	3500.00				
Commission	(FF/t)	1.00	210.00	210.00			210.00			210.00	210.00				
Fret	(FF/t)	1.00	148.00	148.00			148.00			148.00	148.00				
Debarquement	(FF/t)	1.00	143.00	143.00			143.00			143.00	143.00				
Forfait de transit	(FF/t)	1.00	164.77	164.77			164.77			164.77	164.77				
MCAD	(FF/t)	1.00	18.00	18.00			18.00			18.00	18.00				
Credit d'enlevement	(FF/t)	1.00	0.50	0.50			0.50			0.50	0.50				
Peage port	(FF/t)	1.00	7.23	7.23			7.23			7.23	7.23				
Prix FOB, Tunis	(FF/t)			2808.50			2808.50			2808.50	2808.50				
Taux de Change Officiel	(D/FF)			0.10			0.10			0.10	0.10				
Prix FOB, Tunis	DT/kg			0.281			0.281			0.281	0.281				
Charges Portuaires en Tunisie															
Redevance traitement informatique				0.40	0.00	0.00	0.40	0.01	0.03	0.36	0.15	0.00	0.21	0.00	0.00
Redevance compensative				0.20	0.00	0.00	0.20	0.00	0.00	0.20	0.00	0.00	0.00	0.20	0.00
OFITEC				0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Taxe compensative legumes				2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Taxe de formalite douaniere				0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Embarquement				5.50	0.00	0.00	5.50	0.12	0.48	4.90	2.08	0.00	2.82	0.00	0.00
Intervention transitaire				4.00	0.09	0.06	3.84	0.40	0.26	3.18	1.55	0.00	1.54	0.08	0.01
Charges de Livraison, port-marche rural															
Transport	D/t	100.00	5.950	5.95	0.14	0.09	5.72	0.60	0.39	4.73	2.31	0.00	2.29	0.11	0.01
Distribution	D/t	* 1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charges de Livraison, marche rural-ferme															
Transport	D/t	30.000	3.500	3.50	0.08	0.06	3.36	0.35	0.23	2.78	1.36	0.00	1.35	0.07	0.01
Distribution	D/t	1.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (D/t)				18.39	2.43	0.30	15.66	1.14	1.16	13.36	6.09	0.00	6.86	0.39	0.02
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (D/kg)				0.02	0.00	0.00	0.02	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (D/t)				21.89	2.51	0.35	19.02	1.49	1.39	16.14	7.45	0.00	8.20	0.46	0.03
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (D/kg)				0.02	0.00	0.00	0.02	0.00	0.00	0.02	0.01	0.00	0.01	0.00	0.00

PAYS: TUNISIE
SPECULATION: DATTES/DEGLET NOUR
PRIX EQUIVALENT A LA FRONTIERE
a214 ... p242

	UNITES	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX CIF, Marseilles	FF/t	17350.00			17350.00			17350.00	17350.00				
Frot, Assurance	FF/t	850.00			850.00			850.00	850.00				
Prix FOB	FF/t	16500.00			16500.00			16500.00	16500.00				
Taux de Change Officiel	D/FF	0.10			0.10			0.10	0.10				
Prix FOB en dinars	D/kg	1.650			1.650			1.650	1.650				
Charges Portuaires													
...Mise en FOB	D/t	19.573	0.000	0.000	19.573	0.000	0.000	19.573	0.000	0.000	0.000	0.000	0.000
...Pertes	D/t	13.036	0.000	0.000	13.036	0.000	0.000	13.036	13.036	0.000	0.000	0.000	0.000
...Amortissement	D/t	40.380	0.000	0.000	40.380	0.000	0.000	40.380	0.000	0.000	0.000	40.380	0.000
...Frais financiers	D/t	29.503	0.000	0.000	29.503	0.000	0.000	29.503	0.000	0.000	0.000	29.503	0.000
...Fonctionnement	D/t	31.538	0.000	0.000	31.538	0.000	0.000	31.538	0.000	0.000	0.000	0.000	0.000
Charges de Livraison, port-sortie usine													
...Transport	D/t	46.923	1.092	0.747	45.084	4.742	3.044	37.298	18.227	0.000	18.069	0.904	0.097
Cout de conditionnement	D/t	382.539	-16.800	-3.392	402.731	73.303	11.848	317.579	239.474	0.000	69.887	5.594	2.645
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-SORTIE USINE	(D/t)	180.953	1.092	0.747	179.114	4.742	3.044	171.328	31.263	0.000	18.069	70.787	0.097
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-SORTIE USINE	(D/kg)	0.181	0.001	0.001	0.179	0.005	0.003	0.171	0.031	0.000	0.018	0.071	0.000
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-ENTREE USINE	(D/t)	563.492	-15.708	-2.645	581.845	78.045	14.892	488.907	270.737	0.000	87.956	76.381	2.743
TOTAL CHARGES PORTUAIRES ET LIVRAISON PORT-ENTREE USINE	(D/kg)	0.563	-0.016	-0.003	0.582	0.078	0.015	0.489	0.271	0.000	0.088	0.076	0.003

PAYS: TUNISIE
SPECULATION: OLIVES-NORD
PRIX EQUIVALENT A LA FRONTIERE
a221 ... p251

	UNITES	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX CIF CEE	ECU/t	1349.08			1349.08			1349.08	1349.08				
Frais d'approche, CEE	ECU/t	25.11			25.11			25.11	25.11				
Fret, Assurance	ECU/t				0.00			0.00	0.00				
Prix FOB	ECU/t	1323.97			1323.97			1323.97	1323.97				
Taux de Change Officiel	D/ECU	0.908			0.908			0.908	0.908				
Prix FOB en dinars	D/kg	1.202			1.202			1.202	1.202				
Frais sur exportation													
...Achat, emballage	D/kg	0.045	0.000	0.000	0.045	0.005	0.003	0.036	0.008	0.000	0.019	0.009	0.000
...Frais sur vente	D/kg	0.018	0.000	0.000	0.018	0.002	0.001	0.015	0.003	0.000	0.008	0.004	0.000
...Fret	D/kg	0.022	0.001	0.000	0.022	0.002	0.001	0.018	0.009	0.000	0.009	0.000	0.000
...Frais financiers	D/kg	0.019	0.000	0.000	0.019	0.000	0.000	0.019	0.000	0.000	0.000	0.019	0.000
...Impots et taxes	D/kg	0.023	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
...Courtage	D/kg	0.018	0.000	0.000	0.018	0.000	0.000	0.018	0.000	0.000	0.018	0.000	0.000
Frais sur collecte													
...Frais sur achat	D/kg	0.005	0.000	0.000	0.005	0.001	0.000	0.004	0.001	0.000	0.002	0.001	0.000
...Frais d'approche	D/kg	0.005	0.000	0.000	0.005	0.000	0.001	0.004	0.000	0.000	0.004	0.000	0.000
...Frais financiers	D/kg	0.025	0.000	0.000	0.025	0.000	0.000	0.025	0.000	0.000	0.000	0.025	0.000
...Frais de gestion	D/kg	0.012	0.000	0.000	0.012	0.002	0.001	0.010	0.002	0.000	0.005	0.002	0.000
...Frais d'intervention	D/kg	0.023	0.000	0.000	0.023	0.003	0.002	0.018	0.004	0.000	0.010	0.005	0.000
...Marges communes	D/kg	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL FRAIS EXPORTATION ET COLLECTE, PORT-HUILERIE (D/kg)		0.231	0.039	0.000	0.192	0.015	0.010	0.168	0.027	0.000	0.075	0.065	0.000

International Reference Price Series

INTERNATIONAL WHEAT PRICES

Year	SRW #2 (a)	SRW #1 (b)	No. 1 Western Spring (c)	HRW #1 (d)	HRW #2 (e)	#1 Durum (f)	#3 Durum (g)	Ratio #3 Durum/ HRW #2 (h)
1950	66.9	NA	69.8	NA	NA			
1951	72.4	NA	80.5	NA	NA			
1952	72.0	NA	84.5	NA	NA			
1953	68.0	NA	76.8	NA	NA			
1954	62.8	NA	66.5	NA	NA			
1955	61.7	NA	64.8	NA	56.1			
1956	62.8	NA	64.6	NA	52.9			
1957	63.2	NA	62.9	NA	52.6			
1958	61.4	NA	61.7	NA	52.5			
1959	58.1	NA	64.0	81.9	62.3			
1960	59.2	NA	62.9	80.5	61.7	83.3		
1961	59.5	NA	63.9	83.4	61.8	118.9		
1962	59.9	NA	67.0	87.5	62.6	95.1		
1963	59.2	NA	66.9	83.4	54.5	84.7		
1964	63.6	NA	70.2	64.3	55.5	61.8		
1965	58.1	NA	65.9	66.9	65.8	60.2		
1966	62.1	NA	70.4	73.9	58.3	70.2		
1967	61.7	NA	69.3	63.9	56.9	74.5		
1968	58.4	NA	66.6	56.2	53.3	72.0		
1969	56.2	NA	64.2	56.6	53.0	62.3		
1970	57.0	NA	62.8	62.8	54.1	65.6		
1971	62.1	NA	63.9	63.6	59.7	62.3		
1972	69.1	NA	71.3	93.7	60.5	81.9		
1973	136.8	NA	147.2	178.2	87.8	237.6		
1974	160.2	178.0	208.7	163.9	172.9	238.5		
1975	133.4	138.4	181.3	148.8	164.0	189.5		
1976	108.4	122.7	149.1	115.4	149.5	121.3		
1977	101.0	95.5	115.8	110.2	116.7	123.7		
1978	136.0	124.9	134.8	135.2	113.3	134.5		
1979	163.9	156.3	172.2	170.9	137.8	187.2		
1980	171.2	168.3	190.8	178.2	173.5	250.2	266.4	39.6%
1981	143.3	154.6	196.4	170.5	181.0	169.4	238.1	19.6%
1982	128.2	132.6	166.5	158.0	172.6	156.1	179.0	-5.7%
1983	140.4	137.3	169.5	152.9	158.4	177.6	191.9	10.1%
1984	138.5	140.2	165.4	148.4	153.3	160.5	193.0	14.5%
1985	126.4	128.7	173.3	129.7	149.5		174.0	5.8%
1986	109.4	118.4	160.6	105.2	130.5		151.3	5.4%

wheat

12.8% average

Notes: WHEAT.WK1

(a) 1950-1973 current US$/metric ton, f.o.b. Atlantic ports.
From Commodity Trade and Price Trends, 1985, p.56.
1974-1986 based on data from USDA, Livestock and Grain Market News Bureau. Original data expressed in cents/bushel converted to $/ton as explained in footnote (d). Prices are Export Prices, Gulf Coast, Soft Red Winter #2.

(b) 1974-1983 current US$/metric ton, f.o.b. Atlantic ports.
From Commodity Trade and Price Trends, 1985, p.56.
1984-1986 from Betty Dowe, EPD.

(c) Basis in store, Thunder Bay. Following introduction of new grading system in August 1982, this grade substitutes "Manitoba" (Canadian No.1, Northern).
1950-1983 from Commodity Trade and Price Trends, 1985, p.56;
1984-1986 from Betty Dowe.

(d) Figures are based on June-May year, except 1986 figure which is June through Feb. Prices represent Gulf Coast, Export Pirces of HRW #1.
Source is USDA, Livestock and Grain Market News Br., AMS.
Original data in cents/bushel converted assuming 36.7437 bushels/mt.

(e) Monthly data, averaged June-May. FOB Gulf, $/mt.

(f) Minneapolis quotes, $ mt. Monthly prices averaged June-May.

(g) CIF Rotterdam, $/mt. Prices represent CIF quotes, 1st Tuesday every month, averaged Jan-Dec.

(h) HRW #2 prices grossed up by 10% to account for FOB-->CIF conversion.

DURUM WHEAT PRICES ($/metric ton)
...No. 3 Hard Amber Durum, CIF Rotterdam

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	AVERAGE
1980	229.0	234.0	229.0	221.0	224.0	239.0	290.0	307.0	310.0	292.0	307.0	315.0	266.4
1981	279.5	262.0	257.0	240.0	238.0	219.0	200.5	186.0	387.0	193.0	195.0	200.0	228.1
1982	195.0	193.0	185.0	182.0	185.0	181.0	173.5	170.0	163.0	166.0	173.0	182.0	179.0
1983	171.0	169.0	166.0	180.0	205.0	198.0	192.0	201.0	210.0	210.0	203.0	198.0	191.9
1984	208.0	205.0	191.0	193.0	186.3	191.0	181.0	199.0	192.0	182.5	190.0	197.0	193.0
1985	202.0	185.0	178.5	179.0	180.0	182.0	166.0	153.0	165.0	162.0	166.0	169.0	174.0
1986	173.0	164.0	160.0	163.0	160.0	175.0	141.0	122.5	125.0	136.5	145.0	150.0	151.3
1987	154.0	157.0	154.0	161.0	152.4	163.0							156.9

Source: USDA/FAS, Ms. Leslie Burkette

Note: These represent price quotations from 1st Tuesday of each month.
Largest clients of US durum exports are EEC, Middle East, Africa, Poland.
In 1986, North Africa imported .75 mill MT US durum out of 1.3 mMT exported (58%);
In 1987, North Africa imported 1.3 mMT out of 2.1 mMT exported (61%).
No. 3 durum distinguished from No. 1 by size of kernels, cleanliness, # millable kernels per 100#, etc.
Relative prices in June 1987: No. 3, FOB = $3.97/bushel; No. 1, Minn = $4.20/bushel.
No. 3 US durum is comparable to No. 1 Canadian durum. Prices supposedly criss-cross.

duruncif

INTERNATIONAL BARLEY PRICES

Year	Value (a) (000 $) (1)	Volume (a) (000 mt) (2)	Unit Value ($/mt) (1)/(2)
1980	[illegible].591	1.475	136
1981	[illegible].874	1.764	148
1982	[illegible].388	1.962	127
1983	[illegible].949	941	121
1984	[illegible].551	2.052	133
1985	[illegible].960	1.187	123
1986	[illegible].391	756	83

Notes:

(a) US Exports. Fiscal Year is October to September.
Source is USDA/ERS/IED/GA.

INTERNATIONAL BEEF PRICES

Year	NZ Average FOB Beef and Veal (US$/mt) (a)	US Imported (US $/mt) (b)	Argentine (c)	Australian (d)	US East Coast Wholesale (e)
1950	N/A	694	N/A	N/A	N/A
1951	N/A	750	N/A	N/A	N/A
1952	N/A	570	N/A	N/A	N/A
1953	N/A	665	N/A	N/A	N/A
1954	N/A	662	462	352	N/A
1955	N/A	632	461	316	N/A
1956	N/A	572	401	302	N/A
1957	N/A	615	430	328	N/A
1958	N/A	653	428	385	N/A
1959	N/A	722	441	477	N/A
1960	N/A	737	426	506	N/A
1961	N/A	682	416	438	N/A
1962	N/A	714	333	386	N/A
1963	N/A	667	357	432	N/A
1964	N/A	841	570	482	N/A
1965	N/A	882	728	540	N/A
1966	N/A	1022	662	603	N/A
1967	N/A	1041	579	631	N/A
1968	N/A	1085	510	651	N/A
1969	N/A	1223	465	659	N/A
1970	1054	1304	563	709	N/A
1971	1153	1346	804	744	N/A
1972	1415	1480	1038	825	N/A
1973	1748	2011	1421	1201	N/A
1974	1179	1582	1482	778	N/A
1975	1285	1327	785	437	N/A
1976	1192	1581	821	621	N/A
1977	1347	1506	950	567	N/A
1978	2066	2138	957	776	N/A
1979	2505	2884	1779	1665	2239
1980	2469	2760	2192	1685	2302
1981	2310	2475	1881	1418	2202
1982	2257	2390	1494	1204	2235
1983	2274	2440	1446	1541	2155
1984	2477	2273	1530	1598	2199
1985	1786	2154	N/A	N/A	2002
1986	N/A	2092	N/A	N/A	1964

Notes: BEEF.WK1

a. Mostly frozen, boneless beef, New Zealand Dollar/ton.
1970 figure represents July, 1970 to June 1971.
Source is New Zealand Meat and Wool Board's Economic
Service Annual Review of Sheep, Aug. 1980 and Aug. 1985. Calculations
are from the NZ Department of Statistics.
Source for 1984 and 1985 is NZ Dept. of Statistics Monthly Abstract
of Statistics, Sept. 1986.
Original data is NZ$/mt, converted to US$/mt using Market Rate/Par or
Central Rate from IFS, 1985).

b. Source for 1950-1983 is Commodity Trade and Price Trends, 1985, p.60.
Source for 1984-1986 is Betty Dowe from EPD (monthly figures are on the way).
Figure is US $/mt, imported, frozen, boneless, 90% visible lean,
f.o.b. port of entry; as of December 1975, 85% chemical lean.
Original figures in US cents/kg).

c. Argentine f.o.b. unit value of frozen boneless manufacturing beef exports
to EEC. Figure is US cents/kg. Source for 1954-1983 is Commodity Trade
and Price Trends, 1985, p.60. Figure for 1984 is from Betty Dowe.
Original figures in US cents/kg).
Later 1984 figures are scanty and unreliable (according to Betty).

d. Australian oxen, 301-350 kg, bone in, wholesale, Brisbane, US cents/kg.
The 1984 figure is Jan-June figure. Source for all years is Commodity
Trade and Price Trends, 1985. The 1986 edition does not carry this series
because of the unobtainability of data.
Original figures in US cents/kg).

e. Fresh carcass, grade 3, 600-700 lb, US cents/lb.
Source is American Sheep Producers Council, Inc (Rick Weertheimer).
Monthly data for these years is in folder).
Original figures In US cents/lb, converted to US $/mt using 2204.6 lb./mt.

INTERNATIONAL LAMB PRICES

Year	New Zealand (a)	US wholesale (b)	NZ FOB (c)
1950	381	N/A	N/A
1951	426	N/A	N/A
1952	560	N/A	N/A
1953	616	N/A	N/A
1954	650	N/A	N/A
1955	652	N/A	N/A
1956	647	N/A	N/A
1957	689	N/A	N/A
1958	630	N/A	N/A
1959	540	N/A	N/A
1960	647	N/A	N/A
1961	529	N/A	N/A
1962	602	N/A	N/A
1963	616	N/A	N/A
1964	694	N/A	N/A
1965	717	N/A	N/A
1966	669	N/A	N/A
1967	647	N/A	N/A
1968	636	N/A	N/A
1969	698	N/A	N/A
1970	708	N/A	547
1971	725	N/A	511
1972	982	N/A	767
1973	1344	N/A	1052
1974	1310	N/A	973
1975	1425	N/A	999
1976	1541	N/A	1070
1977	1651	N/A	1062
1978	2174	N/A	1354
1979	2371	2326	1562
1980	2886	2908	1835
1981	2739	2682	1846
1982	2377	2689	1553
1983	1931	2774	1354
1984	1921	2900	1431
1985	1845	3103	1132
1986	2153	3114	N/A

Notes:

(a) US $/mt (original figures were in US cents/kg), frozen whole carcasses, Smithfield Market, London. Source for 1950-1993 is Commodity Trade and Price Trends, 1985, p.62. 1984-1986 prices are from Betty Dowe.

(b) US $/mt, fresh carcass, average weight 55-75 lb, wholesale prices (del. East Coast). Source is American Sheep Producers Council, Inc. (Original figures in US cents/lb. converted using 2204.6 pounds/mt).

(c) US $/mt, average f.o.b. of legs of lamb and carcass, mostly frozen. Source is Annual Review of Sheep and Beef Industry, Aug. 1980 and 1985, which is produced by New Zealand's Meat and Wool Board's Economic Service. the figures for 1984 and 1985 come directly from the monthly abstract of statistics which is produced by New Zealand's Department of Statistics. Year 1970 represents June 1970-July 1971, etc. (Original figures in NZ$/mt, converted using Market Rate/Par or Central Rate (ah)) from IFS, 1985).

INTERNATIONAL BUTTER, BUTTEROIL, AND NON-FAT DRY MILK PRICES

Year	.....Butter..... Spring	Fall (b)	.....Butteroil..... Spring	Fall (b)	...Non-Fat Dry Milk... Spring (c)	Fall
1982	N/A	2000-2050	N/A	2000-2500	N/A	800-850
1983	1800-1850	1500-1700	1900-2100	1800-1950	780-850	650-730
1984	1300-1400	1200-1400	1450-1700	1500-1700	640-740	600-700
1985	950-1050	1000-1050	1200-1400	1200-1400	600-650	600-650
1986	1050-1150	1000-1100	1250-1350	800-1300	680-720	680-720
1987					[illegible]	

Notes:

(a) All are FOB of Northern European and other major exporting countries. $ ton
Source is World Dairy Situation Outlook, USDA, various issues.
This is as far back as USDA has the series beacuse they only began doing the series in 1982.

(b) Fall 1986 does not include EEC sales to USSR and NZ sales to Brazil.

(c) 1987 figure is NZ FOB Price per ton in $US (Source: World Bank)
NZ to Tunisia sea freight aoprox. $150/ton

International Reference Price Calculations

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Transport Personnel	56.303	100%	Selon transport routier		56.303
Transport marchandises	325.262	100%	Selon les moyens du tableau		325.262
FRAIS GENERAUX					
Fourniture du bureau	8.311	100%	Fournitures du bureau		4.492
			Taxe sur les fourn. du bureau	85.00%	3.819
Frais de PTT	145.909	100%	Capitale		145.909
Frais Financiers	38.734	100%	Capitale		38.734
Travaux executes à . ext.	216.743	100%	Main d'oeuvre		185.250
			Charges Sociales	17.00%	31.493
Remunerations intermed.	109.543	100%	Capitale		109.543
Publicite	27.102	100%	Echangeable		27.102
Mission	32.786	100%	Main d'oeuvre		28.022
			Charges Sociales	17.00%	4.764
Autres Frais de Personnel	31.301	100%	Main d'oeuvre		26.753
			Charges Sociales	17.00%	4.548
Salaires	14.619.487	100%	Main d'oeuvre		12.495.288
			Charges Sociales	17.00%	2.124.199
Impots et Taxes Indir.	1.038.312	100%	Taxes Indirectes		1.038.312
Frais divers d exploit.	350.773	100%	Selon les moyens du tableau		350.773
Amortissements	4.503.381	50%	Pieces Detachees		1.643.570
			Taxe sur les pieces detachees		608.121
		50%	Batiment/terre		2.251.690
TOTAL	29.216.039				29.216.039

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COUT DE TRANSPORT FERROVIER

	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE	RENVOIS
ENERGIE ET CARBURANTS													
Electricite	299,152			299,152	17,941		281,211	281,211					
Eau	96,327			96,327			96,327				96,327		
Essence	23,711			23,711	12,190		11,521	11,521					
Gas-Oil	95,587	12,809	8,794	73,984			73,984	64,425		96	9,176	287	(a)
Fuel Lourd	1,285,173			1,285,173	283,479		1,001,694	1,001,694					(b)
Huiles et Graisses	311,264			311,264	57,295		253,969	253,969					(c)
MATERIAUX													
Imprimes	93,197			93,197			93,197	93,197					
Peinture et Vernis	43,296			43,296			43,296	43,296					
Articles de fonderie	178,087			178,087	70,140		104,947	104,947					
Petit Outillage	91,789			91,789	36,787		55,002	55,002					(d)
Materiel Electrique	361,723			361,723	21,694		340,029	340,029					(m)
Produits en caoutchouc	144,882			144,882	39,206		105,676	105,676					
Pieces detachees	4,271,521			4,271,521	1,155,783		3,115,738	3,115,738					(f)
FRAIS D'EXPLOITATION													
Lover et charges locatives	183,842			183,842			183,842				183,842		
Reparation mecanique et electrique	102,386			102,386		14,877	87,509			87,509			
Reparations Batiment	124,321			124,321		9,032	115,289	62,161		53,128			
Assurance	8,914			8,914			8,914				8,914		(g)
Transport Personnel	56,303			56,303	6,700	3,603	21,417	23,197		21,395	1,295	113	(h)
Transport Marchandises	325,262	325		324,937	32,201	25,045	267,691	88,146		147,018	6,831	25,696	(i)
FRAIS GENERAUX													
Fourniture de Bureau	8,311			8,311	3,819		4,492	4,492					
Frais de PTT	145,909			145,909			145,909				145,909		(j)
Frais Financiers	38,734			38,734			38,734				38,734		
Travaux executes a l'exterieur	216,743			216,743		31,493	185,250			185,250			
Remunerations intermediaires	109,543			109,543			109,543				109,543		
Publicite	27,102			27,102			27,102	27,102					
Mission	32,786			32,786		4,764	28,022			28,022			
Autres FDP	31,301			31,301		4,548	26,753			26,753			
Salaires	14,619,487			14,619,487		2,124,199	12,495,288			12,495,288			
Impots et Taxes Indirectes	1,038,312			1,038,312	1,038,312		0						
Frais divers d'exploitation	350,773	351		350,422	34,727	27,01[illegible]	288,685	95,059		158,549	7,366	27,711	(i)
Amortissements	4,503,381			4,503,381	608,121		3,895,260	1,643,570				2,251,690	(k)
Prix de Revient	29,216,038	13,485	8,794	29,193,760	3,418,395	2,244,571	23,530,794	7,414,353	0	13,203,007	607,937	2,305,497	
Compensation avant prix de vente	(704,000)	(221,824)	(482,176)	0									
Prix de vente	28,512,038	(208,340)	(473,382)	29,193,760	3,418,395	2,244,571	23,530,794	7,414,353	0	13,203,007	607,937	2,305,497	
COEFFICIENTS DE DECOMPOSITION	1.000	(0.007)	(0.017)	1.024	0.120	0.079	0.825	0.260	0.000	0.463	0.021	0.081	
% du cout economique							1.000	0.315	0.000	0.561	0.026	0.098	

RENVOIS:

a. Pas ajuste pour l'agriculture
b. Voir decomposition de gas-oil
c. Ajuste pour l'agriculture
d. Taxes comme autres outils agricoles
e. Taxes comme outils a main agricole
f. Taxes comme les pieces detachees
g. 50% main d'oeuvre, 50% echangeables
h. Voir transports routiers
i. Selon le moyen des autres couts
j. Taxes comme les articles de bureaux
k. 50% pieces detachees, 50% batiment et terre

SOURCE: Direction des Transports Terrestres
transcdi

PAYS: TUNISIE
SPECULATION: BLE DUR, HUM/SHUM, GRANDE
PRIX EQUIVALENT A LA FRONTIERE
a155 ... p197

	UNITES	QUANTITE	PRIX UNITAIRE	COUT	TAXES/SUBVENTIONS DIRECTES ECHANG	TAXES/SUBVENTIONS DIRECTES NON-ECH	COUT NET TX/SUBV DIRECTES	TAXES/SUBVENTIONS INDIRECTES ECHANG	TAXES/SUBVENTIONS INDIRECTES NON-ECH	COUT NET TOUTES TX/SUBV	INTRANTS ECHANGBLS	.....INTRANTS NON-ECHANGEABLES..... M D'O FAM	M D'O SAL	CAPITALE	TERRE
PRIX FOB	$/t	1.00	127.50	127.50			127.50			127.50	127.50				
Fret, Assurance	$/t	1.00	15.00	15.00			15.00			15.00	15.00				
Ajustement pour la Qualite	$/t		0.00	0.00			0.00			0.00	0.00				
Prix CAF	$/t			142.50			142.50			142.50	142.50				
Taux de change officiel	D/$			0.84			0.84			0.84	0.84				
Prix CAF en dinars	DT/ql			11.97			11.97			11.97	11.97				
Charges Portuaires															
Frais bancaires		1.00	0.423	0.42	0.00	0.00	0.42	0.00	-0.27	0.69	0.00	0.00	0.00	0.69	0.00
Debarquement		1.00	0.416	0.42	0.00	0.00	0.42	0.01	0.04	0.37	0.16	0.00	0.21	0.00	0.00
Peage		1.00	0.190	0.19	0.00	0.00	0.19	0.00	0.02	0.17	0.05	0.00	0.11	0.00	0.00
Douane		1.00	11.797	11.80	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Frais a quai		1.00	0.299	0.30	0.00	0.00	0.30	0.01	0.03	0.27	0.11	0.00	0.15	0.00	0.00
Assurance		1.00	0.083	0.08	0.00	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.00	0.08	0.00
Surestaries		1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Stationnement		1.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cadence		1.00	0.324	0.32	0.00	0.00	0.32	0.01	0.03	0.29	0.09	0.00	0.19	0.00	0.00
Subvention des dockeurs		1.00	0.115	0.12	0.00	-0.12	-0.12	0.00	0.00	-0.12	0.00	0.00	0.00	0.00	0.00
Marge de l'Office des Cereales		1.00	2.118	2.12	0.00	0.00	2.12	0.00	0.00	2.12	0.00	0.00	0.00	2.12	0.00
Charges de Livraison, Tunis-marche rural															
Transport	D/t	100.00	5.95	5.95	0.14	0.09	5.72	0.60	0.39	4.73	2.31	0.00	2.29	0.11	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Charges de Livraison, marche rural-ferme															
Transport	D/t	30.00	3.50	3.50	0.08	0.06	3.16	0.15	0.21	2.78	1.16	0.00	1.35	0.07	0.01
Distribution	D/t	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/t grains)				15.77	11.80	-0.12	3.74	0.03	-0.15	3.86	0.41	0.00	0.67	2.89	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE DU GROS (DT/qx grains)				1.58	1.18	-0.01	0.37	0.00	-0.02	0.39	0.04	0.00	0.07	0.29	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/t grains)				21.72	11.94	-0.02	9.45	0.63	0.23	8.59	2.73	0.00	2.97	3.01	0.01
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-MARCHE RURAL (DT/qx grains)				2.17	1.19	-0.00	0.95	0.06	0.02	0.86	0.27	0.00	0.30	0.30	0.00
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/t grains)				25.22	12.02	0.04	12.82	0.98	0.46	11.38	4.09	0.00	4.31	3.07	0.02
TOT CHARGES PORTUAIRES ET LIVRAISON PORT-FERME (DT/qx grains)				2.52	1.20	0.00	1.28	0.10	0.05	1.14	0.41	0.00	0.43	0.31	0.00

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INTERNATIONAL ORANGES PRICES

Year	Florida (a)	California (b)	Italy (c)
1959	3.84	6.03	NA
1960	5.05	6.52	NA
1961	3.93	6.89	NA
1962	5.68	6.70	NA
1963	6.52	6.55	NA
1964	4.85	5.59	NA
1965	4.11	5.37	NA
1966	3.05	5.20	NA
1967	4.87	8.48	NA
1968	4.36	5.48	NA
1969	3.96	5.71	NA
1970	4.37	6.49	12.[illegible]
1971	5.16	6.04	16.[illegible]
1972	4.72	7.01	15.[illegible]
1973	5.27	7.39	27.[illegible]
1974	5.46	7.28	17.[illegible]
1975	5.85	7.02	21.[illegible]
1976	6.35	8.00	16.[illegible]
1977	9.95	11.28	18.[illegible]
1978	13.00	14.31	38.[illegible]
1979	9.01	9.78	41.4[illegible]
1980	10.90	11.40	28.[illegible]
1981	11.80	15.20	20.[illegible]
1982	11.90	10.90	19.[illegible]
1983	14.10	15.50	27.[illegible]
1984	17.70	16.90	14.[illegible]
1985	12.10	13.60	NA

Notes:

(a) Season is October-September. All oranges FOB packed fresh. $/box (75 lbs./box). Source is Agricultural Prices, NASS, USDA. (Ben Huang, ERS).

(b) Season is October-September. All oranges FOB packed fresh, $/box (90 lbs./box). Source is Agricultural Prices, NASS, USDA. (Ben Huang, ERS).

(c) Blood Orange wholesale prices in Italy. Lira/100kg. Source: Eurostat, Agricultural Prices. 1976-1985, July 1985; Eurostat, Agrucultural Prices, Statistics, 1970-1981, July, 1982.

Annex B: User's Guide To The

Economic Indicators Model

Electronic spreadsheet models have been developed with LOTUS 123 and LOTUS HAL software packages for use in the calculation of profitability, protection and comparative advantage indicators for Tunisian agricultural activities.[1] It is assumed in this guide that the user has both a working knowledge of LOTUS as well as training in farm budgets, protection and comparative advantage methodologies. All models have been loaded onto a 20 MB hard disk card in an IBM PC-AT within the Ministry of Agriculture, CRSAE, where they are available to analysts.

Files can be retrieved for analysis on the screen.[2] HAL's contribution to the model is immediately noted. As a file is loading, the user will note that LINK is flashing in the upper right-hand corner of the monitor. This indicates that HAL is integrating spreadsheets as 123 loads the file, thus assuring that the most up-to-date input cost breakdown coefficients will be applied in the production budgets.

This user's guide describes 1) the structure of the annual crop template used to model eighteen cereals and three potatoes production systems and adapted for four beef and two milk production systems, 2) the structure of the tree crop template, used to model two citrus, one dates, and twenty-six olive production systems. 3) the steps necessary to update each model, and 4) the outputs which the template produces. It is recommended that the user read this manual along with one of the models displayed on the computer screen.

The objective of this spreadsheet model is to facilitate sensitivity analyses by providing one integrated set of calculations which compares domestic production, processing and marketing costs with international parity output and input prices in order to derive financial and economic profitability, nominal and effective protection and comparative advantage indicators (see section 2 of the main report for a definition of these terms). Prior to the advent of micro-computers, these calculations were normally done manually in separate stages. Outputs from crop budgets and international reference price calculations were later combined to derive

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[1] All use the software package LOTUS 123 (release 2). LOTUS 123 and LOTUS HAL are registered trademarks of the Lotus Development Corporation.

[2] With the HAL command line displayed (activated by typing the backslash), the user is advised to type UNDO OFF before loading the files. If this is not done, HAL will allocate too much memory to other software functions, preventing the entire production system model from being loaded.

Figure B.1: SCHEMATIC OF THE ECONOMIC INDICATORS MODEL TEMPLATE

Spreadsheet Header

Sensitivity Analysis

(outputs)

Key Parameters

(inputs)

Discounted Net Present Value Production Stream, years 1-30 (tree crops only)

Crop Budget

(inputs and calculations)

Breakdown Coefficients for Crop Budget

International Reference Price Matrix

(inputs + calculations)

Breakdown Coefficients for International Reference Price

Profitability, Protection and Comparative Advantage Indicators: Farm Level

(calculations)

Profitability, Protection and Comparative Advantage Indicators: Rural Market Level

(calculations)

Profitability, Protection and Comparative Advantage Indicators: Wholesale Level

(calculations)

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Spreadsheet Organization + Analyst Updates

Template Header

At the top of the model template are entered the identification of the file, the crop/technique name and addresses for each sub-module of the model and the date of the model's creation or revision. Assuming that a monochrome monitor tuned with proper contrast is being used, cell contents are displayed in two colors. Highlighted entries are those which may require updating by the analyst. Non-highlighted entries are those which normally do not have to be updated. The crop name and sub-module addresses are referenced below in the rest of the spreadsheet, i.e. need only be entered once and are then updated throughout the model when it is recalculated by pressing F9. These addresses are the ranges which should be entered in order to print out a sub-module. Should lines or columns later be inserted or deleted in the model, the analyst is advised to update the addresses in order to facilitate printing.

Sensitivity Analysis and Key Parameters

The outputs of the model, which are calculated in the worksheet at the bottom of the template, are summarized in the first half of this sub-module.

Net returns are calculated using both financial and economic input costs and output prices. They can be presented in three ways: 1) net returns per kilogram of processed output, 2) net returns per hectare (where returns per kilogram are multiplied by yield of processed output), and 3) value-added per labor day.[3] In addition, financial returns per kilogram and per hectare are calculated on both cash and imputed value bases. The first reflects actual cash disbursements made by the farmer (i.e. normally excludes payments for family farm labor and for land), whereas the second reflects values imputed for those two inputs. Whereas the former is a reflection of the actual cash position of the farmer, the decision to invest in a new production technology may actually be based on the latter which reflects real returns. In the Tunisian case study, the level of detail necessary to differentiate family from hired labor was lacking, and so the difference between cash and imputed value calculations is quite small.

All global parameters are grouped in the second half of this section for more efficient data entry and sensitivity analysis. Thus, for example, it is only necessary to enter such things as yields, prices, exchange rates,

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[3] Calculated as economic value-added per unit output (which equals reference output price minus the economic value of intermediate inputs) multiplied by the yield (output per hectare, or output per animal) and divided by the number of labor days.

netting out taxes and subsidies.[4] This is accomplished by multiplying each cost item by a vector of breakdown coefficients. The breakdown coefficients are themselves the result of a separate set of calculations, such as are found in Annex A which includes the input cost decomposition models for breaking down financial costs.

These data were gathered through interviews with the heads and financial managers of a host of public and private organizations. Variable as well as fixed costs were recorded. In some cases, amortization of capital investment costs had to be estimated, as the original investment was made with donor funding, and thus not monetized by the Tunisian organization. Financial cost-prices of each input were decomposed using domestic and trade fiscal code information provided by the Institut d'Economie Quantitative. It should be cautioned that these represent the official tax codes, and do not take into account exceptions or suspensions which may apply in particular cases.

Tax or subsidy interventions which affect particular line items within an input cost calculation are considered "indirect" interventions by this study. Only interventions which occur at the level between the sale of the input and its purchase by the farmer, such as the direct subsidy of fertilizer costs to farmers, are considered "direct" pricing interventions.

Each input cost model sums the financial cost breakdown across columns. Each of the column totals are divided by the "financial cost" column amount to derive the breakdown coefficients. Figures in this row are identified as a LOTUS range, named CF. HAL later refers to the CF range in each input model to decompose financial production costs in each commodity budget. In annex A, print-outs of the input models are included, along with an explanatory sheet which makes explicit the breakdown assumptions applied in each line. In this way, subsequent studies ought to be able to follow the logic, and update as seem fit.

Normally, these coefficients, once defined, will not have to be updated as frequently as the global parameters, the technical coefficients or the prices in the crop budget. Most of these will not vary between crops (exceptions being seed costs and processing costs, for example) and therefore need only be calculated once for the sector. However, in a situation of sectoral adjustment where the level of direct intervention by government actors is in flux (as in the level of fertilizer subsidies in Tunisia), the last few lines of the fertilizer decomposition models which

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[4] For a theoretical discussion of the methodology, see W. M. Corden, The Theory of Protection (Oxford: Clarendon Press, 1971). A discussion of applications of the methodology can be found in John M. Page, Jr., and J. Dirck Stryker, "Appendix A: Methodology for Estimating Comparative Costs and Incentives," in Scott R. Pearson, J. Dirck Stryker and Charles P. Humphreys, Rice in West Africa: Policy and Economics (Stanford: Stanford University Press, 1981).

reflect the intervention by the Caisse Générale de Compensation must be revised to change the breakdown coefficients.

The procedure for testing an alternative input pricing scenario would be as follows. Assume that the Super 45% fertilizer subsidy is to be removed. The analyst should load the file SUPER45.wk1, and save the original under a temporary name, such as ZSUPER45.wk1. SUPER45.wk1 can then be altered, with the sum in column E of the "Compensatrice (C.G.C.)" line erased, thus effectively eliminating the government subsidy. An examination of the coefficients de décomposition will indicate that the coefficients are different now. The revised SUPER45.wk1 should be saved. When next a cereals model is brought up for analysis, HAL will look for the breakdown coefficients (range CF) in SUPER45.wk1 which it will apply to the crop budget. The analyst must now revise the price per quintal which the farmer would be expected to pay under the new program. When the CALC button is pushed (F9), the model recalculates not only the new financial profitability figure, but revised protection coefficients as well, indicating that protection on input price has been reduced. The same procedure can be followed to test other input pricing scenarios. After the scenario testing, the analyst must remember to erase the SUPER45.wk1 and rename ZSUPER45.wk1 with its original name.

Crop Budget: Annual Crops

The crop budget constitutes the largest part of the template. The farmer's expenditures on inputs are calculated by multiplying quantity x unit price. These may or may not include direct taxes or subsidies (i.e. at the farmer level). A second stage nets all indirect taxes/ subsidies included in the cost of intermediary inputs. The net cost of tradables and non-tradables (family labor, hired labor, capital, and land) are broken out in the last five columns (L through P) and summed in column R. The values in columns I through P are derived by multiplying the financial cost figure in column E by the appropriate breakdown coefficient in columns S through AC.

Crop budget costs are divided into several sections. Labor is entered by activity and summed. As a default, the minimum agricultural wage, entered at the top of the model in the key parameters section, is used to value labor man-days. In cases where the analyst knows that a particular activity commands a higher (or lower) wage, these figures can be revised. In other countries where this model has been applied, total labor is disaggregated by family, hired and child labor, which allows for differential wage rates to be applied if necessary.

Quantities and farm-level prices for seed, other inputs, mechanized and/or animal traction, capital costs, etc. are entered as necessary. Operation and maintenance costs are entered in the final rows.

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Depending on the relevant point of comparison (farmgate, rural market or wholesale), appropriate additional costs can be added to farm production costs. Transport, handling and distribution margins are added as well as processing costs per unit of output (see figure B.2). Thus the outputs at this stage of the analysis are costs of production, collection, processing and distribution per unit of output in financial prices, both inclusive and net of direct and indirect taxes and subsidies.

Figure B.2: RELEVANT POINTS OF COMPARISON

```
                    DOMESTIC COSTS
==========================================================
     !        !        !          ) Production Costs
   FARM       !        !
              !        !          ) Collection Costs
              !        !          )
        RURAL MARKET   !
                       !          )
                       !          )
                       !          )
                       !          ) Processing and
                       !          ) Marketing Costs
                  WHOLESALE

=========================================================BORDER
```

Crop Budget: Tree Crops

Whereas the preceding crop budget discussion is appropriate for annual crops, the analysis of tree crop production must be altered to take account of development costs and uneven yield and cost profiles.

It is often the practice in tree crop production analysis to discount plantation development costs to year 0 and take a capital recovery factor, which is entered as a flow in an annualized tree crop budget depicting a typical year of full production.

While such treatment of development costs may be correct if the investment decision being analyzed is whether or not to start up a new plantation, the use of an annualized crop budget overstates average yields given the importance of lead-in (and to a lesser extent, phase-out) times for tree yields over the life of the plantation. In addition, if the investment decision being analyzed is whether or not to rehabilitate an existing plantation, then development costs should not be viewed from a year 0 vantage, but rather from some year within the production stream, and compounded accordingly.

The discounted benefit/costs stream sub-module of the tree crops models allows for this. As currently structured, the analyst enters in this part

of the model yield and input use profiles over the entire life of the plantation, assumed here to be 30 years.[5] Net present value calculations are made based on quantities of output per hectare and input use per hectare. The quantity in each year is multiplied by the appropriate discount factor, derived from the interest rate entered into the key parameters sub-module at the top of the template.[6] These discounted quantities are then fed into the quantities column (D) of the crop budget below, where unit prices are applied to inputs (the analysis assumes constant costs throughout the life of the plantation). Farm expenditures are broken down in the same fashion as in the annual crop model.

International Reference Price

In the next sub-module, an international reference price for the commodity produced is calculated. Assuming the country is a net importer of the commodity in question, the commodity's internationally quoted FOB price is the starting point. This is then converted into CIF value in local currency (converted at the official exchange rate) and brought to the relevant point of comparison (farm, rural market or wholesale point) by adding the appropriate customs duties, port charges and delivery costs (see figure B.3).

Figure B.3: RELEVANT POINTS OF COMPARISON:
CALCULATION OF BORDER PRICE

```
==========================================================

  FARM
    !                                  ) Delivery to
    !                                  ) Farm, or Millgate
    !   RURAL MARKET
    !        !                         ) Delivery to
    !        !                         ) Rural Market, or
    !        !                         ) Ex-Mill
    !        !                         )
    !        !                         )
    !        !    WHOLESALE
    !        !        !                ) Delivery to Wholesale
==================================================BORDER
```

[5] Should additional years be desired, the analyst can add the necessary columns to the right of the existing model.

[6] A discount factor is calculated as (1 / ((1+i)**(t-1))), i.e. one divided by one plus interest rate), raised to the power t minus 1.

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The analyst must take care that the model "compares comparables." If DRCs are to be calculated to assess the comparative advantage of an import substitution strategy in the major wholesale (consumption) center of Tunis, all relevant production, collection, processing and marketing costs must be aggregated to bring domestic costs to the capital city. These are to be compared with the Tunis equivalent of the border price, i.e. CIF at the border.

On the other hand, if the DRCs are to be calculated to assess the comparative advantage of production for local consumption, the border price equivalent at the farm or at the rural marketing point should be used in the calculation. It is useful to compare both for it may be the case that while domestic production makes good use of a country's domestic resources, its transport and/or processing activities do not. This is particularly the case in large countries, or countries with inefficient, and thus costly, transport sectors. The outputs at this stage of the analysis are the equivalent international reference prices, expressed in domestic currency, of the commodity.

Note that this part of the model must be adjusted by the analyst if 1) the country is not a net importer of the commodity in question, or 2) the commodity involves joint products.

In the case of the former when the country is actually a net exporter of the commodity in question, the relevant border price must be FOB, not CIF. Appropriate customs duties, port charges and delivery costs are subtracted from the FOB price in order to derive a producer price at the appropriate point of comparison.

In the case of a commodity which involves joint products, both or all of which are internationally traded (such as seed cotton versus cotton lint and cotton seed which is further processed into cottonseed oil and cottonseed cake; groundnuts versus groundnut oil and groundnut cake) the calculation of an international reference price is much more complex. Joint product international prices must be brought to the border and then up-country to the relevant point of comparison. If the analysis is to be done ex-mill (ginnery, refinery), then extraction ratios are applied to each product in order to derive the "raw product equivalent" price after product transformation. This international "raw product equivalent" must be compared to the domestic costs of production, inclusive of processing costs per unit of output. On the other hand, if the analysis is to be done at millgate, the processing costs are added (if an import-substitution activity, subtracted if an export activity) to the international "raw product equivalent" price before comparing to domestic production costs which have been brought to millgate.

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Calculation of Profitability, Protection and Comparative Advantage Indicators

At the bottom of the spreadsheet financial, economic and shadow prices of inputs and the output are compared at 1) farm level (production costs only), 2) rural market level (production plus collection costs), and 3) wholesale level (production, collection, processing and distribution costs) to determine a commodity's profitability, the protection which it is (or is not) accorded by domestic pricing and by trade and exchange rate policies, and the relative comparative advantage which the country (or the producing region) enjoys in producing the commodity vis-à-vis international producers.

The domestic output price is compared with domestic costs of production, i.e. inclusive of all taxes and subsidies, for the financial profitability analysis. The financial profitability analysis is done on both a cash and an imputed value basis. The former assesses profitability of the farmer's actual cash outlays versus returns to production, while the latter imputes a marginal financial value to factors of production (e.g., family labor, land) for which the farmer usually does not expend cash. Thus while a financial profitability analysis done on a cash basis may indicate substantial positive profits, future investment decisions are more likely to be made by the farmer on an imputed value basis. If this is only slightly positive, or even negative, the farmer may not be inclined to make future investments.

The border price of the commodity at the shadow exchange rate is compared with economic costs of production (i.e. net of taxes and subsidies) for the economic profitability analysis. The shadow exchange rate multiplier (SERM), where SERM equals (Shadow Exchange Rate / Official Exchange Rate), is calculated as a function of both rates which have already been entered by the analyst in the key parameters section above. In addition, conversion factors which convert financial into shadow prices for each non-tradable (these can be estimated or may be available from Programs departments), entered above as well, are applied here.[7]

In addition, domestic and world output prices (nominal protection coefficient, output) and tradable inputs prices (nominal protection coefficient, inputs) are compared as well as domestic and world value-added (effective protection coefficient and effective subsidy coefficient). These are done at both official and shadow exchange rates.

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[7] Note that within the World Bank one common practice is to apply a standard conversion factor (SCF) to the value of non-tradables when calculating domestic resource cost coefficients. This SCF is the inverse of the shadow exchange rate multiplier and only corrects for disequilibria in the foreign exchange market.

The nominal protection coefficient (NPC) indicates the percentage of protection (NPC > 1.00) or taxation (NPC < 1.00) accorded the farmer as a result of domestic output pricing and trade policies. It is calculated by comparing the domestic output price received by the farmer with the equivalent international output price, converted into local currency at the official exchange rate. The net nominal protection coefficient (NNPC) measures the degree of protection or taxation accorded the farmer as a result of domestic economic policies, inclusive of exchange rate policy. In this case, the equivalent international output price is converted into local currency at the shadow exchange rate. The same logic holds for the NPC on inputs, where the comparison is not between output prices, but rather between prices of tradable inputs in domestic and international equivalent terms.

The effective protection coefficient (EPC) goes one step further than the nominal protection analysis. In one coefficient are included the effect of domestic economic policy on output and tradable input prices. In the EPC, value-added (output price minus cost of tradable inputs) in both domestic and international equivalent prices is compared. Again, an EPC which is greater than one indicates net protection to the farmer whereas an EPC which is less than one indicates net taxation. The effective subsidy coefficient (ESC) subtracts net domestic taxes/subsidies on non-tradables from domestic value-added before comparing it with international value-added. As in the nominal protection analysis, the EPC and ESC are calculated both at official and shadow exchange rates, the latter procedure yielding the net effective protection coefficient (NEPC) and the net effective subsidy coefficient (NESC), in order to assess the additional protection or taxation faced by the farmer as a result of exchange rate policies.

Finally, the shadow costs of non-tradables used in domestic production are compared with international value-added calculated at the shadow exchange rate using the domestic resource cost (DRC) indicator. If this is less than one, it indicates that the crop/technique activity makes a good use of domestic resources to generate or save a unit of foreign exchange, whereas a DRC which is greater than one indicates that the crop/technique activity makes an inefficient use of domestic resources. There may be negative DRCs as well. A negative denominator indicates that value-added is negative in international prices, i.e. that the crop/technique activity wastes foreign exchange.

Formulae for Coefficients

FINANCIAL PROFITABILITY

Producer or Farmgate price, Rural price or Wholesale price. Depending on the relevant point of comparison, the domestic price used as the basis of analysis is 1) the producer price at farmgate, 2) the rural market price, or 3) the wholesale price downstream (e.g. in the primary consumption center). The choice depends on whether the analyst is interested in the relative protection and comparative advantage of domestically produced commodities as an import-substitution activity in the main consumption center(s) of the country or further upstream in the production, processing, and marketing chain.

The domestic reference price is usually known at the wholesale level from national price monitoring surveys. The farmgate and rural market prices can be derived from it (deducting transport, handling, losses, etc.). If official producer prices are used, it is important to assess whether that price is paid to farmers at farmgate or at a collection center. If the latter, transport costs would have to be deducted from it in order to derive the appropriate price actually received by the farmer for his/her product.

Tradable inputs in financial prices. Because of the way the spreadsheet is organized, the value of tradable inputs in financial prices is derived by adding up their net financial cost plus all taxes or subsidies, whether direct or indirect.

Tradable value-added in financial prices. This is calculated by subtracting the value of tradable inputs (including tradable capital) from the domestic reference price.

Non-tradable inputs in financial prices. The value of each non-tradable input (land, labor and capital) in financial prices. In the case of family labor and land, their values are usually zero when considered on a cash basis. However, when assessing the marginal costs/benefits of any impending investment decision it is usually more appropriate to impute a cash value to these factors. Both are done here.

Taxes/subsidies on non-tradables. This equals the sum of direct and indirect taxes/ subsidies on non-tradable inputs.

FINANCIAL PROFITABILITY equals tradable value-added in financial prices minus total value of non-tradable inputs in financial prices minus total taxes/subsidies on non-tradables. The figure is calculated twice, both on a cash and on an imputed value basis.

ECONOMIC PROFITABILITY

The analysis of economic profitability mirrors that of financial profitability except that 1) all taxes and subsidies are eliminated from the cost of inputs and non-tradable factors of production. 2) the reference output price is the internationally traded price and 3) conversion factors are applied to tradables to correct for distortions in the exchange rate market (shadow exchange rate multiplier) and to non-tradables to correct for factor market distortions (e.g., the shadow wage rate coefficient).

International parity price. In the case of import-substitute commodities, this reference output price is calculated as the commodity's CIF price plus the tradables component (in economic prices) of the delivery costs which bring it from the port to the relevant point of comparison. The CIF price is converted into local currency using the official as well as the shadow exchange rate. In the case of export commodities, the FOB price at the Tunisian border is the relevant reference price. In some cases, this may be derived from the commodity's CIF price in the importing country (citrus CIF prices in Marseille, for example), deducting the foreign port charges and freight and insurance costs.

Tradable inputs in economic prices. The value of tradable inputs in economic prices equals their economic cost (shown at both official and shadow exchange rates). All taxes or subsidies, whether direct or indirect, are excluded.

Tradable value-added in economic prices. This is calculated by subtracting the economic value of tradable inputs from the parity price.

Non-tradable inputs in economic prices. These values are calculated from the imputed costs for each factor of production, excluding direct and indirect taxes and subsidies. In an economic analysis, inputs are valued at their shadow prices. This means that conversion factors (reflecting domestic factor market conditions) are applied to non-tradables to convert from financial factor prices.

ECONOMIC PROFITABILITY is calculated by subtracting from the economic value-added, calculated at the shadow exchange rate, the shadow value of non-tradables.

NOMINAL PROTECTION

Nominal protection coefficient. The NPC (outputs) is the ratio of the domestic output price to the border price equivalent of the international reference price, calculated at the official exchange rate. The NPC (inputs) is the ratio of the domestic price of tradables to the international price of tradables, calculated at the official exchange rate.

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Net nominal protection coefficient. The NNPC is the ratio of the domestic price to the border price equivalent of the international reference price, for outputs or inputs, calculated at the shadow exchange rate. It is derived by dividing the NPC by the shadow exchange rate multiplier (SER/OER).

EFFECTIVE PROTECTION

Effective protection coefficient. The EPC is the ratio of value-added, calculated in financial (domestic) prices, to value-added calculated in economic (border) prices, at the official exchange rate.

Effective subsidy coefficient. The numerator of the ESC adjusts for taxes and subsidies on non-tradables which may distort the comparison of domestic to international value-added. The ESC is the ratio of value-added, calculated in financial prices, minus taxes and subsidies on non-tradables, to value-added, calculated in economic (border) prices, at the official exchange rate.

Both of these coefficients can also be calculated as net coefficients (NEPC and NESC) by using the economic value-added calculated at the shadow exchange rate. These are derived by dividing the EPC and ESC by the shadow exchange rate multiplier.

DOMESTIC RESOURCE COST

Domestic resource cost coefficient. The DRC is the ratio of the value of non-tradables expressed in shadow prices to value-added calculated in economic prices, adjusted using the shadow exchange rate.

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