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Rapid Reconnaissance Study of the Nigerien Onion Subsector.

A Policy-Oriented Analysis of Market Performance

Larry S. Lev and Millie A. Gadbois

Postharvest Institute for Perishables

GTS Report No.

PIP/Niger/Jan. 88/99



University of Idaho

College of Agriculture

in cooperation with

**United States Agency for
International Development**

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EXECUTIVE SUMMARY

A rapid reconnaissance of the Nigerien onion subsector was conducted in order to assess current market performance and to examine the implications of different government policy options on onion production and marketing. Nigerien farmers in the Tahoua Department are expert onion producers who have long exported their products to countries on the West African coast where the onion variety, the Violet de Galmi, is regarded as being of superior quality. Exports in recent years have been as high as 20,000 tons.

The central conclusion of the research is that the current private sector marketing channels are functioning efficiently in transporting a highly perishable product over long distances. Although the gap between producer and consumer prices is substantial, this gap results primarily from actual costs incurred and risks borne rather than from excessive middlemen margins. Furthermore, the current system is doing a reasonable job of providing the levels of service and quality demanded in the export markets. In light of these findings, it is strongly recommended that the Government of Niger refrain from imposing "order" on the onion market through creation of a regulated monopoly with its parastatal firms. These parastatals would be incapable of matching the private sector performance in terms of cost effectiveness and quality of service.

A second major conclusion of the research is that the current export tax of 14 FCFA/Kg (U.S. \$1= 275 FCFA) on onions significantly reduces both the volume of exports and the price received by producers since this additional cost is borne by producers. The removal of this tax would directly increase the quantity of onions demanded in other countries and the per sack, producer price. Indirectly, the elimination of the export tax would reduce the barriers to entry for traders and thus would reduce current margins by increasing the level of competition. An increase in the quantity of exports by as much as 25% over a three year period would result from the elimination of the tax.

Finally, a number of suggestions are provided for fine tuning the existing production and marketing system. These represent minor gradual changes rather than abrupt shocks to the market.

I. INTRODUCTION

A. Background to Assignment

The USAID mission in Niger contracted with the Postharvest Institute for Perishables (PIP) at the University of Idaho to conduct a rapid reconnaissance appraisal of the onion and garlic subsectors in Niger, with special attention to the regulatory, fiscal, and marketing environment. Previous studies (Smith, 1986, Wilcock, 1987, and DAI, 1987) cited onions as an existing regional export with expansion potential. Two agricultural economists were employed by PIP to conduct the study.

The two-person study team spent five weeks (January 10, 1988 to February 11, 1988) examining the entire marketing chain from the main production and exporting zone in Tahoua Department to the principal consumers in four coastal countries. Given the time constraints imposed on the study and the initial research findings, the team decided to de-emphasize the much smaller garlic subsector which does not share the coastal market acceptance of onions (See Annex A). In keeping with the USAID mission's current interest in economic policy reform issues (such as the African Economic Policy Reform Program - AERPR), the study was conducted with a policy emphasis. Two specific policy areas which were examined are:

1. What is the appropriate role for the Nigerien Government in the onion export sector?
2. What are the implications of the current export tax on the price competitiveness of Nigerien onions?

B. Onions within the Context of the Nigerien Agricultural Sector

The Nigerien agricultural sector contributes 50% of GDP and provides full or part-time employment for 85-90% of the population. The staple grains of millet and sorghum are of primary concern to both farm families and the nation as a whole in order to achieve the goal of food self sufficiency.

Among other crops, cowpeas, invariably grown as an intercrop with cereals,

have emerged in recent years as an important food and cash crop with a market outlet in Nigeria. This trade has been conducted by small scale traders who bypass existing rules and regulations. Peanuts and cotton are traditional cash crops which have been marketed through large-scale, parastatal trading companies, although the marketing of peanuts has been recently de-controlled.

Onion production and marketing have developed in a strikingly different fashion from the three crops discussed above. In contrast to cowpeas, onion production is more clearly a cash, rather than a subsistence, activity. Furthermore, because of the nature of the product (bulky and low value) and the location of the principal markets, the onion trade has followed legal rather than illegal channels. The onion trade has developed as a purely private sector activity, unlike the cowpeas, peanuts, and cotton trade which are all legalized monopolies.

Although onion production takes place in the five departments of Tahoua, Dosso, Niamey, Zinder, and Maradi, Tahoua dominates in terms of both total production and exports. As will be discussed in Chapter II, production, consumption, and trade figures for onions are notoriously poor in both Niger and the region as a whole. Nigerian export data appears to have the greatest reliability and indicate the size of the subsector. These data show that in 1987 more than 18,000 tons of onions were officially recorded as exports with a village level value (farm gate price + local transport) in excess of 350 million F CFA. This trade provided government revenues of more than 250 million F CFA through the levying of an export tax.

In terms of classic trade theory, onions would appear to be one of the relatively few agricultural products for which Niger has a "comparative advantage" in production. According to this theory, Niger and its trading partners would both gain if each side specialized in certain areas of production, onions, for example, for Niger and kola nuts for Togo, and engaged in trade in order to broaden the range of products consumed.

While the theory of comparative advantage is attractive in the abstract, it fails to provide clear-cut guidance in a multi-country, multi-product world. The concept of "competitiveness" or the ability of a country to supply a

specific market (at a specific time of year) at or below the price provided by alternative sources of supply is a more practical one. The next best alternative to Nigerien onions for the Ivorians is not growing their own onions, but rather increasing their purchases of Dutch (or Moroccan) onions. It is thus against the performance standards of the Dutch that the Nigerien production and marketing chain must be judged.

II. METHODOLOGY

A. The Rapid Reconnaissance Approach

The rapid reconnaissance (RR) approach to marketing research provides a cost-effective means of describing and analyzing the performance of a defined portion of a national production and marketing system. In most instances, the RR approach has been applied to a vertical segment defined along commodity lines and termed a "commodity subsector" (Holtzman, 1986). The RR approach becomes increasingly attractive as the availability and reliability of accurate descriptive and analytical information decreases, since the only available alternative is the initiation of a lengthy and costly longitudinal data collection process.

This was the state of affairs for the Nigerien onion subsector. Little hard data was available to describe a large and vibrant economic activity, and what was available was highly questionable. Using the RR approach, informal questionnaires (guide d'entretiens) were designed to interview multiple participants at all stages of the production and marketing chain. (See Annex B for an example of the informal questionnaires prepared for producers). By looking at all transactions and information flows from a varying perspectives, a complete and (we feel) accurate understanding of the overall subsector was developed.

Interviews were conducted with 18 farmers, 7 local traders, 6 intermediaries, 15 long distance traders/wholesalers, 3 "Serkin Tacha," 7 cooperative members, and 2 transporters between January 18-30, 1988.

The basic structure, conduct, performance paradigm (presented in diagram form in Annex C) was used to organize and direct the research process. This approach, as modified in subsector analysis, included the study of the production and marketing system, technical marketing constraints, importance of onions to the farming system, constraints to possible expansion, and characteristics of the product. The structure of the marketing system was studied, including the identification of the major marketing channels, the key actors, the roles and services provided by each actor, and the barriers to entry to the system. The conduct and performance of the system were assessed

and profit margins for traders/wholesalers were calculated.

The application of the RR approach is inevitably an art as well as a science because of the need to distinguish between useful and misleading information. Examples of incorrect information, their source, the reason for initial misinformation, and our modified re-estimates are provided in Table 1.

Table 1. Examples of Misinformation Collected during Rapid Reconnaissance on the Onion Subsector

Information	Reported	More Realistic Estimate	Source	Reason why Incorrect
1. Level of production of Nigerien onions	As high as 200,000 tons	40-60,000 tons	Ministry of Agriculture	Improper methodology for minor crops
2. Farmer estimates of field size	1 hectare	0.05 hectare	Farmer Interview	Lack of familiarity with unit of measure
3. Reported Nigerien onion imports in Benin and Ivory Coast	None	Thousands of tons	Official customs data	Nigerien onions are exempt from duty hence import statistics are not kept
4. Current export tax on Nigerien onions	20 F CFA/Kilo	1400 F CFA/sack	Ministry of Commerce	Tax is on a per kilo basis. Implementation of law is different than written statute
5. Structure of the Ivory Coast onion market	Monopoly	Two separate markets each with some competition	Government of Niger Mission reports	Insufficient discussions with market participants

Source: From information collected during Rapid Reconnaissance and visits with Government of Niger officials (January-February, 1988).

III. CONSUMER DEMAND FOR ONIONS

A. Introduction

In order to develop a better understanding of the Nigerien onion production and marketing system, it is first necessary to understand the commodity itself from the consumer's perspective. Onions enter the West African diet as a component of the sauces which accompany the staple starches. Unlike cereals, onions and other vegetables are not required to meet basic food needs, although they form an integral component of the diet. As a result, West African governments do not fix the price for onions nor do they concern themselves with regulating supply.

Onions in West Africa are an Integral but not Essential Component of West African diets.

In comparison with staple foods, the demand for onions would be expected to vary more in response to price changes (i.e., the demand for onions is more "elastic"). Thus the quantity of onions consumed would increase when prices fell and decrease when prices rose. This characteristic is an important one in our consideration of the impact of policy changes on the potential export market for Nigerien onions.

For most West Africans, onions are a purchased, rather than home produced, item. Consumer purchases tend to be frequent and in small quantities. Although virtually all West Africans consume onions, relatively few actually produce them. They constitute one of the most frequently purchased food items. The relatively poor storage characteristics of the crop (considered in greater detail in the production and marketing chapters) are a major factor which explains why purchases are small in quantity and frequent in number.

The West African consumer regards onions as a differentiated rather than a generic product (i.e., all onions are not the same). Specific food items vary greatly in their degree of "within category" differentiation. For example, in Tanzania, the maize meals which are obtained from different maize varieties are viewed as similar and thus have a common price. In contrast, using a U.S. example, winter greenhouse-grown tomatoes and home-grown tomatoes are viewed

by U.S. consumers as having quite different characteristics. As a result the demands for the individual types of tomatoes are not as closely linked as in the maize meal example.

In our discussions with West African consumers and participants in the marketing chain, it became clear that the Nigerien onions, and specifically the "Violet de Galmi," are greatly preferred to all other types of onions. Whenever Nigerien and Dutch are in the same price range (within 50 F CFA/kg in the Abidjan market) consumers will overwhelmingly select Nigerien onions. Since Nigerien onions are differentiated and preferred by the consumer, their producers can gain a greater market share by increasing volume and reducing average price.

B. Import Demand in Relevant Markets

We were unable to find accurate production, consumption, or import/export data for any of the countries studied with the following two exceptions:

1. Ivory Coast imports which arrive by sea (included in Annex D).
2. Nigerien exports for 1975-1987 on which an export tax was levied (see Table 4).

Estimates of current and potential demand for Nigerien onions within the region were developed on a qualitative basis through interviews with knowledgeable individuals and through a consideration of the key statistical factors which should be considered first as we develop a demand function for Nigerien onions. The key elements in the demand function and their expected influence on demand are listed in Table 2.

Table 2. Factors Influencing Import Demand for Nigerian Onions

	Factor	Influence
1.	Population	+
2.	Income	+
3.	Level of Urbanization	+
4.	Local onion production	-
5.	CIF price of Nigerian onions	-
6.	CIF price of substitutes (imports from other sources)	+

The influence of population and income should be obvious; as both go up so does the demand for onions. The level of urbanization is included because of the fact that urban populations in Africa have higher food purchases than do rural residents. An increasing level of local production reduces the level of onion imports. In at least two countries, Benin and Burkina Faso, imports are not allowed when locally produced onions are in-season. As the CIF price increases (as a function of import taxes and transport costs), Nigerian onions become less competitive in the market place. Finally as the CIF price of alternative imported substitutes increases, the import of Nigerian onions is encouraged.

Table 3 brings together all of the available information for the countries in the region. Nigerian onions compete on a seasonal basis with Dutch onions in the Ivory Coast and could potentially do so in the Central African countries of Gabon and the Congo (see Annex E). In Benin, Burkina Faso, Nigeria, and Ghana, the principal competition is from locally produced onions (our information on Ghana is incomplete, so we do not know if European onions are imported). To date, Nigerian onions face no competitors at home or in the Togolese market.

Table 3. Factors Influencing the Demand for Nigerien Onions in Neighboring Countries

Country	Population (millions, 1984) 1	GNP per capita (Dollars, 1984) 1	Urban Populat. (Percentage, 1984) 1	Local Onion Production 2	Import Duty 2,3	C.I.F. Dutch onions (F CFA/ per kilo) 2	Current Market for Niger onions 2	1987 Imports from Niger (000 tons) 4
Niger	6.2	197	14	Exporter	N.A.	N.A.	Year Round Domestic Market	—
Ivory Coast	9.9	610	46	Minimal	7%	80	Nigerien and Dutch onions dominate specific seasons	12-16
Benin	3.9	270	15	Seasonal	41%	?	Local production for 4 months; Nigerien onions at other times	1.5-3.0
Togo	2.9	250	23	Minimal	20%	?	Nigerien onions year round	1.5-3.0
Ghana	12.3	350	39	Some production	?	?	Seasonal	1.0-2.0
Burkina Faso	6.6	160	22	Seasonal	?	?	Limited seasonal market for Nigerien onions	0.5-1.0
Nigeria	96.5	730	30	Self-sufficient	?	?	No current market for Nigerien onions	-----
Gabon	0.8	4100	?	Minimal	?	?	No direct imports from Niger	-----
People's Republic of the Congo	1.8	1140	56	Minimal	?	185	No direct imports from Niger	-----

1. World Development Report, 1986

2. Collected during research

3. Charged on Dutch but not Nigerien onion exports. In the case of Benin charged on Nigerian exports.

4. Very tentative estimates

In terms of volume, the Ivory Coast is the largest export market by far, with Benin, Togo, and Ghana as other important market outlets. (See Annex D for the Ivory Coast Imports of Dutch Onions, 1930-1987.) Burkina Faso is a small market and official exports to Nigeria have ceased since 1984. Gabon and the Congo are potential new markets which are being studied by COPRO-NIGER and SONARA. They are marginal markets, however, because of the distance and the necessity of supplying them via a combined road and sea route through Benin. It is at present uncertain whether the extremely perishable Nigerien onions can withstand the trip.

The estimates of the quantities imported by neighboring countries in 1987 are based on a disaggregation of total Nigerien exports for that year. Data on Nigerien onion exports were collected at the Tahoua Department Ministry of Commerce Office and from the Galmi Customs Office. Although these data represent only exports from one department, Tahoua, as the major producing area, accounts for 90-95% of all exports. The data were modified to represent a consistent 100 kilograms (kg) per sack basis and were adjusted when individual months were missing through the use of a monthly index of onion exports for the two years (1985 and 1986) with nearly complete data. Although certain officials in Niamey indicated that much of the onion trade is not officially recorded by customs officials, we were unable to verify this. It is also possible that all exports are taxed but a certain percentage were never properly recorded. Either of these two factors would result in higher than reported exports.

The extreme fluctuations from year to year in onion exports was viewed by knowledgeable persons in Tahoua as a reflection of variations in production rather than discrepancies in the quality of the export data. Among the major factors influencing annual production were:

1. Expected sale price;
2. Insect and disease attacks;
3. Quantity/quality of the millet harvested; and
4. Percentage of the population which engages in seasonal migration.

The farmer reaction to sale price is in the expected positive direction (the higher the expected sale price the higher the targeted production level).

The influence of the prior millet harvest is of equal or greater importance in the farmer's decision. When the millet crop is poor, dry season onion production will increase as farm families try to find a source of cash to purchase their staple food requirements. For some farmers, this implies increasing the size of onion fields; for others, it means refraining from seasonal migration to concentrate on onion or other vegetable cash crop production. In the eyes of most Tahoua residents, onion production apparently represents a more certain source of income than does seasonal migration, and is thus relied upon during food shortage years.

In summary, on the demand side we have the following key findings:

1. Nigerien onions are a recognized and preferred product in all markets.
2. Consumption of all onions and Niger onions in particular are price responsive.
3. At a lower delivered price, the demand for Nigerien onions would increase both from the replacement of other onions and from an overall increase in onion consumption.

IV. PRODUCTION

A. Introduction

Onion production has become an increasingly important source of revenue for Nigerien farmers. Although estimates of total production vary widely from year to year and are highly questionable, it is evident that onion production has increased considerably in the 1980's and that at least 50% of the crop is exported. Yields per hectare generally vary from 15 to 30 tons. The major technical constraint to increased production is the lack of an affordable water supply. The traditional production methods are overly labor intensive, the irrigated perimeters are limited in size, and they are not cost effective in the long run. Constraints to improved marketing are the lack of adequate storage techniques and facilities, and the failure to stagger planting dates to more adequately match consumer demands throughout the year.

1. Total production

Onion production has increased considerably in the 1980's, especially after the Nigerien government's policy of promoting dry season agriculture (Politique nationale des cultures de contre-saison). Production is now estimated to be about 40 - 60,000 tons per year. The production data published by the Ministry of Agriculture vary widely from year to year and is of doubtful quality due to small sample size, missing data, and multiple reporting errors.¹ (See Annex G.) Export data collected from the border posts of Galmi, Birni N'Konni, and Tahoua give the clearest indication of the magnitude of total onion production as presented in Table 4.

An accurate measure of harvested onions requires the establishment of a standard moisture level. The difference in field weights and weights after the product reaches storage facilities can be substantial. Spoilage in storage and transport losses amounts to an additional 10-15% of total production.

¹ Regional Agricultural production statistics (the source for national statistics) often differ greatly from those published nationally.

Table 4. Nigerien Onion Exports 1975-1987
(in '000 Tons)

YEAR	NATIONAL*	TAHOUA
1975	6,084	
1976	2,250	
1977	10,629	
1978	177	
1979	1,431	
1980	4,998	
1981	13,074	
1982	13,834	
1983	11,387	10,700
1984	15,054	8,600
1985	18,967	16,900
1986	7,482	10,750
1987		18,650

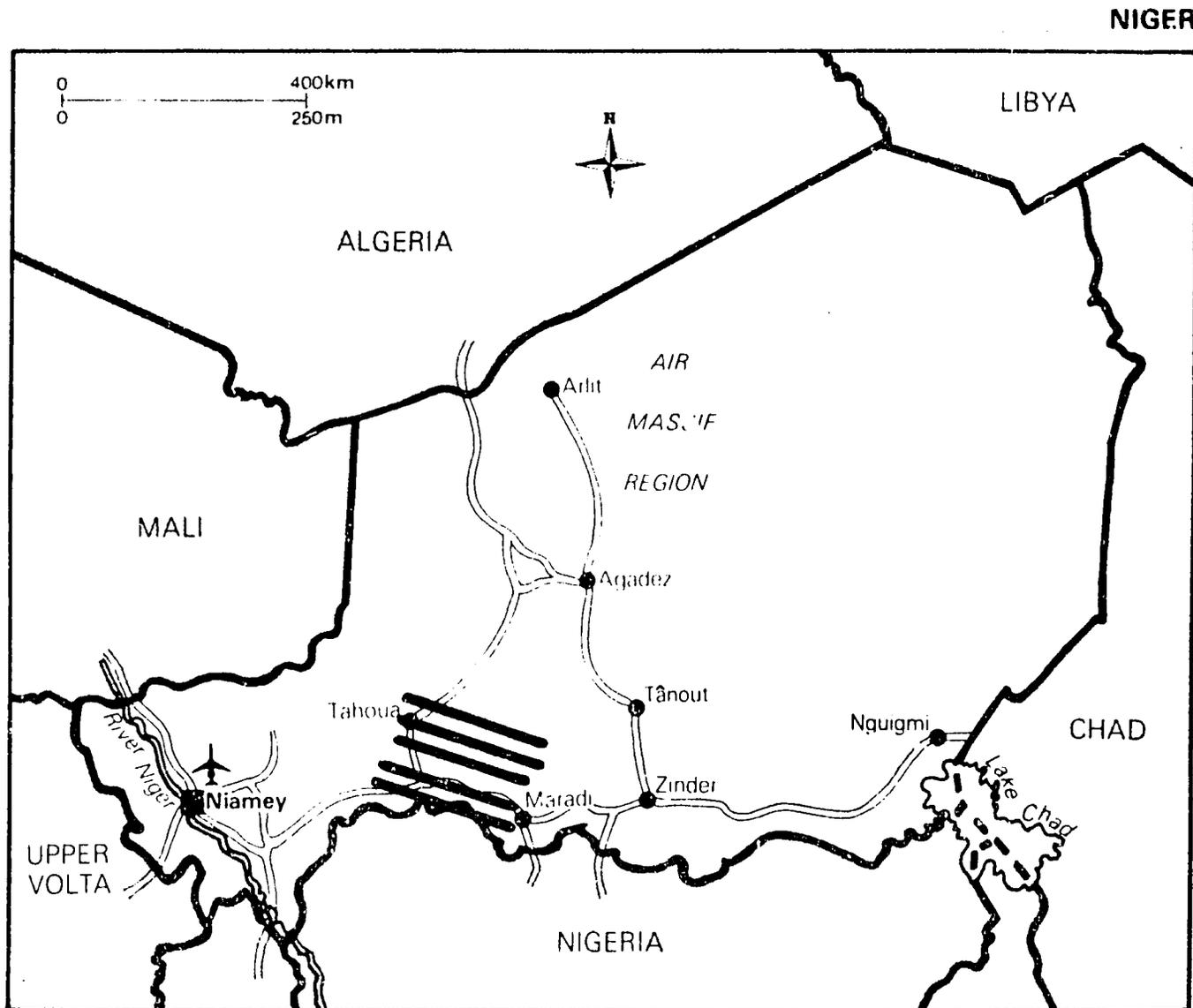
*Source: Republic of Niger Ministry of Plan (Service de la Statistique et de l'Informatique)

Producers indicate that generally 10% of the onion production is retained for home consumption or for gifts, while the vast majority of onions are exported or marketed within Niger.

2. Production Area

The Department of Tahoua (especially the Arrondissements of Madaoua, Keita, Birni N-Konni, and Bouza) accounts for 80% of Nigerien production. The Departments of Niamey (Arrondissements of Kollo, Say, Tera, and Tillabery), Dosso (Arrondissements of Boboye, Birni N'Goure, Dogondoutchi, Dosso, and Gaya), Zinder (Arrondissements of Goure, Magaria, Matameya, Mirriah, and Tanout) and Maradi (Arrondissements of Aguié Guidan Romdji, Madarounfa, and Tessaoua) also produce onions. The map in Figure 1 indicates the most important producing zones.

Figure 1
Map of Niger



 Shaded Area Designates Most Important Producing Zones

3. Place of Onions in the Farming System

Onion cultivation plays an increasingly important role in the farming system in zones of major production. Revenues gained from onion production enable farmers to purchase grains for home consumption, and make up cereal deficits in drought or low rainfall years. Onion cultivation is primarily a dry season activity with planting dates in November-January, and harvest dates from February to April. Increased onion production has had an impact on the level of seasonal labor migration. Farmers interviewed indicated that migration to Nigeria and the Ivory Coast in the dry season has greatly decreased as onion cultivation has provided opportunities for local employment.

B. Production Systems

Three major production systems predominate in dry season onion cultivation: traditional calabash systems, irrigated perimeter systems, and motor-pump systems. Production during the rainy season is also more important as producers realize the benefits of high prices for onions in October through December.

Table 5 summarizes the differences between the three production systems. Returns to labor are highest in the motor-pump system. Irrigated perimeter schemes are not found to be economical, although the financial returns obtained by producers are substantial.² (for more details concerning production systems, see the Niger Irrigation Scheme and Studies cited below.)

Irrigated perimeter production is not economical in the long run, in spite of the substantial revenues gained by farmers. A study of the Galmi perimeter demonstrated that the overall, economic, internal rate of return is zero using a 23 year time horizon, rising to 3.0 percent using a 40 year time horizon.

² J. Keller et al. Niger Irrigation Scheme Case Studies contract AID/DAN-4127-C-00-2086-00. December 1987.

Table 5. Onion Cultivation: Comparison of Three Production Systems

Practice/ Characteristic	Traditional Calabash	Motor Pump	Irrigated Perimeter
Labor Requirement	Labor intensive	Labor saving	Labor saving
Weeding	Manually	Manually	Manually
Fertilizer	Mineral 25 kgs	Mineral 25 kgs	Mineral 50 kgs
Returns for Labor: Per day (en F CFA)	928 (2 meter lift)	1,359 (normal use)	935 (inadequately watered)
	452 (6 meter lift)	1,295 (high use)	582 (adequately watered)

Source: Discussions with farmers, Rapid Reconnaissance Survey Jan. 24-30, 1988

The key constraint to the expansion of potential output for irrigated perimeter schemes is the availability of land; whereas the availability of labor poses the key constraint to expansion of the traditional calabash system. The motor pump units present great potential for increased output especially if they continue to be exempt from import duties. Currently they are relatively cheap in Northern Nigeria (as little as 62,000 F CFA).

Producers in the Tahoua, Galmi, and Madaoua zones have considerable experience in onion cultivation and have perfected production techniques. Farmers attempt to grow their own seeds or purchase them from local producers. Seeds are sown in nurseries and transplanted after 40 days. Land preparation and weeding are primarily carried out manually for all three production systems. Chemical fertilizer is universally used and is mainly in the form of urea. Full maturity for onions is 140 days.

Planting dates are usually from late November to mid-December, although some producers attempt to plant earlier to benefit from the higher prices available before the bulk of the onions appear on the market. The failure to stagger planting dates brings all the onions to market at virtually the same time which greatly decreases farm-gate prices. Staggered planting dates should be studied.

Producers are often criticized for harvesting too early when the onion water content is still high. This leads to spoilage in storage and hence a poor product quality. Early harvesting is not due to lack of knowledge of proper techniques, but usually to the immediate need for cash to meet family needs. Producers realize they are reducing their overall income potential in the long run, but short-term exigencies (especially when the cereal harvest has been poor) leave them little choice.

1. Rainy Season Cultivation

Onion cultivation during the rainy season has increased substantially in the last four years in the Madaoua/Arewa/Kumasa zone. The case of Mahamadou Boye, a traditional producer from Arewa, is typical. Table 6 demonstrates the benefits to be gained from rainy season cultivation. The price received in March for his dry season production was 1,500 F CFA per 100 kg sack; whereas the price had leaped to 18,000 F CFA per sack in the rainy season production.

Table 6. Comparative Dry/Rainy Season Revenues Earned by Mahamadou Boye in 1987
(in F CFA)

<u>Sale No.</u>	<u>Month</u>	<u>Number of sacks</u>	<u>Price (per sack) (in F CFA)</u>	<u>Value (in F CFA)</u>
1	March	27	1,500	40,500
2	October	10	18,000	180,000

When asked why he does not cultivate onions primarily during the rainy season, he said labor was unavailable, especially at peak periods in the agricultural season, and the level of risk associated with nursery preparation in the rainy season was high. He deems it a wiser strategy to continue onion cultivation in both seasons. Onion yields are lower during the rainy season and the onions have a higher water content. This poses difficulties of increased spoilage during storage and transport, but it would appear to be more than offset by the increased demand and higher price at this period.

2. Production System Constraints

The major constraints to production, as enumerated by the farmers, are:

- a. The lack of an easily available and affordable water supply.
Traditional onion farmers complain of the intensive labor requirements of the traditional calabash system (this involves dug wells and lifting the water by hand with gourds as containers). They stated that four full-time laborers per hectare are necessary to hand irrigate from traditional wells. Costs of paid labor (20,000-40,000 F CFA per season) are prohibitive for small farmers. Construction of large scale irrigated perimeters, although providing returns to producers, are not found to be cost effective in the long run due to the high cost of contraction of irrigated perimeters.³ Small motor pump systems seem to be the most cost-effective means to increase production.
- b. Seeds - Farmers try to grow their own seeds with varying results. They complain of the high cost of buying seeds from other farmers (cost up to 10,000 F CFA per hectare).
- c. Insects - Farmers interviewed complained of problems from insects (thrips, aphids) and other pests. Insecticides are provided by the Department of Agriculture, ONAHA, or other organizations, either free of charge or at 300 F CFA per liter.

³ J. Keller et al., op cit

According to our analysis, labor is the major production constraint. It appears clear that onion production is a function of profitability and the availability of capital. The recent removal of the customs duty on imported motor pumps has already had a major impact on production. Several of the farmers interviewed are now producing in excess of 100 tons a year. Without the new technology few farmers exceeded 20 tons of production.

Higher output prices represent another means of increasing capital availability. All farmers interviewed indicated that they would increase onion production in response to higher prices.

It should be noted that, for many farmers, the short-term supply response is in the opposite direction. These producers sell increasing amounts at lower prices (as happened last year when many producers liquidated the bulk of their production at the low price of 1,500 F CFA per kilo) due to the immediate need to purchase food supplies to meet household consumption needs.

C. Storage

The storage problem is one which increasingly preoccupies the farmer. The decision to store onions in the hope of obtaining a better price is a difficult one for the farmer and is influenced by several factors, including the results of the previous year's millet harvest, the need for immediate cash to fulfill family requirements, and his previous experience with onion storage.

Many producers have attempted storage with varying results. Losses are reported from ten percent to 100 percent. Large losses are attributed to improper storing techniques, such as over-stocking, leaving onions in the sun before placing them in the storage warehouses, or from harvesting too early when the water content of the onion is still too high. Producers have become cognizant of improper storing techniques and are planning to store fewer sacks per storage area in the future to allow for air movement.

Typical storage units ("cases de stockage") are made of thatched straw roofs over wooden frames. The onions are placed on a raised platform covered with millet stalks. Costs of these traditional storage units vary from 10,000 F CFA

for small units with a capacity of up to 40 sacks of onions, to 30-40,000 F CFA for the larger units with a capacity of up to 70 sacks.

Less typical are the rectangular storage houses of banco (adobe mudwalls), and straw roofs. If properly undertaken, storage of the Violet de Galmi onions could be successful for up to six months with less than 25% spoilage.

As seasonal increases in onion prices are very high (especially in the third and fourth quarters), there are advantages to the storage of the Galmi onions in spite of the risk involved.

We found no evidence that traders are accumulating stocks of onions for speculative purposes, and they obtain a return much greater than the storage costs involved.

With the exception of a few local traders, we found little evidence of traders seeking to profit from hoarding activities. Hoarding, as everyone seems to recognize, is an extremely risky undertaking.

V. MARKETING SYSTEM

A. Introduction

It is often alleged that the Nigerien onion marketing system is inefficient, disorganized, and does not serve the best interest of the producer or the nation. Although a limited number of traders dominate the most important market (the Ivory Coast), their margins (oligopsony and oligopoly profits) are restricted by competition with smaller traders from that and other markets. Market entry is relatively free, although relatively high investment requirements inhibit the entry of some would-be traders. Knowledge of prices and requirements of all actors is sufficient to protect against collusion, although the availability of market information could be improved.

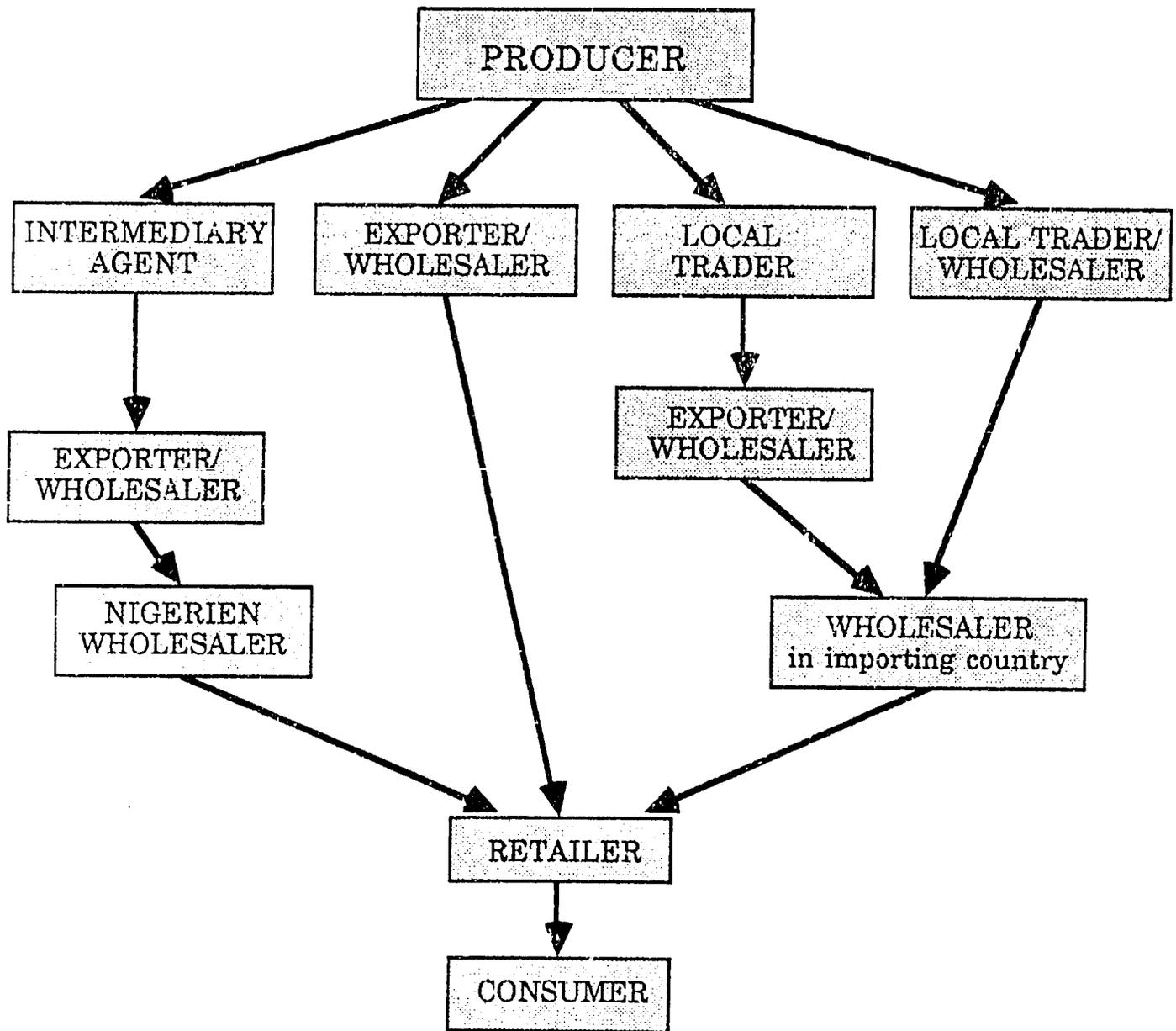
Traders and middlemen are often portrayed as "parasites" preying on the poor onion producers, preventing them from recovering a fair price for their onions. In reality, these traders and middlemen perform many useful services. They move production long distances in a relatively efficient manner, all the more remarkable given the numerous risks involved. Profit margins gained by intermediaries and wholesalers are a fair return for their capital invested and risks borne. Any replacement system would have to maintain or improve upon these services.

In this chapter, the onion marketing system will be presented. The definition of the market organization will include the identification of the four major market channels for Nigerien onions including the functions performed by actors at each level, the degree of buyer and seller concentration, and the condition of entry into the market. Market conduct and performance will be assessed concerning estimated costs and returns (margins), level of competition, and constraints to increased volume. Figure 2 presents the four dominant market channels for Nigerien onions. We will describe each briefly and then focus in more detail on the Togolese and Ivorian markets.

B. Market Organization

The market is characterized by a multiplicity of actors. The major actors will be identified and their roles and the services they provide will be

Figure 2. Market Distribution Channel for Nigerien Onions



I
"Intermediary"

II
"Exporter/
Wholesaler"

III
"Local Trader"

IV
"Local Trader/
Wholesaler"

discussed. Functions may vary depending on the marketing channel in question. Major actors in the Niger onion marketing chain include producers, intermediaries, the Serkin Tacha, traders, retailers, and consumers. The term "traders" is used synonymously with "merchants". (Traders can also be buyers, exporters, or wholesalers depending on the particular distribution channel.) Cooperatives and parastatal agencies have been minor actors to date.

1. Identification of Major Actors in Onion Marketing

a. Producers (All Market Distribution Channels)

Producers are the most numerous participants in the onion sector. There are over 6000 families in Tahoua Department engaged in onion production with individual production ranging from less than two tons to over 100 tons. The number and dispersion of the farms result in problems of coordination and assembly of production. Farmers may sell to local or foreign (larger-scale) traders, cooperatives, or other intermediaries. When onions are plentiful (usually from March to July), there is a buyer's market. From August through December there is more competition among buyers for the relatively scarce onions. Onions are placed in large burlap sacks which weigh 100 kgs or more and are topped with "breathing cups" of braided palm strips. The sacks are usually provided by the buyer.

b. Serkin Tacha (All Market Distribution Channels)

The Serkin Tacha is a traditional figure licensed by the arrondissement to collect the arrondissement tax (100 F CFA per sack). He also arranges the transport of onions for the traders, for which he receives between 50-500 F CFA per sack (usually 100 F CFA depending on the village.) In many of the villages and towns we or the team visited during the Rapid Reconnaissance Survey, the Serkin Tacha also played the role of intermediary described below. Finally, the Serkin Tacha provides lodging to those traders traveling to the producing zone. Given the broad range of his functions, the Serkin Tacha wields great influence in the marketing chain.

c. Intermediaries (Market Distribution Channel I)

The "intermediary" distribution channel is portrayed as Channel I in Figure 2. The distinguishing characteristic of this channel is the facilitating role that the intermediary or agent plays in bringing together buyers and sellers. Intermediaries are used by foreign buyers who are unfamiliar with producers and the production area. In addition, in times of short supply, agents are used by the large Nigerien traders from Abidjan. In both instances the agents provide these three key services:

1. The location and assembly of produce; (this role is particularly crucial in areas off the major routes as Tamaske and Roukouzoum)
2. The establishment of a per sack price;
3. The organization of transport.

Two additional services which may be provided by intermediaries are:

4. Provision of loans to finance onion purchase and transport based upon telephone orders from Abidjan;
5. The arrangement of local storage for the buyer's onions until the market price in the consumption area rises.

The agents acting as intermediaries never own the onions which pass through their hands, and thus assume no risk. They merely facilitate the transfer of title of the product. In principle, the agents (who must purchase a "patente" or license from local officials) receive a fixed fee per sack (usually around 100 F CFA per sack). In practice, since producers and buyers never communicate directly, it may be unclear what the intermediaries are earning.

In areas having several intermediaries, there is generally little competition for clients during most of the year, as intermediaries collude among themselves on prices. After August when supplies are low, the level of competition rises rapidly. It becomes a seller's market as producers search for the highest bidder. The cooperatives in some areas are seeking to serve the intermediary role in an attempt

to ensure that higher prices are transmitted to producers.

d. Local Trader (Market Distribution Channels III and IV)

Local traders reside year round in the production area, and generally have a relatively small volume of business. In Channel III they function in a manner similar to the intermediaries, in that they assemble the produce. The distinction is that they actually purchase the produce and thus put their own funds at risk. In many instances they purchase the crop well before harvest and are thus providing farmers cash or millet during a time of need. This role is often criticized when the onions are purchased at a low price, but the farmers have few other options when their cereal harvest is not sufficient to cover family consumption needs.

In Channel IV, the local trader assumes additional risks by exporting the crop all the way to the final markets. Most traders only ship two to three trucks per season, and in some instances several traders combine to send one truckload. Local traders are responsible for arranging collection, assembly, and transport of the onions to the Ivory Coast (or elsewhere). They pay all custom tariffs, arrondissement taxes, and a patente of 40-46,000 F CFA. They or their associates will accompany the onions to their final destination (the wholesaler), facilitating the border crossings and passing of control points along the way. Before leaving, they will have up-to-date information regarding prices in Abidjan. Given the volatility of the prices, they are by no means assured of obtaining onions at that price. It is a risky venture, and they may have to sell their onions at a loss. Onions are often sold in market towns in Ivory Coast before Abidjan, if prices seem satisfactory.

e. Exporter/Wholesaler (Market Distribution Channels I, II, III)

In three of four distribution channels, the people who buy the produce in Niger and transport it to the coast also handle wholesale distribution in the destination market. The essential difference among the three systems is the identity of the initial buyer. In Channels I and III, the exporter/wholesalers depend upon agents to

locate the product and facilitate the assembly of the produce (either an intermediary or a local trader). In Channel I: the exporters supervise product location and assembly.

The exporter/wholesalers class includes the large Nigerien traders from Abidjan, other Abidjan-based traders, and Togosese and Beninois women traders. The Nigerien traders conduct the largest volume of business and undoubtedly earn some oligopsony profits within reason.

These exporters provide all of the funds required for purchase, assembly, loading, transporting and unloading the onions. In addition, they pay all export and arrondissement taxes and miscellaneous expenses (i.e, road taxes and bribes) incurred en route to the destination markets. Arriving at the destination, they provide the wholesale functions described below.

The exporters assume considerable price and spoilage risks and earn a return for the cash invested and the risk borne. A more detailed analysis is provided in the two case studies.

The key constraint which these traders face in expanding their volume of business is the high cash requirements of the export business. The elimination or reduction of the export tax would permit more participation of these traders in the market and would reduce the margins earned by the larger exporters.

As another variant of Channel IV, the local trader may resell onions in smaller packages to passing motorists or transport onions to other markets within Niger. Entry is easier since major expense items (export taxes and long distance transport fees) are avoided. Some producers do market their onions in local markets or at roadside stands. This constitutes only a small percentage of the total production market as the opportunity cost for farmers marketing their own produce is high.

f. Wholesalers (All Market Distribution Channels)

Wholesalers import or purchase locally large quantities of onions and

sell to retailers and other merchants. Wholesalers are usually based in urban centers such as Niamey, Abidjan, Accra, Lome, and Cotonou. They keep urban and other areas regularly supplied with onions. Although the grading of onions is rare, simple triage is necessary. Little long-term storage of onions is attempted, as wholesalers move the product to the retail level as quickly as possible. As a result, the wholesale function by itself is a relatively low risk one.

g. Retailers

Onion retailers are usually of the traditional type and sell onions displayed on tables or in stalls in the open market place. Several retailers may combine to buy a sack of onions and resell them by "tas" (a small grouping of onions weighing less than one kilogram). The retail trade is characterized by a multiplicity of actors due to the small amount of capital required to enter the market and the lack of alternative employment opportunities. Once again, because retailers do not maintain large volumes of onions, their risks are relatively low.

h. Consumers

Consumers send signals to retailers specifying the quality of onions preferred and the prices they are willing to pay for that quality. They tend to make frequent, small purchases of onions.

i. Cooperatives

At present, cooperatives do not play a major role in onion marketing, except in those cooperatives such as Roukouzoum and Iamaske which are organized by the CLUSA Cooperative Development Project. The objectives of the CLUSA project are to develop the marketing skills of cooperatives, and to improve technical knowledge about packaging, handling, and storage of onions. In Roukouzoum, twenty new storage warehouses are being constructed (at 40,000 F CFA each) so that the onions bought by the cooperative can be stored after the harvest until prices rise. There has been some conflict with the local intermediary (the Serkin Iacha) in Roukouzoum over the role played by the cooperative in arranging its own transport for onions. More than 900 sacks of onions were bought by the cooperative last year.

The possibility exists that cooperatives in the future will play a larger role in buying and selling onions, and in providing market information on wholesale prices and market possibilities to members (producers).

j. Parastatals

The Government of Niger is at present considering state intervention in the marketing of onions through the parastatals, COPRO-Niger and SONARA. A government decree of June 1987 mentions their involvement in the onion marketing campaign. A possible monopoly in the marketing of onions for these two agencies is presently under discussion by the government. Neither COPRO-NIGER nor SONARA has any experience or expertise in the onion trade. It is doubtful that they could perform the roles and services currently undertaken by the present traders who have long years of experience and specialized knowledge of the onion sub-sector.

While many government officials criticized the lack of organization of the onion market, including the Directors of Commerce Exterieur, Commerce Interieur, and the Centre Nigerien du Commerce Exterieur, they stopped short of recommending marketing monopolies for SONARA and COPRO-Niger. We were apprised of the proposed plan by COPRO-Niger, which together with SONARA promotes the idea. We are not aware of any other organizations strongly favoring the monopolies.

C. Case Study: The Togolese Distribution Channel

The Togolese and Beninois systems are similar with three major exceptions:

1. The Togolese purchase Nigerien onions throughout the year. Benin prohibits onion imports during the four-month period of Benin production.
2. The Benin traders supply markets on the way to Cotonou while the Togolese traders deliver all onions to Lome first.
3. Unlike the togolese traders, the Beninois choose to work through Nigerien workers who are based in Cotonou and travel to Niger.

In this case study the focus is on Togolese women. These women are known for the time and effort which they put into purchasing onions. Foregoing the service of intermediaries, they travel to the production areas and often spend two weeks assembling a shipment. They discuss prices directly with the producers and perform a triage as the onions are packed in sacks. During their stay in Niger, they are lodged by the Serkin Tacha.

After all transport and tax payments have been made, the onions are trucked to Lome, Togo, passing through the Republic of Benin where transit fees and multiple bribes are given. In some areas, Togolese women maintain storage facilities where they place onions bought in peak season (when prices are low), until prices rise in Lome.

Groups of several Togolese wholesalers often share a truck, as they do not have enough capital to finance a thirty ton truck on their own. Upon arrival in Lome the onions are deposited in the Lome wholesale district called "ancien Zongo". The onions are then sold to retailers or groups of retailers who buy by the sack to sell in the produce markets of Lome (le Grand Marche, the markets of Hankopi, Be, Mavell, and surrounding areas). Most retailers buy several sacks at a time. The large supermarket in Lome, Goyi Score, purchases approximately eleven tons of onions per year from the wholesalers in Ancien Zongo at prices between 20,000 to 35,000 F CFA per sack. Nigerien onions have no substitutes in the Togo market as European and other imported onions are not imported to Togo. Togo has recently begun onion production, but total production is estimated at under 200 tons (estimate of the Office of Agricultural Statistics). The variety produced in Togo isn't the Violet de Galmi, for which the Togolese have a decided preference. There are no import duties levied against Nigerien onions.

Both the Togolese wholesale and retail markets are characterized by a large number of actors who are predominantly women. Many wholesalers in the Ancien Zongo market are related, and they and their mothers have been involved in the onion import trade for many years.

1. Costs and Returns of the Togolese Exporters/Wholesalers

The exporters/wholesalers have the following expenses and revenues during the year, using a producer price of 8,000 F CFA per sack. Prices paid per sack by the Togolese exporters/wholesalers vary during the year from 2,000 F CFA at the height of the season (March-June) when supplies of onions are abundant, to 20,000 in November-December.

Table 7 presents the net balance of onion traders exporting onions from Galmi to Lome in mid-season (July-August).

The margin earned by the wholesalers/exporters at mid-season is estimated to be 10%, which is hardly exorbitant, considering the risks undertaken. The Togolese export/wholesale marketing channel is characterized by competition between numerous actors. Barriers to market entry include a necessary amount of expertise and knowledge of the sub-sector and the capital investment required to finance the purchase and transport of onions from the producing region to Lome.

Early in the season, profit margins drop to approximately seven percent. In November-December the marketing margin can climb as high as 15 percent.

Table 7. Costs and Returns for 250 Sacks of Onions (July-August)
from Galmi to Lome in Mid-season

Expenses	F CFA Price per Sack	Total (250 Sacks)
1. Purchase Price	8000	12,000,000
2. Arrondissement Tax	100	25,000
3. Price of Sacks	400	100,000
4. Labor-putting into sacks/loading	200	50,000
5. Serkin Tacha	100	25,000
6. Export Tariff	1400	350,000
7. Transportation	2500	625,000
8. Benin transit fees	2000	500,000
9. Miscellaneous "gifts"*	-	50,000
10. Unloading (Lome)	200	50,000
11. Personal Costs of Trader**		30,000
Subtotal Costs		3,805,000
Revenues @ 18,000 per sack		
Assuming losses of 7% of merchandise		4,185,000
Total Benefits - Total Costs		380,000
Net Profit Margin =		9%

* These include "cadeaux", bribes in order to pass control points

** Costs are approximately 15,000 F CFA per week for two weeks which includes food, loading, and other miscellaneous.

D. The Ivory Coast Marketing System

Since the Ivory Coast is the primary market outlet for Nigerien onions, it is particularly important to understand the functioning of the marketing system in that country. Although previous reports have characterized the onion market as being dominated by a single firm, SABIMEX, the situation is in fact far more complex and involves several major actors. The market varies on a seasonal basis depending upon whether Nigerien or Dutch onions are in the market place.

As a starting point, it is useful to compare and contrast the two different types of onions--Nigerien and Dutch (see Table 8).

Table 8. Comparison of Nigerien and Dutch Onions

	<u>Niger Onions</u>	<u>Dutch Onions</u>
Color	Violet	Yellow
Size	Mixed	Uniform
Storability (in Abidjan)	Relatively Poor	Good (several months)
Packaging	Poor	Attractive
Quality	Poor, requires triage	Dependable
Reliability of Supply	Poor	Dependable
Taste	Good	Mediocre
Seasonal Availability	Feb-Sept.	Aug-March

Throughout the year, but especially in the period from September through February, the large Lebanese firms import entire shiploads of Dutch onions to Abidjan. These are modern, diversified firms which are characterized by excellent computerized records and large storage facilities. Onions form a significant, but not dominant, aspect of their business (8% of sales volume at the largest firm by one estimate). When buying Dutch onions, these firms receive guaranteed prices, delivery dates, and product quality. As a result of the excellent storage characteristics of Dutch onions, importers receive volume discounts and can maintain constant stocks.

While the owner of SABIMEX indicated that his firm imports 75% of Dutch onions (personal communication), there are a number of other firms engaged in this activity, and entry would appear to be free. From the numbers cited, this should be characterized as a high-volume, low-margin business (i.e., into warehouse price 2100 F CFA/25 kg sack, out of warehouse price 2200 F CFA).

Although many of the same Lebanese firms are active in both importing and retailing, it is important to consider these functions separately when considering their respective roles in the onion market. The percentage of the retail market for onions which is controlled by supermarkets (generally Lebanese-owned) is quite small, perhaps on the order of one to two percent.

In order to enter the distribution channel for the traditional African produce markets, the large importers not only carry out some of their own wholesaling but also sell large quantities of Dutch onions to wholesale firms which focus on onion distribution throughout the year. These firms, which are primarily run by Nigeriens but also include Ivorians and Malians, wholesale Dutch onions for part of the year and directly import and wholesale Nigerien onions for the rest of the year. Their facilities and practices lack the high tech, computerized records and refrigerated facilities of the Lebanese firms. They operate out of simple warehouses (capacity of approximately 60 tons) located near the city's major food markets. They handle relatively few products (potatoes, garlic, and Maggi cubes) and depend upon onions for over 80% of their gross receipts. Their average clients make small but frequent purchases, generally in the range of two to ten sacks at a time. Unlike the Lebanese, who tend to set fixed prices for all similar clients, the Nigerien merchants do not have price lists and do not set prices for individual clients.

Contrary to the opinion expressed in Niamey, these traders are independent businessmen and not employees of the Lebanese importers. When handling Dutch onions, they are granted credit privileges. When they handle Nigerien onions, however, they use their own funds.

The traders who handle Nigerien onions follow one of four systems in order to obtain stocks of Nigerien onions. These are:

1. Direct purchases from farmers in the producing areas;
2. Purchases through intermediaries in the producing areas;
3. Purchases from local traders in the growing areas;
4. Purchases in Abidjan from local traders who have transported the onions at their own expense and risk.

Those engaged in the export of Nigerien onions continually emphasized that it is an expensive and risky business. A budget for an "average" trip is provided in Table 9.

Entry into the import market of Nigerien onions necessitates a thorough understanding of the market and a high initial capital requirement. A number of individuals in Tahoua Department recounted that in the past they had experimented with the export business but had subsequently quit after a particularly unsuccessful trip.

The Abidjan importer/wholesalers indicated that, because of the humid conditions on the coast, Nigerien onions do not store well and are ordinarily moved through to the retail level within a week. As a result of this characteristic and the uncertain scheduling of onion arrivals, the Nigerien onion business is far more volatile than the Dutch onion business.

The importer/wholesalers engage in far more "conditioning" of the product than do their Lebanese counterparts. Primary among these added tasks is the triage of the newly arrived onions and their repacking into plastic mesh sacks in order to increase their shelf life.

The Lebanese businessmen frankly admitted that they had in the past tried and failed to directly import Nigerian onions. They had not been successful, not only because of the complexities of purchasing and transporting goods in West Africa, but also because of the difficult nature of the product once it arrived at the coast.

At the retail level, Nigerian onions already enter supermarkets via limited sales from Nigerian wholesalers. This represents an easy and quite satisfactory alternative to direct importing.

Table 9. Costs and Returns for Transporting 100 kg Sack of Onions after harvest from Galmi to Abidjan
(in F CFA)

	Per sack cost	Total (300 sacks)
Purchase Price	2000	600,000
Arrondissement Tax	100	30,000
Loading Truck	100	30,000
Serkin Tacha	100	30,000
Export Tax	1400	420,000
Road Payment (Niger) 30,000/truck	100	30,000
Laissez-passez-Burkina Faso 10,000/truck	200	60,000
Road Payments-Burkina Faso 30,000/truck	100	30,000
Laissez-passes Ivory Coast 261,000/truck	870	261,000
Transport	3000	900,000
Reconditioning	250	75,000
Miscellaneous costs 75,000/truck	<u>250</u>	<u>75,000</u>
Total Cost	8470	2,541,000 F CFA

The average loss rate per truck load was estimated at 7% or 21 sacks. Thus, the trader would sell 279 sacks. An average sale price was estimated at 10,000 F CFA per sack or 2,790,000 F CFA per truckload.

Total Benefits	-	Total Costs	=	Net Benefits
2,790,000 F CFA		2,541,000 F CFA		249,000

Net Benefits/Total Costs = 9.8%

The margin earned (roughly 10% in this example but more broadly in the range of 5-15%) is a return for the capital used and the risk accepted. The relatively limited number of traders who dominate the Abidjan wholesale market implies that some monopoly profits are being earned. These profits are limited by competition among the traders, different sources of supply, and the price pressure exerted by the availability of Dutch onions.

VI. GOVERNMENT INTERVENTIONS IN THE ONION SUBSECTOR

A. Introduction

As was emphasized throughout this report, the onion export trade has developed entirely as a private sector activity with relatively little public sector assistance or control. The sole, significant exception to this general policy has been the imposition of an increasingly large export tax. In addition, there have been a growing number of calls for the imposition of government controls in what many have termed a "disorderly" sector. In this section the appropriate role for the public sector and the impact of the export tax, as well as other governmental measures, will be discussed.

B. Public Sector Role in the Onion Market

Virtually all government officials contacted during the research lamented the "disorderly nature of the current onion marketing system". The current marketing system, however, is functioning. The traders and middlemen perform useful functions, moving production for distances in a relatively efficient manner, all the more remarkable given the numerous risks involved.

Two questions must therefore be asked:

- Is the current market organized?
- Would an alternative system perform the marketing roles more efficiently?

1. Proposed Restrictions on the Market

As detailed in a previous section, the reason for the restructuring of the Nigerien onion market is two-fold:

- a. The belief that the Ivorian onion wholesale market is monopsonistic and hence should be confronted by a monopoly in Niger in order to regain market power.

- b. The belief that a restructured market is required to improve the quality and reliability of supply to foreign (especially Ivorian) markets.

Representatives of both the SONARA and COPRA-NIGER indicated that their organizations are ready and eager to take over the entire onion export system if they are given a monopoly of the trade. They argue that they would require only a short term (two to three year) monopoly in order to improve the quality of the product exported and to regain market power from the (assumed) monopsonists in the consuming countries. There seems little basis to the belief that Nigerien monopolists could force higher prices out of foreign buyers. Interestingly, the two parastatels recognize their own shortcomings and argue that they would be unable to compete effectively with the private sector under a free market.

There are grave doubts that these large parastatals would be able to master the complexities of a commodity as delicate as the Nigerien onion. Under the current system, the price of onions fluctuates weekly. The parastatals, however, have proposed fixing a single price for the entire season. The private operators make instantaneous decisions based upon their current analysis of the market. The SONARA and COPRO-NIGER decisions would inevitably follow the bureaucratic chain of command. How would they, for example, build in the flexibility required to pay unexpected road bribes? Unlike the private operators who have demonstrated their ability to quickly move the product from the production area to the consumer, the parastatals would add time-consuming steps which would threaten the quality of the product.

The existing government regulation (released in June 1987 by the Ministry of Commerce), simply indicates that the SONARA and COPRO-NIGER have the right to participate in the market. The relegation of monopolistic powers to the two parastatals would represent a major disregard for the existing system. It is doubtful that the two parastatals, protected by their monopoly status from market forces, would be able to contain costs and move the high volume of product required. Current critics of the existing market structure have not adequately considered the degree of competition which exists at each level of exchange. Scant attention has been paid by the SONARA and the COPRO-NIGER to planning how and with what they would be replacing the roles and services

provided by the actors in the current system (intermediaries, traders, exporters, transporters, etc.) This movement towards monopoly power would appear to be a case of trying to repair something which is not broken.

2. Government Regulations with Respect to Quality and Packaging

Government regulations with respect to grades and standards are widely recognized as a legitimate means of intervention in an otherwise private sector activity. In many instances, while it may not pay for any given individual to adopt specific standards for his/her production (because the consumer will not be able to distinguish this product from similar but lower-quality products on the market), all producers will be able to receive higher prices if all of their products must meet certain standards. In the U.S., much of the fresh produce is graded and differentiated in order to guarantee a specific quality. Producers, as a whole, gain from this segmentation of the market.

One prevalent comment heard from public officials was that Nigerien onions earned a low price because of their poor, uneven quality and packaging. In support of this assertion, these officials inevitably cited their conversations with Lebanese onion importers in Abidjan who expressed reluctance to handle Nigerien onions for these reasons.

This conclusion would seem to be based upon a misunderstanding of the overall nature of the Ivorian onion market. The various Nigerien missions which have gone to Abidjan have contacted only the large scale Dutch onion importers and thus have placed too much emphasis on their product preferences and requirements. The traders who are currently involved in the importation of Nigerien onions have not been consulted. As detailed in the marketing section, these traders prefer to carry out the triage and packaging functions in Abidjan since this eliminates the need of performing these tasks at both ends of the marketing chain.

Though concerned with the rapid deterioration of the product under coastal conditions, neither the traders, nor their clients mentioned any desire for an improvement in standardization through grading or through improved packaging. Simply stated, the current levels of product quality and packaging

appear to be in line with general consumer requirements. Any immediate upgrading, except to satisfy specific clients, would be an additional expense which would not likely earn a high return.

3. Market Information

A smoothly functioning market requires that all participants have access to adequate market information. Market research indicated that a surprising amount of market information is available in the production areas for the Abidjan market as a result of frequent return trips as well as telephone and telex links. All of the traders indicated, however, that the market is so volatile that market prices change at a rate faster than the time required to journey from Niger to Abidjan.

Although more detailed price information would not be useful to the average farmer, this dispensing of information is another instance in which there is the potential for an added role for the cooperatives. The cooperatives will need to be on an equal footing in terms of information if they are to effectively compete with other intermediaries and traders.

C. Effects of the Export Tax

Export taxes are justified generally as a means for the central government, or marketing agency extracting revenue from rural households and/or foreign consumers. They have been frequently applied in other African countries on classic export crops such as cocoa and coffee.

While the basic effects of export taxes are completely general, the specific impact will depend upon the supply and demand characteristics of the crop which is taxed. The gainers and losers are as follows:

<u>Gainers</u>	<u>What gained</u>
taxing agency	Tax revenues
Domestic consumers	Lower domestic prices
foreign producers	Higher market prices

<u>Losers</u>	<u>What Lost</u>
Domestic producers	Lower farm prices
Marketing agents	Lower traded volume
Foreign consumers	Higher market prices

The progression of the Nigerien tax on exported onions by statute is as follows:

1967-1984	1984-Jan 1987	Feb 1987
3 F CFA/kg	10 F F CFA/kg	20 F CFA/kg

The application of the law has been somewhat different, however, as in April, 1987 the Tahoua Customs officials decided on their own that the new tax was so high that it was discouraging exporters from buying onions in the Department. They then redefined a sack as weighing 70 rather than 100 kilos, thus reducing the effective tax rate from 2000 F CFA to 1400 F CFA (sacks are never actually weighed so the tax is paid on a per sack rather than a per kilo basis).

1. Response of the Onion Market to the Export Tax

An analysis of the effect of increasing or decreasing the export tax depends critically upon an understanding of the production and marketing chain developed in the previous sections of the report. The key questions which must be addressed are:

1. On the demand side (in the consuming countries)
 - a. What is the structure of the market (i.e., how competitive is the market place)?
 - b. How responsive are the consumers to changes in the price of Nigerien onions?
2. Is transport available to handle the increased flow of the product?
3. On the supply side (in the production zone):
 - a. What is the structure of the market in terms of bidding up the purchase price?

- b. How responsive are farmers to changes in purchase price (i.e., by how much can supply increase)?

The direct impact of a change in the export tax is identical to a change in any transaction cost which alters the price spread between the producers and consumers. In the case of Ivorian and Nigerien producers these costs are large (more than 5000 F CFA per sack) even without the export tax. While the tax is imposed after the producer has been paid, it must be recognized that the burden of the tax falls on both consumers and producers (as well as middlemen). The extent to which each "pays" the tax (or benefits), when the tax is removed, depends on how each reacts to price changes. The Nigerien Government can take some comfort from the knowledge that foreign consumers are paying a portion of the current tax. The degree to which foreign consumers continue to buy Nigerien onions is a function of factors such as varietal preference and seasonal price advantage. A graphical explanation of the functioning of the market is provided in Annex H.

Two other indirect impacts of the current tax should be considered. The first concerns the magnitude of the tax (420,000 F CFA per 30 ton truck) which increases the up-front cash costs of exporting a truckload of onions by 20% and thereby increases the risk which must be borne. As such, it represents a significant barrier to entry for small-scale, resource-poor traders. The removal or reduction of the tax would thus have a direct impact on the number of buyers in the Nigerien onion market, and sellers in foreign markets, and should reduce marketing margins and ensure higher producer and lower consumer prices. This would expand market volume quite apart from the direct price effect described above.

Another, longer-run effect of the current tax is that it will encourage onion production in other countries. This will, over time, lead to a further erosion in the potential Nigerien export market. A reduction or removal of the tax would reverse that signal and protect the current market leadership which Niger enjoys.

A final point which should be made is that, in contrast to taxes on other products such as cowpeas or livestock, the vast majority of onion exports are taxed. The large trucks transporting onions are very visible and cannot

escape the eye of the custom's officials. These trucks can be easily recognized as they travel the long distance from the production areas to the exit points from Niger.

What then would happen to onion exports if the tax were removed? Because there is already sufficient competition at each end of the marketing chain, much of the reduction would be transmitted onto producers and consumers. In fact, the reduction in the tax should heighten the competition. This structural question is important, since in an oligopolistic situation, the middlemen could choose to continue to restrict the volume and keep much of the money formerly allocated to the export tax.

In seeking to predict where the new equilibrium will settle, it is important to consider the effect of the large fixed costs (transport and "road fees") which separate the producer and consumer prices. At the height of the season, a village level price of 5000 F CFA/sack in Tahoua and a consumer price equivalent of 15000 F CFA in Abidjan would be in the normal range. How could one expect the removal of the 1400 F CFA per sack tax to affect the two prices? Assuming the most favorable case in which middlemen exert no oligopoly power and thereby retain none of the 1400 F CFA for themselves, what would happen if the 1400 F CFA were divided equally between the producers and consumers? This 700 F CFA would represent a 47% increase in the producer's price, but less than a five percent decrease in the consumer price in the wholesale market. If an excess supply was in existence before the application of the tax (i.e. the quantity supplied would be greater than the quantity demanded), then, after the tax, the quantity supplied would be reduced and a new equilibrium would be attained. Thus the high transport costs imply that the gains from the removal of the tax may lean toward benefits to the consumers in other countries.

The potential increase in exports (over a three year horizon) must be assessed on a country-by-country basis. In the Ivory Coast there would be two components to the increase. First, Nigerien onions would become increasingly perfect substitutes for the Dutch onions at the switch over points between the seasons when both products are present in the market. An increase in two weeks at each end could raise Nigerien exports by 3000 tons. Secondly, the overall lower price (from the reduction in the tax and reduced marketing

margins) would itself increase onion consumption. This increase is estimated at 10% or 1500 tons. In the Benin market, several hundred tons of exports would be gained through a replacement of current Nigerien exports. In addition, in the three countries of Benin, Togo, and Ghana the reduction in the price of onions provide for an additional estimated 500 tons per year of exports. Finally, the new markets in Gabon and Congo-Brazzaville would be easier to penetrate and compete with the Dutch if the tax were removed.

It can be estimated that the increase in market share for Nigerien onions in these countries is about 250 tons. The overall increase thus reaches 5500 tons or an increase of more than 25% of current export levels. This total can easily be achieved on the supply side, where a more serious concern is that any short run price improvement may result in too large an output response. This would result in sharply lower export prices at some intermediate point.

One question which arises is whether it would be possible to monitor the effects of removing the export tax if such a policy decision were taken. Although clearly desirable, the statistical measurement of this change is complicated by the wide variation in exports (as reflected in the export data cited earlier) which results from other factors such as the prior millet harvests. Thus it will be difficult to assess the direct effect with a great deal of precision.

As a final note on the question of taxation, other forms of government taxation of the informal sector were never mentioned by traders as serious barriers to trade. As a cost item, these taxes do not exceed five percent of the export tax and thus are minor concerns to traders and foreign consumers.

The tax is not sufficient to close off the export markets completely. On the demand side, Nigerien onions are able to maintain their market share by their preferred status and by their seasonal price advantage over competing onions. In Niger, production is being maintained at relatively high levels due to the lack of other attractive alternatives.

VII. RECOMMENDATIONS AND FUTURE RESEARCH

A. DO NOT LEGISLATE A MONOPOLY IN THE ONION MARKET

The current proposal to provide SONARA and COPRO-NIGER with a monopoly over onion marketing activities is ill-conceived. The stated reason - to counterbalance an Ivorian market - are based upon a misrepresentation of the existing situation. The present onion marketing system works well as it succeeds in moving production long distances in a relatively efficient manner. The often criticized traders and wholesalers provide a variety of useful services for which they do not receive excessive compensation given the resources invested and the level of risk incurred. It is extremely doubtful that SONARA and COPRO-NIGER, which have neither the long years of experience nor the expertise of the private sector, would perform nearly as well. Government officials interviewed did not recommend the creation of a marketing monopoly for the onion sub-sector. Only the directors of SONARA and COPRO-Niger lobbied for a regulated monopoly in the onion market.

B. ELIMINATE THE EXPORT TAX

The current export tax adversely affects one of Niger's few successful export sectors by making the crop less competitive in foreign markets. The elimination of the tax will directly increase the attractiveness of the crop to Nigerien farmers (through a higher producer price) and foreign consumers (through a lower market price). In addition, the removal of the tax will reduce the barriers to entry faced by traders, and thereby increase competition thus reducing marketing margins. This will foster further market expansion. Over a three year time horizon, we estimate that the elimination of the tax will result in a 25% expansion in Nigerien onion exports.

C. IMPROVE THE COORDINATION OF PRODUCTION AND MARKETING THROUGHOUT THE YEAR

The large, seasonal price variations for onions indicate that both producers and consumers would gain if a more consistent supply of onions were placed on the market throughout the year. Nigerien producers can increase their earnings through the following strategies:

1. Staggered Planting Dates

The staggering of planting dates from October through February will maintain a continuous supply of onions on the market during the period of January to June. In addition, rainy season onion production should be studied as it offers the possibility of higher returns than the dry season crop. These returns must be carefully examined within a farming systems context since there will be direct labor conflicts with cereal production.

2. Improved Storage Facilities and Techniques

The other option for providing a more even supply of onions is through improved storage. Inappropriate and overcrowded storage facilities, and inappropriate handling of the product (by leaving it in the sun) before storage results in severe storage losses. Although properly maintained traditional storage facilities can perform average storage functions, additional research should focus on designing more cost effective alternatives. The returns from such research will be extremely high.

D. PROMOTE THE PARTICIPATION OF COOPERATIVES IN THE ONION MARKETING SYSTEM

Except in isolated instances, cooperatives have not been active in the onion marketing system. They have the potential, however, of aiding in coordination of production and marketing. This is particularly true in isolated production zones such as Roukouzoum and Tamaske where farmers have access to a limited number of traders and intermediaries.

In order to expand their role, the cooperatives will require capital resources to provide storage facilities and, in certain instances, will have to make cash advances to farmers. The cooperatives will also need accurate market information if they are to compete successfully with private marketing agents.

E. ATTEMPT TO NEGOTIATE REDUCTIONS IN "CADEAUX" AND TRANSIT FEES WITH CONCERNED GOVERNMENTS

Transport costs represent a large percentage of the difference between

producer and retail price. Any reduction in these fees will expand market volume through improvements in producer and consumer prices. The Government of Niger should attempt to negotiate these issues with neighboring governments on a reciprocal basis.

F. COLLECT AND/OR MAKE AVAILABLE RELEVANT DATA

The lack of data on onion production, prices, exports, and elasticities complicate the process of analyzing the performance of the onion marketing system and predicting the impact of policy changes. Some of these data have been collected, but never compiled or published (such as export destination figures). Others, such as price and market volume data, could be gathered inexpensively.

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IX. ANNEXES

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ANNEX A
THE GARLIC SUBSECTOR

Although the original scope of work suggested that the research focus on both onions and garlic, it quickly became evident after a review of the market situation that Nigerien garlic provided far fewer opportunities than did onions. As a result, the degree of research effort devoted to garlic was scaled down.

Two characteristics of garlic would appear to heighten the attractiveness of garlic as a Nigerien export. Though garlic is a relatively high valued crop, the gross market margin, which includes transport, handling, and taxes is smaller on a proportional basis than for a lower valued crop such as onions. Secondly, garlic, unlike onions, can be stored effectively for prolonged periods.

In terms of the standard theory of comparative advantage, garlic would appear to be an excellent export crop for a Sahelian country such as Niger. In the real world of international trade, however, the question becomes whether Nigerien garlic can be competitive with other substitutes.

Despite these apparent advantages, our initial research work in the coastal markets quickly demonstrated other factors which greatly limit the opportunities for the export of Nigerien garlic:

1. Nigerien garlic is not price competitive with European garlic.
2. Nigerien garlic is considered to be of lower quality than European garlic.
3. The total value of the regional market for garlic is perhaps one-fiftieth of the regional onion market.

In Abidjan, the largest market, the general manager of SABIMEX quoted a current cif price of 310 FCFA/Kg for Spanish garlic. A recent COPRO-Niger report indicates a farm level price range of 275-300 FCFA in Agadez Department and a Niamey fob price of 600 FCFA per kg. Clearly Nigerien garlic is not price competitive in the Abidjan market.

As a note, it is important to use the wholesale price for garlic when making

comparisons. As a low volume item, garlic is sold with a very high percentage markup at retail (over 200% in Abidjan) when compared to a high volume item such as onions. This high retail price is not a good indicator of the price available at the producer level.

The importers and wholesalers in the coastal markets were also quick to indicate that, in sharp contrast to Nigerien onions, Nigerien garlic is considered to be of inferior quality. The traditional variety produced in Niger is pink in color and has small open cloves. The Spanish variety which dominates coastal markets is white, closed, and much larger. Spanish garlic arrives in excellent condition packed in wooden crates of ten kilograms. The Nigerien variety, because of its open cloves, is susceptible to breakage during transport.

As is noted in the main report, in contrast to the Ivory Coast, European onions are not imported into Togo or Benin, which allows Nigerien onions to dominate these markets. These two countries do, however, import garlic from Europe. Consumers in these countries, we were informed, will not accept the quality of Nigerien garlic. Thus we were unable to find any of the onion sector participants who were interested in handling Nigerien garlic (although some had tried in the past).

A recent COPRO-Niger trip report indicated that there are potential export markets in Gabon and Congo-Brazzaville. The market has not been studied to confirm the level of competition one is likely to encounter selling Nigerien onions at these markets.

The total size of the garlic market in the region is relatively small. According to an estimate provided by a major Ivorian importer, annual garlic imports for the Ivory Coast are approximately 250 tons while annual onion imports are 35,000 tons. On a value basis at the wholesale level, the onion market in the Ivory Coast (and by extension in the region) is nearly fifty times larger than the garlic market.

The principal Nigerien garlic production area is in Agadez Department. Although no production figures are available at the national level, COPRO-Niger has estimated departmental production at 1250 tons.

Currently most of the production is of the small pink variety, the seeds are imported from Nigeria.

Garlic could grow equally well in the onion growing area of Tahoua Department and is currently found in small quantities. Farmers in that area are not enthusiastic about the crop -- they do not find that the returns justify the effort.

In summary, the current market situation provides little reason for optimism for the potential of garlic as an export crop. Nigerien garlic is not price or quality competitive and thus is unlikely to attract foreign buyers.

ANNEX B
INFORMAL QUESTIONNAIRE -- RAPID RECONNAISSANCE SURVEY

Guide d' Entretien
De Reconnaissance Rapide
Des Producteurs de l'Oignon et de l'Ail

Nom de l'enqueteur _____ Date _____
Village _____
District de _____
Arrondissement _____

1. Nom de l'exploitant _____
 2. Ethnie _____
 3. Superficie totale de l'oignon (ou de l'ail) / ___/___/, /___/___/ ha
en 1987-88
 4. Superficie cultivee en 1986-87 / ___/___/, /___/___/ ha
 5. Production totale (1986-87) / ___/___/, /___/___/ kg
 6. Date de semis (1987-88) Indiquez la periode _____
 7. Quels sont les criteres de choix des differentes dates de semis

 8. Utilisation de la recolte: Quantite consommee / ___/___/___/ sacs *
Quantite donnee / ___/___/___/ sacs *
Quantite vendue / ___/___/___/ sacs *
- * Indiquez le poids des sacs

9. Prix

Periode	Prix de vente
Vente no. 1	
Vente no. 2	
Vente no. 3	
Vente no. 4	
Vente no. 5	

10. Qu'est ce que vous pensez de prix obtenu pour vos oignons?

trop bas _____

suffisant _____

assez eleve _____

11. A qui vendez-vous vos oignons (ou de l'ail)?

_____ aux villageois

_____ aux commercants locaux

_____ a la cooperative

_____ aux commercants

_____ a la SONARA

_____ aux autres (a preciser)

12. TRANSPORT

a. Transportez-vous vos oignons (ou de l'ail) au marche vous-meme?

oui / _____ /

non / _____ /

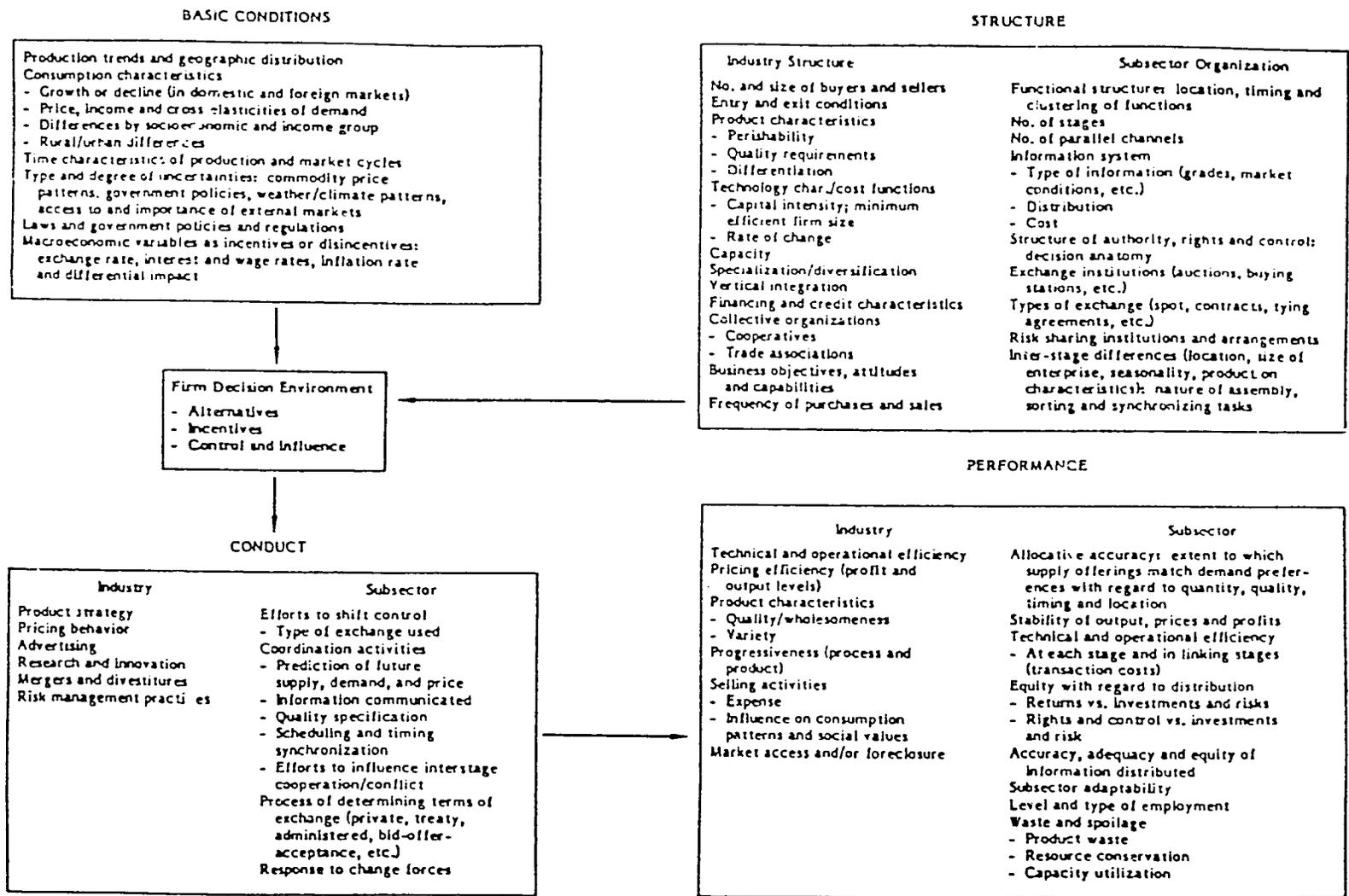
b. Si oui, par quels moyens _____

c. A quelle distance _____ kms

d. Combien de jours mettez-vous a vendre vos produits? _____

e. Quelles sont les difficultes rencontrees? Precisez-les.

A Schematic Representation of the Structure, Conduct, Performance Paradigm as Applied to the Commodity Subsector Approach



ANNEX D

IVORY COAST IMPORTS OF DUTCH ONIONS 1980-1987

<u>Year</u>	<u>Volume (tons)</u>
1980	10,465
1981	13,080
1982	16,121
1983	12,695
1984	10,056
1985	14,675
1986	17,034*
1987	8,500**

* All months except December (a strong import month)

** All months except October-December (all are strong import months)

Source: Ministry of Commerce Official Import Figures, Abidjan, Ivory Coast

Note: Major Ivorian onion importer feels these figures underestimate imports of Dutch onions which he estimates exceed 20,000 tons a year.

ANNEX E

ALTERNATIVE MARKETS: GABON AND CONGO-BRAZZAVILLE

While these two Central African Markets are not currently supplied from Niger, they represent potential markets for onions because of their distance from alternative sources of supply. According to information provided by other sources (CNCE - 1987 and Sidibe, personal communication), onions retail from 450 FCFA up in both countries. The onions are supplied from Holland and Cameroon, and apparently even some Nigerien onions arrive via Abidjan. The cited Dutch cif price of 185 FCFA/k for Libreville is substantially higher than the 80 FCFA/kg rate for Abidjan. The difference may reflect higher shipping costs, import duties or both.

It may be difficult to supply a quality product to these markets. COPRO-Niger proposes to truck the onions to the port of Cotonou, and then by boat to Libreville and Brazzaville (supply by air is too expensive). Their 7-10 day delivery period may be optimistic.

COPRO-Niger's initial plans are to ship 20-30 tons per week to each market during the height of the season (three months). Thus the total sales for the two countries would only be in the range of 500-700 tons. This would only be a small but perhaps lucrative market

ANNEX F
ANNUAL ONION PRODUCTION IN NIGER

EVOLUTION DE LA PRODUCTION D'OIGNON

<u>Annees</u>	<u>Productions (Tonnes)</u>
1966	25,750
1967	34,400
1968	31,100
1969	19,840
1970	21,500
1971	24,750
1972	10,480
1973	19,529
1974	36,950
1975	62,907
1976	70,670
1977	128,000
1978	-
1979	99,500
1980	104,670
1981	20,375
1982	86,050
1983	86,160
1984	20,368
1985	42,190
1986	20,435
1986/1987	?

(rapport non encore elabore)

Source: Department de Tahoua
Direction de l' Agriculture

ANNEX G
NIGERIEN ONION PRODUCTION BY REGION 1980-1986

PRODUCTION PAR DEPARTMENT 1980-1986

(en tonnes)

<u>Dept/Annee</u>	<u>1980/81</u>	<u>1981/82</u>	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>
Dosso	-	-	14,065	14,345	-	3,350
Maradi	-	-	-	-	-	1,715
Niamey	-	-	-	-	-	6,295
Tahoua	104.670	20.375	86,050	36,135	20,368	48,190
Zinder	3,075	2.796	3.570	3,445	3,580	3,200
Total	107.745	23.375	103.685	53,925	43,800	62,750

Source: Dept de Statistiques Ministere de l'Agriculture

ANNEX H

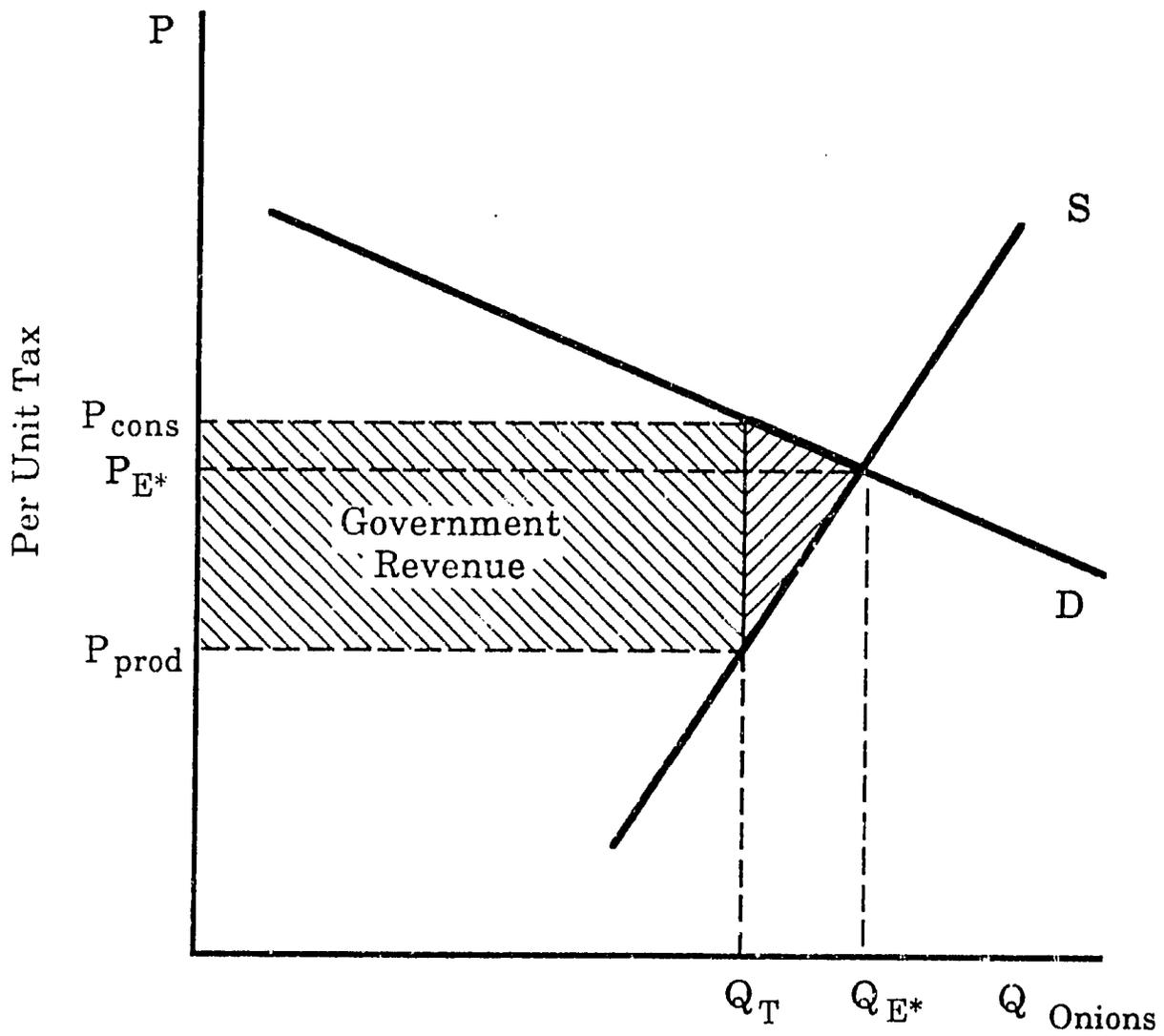
A GRAPHICAL ANALYSIS OF THE EFFECTS OF IMPOSING AN EXPORT TAX

As described in the text, export taxes function in a similar fashion to any transaction cost which separates the producer and consumer prices. In the graph above we have simplified the analysis by assuming that the tax is the only cost which separates supply and demand. The inclusion of the other transactions costs would not affect the basic results obtained here, but would help to place the magnitude of the export tax in its proper context.

In the initial pre-tax situation the producers and consumers have met in the market and have directly established a mutually agreeable price (PE^*) and quantity (QE^*) of onions which they will exchange. The government has now decided to institute a per unit tax of T . The first point to be made is that the burden of the tax is not a function of when it is collected. The burden of the tax will instead be decided by the relative responsiveness of consumers and producers to price changes. In the above example, since producers are relatively more price responsive than consumers (i.e. in relative terms it takes only a small price change for them to reduce the quantity supplied by as much as the quantity demand is reduced), the consumers will end up paying for most of the tax. In this case the producers "pay" the per unit quantity of " $PE^*.P \text{ prod}$ " while the consumers "pay" the smaller amount " $P_{con}-PE^*$ " (see graph on next page). The government collects the amount of the tax which is equal to the per unit tax rate (T) times the after tax volume (Q_{tax}). This amount is equal to the rectangle in the diagram. The triangle in the diagram is a dead weight loss which occurs because of the reduction in the volume of the market. It is a reduction in the consumer and producer surplus which is not captured by the government.

A reduction/elimination of an export tax has an exactly opposite effect as the consumer and producer prices are brought closer together. Once again the relative responsiveness of the two sides of the market to price changes will determine where the new equilibrium price and quantity are fixed.

A Graphical Analysis of the Effects of Imposing an Export Tax



ANNEX I
LIST OF PERSONS CONTACTED DURING THE RAPID RECONNAISSANCE MISSION

Niamey

M. Maliki Barhoumi	Directeur de Commerce Interieur Ministere de Commerce
M. Combarry Abdoul-Aziz	Directeur de Commerce Exterieur Ministere de Commerce
Mme Ali	Directrice Adjointe de Commerce Exterieur, Ministere de Commerce
Pape Sene	Project Director, Cooperative League of the USA (CLUSA)
Graham Owen	CLUSA
Mme Boubacar	CLUSA
Mme Diallo Aissa	Directrice de Centre Nigerien du Commerce Exterieur, Chamber de Commerce (CNCE)
Mme Ousseine	Chef de Service Etudes et Statistiques Agricoles, Ministere d'Agriculture
M. Philippe Singellos	Service Etudes et Statistiques Agricoles, Ministere d'Agriculture
M. Soumaila Amadou	Directeur General, Office des Amenagements Hydro-Agricoles (OHAA)
M. Grand Jean	ONAA
M. Issa Mahamane	Institut National des Recherches Agronomiques de Niger (INRAN)
Dr. Henri Jossierand	USAID, U. Michigan Credit Study
M. Jim Gray	Technical Assistant, U. Michigan Credit Study
M. Michel Querebec	Technical Advisor, Ministry of Agriculture
M. Ken Koehn	Chief of Party, NDD/DAI
M. Mick O'Neil	Agronomist, NDD/DAI
M. Koullou Mahamane	Directeur General, Office des Produits Vivriers de Niger "O.P.V.N."
M. Ali Alidou	Directeur, COPRO-NIGER
M. Sidibe	Chef des Etudes, COPRO-NIGER
M. Franco Franchini	Chief Administrator, FAO

BENIN (COTONOU)

M. Acapoui Jean Apiti Centre Information Commerciale du Benin
M. Agossa Deffodji Chambre de Commerce
M. Aholou Romain Directeur des Prix, Ministere du Commerce
M. Directuer des Douanes

TOGO (LOME)

M. Medeiros Program Officer, FAO
M. Johnny Mantilla Expert Forestier, FAO
M. Kofe Idao Egbeto Representative World Bank
M. Leonard Lawson Chef Departemental de Vivres Frais/GOYI SCORE
Largest Grocery Store in Lome
Mme Tandi Fati Wholesale Onion Merchant, Ancien Zongo Market
M. Amavi Directeur des Enquetes et Statistiques
Agricoles
Ms. Evelyn McLeod Program Officer, USAID/TOGO
Mme Fiagan Massan Directrice des Statistiques,
Service des Dovanes
M. Koudaya Statistiques Generales
M. Koffe Ahlin Statistiques Generales
Ms. Ruth Lawson Wholesale Onion Merchant
M. Amadou Salif Togolese Transporter of Onions from Niger
M. Kofe Avavi Togolese Transporter of Onions from Niger
Be Market Lome - 3 Wholesale Seillers
Hankopi Market/Lome 3 Wholesale Sellers

NIGERIA (LAGOS)

Mr. Thomas Pomeroy Agricultural Attache, USAID/LAGOS
Mr. Iyang Eleje Director Federal, Ministry of Agriculture
Mr. Babalonla Agricultural Officer, Federal Ministry of
Agriculture
Mr. Moschen Alikham Agricultural Officer, World Bank

Ms. Abe Olayiula	Agricultural Officer, Federal Minsitry of Agriculture
Ms. O.S. Sanni	Federal Office of Statistics
Mr. Owolabi	Federal Office of Statistics
El Hadji Hassan	Onion Wholesaler, 10 miles Market Lagos
<u>TAHOUA (NIGER)</u>	
M. Tandja Mamadou	Prefet for Tahoua Department
M. Amadou	Directeur of Regional del'Union des Cooperatives Nigeriennes
M. Oumarou Naoua	Directeur ONAHA, Galmi
M. Abouzeidi Sale	Coordinateur, CLUSA/ROUKOUZOOM
M. Sani Rabiou	Union Regional des Cooperatives