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SEASONAL PRICING AND INSTITUTIONAL REFORM OPTIONS FOR TUNISIA'S GRAIN MARKETING SYSTEM

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Seasonal Pricing and Institutional Reform Options for Tunisia's Grain Marketing System

1. INTRODUCTION

This report addresses questions relative to the introduction of administered seasonal price variation into Tunisia's grain marketing system as a step toward more general price liberalization and an increased role for private operators in grain assembly, storage, and handling. It also addresses implications for the future role of the Office des Cereales (OC).

Over the last year, the Government of Tunisia has published a number of administrative orders affecting the future organization of the grain subsector:

- The conditions under which private operators will be authorized to assemble grain have been announced (Decret 90-1083, 26 June 1990).
- Customs duties and value added taxes (vat) on imported grain have been suspended (Decret 90-1142, 29 June 1990).
- Advantages of the agricultural investment code have been extended to grain assembly and storage (Decret 90-1252, 1 August 1990).
- Resale prices of grain and a broad range of agricultural products have been declared free at the distribution level (Decret 90-1503, 17 September 1990). Government sources indicate that this has the effect of changing official prices into support prices, rather than the only price at which products can be sold.

In addition, administrative orders have or will announce support prices, and the mechanisms for payment, storage and resale of grain produced during 1990 and 1991; changes in the system for administering subsidies are in the works; and the OC has undertaken a number of initiatives designed to improve the transparency of its financial management and reduce its involvement of activities unrelated to its primary mission.

In order to situate options for price policy reform in the broader context of general changes in grain market policy, the report is organized as follows: Section 2.0 discusses the current grain marketing system situation and a number of issues influencing the policy options available to policy makers. Section 3.0 presents an analysis of alternative short and medium term options for using the price mechanism to pursue efficient market operations and government objectives. Section 4.0 presents a short term plan for implementing administered seasonal prices within the context of the current price/subsidy system. It also identifies needed improvements in market information to facilitate monitoring and system operation. Section 5.0 discusses implications for the role of the Office des Cereales, and evaluates developments relative to the Plan of Action provided in phase one of the current study. Section 6.0 presents conclusions and implications for follow-up.

2. TUNISIA'S GRAIN MARKET: SITUATION AND ISSUES

Annual grain production in Tunisia has varied between .9 and 2.1 million tons (mmt) over the last decade, with 1990 production estimated at about 1.6 mmt. The marketed portion of the crop passing through official channels, i.e. the Office des Cereales (OC) or two major cooperatives, has ranged from 30 and 60 percent of total production, and 40 and 70 percent of production in the northern part of the country.

On average, about eighty percent of the marketed crop is delivered to official assembly centers during July and August, with 10 percent delivered in June, and 10 percent after August 31. Tunisia also imports 1-2 mmt of cereals annually, with total use of local and imported grain of 2 -3 mmt.

As indicated in our first phase Analysis of Tunisia's Grain Sector (Newman, Ladd, Boughzala and Ben Amar), the current system is characterized by major assembly bottlenecks during average years of production due to the nature of grain deliveries during the immediate postharvest period. This reportedly leads to:

- Inaccurate or at least disputed weighing and grading;
- Inability to separate grain at assembly centers in such a way as to take advantage of the grading system;
- Improper storage of grain and unnecessary losses;
- Costly over investment in sacks, along with the inability to make use of more efficient bulk handling facilities where available;
- payments for storage and handling that cooperatives report are inadequate to cover costs.

The OC estimates that about 5 million TD per year is spent unnecessarily on sacks, transport and demurrage as a result of limited storage capacity and problems in removal from ports and bottlenecks at assembly centers. Additional storage facilities could be constructed by the OC. However, the current policy thrust toward reducing public costs and increasing the private role in Tunisia's grain markets suggests consideration of options under which private investors would provide for a growing share of Tunisia's future storage needs.

Under the current system of agricultural product prices in Tunisia there is no incentive for private operators to invest in storage facilities, and all costs of storing cereals in Tunisia are borne by the public subsidy fund (CGC) through payments administered by the Office des Cereales. This is due to the fact that prices are kept the same throughout the year, and throughout the country, so that costs of carrying inventory, physical handling, storage and transportation can only be covered by premia paid to the OC and cooperatives. Furthermore, quick delivery premia ("primes de prompt livraison") during years of small

crops (most recently 1988 and 1989) have discouraged storage, and encouraged bottlenecks in assembling local production.

Because millers and feed manufacturers pay the same price for grain whenever they purchase it, they too have no incentive to invest in storage. If they store grain, they must pay the costs of interest on the value of the grain, as well as storage and handling costs. As a result, storage capacity at the mill level is sufficient for only about 10 days capacity.

Lack of storage capacity contributes to increased requirements for bags, unnecessary transportation and handling expenses, and problems in unloading ships that leads to major demurrage expenses. While ships can unload at 2000 tons/day at La Goulette, if the entire amount must be bagged, it requires filling more than 1000 bags per hour on a 24 hour basis if the silo is to avoid getting backed up, slowing discharge of vessels and giving rise to demurrage charges. Improved bulk handling capacity and urban transit storage could reduce this problem and permit reductions in demurrage costs.

As part of its grain market reform program, the Government of Tunisia (GOT) has embarked on a program of redefining the role of the OC, and encouraging a larger role for private operators in the grain marketing system. Previous analysis conducted as part of this study examined storage costs of the OC and Cooperatives (Rassas), costs of investments in new storage facilities (Newman and Cohn), and options for encouraging private investment in storage facilities. Potential financial returns to such investments under a variety of contracting options were also analyzed.

Private investment in storage facilities can be made more attractive by extending the benefits of the investment code to storage facility investments. However, with grain resale prices heavily subsidized, so that grain is resold to millers and the feed industry for less than it is purchased for, and with grain prices that remain the same over time and space, storage facility investments at the farm, assembly center, or terminal level make no economic sense without assured government subsidies to cover costs.

The GOT has indicated a desire to develop the storage capacity it needs for food security and gradual development of a private grain trade through private investment. It has also indicated major concern with the growing costs of government subsidies in the cereals sector. Under the current price and subsidy policy environment, private storage investments will only be made with binding contractual assurances that losses on investments will be covered by government storage payments.

In managing costs associated with imported grain, it might be possible for such contractual arrangements to be put in place, and costs to the GOT relative to current outlays for storage, handling and demurrage reduced. However, in addressing the problem of on-farm storage, and bottlenecks in deliveries to local assembly centers, a public contracting mechanism would be extremely cumbersome.

The following analysis examines options for gradual introduction of market driven price variation as a basis for encouraging storage, reducing bottlenecks at assembly centers, terminals and ports by spreading out deliveries of local grain; and encouraging private processors to remove grain from port elevators.

The price mechanism can also be used to encourage transportation of grain and products between areas of surplus and deficit. A recent study of the grain transport cost equalization system (perequation du transport) indicates that costs of the current system amount to about 1 million dinars annually. This is very small relative to the total cost of grain subsidies, estimated at about 400 million dinars annually, so the focus in the current analysis will be on storage and handling costs.

3. USING PRICES TO PURSUE GOVERNMENT OBJECTIVES AND EFFICIENT MARKET OPERATIONS

In many of the world's market economies, seasonal variations in prices of agricultural commodities are at least in part a function of supply and demand. When product supplies are plentiful, and demand limited, prices are lower than when the reverse situation prevails. This situation means that farmers who must sell immediately after harvest receive lower prices than those who can afford to store and sell later in the marketing season. It also means that consumers face variable costs for food. Many nations have developed agricultural policies directed at stabilizing agricultural prices, keeping them above a certain floor, or supporting them at some administratively determined level to protect farm incomes. As part of a food security policy, food stock and import management policies are often used to keep food available and fix an upper limit on prices.

3.1 Government Objectives in Price Policy

Governments use price policy to pursue a number of objectives vis a vis producers, consumers and market intermediaries.

- For producers, price policy is generally directed at assuring a regular return that will keep them producing despite weather induced production variability.
- For consumers, the objective is often to stabilize prices so that swings in production, and seasonal variation in food availability do not unnecessarily harm sensitive groups.
- For intermediaries, the objective is often to assure that margins are sufficient to assure regular supplies of marketing services, while preventing expletive margins that bear little resemblance to actual costs.

Tunisia is not alone among wheat producing nations in having a price policy that mitigates the forces of supply and demand. The United States effectively provides qualifying producers with a floor price (loan rate) at which grain can be "sold" to a public agency if market prices are lower. The European Community member nations provide producers with the option to deliver qualifying grain to a public agency if market prices are below the floor (intervention) price. In Canada and Australia, producers receive an initial payment that becomes a floor price if market conditions prevent getting a higher price.

At the same time, all of the countries mentioned above have mechanisms permitting forces of supply and demand to influence the final price received by producers, market intermediaries and consumers. They also allow for variation in prices to reflect costs associated with storing and handling grain.

3.2 Price Supports

In evaluating a system of support prices for agricultural products, it is important to recognize the potential costs and distributional impacts. For example, higher prices for producers, in the absence of subsidies, mean higher prices for consumers. Different nations have adopted different approaches to mitigating these joint impacts.

- In the United States, a support price provides a floor to producer prices, that is sufficiently low that consumers do not contribute directly to the cost of supporting farm incomes. A separate target price and deficiency payment system supports the final price received by producers. Taxpayers bear the burden of these support costs. Where the price for sales to export markets is still above that offered by competitors, a program of Export Enhancement Payments (EEP or BICEP) is used to reduce the offer price, again from general taxpayer resources.
- In the European Community, producer prices are supported at a high level through the intervention price system, and variable levies on imported grain prevent consumers from purchasing lower priced grain from competing suppliers. In this case, consumers pay the cost of providing higher prices to producers. The price of production to be exported is reduced through export subsidies, so that it can compete with other suppliers to Tunisia and other world markets. This cost is borne by taxpayers.

In Tunisia, the system of purchases at a high producer price and resale at a highly subsidized price means that taxpayers bear the costs of subsidies.

3.3 Seasonal Pricing

Different countries also treat support for the costs of storage, handling and transportation differently. As indicated above, the current Tunisian system simply absorbs all such costs as part of the subsidy. Storage payments are made to the OC and Cooperatives monthly on the basis of stock levels every 14 days.

In the European Community, the intervention price is increased on a monthly basis in order to cover the costs of storage and handling, and avoid delivery of all grain immediately at harvest. At the same time, grain which is not sold into intervention is traded at market prices which vary over time and space as a function of supply and demand conditions.

In the U.S., loan rates are set on an annual basis. Monthly fees are charged on grain stored in private silos, as are handling charges when it is moved in and out of an elevator. The U.S. price support system operates by permitting producers to borrow money against their production, which can be reimbursed if market prices exceed the loan rate. On

reimbursement, storage and handling costs must also be paid. In the event that grain is turned over to the government support agency, storage costs are paid by the Department of Agriculture.

3.4 Price Policy Options for Tunisia

Until recently, Tunisian price policy has attempted to maintain constant prices for producers and consumers over time and throughout the year. Adjustment has been through the cost of subsidies to the Government, which have risen rapidly over the past decade. As Tunisia begins to shift toward a more market-oriented agriculture, there are several alternative approaches that can be considered, either individually or in some combination.

- The current system could be maintained.
- Administered seasonal price variation could be introduced.
- A floor price system could be introduced.
- A price band, including floor and ceiling prices could become the basis for implementing grain sector policy.
- The sector could be completely liberalized with respect to prices.

3.4.1 Maintaining the Current System

The current system is a known. It has succeeded in assuring supplies throughout Tunisia. Results of the recent APIP analysis of the CGC indicate that subsidy costs of the current system are high, and the bulk of subsidies benefit those who are best off economically. At the same time, prices and subsidies have an important impact on the expenditures of poor and disadvantaged groups. While Government of Tunisia comments on an earlier draft of this report indicate that maintenance of the current system is undesirable and unlikely, it nevertheless serves as a useful baseline against which other options can be evaluated.

Under the current system, the OC and Cooperatives are paid for storage on the basis of inventory levels every 15 days. The level of the payment, originally based on calculations made in 1980, is reviewed and renegotiated annually. The cooperatives report that the amount of the payment is largely insufficient to cover their costs. At the same time, there is little pressure for them, or the OC to pursue efficiency gains or cost reduction. Labor costs make up about 40 percent of the Cooperatives' storage and handling costs, while depreciation and facilities rental are only about 5 percent. Interest costs, a result of cost of carrying inventories and in large measure attributable to delays in getting paid by the OC, make up much of the balance of the Cooperative's costs.

3.4.2 Introducing Administered Seasonal Price Variation

The current system of storage payments to the OC and Cooperatives and constant prices for producers, processors and consumers amounts to de facto administered seasonal pricing restricted to three operators. Costs associated with handling and storing grain on a seasonal basis are absorbed by the public treasury for grain passing through official channels, and distributed among producers, parallel market intermediaries and consumers for grain that does not pass through official channels.

As a transitional measure to a more market oriented price policy, administered price variation has the attractiveness of opening up the sending of economic signals encouraging storage and handling at the farm level, and spreading out deliveries to assembly centers during July and August, when bottlenecks generally occur. To the extent that price variation equivalent to current storage margins could be extended to a broader range of market participants at the same cost as the current system, administered price variation is an attractive starting point. If there are changes in the current system, so that price variation is passed through to market intermediaries, government subsidy costs can be expected to fall, and incentives to invest in storage facilities at the processor level will be increased.

It is important to point out that the introduction of administered seasonal pricing is intended to approximate the operation of a market mechanism, without giving the market a chance to operate freely. It is especially attractive as a transition to a managed type of seasonal pricing, as discussed under 3.5.3 and 3.5.4 below.

3.4.3 Floor Pricing

Rather than attempting to administer prices, it is possible for governments to pursue overall pricing and incentive objectives through limited intervention to complement or guide the direction of open market operations. For example, under the current system Tunisia wants to assure that producers receive the official market price of 24.5 dinars per quintal for durum wheat. It pursues this goal through a monopoly by the OC and its representatives, COCEBLE and CCGC, which stand ready to purchase all wheat produced and delivered to official assembly centers.

One alternative would be to have available at a limited number of levels per governorate, the possibility to sell to some official assembly center at a floor price such as 24.5 D/ql, with a legal private trade that is allowed to purchase at any price, or initially at any price above the floor. Under this system, farmers would have the option of selling to private assemblers at a mutually acceptable price, with recourse to the official floor price at selected official assembly centers. In the event that supply and demand conditions led private assemblers to offer less than the floor price, farmers would exercise the option to deliver to official assembly centers, with some allowances for differences in costs of delivering grain to alternative sites.

Where supply and demand conditions permit private assemblers to pay the same or more than the floor price, farmer decisions to deliver to official assembly centers will be based on differences in delivery costs and payment terms. If prices to millers and other processors remain regulated, private assemblers will only be able to pay prices equal to or superior to official floor prices if they are able to store and transfer cereals at costs below those of the OC and cooperatives, or receive a subsidy.

A sub-option would also allow prices to processors to vary up to a ceiling, or within a certain range. This would require that subsidy payments be shifted to the mill level, and be based on output, or eliminated. Under such conditions, sales to millers would be influenced by price for a given grain quality. The OC could manage prices relative to a ceiling or within a band through management of imports, sales of local cereals and/or subsidy levels.

One key to the OC role in regulating the marketing system to implement a system of price floors, ceilings and bands will be the development of a decentralized system of market price monitoring and dissemination. Experience in a wide range of other countries has shown that when real time market price data are widely available to farmers, market intermediaries, processors and regulators, private transportation and storage of grain is stimulated by knowledge of price differences, and the implementation of a floor price system facilitated.

3.4.4 A Price Band

The price policy discussed above is most important in establishing a floor under market prices. At the same time, price policy mechanisms are used to prevent prices from rising above certain levels. Government policy can allow farm prices of grain to vary between some minimum, or floor price and some maximum, or ceiling price. In other words, within a band. This would prevent the price received by farmers from falling below a certain low point (floor), designed to protect incomes, or above a rising above a high point (ceiling), directed at meeting food security objectives by limiting processor or consumer costs, or government subsidy costs.

In other countries, a price band is used as one component of a policy directed at the pursuit of farm income and food security objectives. For example, market prices in both the EC and U.S. are permitted to vary throughout the year, and in different physical locations.

For example, the U.S. maintains grain security reserves, with much of the total held in a farmer-owned reserve stored in farm-level storage or in private silos. Under the program, farmers agree to store grain for three years. They can receive low or no interest loans for this period and the annual storage payments from the government. Once in the reserve, grain may not be removed without penalty unless the market price reaches a

specified "release price" or the loan reaches maturity. If the release price is reached, farmers are not required to sell their grain, but the government can reduce or eliminate storage and interest incentives.

In the EC, grain held in government intervention stocks can be sold to reduce prices. As EC prices are generally above prices on international markets, the cereals management committee in Brussels can also manage market prices by varying the import levies it charges on grain and the export subsidies it accepts to pay.

In contrast, Tunisia has used a parastatal monopoly and official prices as mechanisms for fixing prices, rather than managing them within limits. In so doing, it has removed the incentive for private operators, farmers, market intermediaries, processors and consumers to play roles in the grain subsector that they do usefully in many other economies. Tunisia also has an active parallel market, which, though relatively unstudied, appears to play an important role with respect to the share of production that does not pass through official marketing channels.

Management of price variation using a price band would include both measures mentioned in providing a price floor, plus the use of import management and management of strategic grain reserves to keep consumer prices below an upper price band bound.

At the processor, baker and consumer level, prices of grain and products could be regulated within a certain range, rather than being fixed by public fiat. This would permit market signals to promote private investment in the means and performance of physical handling, storage and transportation, while retaining the ability of a public regulatory agency to protect the public interest.

3.4.5 Complete Price Liberalization

Total price liberalization would involve allowing the forces of supply and demand to determine prices without intervention. It is unlikely to happen, and would probably be undesirable given the tremendous variability in production Tunisia faces.

3.4.6 The Choice Among Price Policy Options

The above discussion clearly indicates that Tunisia's agricultural price policy options must be examined in a broad perspective. The issue is not just how to adjust the current price policy to make private storage pay. It is essential to consider price policy impacts on incentives facing producers, intermediaries, consumers and government.

The role that the OC has selected for itself in the longer term involves that of regulator of market operations in order to stimulate private capital and initiative to support public objectives of efficient market operations and food security.

In the short run, a system of administered seasonal price variation can begin the transition to a more market oriented system. In order to take advantage of the potential benefits of efficiency gains from private operations, these should become a basis for establishing floor prices, rather than the basis for all trade. It makes sense for the ultimate objective of price policy to be a transition to price management within a band bounded by a floor and ceiling, as discussed above. The following section discusses the process of implementing an administered seasonal price system.

4.0 IMPLEMENTING ADMINISTERED SEASONAL PRICES

The current Tunisian practice of storage payments to the OC and Cooperatives on the basis of inventory levels every 15 days is in reality a system of administered seasonal prices. However the benefits of compensation for storage and handling costs are restricted to three operators. The discussion above has indicated that more broadly applicable seasonal price variation can be a useful first step toward broadened participation in grain marketing and storage. This chapter provides a suggested basis for determining and implementing administered seasonal price variation within the context of the current system of subsidized cereal prices. It also identifies improvements in market information necessary to facilitate monitoring and system operation.

As a first step, monthly increments in official producer prices equal to the current storage payment (prime de magasinage) should be announced now to become effective in August or September, 1991. These increases should also be translated into increases in the transfer price to millers and other processors (prix de retrocession).

The OC should announce that it will contract for future delivery of grain at prices that reflect the monthly increment. Minimum quantities will be specified. The OC could provide advances to producers contracting for future delivery. This would permit repayment of some production loans, and also necessitate that the OC have a means of safeguarding its collateral.

As the primary agricultural lender, arrangements will have to be made with the BNA to assure that contracts for future delivery will be acceptable as collateral for loans. Otherwise, the necessity of loan repayment at harvest will prevent storage and delayed sales, effectively undermining the whole program. Interviews with the BNA indicate a preference for the current system, which provides considerable protection against risk. However, in light of the legalization of private trade, the BNA will be faced with new risks and the need to develop new systems to assure that credit is reimbursed.

As the legalization of private assembly has been announced, and the new regulations require that private merchants essentially operate as agents for the OC, a system of pricing and contracting will be required that compensates for costs of assembly and storage.

4.1 Monthly Increments - A Seasonal Pricing Formula

The simplest method for providing seasonal price increments would be to transform the current system of storage payments into a system of price changes, whereby the purchase price of grain and the resale price are increased on a monthly basis by the amount of a storage premium. The starting point for beginning to adjust prices can be determined by considering tradeoffs between administrative simplicity, actual costs and fairness.

For purposes of simplicity, adding a monthly increment to the price beginning in September would reduce bottlenecks in deliveries in July and August. Actual costs and fairness might dictate regional differences in payments based on the date that harvesting begins. However, if the purpose of introducing seasonal variation is to eventually serve as a floor price above which free market prices are expected to vary, market prices will eventually reflect these differences.

Presently, when the OC or a Cooperative buys durum wheat on 1 July, it pays 24.5 TD/quintal. On July 31 it is credited with a monthly storage premium of 206 millimes, making the effective cost of the quintal 24.706 TD. At the end of August, payment of another monthly premium raises the cost of the quintal to 24.912 TD. Of course, durum purchased during August would only receive one months storage payment at the end of the month, so the effective cost is lower. However, under the current system, all grain is transferred to processors at the same price, so these cost differences are simply absorbed by the CGC.

In the European Community, which uses a monthly increment system, the grain marketing year begins in July, and monthly increments are added to the intervention price from August through April. However producers in the EC must wait 4-5 months for payment if they deliver grain into intervention in Italy, Greece and Spain in August, or the rest of the EC in September. After that, payment delays are 90-120 days. Thus, intervention serves to provide a price floor, but cash markets discount the price for immediate payment to reflect the delay accompanying intervention sales.

4.2 Setting the Level of Monthly Increments

The amount of the monthly price increment should be determined by the costs that it is intended to cover. The purpose of the increment should be to cover costs of storage, handling and interest costs.

For purposes of a trial period, the monthly increment should be no more than the current monthly storage payment: 206 millimes/ql for durum wheat (ble dur); 194 millimes for bread wheat (ble tendre); 164 millimes/ql for barley; and 182 millimes/ql for triticale.

Presumably, private operators should be able to achieve economies permitting them to store grain for lower costs than those of the OC or Cooperatives. Critical issues will be the length of time for which grain will be privately stored, the conditions under which it will be stored and how privately stored grain will be financed. If financing is not available, it is likely that grain will be stored for short periods of time and few investments will be made in modern storage facilities at the farm level.

A more analytical approach to establishing the prime de magasinage would be desirable. Calculations of actual costs of the OC and cooperatives as part of the APIP/AMIS study probably overestimate necessary payments. Use of Abt Associates

storage cost estimates based on costs of new facilities requires that allowances be made for site costs as well as the level and variability of use.

4.3 Implementing Administered Seasonal Pricing

In the absence of any other changes, announcement that purchases by the OC and Cooperatives during 1991 will be made at prices that are increased by the amount of a monthly storage increment beginning in August or September 1991 would provide producers with a basis for planning for the coming crop year.

The PDG of the OC indicates that millers, pasta, semolina and feed manufacturers will soon begin to pay the full price of grain purchased from the OC, and then be reimbursed for the subsidy component. This is a very important step in facilitating the entry of private operators into assembly and eventually imports. The OC currently has requests from about 50 individuals to become licensed private grain assemblers.

If processors pay a price for grain equivalent to the farm price and a marketing margin, as opposed to the current system whereby they pay a subsidized price that is substantially less than the farm-gate price, there would be no subsidy-related reason for maintaining the official OC monopoly on grain purchases. If subsidy payments to the grain processors are made on the basis of ex post verification of grain receipts or production, it will be possible to introduce considerable flexibility in the operation of marketing channels between farms and the mill door. Such a change could also eventually permit subsidy cost reductions by allowing individual processors to bid on the minimum subsidy that they would require to produce a given quantity of subsidized flour or other product to be sold at a subsidized price.

The introduction of administered seasonal pricing does offer the opportunity for grain held short periods of time to receive the benefit of a monthly price increment even though it was purchased late in the previous month. It is likely, however, that where assemblers must compete for grain, their prices will begin to adjust as the month draws to a close.

The introduction of seasonal price variation is intended to encourage grain storage throughout the subsector, spreading out deliveries over time, and promoting investments in grain storage facilities at the farm, terminal, mill and port level.

The reality of physical requirements of grain storage is that deliveries could probably extend into October without major risk of storage problems. Once fall rains begin, the potential for storage problems begins to increase somewhat. Nonetheless, grain is currently stored throughout Tunisia with limited modern storage facilities. It would be possible to use administered seasonal price variation to reduce some of the bottlenecks in deliveries to assembly centers without encouraging investments in modern silos. In fact, investments in modern facilities at the farm level are unlikely before individuals are convinced that:

- **The government commitment to a larger private role in marketing and storage is likely to last long enough to make such investments remunerative;**
- **Price policy will continue to acknowledge the financial costs of storing and handling grain, so that mixed signals, such as prompt payment premia, are a thing of the past;**
- **The financial system will be responsive to the potential returns to storage, and extend credit with stored grain as collateral; and that**
- **The economics of the investment indicate that storage premia offered either through official prices or expected market price variation will cover the costs of the investment.**

Analysis of storage costs and potential returns to farm level storage indicate that where grain is stored on the farm for only 3 months, it will not be possible to recover investments in modern storage facilities at current storage payments. A 250 ton metal silo would cost about 2.5 dinars per ton of capacity per year with repayment over 12 years and investment code benefits reducing import duties and interest rates. Where farmers can store for longer periods of time, and take advantage of savings in handling costs of moving grain through local assembly centers, there is potential for making such investments pay. In light of the historical variability of production, it will be easier to cover the costs of storage facilities at the urban terminal level, where imported grain can be handled in years of small local crops.

On-farm storage in multipurpose warehouses for short periods is likely to be encouraged by the introduction of seasonal price variation, and this in turn may eventually lead to building dedicated storage facilities. Recent experience with prompt delivery premia can be expected to have a major impact on willingness to invest in storage at the farm level. If in the future, support prices are simply increased, or a flat disaster payment is made to affected producers, the negative impact on incentives to store will be avoided.

4.4 Licensing Operators, Certifying Facilities and Merchandise

Government involvement in licensing operators stems from the desire to assure that those who purchase grain have the means to pay for it, the financial solidity to participate reliably in business transactions, and the technical expertise and facilities to maintain grain quality. Interest in certifying facilities and merchandise results from the desire to assure that grain quality is assured, and that merchandise that is contracted for, but undelivered, is not sold or delivered elsewhere. This section discusses requirements for introducing seasonal pricing as they affect licensing and certification needs.

4.4.1 Licensing

Decree 90-1083, published in June 1990, defines conditions for grain assembly by private operators. It specifies that a license must be obtained from the OC on the basis of demonstrating satisfactory financial capacity, posting a bond, and possession of storage capacity of 1500 mt. More than 50 applications had been received by the OC in early October.

The decree specifies that licensed collectors will operate as agents of the OC, as the cooperatives do now, with access to a line of credit for prefinancing purchases and the various premia and indemnities to which the OC itself has access.

In evaluating licensing requirements and their reasonableness, it is essential to consider the objectives of private participation in the subsector. Requirements that may make sense in a transitional stage to freer markets may become impediments to pursuit of improved market performance in a short period of time. As long as the OC has a monopoly on grain purchases, private operators may have to serve as agents of the OC. However, if the primary impediment to more efficient performance by Cooperatives is that they are constrained to operating as agents of the OC, then the "transitional solution" may be neither transitional nor a solution.

It is clear that no private operator will voluntarily accept a loss on every quintal of grain purchased, as would be required without government funding under the current system of subsidized sales. Shifting the point of subsidy to the processor level, as the OC plans to do, will eliminate the need for private operators to get involved with subsidies on the assembly end. Strong financial condition will still be essential due to the credit requirements associated with immediate payment for purchases. Operating as a representative of the OC is a temporary solution to the problem of access to credit. In the medium term, access to credit should become independent of working as an agent of the OC.

From the producer perspective, assurance of assemblers' financial viability is critical. In terms of demonstrating such viability, a combination of past and current statements of financial condition, and bonding, as required by decree 90-1083, makes more sense than simply demonstrating solvency at a point in time.

Where financial requirements are too stringent it can be expected that regulations will give rise to an unregulated parallel market, which in fact already exists in Tunisia. As a result, once the problem of subsidy administration has been removed, it may make sense to establish a multi-tiered licensing process that avoids forcing a large part of trade into unregulated illegality. A distinction between petty assemblers and larger wholesale assemblers may make sense, in that less onerous requirements for the former will facilitate monitoring and regulation.

4.4.2 Certifying Facilities

If the OC or private operators are to contract for future delivery of grain at prices that reflect storage costs, it is reasonable for them to have some assurance that the grain will be stored under conditions that respond to minimum technical requirements. If the OC adopts a broader role as regulator of quality standards, it may also chose to provide information to farmers and intermediaries on the requirements of good storage. Certifying storage facilities as adequate, provided that proper handling and phytosanitary procedures are used, seems like an appropriate regulatory requirement. Such approval should be based upon technical requirements and not arbitrary construction details.

4.4.3 Certifying Merchandise

It is also reasonable to have some assurance that grain used as collateral will not be pledged or sold multiple times. The latter constitutes theft. In a society ruled by laws, it may be necessary to assure the latter through strong enforcement of harsh penalties to those who violate contracts, rather than attempting to individually seal all quantities that have been pledged for future sale. Given the nature of grain storage and handling in modern facilities, preserving the identity of individual lots of grain is often impractical. Also, those with a genuine will to defraud are unlikely to be deterred by a simple lock or seal.

4.5 Monitoring Facility Use and Supply for Planning Imports

In light of its responsibility for Tunisia's food security, should the OC require that all quantities to be sold during a given marketing year be declared for purposes of planning import levels? The answer to this question depends, among other things, on the accuracy of Ministry of Agriculture grain production estimates and the availability of information on market situations and price developments throughout the country.

Current import decisions are based on a combination of estimates of consumption requirements, production, marketings, and stock levels. While storage may increase as a result of introducing seasonal price variability, knowledge of overall production levels, and consumption requirements should be sufficient for management of import levels, especially with an improved market information system for monitoring price and supply situations at the governorate level.

Annual surveys conducted by the Ministry of Agriculture should also begin to ask questions about marketing practices and plans, storage facilities and practices, and prices so that decision makers will be better informed on how the grain market really operates. If recent liberalization of grain distribution prices constitutes legalization of the parallel market, then monitoring should be much simpler, easing accurate planning for import requirements.

4.6 Avoiding Fraud

Opportunities for fraud can be addressed at two levels. First, at the producer level in terms of application of grades, and payment of official prices. Secondly at the processor level, in terms of payment of subsidies, and avoidance of collusive practices.

4.6.1 Producer/Assembly level

At the producer level, there is considerable uncertainty with respect to operations of the parallel market system. It is known that almost half of Tunisia's grain production is either consumed where it is produced, used for seed, or sold on the parallel market. There has been no systematic monitoring of prices or procedures of the parallel market, but anecdotal evidence indicates that prices differ from "official" prices, and grading is unrelated to official guidelines (barèmes).

In official channels, there are numerous reports of resale by unofficial assemblers to the OC and cooperatives, indicating that some producers receive less than the official price, even though their grain ends up in official channels. Furthermore, there is considerable evidence that the current grading system is subverted to permit different assembly centers to compete for grain. As a result of displeasure with grading throughout the system, the OC recently set up a panel to review the current grades and move them closer to the kind of grading practiced in international markets.

The above indicate considerable opportunity for fraud under the current system. The injured are sometimes producers, sometimes processors and sometimes the public treasury. These problems can be addressed through a three-fold program:

- A system of market price information collection and dissemination, as discussed above;
- Reform of the grading system and
- A focused regulatory role for the OC that makes it responsible for:
 - Providing a market of last resort to support producer prices;
 - Assuring that grades applied reflect actual grain quality;
 - Managing grain reserves and import levels to assure availability and keep prices below a ceiling.

4.5.2 Intermediary/Processor Level

At the intermediary and processor levels, concerns about potential fraud center on opportunities for unjustifiable or multiple subsidy payments. Potential cases mentioned include grain that is distributed as food aid and resold to intermediaries at supported prices, resale of grain that has been sold at subsidized prices for processing; or imported grain that might be purchased for less than local support prices.

It is important to point out that the possibility for any of the examples of fraud mentioned above exists within the current system. There are no quantified estimates of its importance. Any system whereby subsidies reduce the price of a commodity at the same time that value is added offers major opportunities for fraud. Elimination of the subsidies would eliminate most of the incentive for fraud. For purposes of examining an alternative system, the issue is really whether, if current fraud levels are considered tolerable, a new system will provide no more opportunities for fraud. Ideally, it will facilitate fraud reduction, while contributing to efficiency gains that reduce public costs.

In a move that will considerably simplify subsidy implementation under a system where private operators are permitted to assemble grain, the OC has announced that millers will begin to pay full price of grain, and then be compensated in the amount of the subsidy. Making this system work will require prompt payment of the subsidy or compensation for interest costs arising from payment delays. However, there are a number of very attractive opportunities opened up by this transition.

First, if the subsidy is paid on the basis of subsidized flour produced and sold, considerable flexibility can be introduced into the system from farm to mill door, without complications introduced by the subsidy. Millers could purchase from the OC, from other intermediaries, or directly from producers without major opportunities for fraud. Furthermore, by eliminating the need for all transactions to pass through the OC, any efficiency gains from the revised system can be shared between producers and processors.

As decisions are made to limit the amount of subsidized flour sold, and target sales toward specific socioeconomic groups, the revised subsidy payment system will facilitate the transition. Millers can be asked to bid for contracts to produce subsidized flour and other products to be sold at specific prices. Their bids can specify the amount that they would like to produce, and the amount of the subsidy that they would require. Bids could be awarded, and subsidies paid on the basis of documentation indicating delivery of the contracted quantities and qualities. With only about 20 operating mills, policing to avoid fraud should be relatively straight forward.

The issue of antitrust regulation, facing up to potential collusion and bid rigging among trade association members is one that will be presented in the above case, as well as in a broad range of other activities touched by the economic reform program. The traditional role of Industry associations (syndicates) has been to provide a basis for

collaboration in negotiations with parastatal institutions such as the OC. The same kind of collaboration can easily give rise to restraint of trade in a more competitive market. Thus, Tunisian policy makers are faced with the need to address the issue of antitrust regulation and enforcement throughout the economy.

GOT officials with responsibility for economic monitoring and control indicate that they can design and implement a system that will manage fraud at least as effectively as is currently the case. The World Bank Structural Adjustment Program (PAS) provides a credit of 2 million dinars to reinforce systems to avoid fraud. Issues of regulation, monitoring and enforcement to assure application of grades for grain, product quality for processed products, and competitive operations by industry groups should all be addressed.

4.7 Processor and Consumer Prices

The above analysis suggests the possibility that processor and consumer prices of cereals and products could also be permitted to vary over time and space. In the event that the Government of Tunisia prefers to prevent such variation, subsidies could be used to eliminate the impacts of market signals on supply and demand. This would, of course, imply an increase in costs borne by the CGC.

4.8 Impact on CGC

In examining potential impacts of seasonal price variation on the CGC it is necessary to separate three factors: 1) potential impacts of the change to administered seasonal prices; 2) potential impacts from changes in the way the marketing system operates with private assembly; and 3) changes in the way subsidies are administered.

In the direct transition from storage payments to the OC and Cooperatives to monthly price increases reflecting the storage payment beginning in August, there should be essentially no change in costs.

If monthly increments begin in September, a slight reduction in costs would be possible. Since 50 percent of the harvest is generally in storage at the beginning of August, and if price increments result in spreading out deliveries, then storage payments will only be paid for the lesser amounts delivered to the OC, Cooperatives and licensed traders during August.

If more grain passes through official commercial channels as a result of seasonal price variations, costs of storage would go up proportionally. If as a result, a greater proportion of local grain was used relative to imported, costs would also go up if current price relationships prevail. This is because subsidy costs are consistently higher on local grain than on imports.

Transition to a subsidy system whereby grain is purchased by processors at its internal market price, and subsidies are paid on the basis of finished products would facilitate a process of more targeted subsidies and subsidy reduction, as discussed above.

In the event that quantitative estimates of these costs are judged desirable, follow-up work can be provided. In the absence of experience with producer response to storage payments in Tunisia and solid data on the operation of the parallel markets, such estimates can be developed on the basis of assumptions provided by the OC and field interviews.

5.0 IMPLICATIONS FOR THE ROLE OF THE OFFICE DES CEREALES

The current system of imports and price policy, while costly, has succeeded in assuring uninterrupted grain supplies throughout Tunisia. In the search for a policy that will reduce subsidy costs and improve system efficiency, a continuum of options is available, ranging from the current OC monopoly to a lightly regulated "free market." Options include:

- 1) Total Control - a parastatal monopoly, somewhat like the current system;
- 2) Monopolistic Management - guiding the transition to a less regulated system through contracts and subsidies involving cooperatives and private operators in marketing, storage and distribution;
- 3) Regulated Liberalization - reinforcing the role of the OC as a market regulator, assuring the protection of public interests, and avoiding problems of free riders. Emphasis on improving information and management directed at creating incentives for private operators to play a more important role in the pursuit of public objectives.
- 4) A Free Market - turning all activities over to private operators

Experience with privatization and parastatal restructuring around the world presents too many examples of public sector retreat from activities for which there was little incentive for private business to take over. In Tunisia, the OC has embarked on a program of regulated liberalization directed at redefining its own role, and building the infrastructure, institutional capacity and incentive system for a transition to a more market-oriented system.

5.1 Recent Steps Toward Reform

To date, a number of important steps have either been taken, or are under way:

- Legalization of private grain assembly has been announced, albeit as agents for the OC;
- Steps have been taken to clean up OC financial management, getting accounting up to date within legal norms;
- Benefits of the Investment Code have been extended to private investment in assembly and storage;
- A change in the basis for payments of subsidies to processors is to take effect in November, with millers to pay the full cost of delivered grain, and receive subsidies afterwards;

- A committee on simplification of grain grades has been set up; and
- Prices have been freed at the distribution level, rendering official prices, de facto floor prices, although subsidies will prevent an immediate impact; and
- The OC has begun to divest itself of unrelated activities.

5.2 Critical Elements of a Reform Program

The OC is in the process of administering change, and it still has the power to halt the process. Effectively, the OC is still both a major player and the referee, while it goes about rewriting the rules of the game. Introduction of administered seasonal price variation is one step in the process. Critical to the overall success of reforms will be:

- Transformation of the subsidy system, so that market participants can operate independently of the OC between farm and mill. The planned changes in November could lead to a situation whereby the OC no longer has to be involved in subsidy payment;
- A plan for separation of regulatory and commercial functions of the OC, so that private operators no longer fear unfair competition;
- Reform of the grading system, so that confidence in graded grain will permit sales on the basis of grade specifications, and storage of comingled grain lots;
- Addressing financial issues related to access to credit for storing and trading grain, and eventual access to foreign exchange for imports;
- Confidence in publicly available information on production and prices, requiring the development of a reliable and decentralized market information system, and increasing the attention to grain marketing and storage in national agricultural surveys;
- Confidence in government's long term commitment to a policy directed at shifting to a market-based system. Private operators will only play an important role in grain markets, and make investments that will take 10-15 years to pay off, if they are convinced that short or medium term reversals are unlikely.

5.3 The Future Face of the Office des Cereales

The OC plan for its own future calls for it to have three primary responsibilities:

- **Regulator** of market participants, grades and standards, prices, subsidies and quantities to be imported;
- **Manager of Food Security**, with responsibility for monitoring the market situation throughout the country, and assurance of food security through a combination of ownership of reserve stocks, and contracts with private operators; and
- **Source of Information** on market conditions domestically and internationally, and perhaps grain storage, grading, and quality assurance.

5.3.1 The OC as Regulator

Introduction of administered seasonal prices is one step in a process that will convert the OC from a monopoly commercial operator to a regulator of the subsector with respect to commercial activities, grades and standards. As a regulator, its objectives should include:

- assuring that those who purchase have the ability to pay and also to maintain grain quality; and
- assuring a reliable grading system, so that payment reflects quality sold and purchased, and grain can be traded on the basis of grade certification.

As a regulator, responsible for determining minimum requirements for local assembly of grain, it is important that the OC carefully considers commercial necessities. Standards established should be sufficient to assure required performance, but barriers to legality may actually make regulation to encourage improved performance more difficult. For example, requirements for licensing private assemblers of grain include the stipulation that an operator have at least 1500 mt of storage capacity. If, as indicated by our analysis, the volume to be handled by an silo must be three times storage capacity in order to pay for the investment, then the number of potentially profitable assemblers in any governorate will be extremely limited. This in turn will limit potential competition, making regulation more difficult. As indicated above, one likely result is a thriving parallel market that remains unregulated because it is not provided for by regulatory requirements.

In overseeing the administration of grades and standards, a combination of simplification, certification and oversight is attractive. Simplification of grades will ease their honest application. Certification of personnel, equipment, and facilities should be based on demonstrated ability to provide accurate and consistent grading, and proper

storage. Oversight is essential to making sure that grades are applied as they should be, and providing a basis for penalties and arbitration when required.

5.3.2 OC Responsibility for Food Security

As the Agency responsible for Tunisia's food security, the OC should be charged with:

- assuring adequate grain supplies, generally by managing incentives for private operators, rather than direct commercial operations; and
- maintain prices within a band bounded by a floor and ceiling price;

While the traditional view of food security assurance would imply physically holding stocks, it is important for the OC to have the information resources and access to incentives so that a broader approach can be undertaken. For example, increasing storage at the level of mills will contribute to food security without the requirement that the government own grain or facilities. Likewise, access to timely and accurate information on grain availability and prices in rural areas can permit response to specific needs rather than complete control of marketing and distribution.

A program of price monitoring and import management, eventually through licenising of imports by private operators is likely to prove considerably more cost effective than the curent system.

5.3.3 OC Responsibility for Market Information

In order to fulfill its responsibilities relative to the last two objectives, the OC will have to have access to improved information on domestic market developments, including information on prices and availability of products at the gouvernorate level. Such information will be essential for implementing a sysetem of floor and ceiling prices, as well as for monitoring needed imports on a commercial basis and through food aid.

While the OC has recently eliminated some of its responsibilities for agricultural extension, there are a number of areas where information dissemination is important, and should fall within OC responsibilities. These include such activities as dissemination of information on market price developments, grades and standards, and trade regulations.

6. CONCLUSIONS AND IMPLICATIONS FOR FOLLOW-UP

Administered seasonal price variation is a small step toward a more market oriented grain marketing system, but it should be recognized as such. Providing administered price variation will only encourage storage if costs are covered. The OC hopes that administered price variation will lead to decentralized investments in modern storage facilities. Whether in fact this is the case will depend on several factors:

- The size of the monthly increment and how it is administered;
- Confidence on the part of those who would invest that this is a long term policy, and not one that will be replaced with a prime de prompt livraison or return to public monopoly at any time in at least the period during which the investment will be recovered;
- Access to credit, technical expertise, materials and supplies to assure that grain storage facilities can be built and grain quality maintained;
- A grading system that remunerates investments in assuring stored grain quality.

Progress by the OC toward its goal of becoming a market regulator, market of last resort, and overseer of national food security will also be critical. As indicated in the previous chapter, the OC is clearly making strides in the areas identified in the May 1989 Action Plan.

As long as the OC has the ability to "tilt the playing field" through its combined role as monopolist and regulator, it should not be expected that private operators will play a role any greater than that permitted by contractually guaranteed returns on investment. Such an arrangement has the potential to yield substantial profits for those who receive the OC's largesse, with some, but limited, potential for encouraging improved efficiency in grain marketing system operations.

Thus, in instituting an administered pricing system, it is critical to recognize that its promise lies in the experience of introducing price variability into a system that has had none. Tunisia's policy of constant producer and consumer prices over time and space has provided some advantages, and clearly assured regular supplies. It has also grown very expensive, distorted locational decisions and storage investment levels for processing facilities, and resulted in substantial underinvestment in other private storage capacity. This in turn has probably increased the costs of assuring supplies to rural areas.

As a transitional step toward a more market oriented agriculture, the administered seasonal price mechanism discussed here can be very valuable. If, however, it is treated as the solution in and of itself, disappointment is likely.