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Lessons from Other Countries Relevant for Grain Market Reform in Tunisia

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June 1991

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Patricia Kristjanson

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AGRICULTURAL MARKETING IMPROVEMENT STRATEGIES PROJECT

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1. INTRODUCTION

The experience of other countries in grain market policy and reform can be valuable to Tunisian decision makers and private operators as they define and embark upon a program of policy reform in the cereal sector. Tunisia's grain market reform program is directed at increasing reliance on private investment to provide grain storage, handling and transportation and redefinition of the role of Tunisia's grain marketing board, the Office des Cereales (OC), as a regulator and insurer of food security.

This comparative analysis draws on the experience of Canada, Egypt, France (and the European Community), Morocco, Pakistan and the United States. The emphasis is on marketing and policy issues affecting the operation of grain assembly, marketing, trade, processing and distribution. While clearly no single system offers a perfect solution to the unique situation faced by Tunisia, lessons drawn from elements of individual systems can provide valuable insights. In examining the experience of other countries, it is important to consider similarities and differences in government objectives, resources and agricultural production and distribution systems.

Tunisia is currently a somewhat variable importer of grain. It has been an exporter of durum wheat in the past. Much of its internal physical handling, storage and transport infrastructure is dilapidated, dating from prior to 1956. Some new interior, urban transit and port storage capacity has been built and some rehabilitation of facilities has taken place in recent years. However, the current physical grain handling system is constrained by its weakest links, giving rise to bottlenecks, inefficiencies and high costs. The most evident of the latter are multi million dinar annual demurrage costs associated with delays in unloading imported grain.

The OC is evaluating options for increasing and improving available storage infrastructure and transportation through private investment. Recent policy reform announcements have opened the door to a reform program based on a business-cooperative-government partnership. Experience in other countries can provide useful insights to the operations, successes and shortcomings of their programs.

The main report provides an overview of the experience and lessons drawn from other country experiences. Appendices provide brief country case studies of grain marketing systems and policies.

2. THE APPROACH

This comparative analysis focuses on operational and policy dimensions of country approaches to grain markets and marketing. It begins with a discussion of private and public sector roles in grain markets; proceeds to a discussion of grading, handling and storage issues; and then explores pricing, subsidy and food security issues as related to grain market reform.

The report draws on selected experience in 6 countries to identify lessons that may be valuable in Tunisia. Of necessity, it is based on a review of secondary source material, supplemented by first hand experience of Abt Associates staff who have worked in the case study countries. A brief study tour of the U.S. grain marketing system by officials of the Office des Cereales and Ministry of Agriculture organized as part of the study provided additional insights. These could be valuably supplemented by further country visits in the future.

3. PRIVATE AND PUBLIC ROLES IN GRAIN MARKETS

Throughout the world, grain is viewed as a strategic commodity and governments pay close attention to the political and economic efficiency implications of policy reforms. The last several years have seen major initiatives directed at increasing the role of private operators and capital in national grain marketing systems. At the same time, much of the world's wheat is still state traded, albeit with increasing reliance on private operators to actually implement the transaction and provide physical handling of the grain. Furthermore, with international subsidy wars among major grain exporters increasing, there may have been a net increase in the role of governments in international grain markets over the last decade. This section discusses developments and experience in both local grain assembly and marketing and international trade.

3.1 Local Assembly and Marketing

In Tunisia, the current Office des Cereales monopoly on grain purchases differs significantly from that of the other countries examined, especially with respect to the limited number of operators that are officially acknowledged as participating in the subsector (filière). While Tunisia has an operating parallel market it has been tended to deny its existence, while other countries have made greater efforts to monitor and regulate their private trade.

For example, in Morocco, ONICL maintains a monopoly for bread wheat purchases and imports, but still permits licensed private traders to purchase from farmers. Morocco maintains a guaranteed producer price for wheat, but sets support prices for durum and barley. Less than half of production passes through official channels, so a parallel market is still important.

In Canada, France and the U.S., local assembly is by privately owned or cooperative elevators. In Canada, grain prices are determined through a pooling arrangement on the basis of the value received on sales by the Canadian Wheat Board in domestic and export markets. A cash advance, underwritten by the Canadian government is provided. In Canada, delivery of grain to elevators throughout the year is governed by quotas in order to even out the demands on storage and handling facilities, so that a large portion of the grain produced is stored on-farm during much of the year.

In France, grain can be delivered to private traders or cooperatives for cash sale, which in turn can deliver to the intervention agency, ONIC if the cash market price is below the intervention (support) price and the grain quality permits it to be delivered to intervention.

In the U.S., grain can be sold to a private or cooperative elevator on a cash basis. As prices vary throughout the year on the basis of supply and demand, farmers also have a variety of options for establishing the price that they will receive for their grain. It is

possible to deliver the grain to the elevator with the understanding that the price will be established at some future date, if the farmer feels that the price is likely to rise. Because the elevator can use futures markets to protect against the risk of future price increases, it has the flexibility to offer a variety of sales and pricing options to farmers. These range from cash sales, to a fixed price for future delivery, to delivery with price fixed at some future date, to storage (for a fee) for the farmer without actually purchasing the grain.

If the U.S. farmer complies with the conditions for participating in the farm program, he or she can also get a price support "nonrecourse loan" from the Commodity Credit Corporation (CCC) through the local office of the Agricultural Stabilization and Conservation Service (ASCS) for grain that is stored on-farm or at a one of 7,000 licensed privately owned or cooperative storage facilities throughout the United States. The "loan rate," currently about 7 Tunisian dinars per quintal for bread wheat (\$2.04/ bushel), becomes a floor price because the farmer has the option of keeping the loan and turning the grain over to the CCC in the event that market prices are below the loan rate.

3.2 International Trade

On the import side, experience with liberalization points to the importance of doing more than simply declaring imports open to the private trade without attention to the details of making the new regime succeed. For example, in Egypt, liberalization of corn (maize) imports without attention to the credit requirements of private traders led to short supplies and problems in the feed industry that were aggravated by other government policy decisions regarding regulations of feed and meat prices.

In Pakistan, a government agency maintains its monopoly on wheat imports, but permits private imports of feed grains. With elimination of feed grain subsidies and maintenance of subsidies on wheat directed at consumers, Pakistan has discovered that wheat is being used for animal feed as a result of the distortions introduced by government price policy.

In Canada, while export sales are made by the Canadian Wheat Board (CWB), it owns no facilities or physical infrastructure, making use of accredited agents for storage, handling and transportation, and selling on a fob basis, with transportation and insurance provided by buyers or multinational grain companies.

4. GRADING, HANDLING AND STORAGE

4.1 Grading

Tunisia is not alone in facing problems in grading, handling and storage. In Pakistan, problems of quality control are reported and complaints are voiced about unfair trade practices in grading by both public agents and the private trade.

In Canada, grades for export are provided by the Canadian Grade Commission, which is independent of the Canadian Wheat Board. Thus, the quality monitoring function is independent of the marketing function.

In the United States, the Federal Grain Inspection Service (FGIS), a government agency that is part of the U.S. Department of Agriculture provides official grades for domestic and export sales, working in conjunction with decentralized grain inspection agencies in individual states. FGIS has inspectors at major terminal and port elevators. Users of grading services pay fees to FGIS to cover the costs of providing the grading services.

In France, ONIC has attempted to establish a public grading system for export, but most inspection is by private grading services, such as SGS.

In contrast to the Tunisian grading system, grain in exporting countries is generally given a numerical grade on the basis of the grading factor on which it rates the lowest. In addition to a numerical grade, moisture and protein are fairly common factors measured for wheat. Examples of grading criteria for different wheat classes are presented in Table __.

4.2 Handling and Storage

Grain storage results in costs for physically handling the grain and keeping it in marketable condition as well as costs of the capital tied up in inventory. In countries where market prices vary according to supply and demand conditions over the year and across physical distance, investments in storage facilities are made when the expected returns exceed the expected costs.

In Tunisia, where market prices are fixed at a single level throughout the year and physical space, investments in storage facilities are only made by administrative decision, or in response to potential government payments. The issue of seasonal price variation is discussed in further detail elsewhere (Newman, 1991).

Pakistan is experiencing the same problem of lack of private investment in storage facilities as a result of fixed official prices. A recent study of Pakistan's grain economy also found inefficient locational decisions for flour mills as a result of the government's transport subsidy system, which encourages transportation of grain longer distances than would

otherwise be the case. Enforcement of regulations prohibiting shipments of grain across regional boundaries was found to give rise to substantial differences in parallel market prices for grain, as excess supply and demand conditions were prevented from equalizing across regional borders (Pinkney).

On the positive side, Pakistan has succeeded in implementing a decentralized system of market regulation that is self-financed by farmers, merchants and their agents. This may merit further examination as Tunisia seeks to develop its own system of decentralized market monitoring and regulation.

In the U.S. and Canada, it has been found that decentralized on-farm storage is the most economic means of storing grain. While both countries have sufficient on-farm storage to handle "normal" crops, the storage has been built as a result of very different incentives. In Canada, delivery quotas established by the Canadian Wheat Board for individual farmers necessitate the construction of on-farm storage. Since the CWB dictates who delivers what quantities at what point in time, the eventual pooled price does not differentiate according to the time that grain was delivered to an accredited agent. To the extent that quotas divide deliveries evenly over the marketing year, the pooled price does reflect a return to storage however, since the market price received may be higher because sales prices reflect seasonal market price variation. The price of grain sold above the quota in cash markets does reflect seasonal price variation.

In the U.S., returns to private storage investments result from a combination of seasonal price variations and government payments for grain stored under the farm loan program, as part of the farmer owned reserve or in CCC stocks.

5. PRICING, SUBSIDIES, MARKET INFORMATION AND FOOD SECURITY

5.1 Pricing and Price Policy

The issues in price policy include the purpose of policy prices, whether they are set as obligatory sales prices or as floor or ceiling prices, price levels relative to world markets, and variation over time and space. In developing a price policy system, concerns with both prices and income implications for producers, consumers and processors, as well as government costs come into play.

A number of countries, including Pakistan, Egypt, Morocco, and Tunisia have traditionally maintained producer price levels below world prices, and subsidized the cost of inputs to compensate for these low output prices. This strategy has not generally succeeded in increasing grain output, and has led to distortions in the choice of crops grown, and the choice among farm and off-farm activities.

For example, in Pakistan, a depressed wheat price and high support price for Basmati rice led to a fall in wheat production. In Morocco, heavy subsidization of irrigated crops has shifted production away from grains and oil crops grown under rainfed conditions which in fact have a stronger comparative advantage.

In recent years, policy shifts and international market price developments resulting from export subsidies by major exporters have resulted in grain prices supported well above world levels. Input subsidies are gradually being removed simultaneously (e.g. Morocco, Tunisia). It has been demonstrated in many countries that supporting a higher than world output price can stimulate production (e.g. Basmati rice in Pakistan, wheat in Saudi Arabia). However, this can also produce distortions in the sense that resources might be better invested elsewhere in the economy, and taxpayers and consumers ultimately pay the bill for production at very high costs.

As indicated above, government price policy can have a major impact on private incentives to store grain and move it from areas of surplus to deficit areas. While Tunisia is considering alternatives to panseasonal and panterritorial prices, other countries with similar experience have already embarked upon change. For example, in Morocco, while bread wheat prices are still guaranteed and obligatory, prices for durum and barley are now considered price floors.

In Canada, producers receive an initial payment at harvest along with quotas for delivery of stored grain when needed throughout the year. The initial payment is financed through a public sector line of credit. As the grain is sold by the CWB, returns to sales of specific classes and grades of wheat are calculated. If prices received permit, progress payments and a final payment are made. The final price received by a producer is the result of a pool of the total returns from the crop sold by the CWB. In this manner, Canadian producers are exposed to variations in the world price, as the pool links the final returns to

the world market price. The initial payment serves as a floor price, in that the producer keeps it and any deficit is made up by the government if the total price received falls below the initial price, as is the case this year.

Although Canada is an exporter and Tunisia is an importer, there are two potential concepts that might be explored for usefulness in Tunisia:

- First, an initial payment that acts as a floor price, with final payment linked to world markets - could serve to bring producer and consumer prices into closer alignment, reducing the need for public intervention.
- Secondly, the use of delivery quotas at supported prices could be used to focus the benefits of support prices, especially to the extent that support prices are set with farm income objectives in mind. To the extent that the benefits of high support prices are going to a limited number of large producers, it may be desirable to set a quota on how much grain is eligible for the support price, or consider another income transfer mechanism.

Morocco has recently attempted to implement a system which ties the producer price of bread wheat to the world price. Bread wheat producer prices (prix taxé) are now based on a formula that uses a five-year moving average of a world reference price (HRW #2, FOB U.S. Gulf), plus transportation and other costs to the mill in Morocco, plus a 25% tariff protection. However, in practice this mechanism has not worked because of a safeguard clause which acts as a floor price, which kicks in if the producer price calculated from the world reference price is below the real producer price level in 1986. Since this "floor price" is at a very high level (more than twice the current world price, it has defeated the purpose of achieving a better transmission of world price levels to producers.

In Pakistan, where support prices for wheat are implemented by a parastatal, PASSCO, experience has shown that the price can be supported by purchasing 15-35 percent of the crop, while assuring that producers are aware of the existence and location of government support price centers and have the option to deliver and sell to them if market prices fall sufficiently to make it worthwhile to sell to PASSCO.

In the United States, the farm price support program operates through a system of price floors implemented through a loan rate established annually by the Secretary of Agriculture and deficiency payments based on the difference between a target price set by the U.S. Congress and the average market price during the first five months of the marketing year (see Figure __.) The loan rate serves as a floor under market prices, while the deficiency payment serves to transfer income to producers without necessitating consumer subsidies.

In France and the rest of the European Community, support (intervention) prices are established annually by the Council of Agricultural Ministers on the recommendation of the

EC Commission. To deliver grain to intervention, it must meet certain minimum quality standards, and be delivered to a national intervention agency, such as ONIC in France in a minimum quantity. Payment for grain delivered to intervention takes 90-120 days. Thus, the intervention price serves as a floor under the free market price, once allowances for quality and delay in payment, plus any other special requirements are taken into account. With intervention prices substantially above world market prices for grain, a system of variable import levies and export refunds is required to maintain the EC price support system. Under this system, consumer prices remain higher than dictated by world supply and demand conditions.

5.2 Food Security and Subsidies

5.2.1 Food Security and Market Information

Net grain importing countries such as Tunisia, Morocco, and Egypt are very concerned with ensuring that in years of low production, shortfalls in food availability do not occur. One of the principal concerns in the shift away from public sector responsibility for all grain imports is that the private sector may not meet the population's food needs all of the time.

There is a food availability dimension to the food security issue and a food cost dimension. Food availability can be assured through a combination of local production, imports and strategic stockholding. Food subsidies have developed in an effort to assure that disadvantaged sectors of the population do not go without food as a result of its cost.

Tunisia has succeeded in assuring availability of supplies and low consumer prices, albeit at costs that some judge unacceptable. Analysis conducted under APIP has considered options for decreasing costs through a combination of efficiency gains and targeting of subsidies (Rejeb et al, Medimegh, Kramer).

A challenge facing Tunisia is to provide incentives to encourage sufficient production, imports and private storage and stockholding to assure food security without incurring unnecessary public costs.

Stock holding requirements for Tunisia to achieve desired food security objectives will be strongly influenced by the operation of the grain marketing and distribution system. Investments in storage facilities and inventories can be smaller if reliable and timely information on supply, demand and market price conditions throughout the country is available and the physical infrastructure permits prompt response to shortages. When information is available, private operators can also be encouraged to respond to shortages by market signals.

In Pakistan, a recent analysis concluded that public investment in storage involves higher costs of investments in storage facilities and costs of carrying inventory than necessary to achieve food security objectives.

In the United States, security stocks are in part held in a farmer owned reserve, with storage costs paid by the government, but release determined by market price movements. This permits the country to assure availability of grain without government ownership of the grain or the facilities in which it is stored. This concept might be extended in Tunisia's case to permit decentralized storage at the farm and processor levels.

5.2.2 Food Subsidies

Food subsidies are an important consideration in Tunisia's grain market reform because under current conditions the price of the grain actually decreases as value is added from the farm gate to the consumer's table. This decrease results from government subsidies. Under the current subsidy regime there is no incentive for private investment in storage or handling in the absence of government payments. A variety of targeting options are used in other countries to assure the availability of food to low income consumers without distorting the operation of the grain marketing system.

Food subsidies are often intended to assure that the neediest segments of the population have sufficient food. In practice, subsidies in Tunisia have been found to be important to portions of the population that is least well off, but benefit primarily those segments of the population who are best off.

The Tunisian case has been discussed in sources cited above. Tunisia is not alone in facing the subsidy issue.

The Egyptian case illustrates the political and economic consequences of a very high dependence on food subsidies. Food rationing and subsidies are widely utilized in Egypt. According to a 1981-82 survey, 93 per cent of urban dwellers and 92 per cent of rural dwellers have and use ration cards. Twenty five per cent of rural dwellers have access to subsidized bread and 75 per cent to subsidized flour sold in Government shops. Seventy five per cent of city dwellers have regular access to subsidized bread. (Alderman and von Braun, 1984).

The income transfers involved are significant and, except in the past two years, the fiscal cost has been rising. This is because the demand for food imports has proved to be very inelastic. To keep domestic food prices below world prices, grain or food is imported. A rise in world food prices or fall in export earnings or the progressive devaluation that has taken place would tend to lead to a fall in the quantity of imports. However, since food imports have to be maintained, still greater budgetary support is required. In fact subsidy schemes have become increasingly dependent on imported food, despite increases in the domestic output of grain and other food.

Subsidies and marketing systems can have allocative impacts within the agricultural sector. Although the Government's policy has been to encourage the domestic production of the rice and corn, Egypt's comparative advantage may lie in the production of long staple cotton on the land where rice and corn are now grown. This distortion is made worse by the Government's policy of paying the farmers only one third of the world price for cotton (Abt Associates, 1989).

There have been recent attempts to reduce consumer subsidies in Egypt. The price of bread was doubled in 1989. There was only a slight impact on demand since the real price remains low; a loaf of "balady" bread costs 5 piasters, equivalent to less than 7 Tunisian millimes per kilo. A program is underway to shift more consumers to higher quality bread costing about three times as much. The budgetary cost for bread and flour are now over \$1 billion per annum. Subsidies for dairy products, sugar, and rice have been reduced. They have been eliminated for animal feed and pulses. Reductions in these subsidies will save \$500,000 annually. (USDA, May 1990)

In Morocco, consumers have also benefitted considerably from cereals subsidies due to fixed flour prices. There are two types of flour - "farine nationale" and "farine de luxe". Farine de luxe is a more refined bread wheat flour whereas farine nationale is produced at a higher milling extraction ratio and contains some barley. Since 1987, the price of farine de luxe has no longer been set by the government, but the price of farine nationale still reflects a significant consumer subsidy. The government is attempting to limit this subsidy by limiting the amount of farine nationale subsidized. Each mill is now assigned a quota limiting the amount of farine nationale they can produce. The Ministry of the Interior is responsible for distributing it to areas where it is most needed, that is to low income rural areas.

The Moroccan government has also maintained control over the price of bread (which is made with farine de luxe whose price is no longer controlled). It is sold as large loaves (grande baguette - 80 centimes) or small loaves (petite baguette - 30 centimes). Since the price is controlled but the weight is not, bakers are reported to have reduced the weight of these loaves in order to increase their margins.

The maintenance of subsidies on wheat flour has encouraged the consumption of wheat flour products, and discouraged the consumption of traditional Moroccan cereals based products, such as couscous, durum wheat flour, and semolinas made from barley and corn (maize). Morocco, along with other North African countries, has the highest per capita wheat consumption rates in the world (Gardner & Skully, 1986). Per capita consumption of bread wheat increased from 164 kg/capita in 1976 to 178 kg/capita in 1985. Coupled with strong population growth, the demand for bread wheat has far outstripped supply. The result has been a doubling of bread wheat imports since the mid 1970s.

6. CONCLUSIONS AND IMPLICATIONS

Tunisian policy makers can learn from the experience of other countries in grain marketing reform, taking advantage of lessons learned in making systems work effectively and avoiding repetition of the mistakes made in other countries.

Among the primary lessons to be drawn from experience in other countries:

- Parastatal agencies like the Office des Cereales can and have become effective regulators of a system that relies on private investment and operations to produce, import, handle, store and process grain in other countries.
- Merely announcing that the system is open to private operators is insufficient to assure that a private sector will step in to fulfill the functions previously handled by a government monopoly or its representatives.
- Operating policies, regulations and enforcement to assure a level playing field for honest private operators is essential, including
 - A reliable grading system
 - Reliable and timely market price information
 - A pricing system that remunerates private investment in storage and handling infrastructure and operations and reflects world market realities
 - A financial system that permits payment to producers, investment in storage and infrastructure and working capital for stocks and imports
 - A food subsidy system that does not prevent price signals from encouraging grain handling and distribution
 - Licensing and bonding requirements that protect the system without unnecessarily eliminating competition.

Further details on individual country systems are provided in the accompanying case studies. It is hoped that these provide a basis for discussion among Government of Tunisia officials and private operators. This in turn can be expected to give rise to follow-up questions and details which can be examined as part of the on-going policy evaluation and reform process.