

## Implications for Other Countries

Worldwide, the poultry meat sector is growing faster than any other meat production sector. Especially in middle- and low-income countries, poultry is the meat most likely to fill the gap between supply and demand for animal protein at low prices. Consequently, poultry meat production is receiving great attention worldwide. What is happening in Egypt has implications for other countries, including, Algeria, Cyprus, Indonesia, Iran, Iraq, Israel, Jordan, the Republic of Korea, Lebanon, Libya, Mexico, Morocco, Oman, Saudi Arabia, countries of the South African Custom Union, Tunisia, the United Arab Emirates, and Yemen.

### Rising Dependence on Feed Imports

Projections of Egypt's poultry and egg production and resulting feed requirements compared with domestic feed production show a rising dependence on feed imports during the 2000-2010 period. Rising dependence on feed imports will ultimately require a government decision to continue increasing imports to feed domestic poultry, or to lower high poultry meat import tariffs to allow more meat into the country, or both.

A government decision on the issue based on economic and welfare loss and gain considerations might benefit the lower income population. The vast majority of Egypt's population has a strong preference for live birds, slaughtered immediately at the point of sale, over frozen poultry meat. However, imports of frozen poultry would benefit a sizable population segment, mostly those in low-income brackets, who would purchase the less expensive frozen poultry. Although other countries may not have strong consumer preferences for live birds, they are faced with the policy decision of whether to foster feed imports or poultry meat imports.

### Privatization Boosts Poultry and Egg Production

The end of feed production subsidies, liberalization of feed imports, and start of privatization in 1991 fostered private investments and technology development in Egypt's poultry sector. Backyard poultry and egg production has been gradually replaced by commercial operations that have rapidly adopted new technologies, improved feeding systems, and acquired new management skills. These changes spurred gains in physical productivity and economic efficiency and have led to expanding poultry production and lower prices.

Consumers responded by expanding poultry meat purchases in an upward spiral, rising 113 percent from its pre-privatization level 10 years ago. Countries like Egypt, with unmet meat demand, can expect poultry industry expansion and modernization under similar policy scenarios.

### Feed Industry Lagging

Modernization of feed manufacturing can improve feed production efficiency and reduce poultry production costs. Under governmental ownership and management, Egyptian feed mills operated on extremely rigid schedules, often resulting in short supplies of feedgrains and other ingredients. Also, government-run mills often replaced expensive ingredients with whatever was available, without consideration to nutritional value or price of the final products. After privatization, however, competition intensified between feed producers to improve the quality of feed rations and reduce production costs and prices.

Currently stalled, Egypt's feed industry could be revitalized in two major ways. First, there needs to be accelerated specialization and differentiation efforts in manufacturing processes to produce a nutritionally balanced feed-mix for various poultry types, ages, breeds, and broiler and egg production. Second, mills need to apply the principle of relative value analysis to develop highly nutritional least-cost formulations for standard recommended rations. Substitution among ingredients should be viewed in terms of price and nutritional value. For example, under different prices, the absolute advantage of sorghum, barley, or any other energy-supplying feed could shift, causing substitution for corn in feed mixes.

Unfortunately, information on daily feed prices is not available on a regular basis, and commodity futures markets do not exist in Egypt. If price information were available, and least-cost ration formulation technology was widely adopted, competition would result in lower feed prices.

### WTO Impact on Egyptian Poultry Production

Egypt's poultry producers currently import feedstuffs to raise their growing flocks while high tariffs restrain meat imports. Although the poultry import ban was lifted in 1997 and replaced by an 80-percent import tariff, imports remained negligible (about 4,000 tons

per year). However, Egypt, as a WTO member, has to reduce and gradually eliminate all tariffs, opening up the market for imported poultry. Further reduction of import tariffs will increase imports of poultry meat and reduce feed imports.

Egypt will continue to be a lucrative world market for feeds, meat, or both. Traditionally, U.S. corn dominated Egypt's corn imports, due to its quality and prices, accounting for 75 percent of total corn imports in 2000. Likewise, U.S. soybeans were 63 percent of total soybean imports in 2000. If the market shifts to meat imports in the future, Egypt will be a new market for U.S. poultry exporters, as it was during the 1970s and 1980s, despite competition from the EU, Brazil, and some Eastern European countries. Finally, full trade liberalization under WTO rules will most likely make the Egyptian market more lucrative for U.S. and other world exporters of feedstuffs and poultry meat. Liberalization will also intensify competition between domestic and world poultry producers, decreasing prices to consumers' advantage and benefit.

## **Applying the Methodology To Other Countries**

The model represented here can provide an analytical basis to project derived feed demand for poultry and eggs using endogenous indicators that reflect a country's actual production and price trends. The methodology achieved its goal of estimating feed demand in the poultry sector. It could be applied in other countries with the necessary data, including the proportion of commercial and backyard broiler and egg-layer operations, domestic and foreign breeds, and the number of eggs per year of each breed. Statistical data needs also include the daily nutritional feed rations, mortality and morbidity rates, number of cycles per year for each poultry type, offtake rates (the proportion of inventory that goes to slaughter each year), and the national flock composition by poultry type. The same data are needed for other poultry types (i.e., ducks, geese, and turkeys).