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## **Paraguay**

### **Dairy Livestock and Poultry**

### **Paraguay Livestock Update**

## **1999**

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#### **Report Highlights:**

**Paraguay's livestock sector continues to develop as it employs more modern production techniques, but difficulties in obtaining investment capital slow growth. Meat exports during CY1998 could be a record, but the country still needs to import dairy products.**

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## **Executive Summary**

Beef production ranks first among Paraguay's livestock enterprises in terms of stock numbers and consists of about 9 million head of native and improved animals raised primarily on pasture. Paraguayan farmers have begun to use more modern husbandry practices and import genetic material which has resulted in a better quality animal and a more productive business. On the negative side, high real interest costs make further capital investments such as feedlots less profitable, and declining per capita domestic beef consumption also restricts incentives for farmers to expand output. At least in the short run, productivity and output will be lower than their potential.

The dairy industry, with about 688,000 cattle according to the 1997 census, is advancing due to demand pull as the country strives to increase domestic milk consumption, while the processing industry seeks a greater quantity of raw materials to expand its line of value-added products for both the local and export markets. Dairy farmers are also using better genetics to improve average production, and most modern enterprises employ Holstein or Jersey breeds under intensive management practices. Many small farmers keep their own animals, often of mixed type, to produce milk for on-farm consumption, but this sub-sector is less efficient.

Commercial swine and poultry production enterprises are more limited in both in size and efficiency, and are generally not as intensive as might be found in other countries. Again, subsistence farmers often keep animals for on-farm use.

Paraguay has the necessary natural resources such as grazing land and grain production readily available to expand the output of meat and livestock products. What remains to be seen is if the demand side, developed through increased local consumption and government and private sector efforts to open new trade opportunities, will provide sufficient incentive to move the industry forward.

## **Beef Industry**

### **Production System**

Farmers and ranchers in the western portion of Paraguay, commonly known as the "Chaco", employ extensive livestock production methods due to the region's openness and available pasture. In contrast, the eastern portion contains most of the existing cattle fattening systems, especially near the capital city of Asuncion, and farms with smaller beef herds. At this time, few confined feeding systems are in place despite the adaption of improved breeds that are suited to take advantage of more intensive practices and local availability of raw materials such as corn. Many Paraguayan farmers are incorporating more modern cattle breeds and crosses in their systems, such as Zebu/Herford, Brahman, Nelore, Bradford, Hereford, Angus, Brangus, Santa Gertrudis, Limousine, and Fleckvieh, while some lesser mixed breeds are often raised by the smaller subsistence farmer.

Paraguay has taken a modern approach to production methods in other ways. For example, the government uses science-based criteria to make decisions on the approval of feed additives and other production inputs. They believe that modern growing methods are generally safe, and would like farmers to incorporate them in production systems to expand output.

## **Foot and Mouth Disease**

In September 1998, Paraguay completed 48 months without an outbreak of foot and mouth disease (FMD), and is certified free with vaccination by the OIE. The western areas of the country have been free for more than 25 years due to natural barriers in that region, and the south portion of the country free for from four to eight years. Paraguay is currently discussing halting the vaccination program, and may attempt to become certified free without vaccination. Having such certification would allow them to ship to a wider range of markets.

The FMD vaccination program is run by local committees made up of veterinary organizations, the Ministry of Agriculture (MAG), university scientists and private sector representatives. The MAG has a certified-free herd verified by an international organization. Early on, Paraguay recognized the importance of an eradication campaign and instigated a tax on meat imports and exports to provide sufficient funds to complete it.

## **Beef and Cattle Trade**

Paraguay ships both live animals and fresh and processed meat products, with these products going to several markets such as Chile, Brazil and the Middle East, among others, with Mercosur being the most significant destination. Fresh and processed meat exports, valued at around \$50 million per year, are the country's fourth most important trade item by value, and live cattle add additional trade income. To widen its market base, Paraguay has also been investigating new markets.

Because it is more than self-sufficient in cattle production, Paraguay imports only a few live animals from other countries. Those that do enter are almost all slaughter or breeding animals from either Argentina or Uruguay. Only cattle from non-FMD countries can be imported. Few beef products are imported; those products importer are primarily specialized high-value products not manufactured locally.

**Table 1. Major Destinations for Paraguay's Beef in CY 1996 and CY 1997**

| <b>Destination</b> | <b>CY 1996</b> | <b>CY 1997</b> |
|--------------------|----------------|----------------|
| Argentina          | 497            | 319            |
| Brazil             | 10,903         | 7,944          |
| Chile              | 5,884          | 10,089         |
| Germany            | 341            | 99             |
| Iran               | 0              | 2,018          |
| Italy              | 648            | 722            |
| Spain              | 1,132          | 398            |
| United States      | 0              | 49             |
|                    |                |                |
| Others             | 1,792          | 1,116          |
|                    |                |                |
| <b>Total</b>       | <b>21,197</b>  | <b>22,754</b>  |

Source: Ministerio de Agricultura y Ganaderia, *Estadística Ganadera*, enero 1997 and enero 1998

Notes: In both years, offal exports represent an additional 10 percent in volume terms, and these exports go primarily to Brazil. Data is in metric tons, and may not add due to rounding

Although full year trade figures for CY 1998 are not yet available, beef and products exports through September 1998 totaled more than 31,000 metric tons, well head of the pace at a similar date in 1997 of about 18,000 metric tons, and on a pace that should lead to record trade of possibly 38,000 metric tons for the year according to industry sources. Brazil and Chile have been the main destinations for Paraguayan product in 1998, and in 1999, markets such as Taiwan could also begin importing Paraguayan meats.

**Table 2. Export of Live Beef Animals by Destination, CY 1997 and CY 1996**

| <b>Destination</b> | <b>CY 1996</b> | <b>CY 1997</b> |
|--------------------|----------------|----------------|
| Argentina          | 20             | 1,913          |
| Bolivia            | 28             | 80             |
| Brazil             | 37,247         | 105,287        |
|                    |                |                |
| <b>Total</b>       | <b>37,295</b>  | <b>107,280</b> |

Source: Ministerio de Agricultura y Ganaderia, *Estadística Ganadera*, enero 1997 and enero 1998

Note: Data in number of head.

In CY 1997, about 67 percent of cattle exports to Brazil were for slaughter, and about 32 percent for fattening, as apposed to CY 1996 when about 80 percent were for slaughter. For CY 1998, more cattle went to Argentina due to shortages and stock rebuilding in that country. In fact, although full year figures are not available, through the first nine months of CY 1998, 4,065 animals for slaughter or fattening had already been authorized for export to that destination.

**Table 3. Authorization for Imports of Beef and Products**

| <b>Year</b> | <b>Chilled Beef</b> | <b>Frozen Beef</b> | <b>Offals</b> |
|-------------|---------------------|--------------------|---------------|
| CY 1997     | 523.5               | 8.5                | 418.6         |
| CY 1996     | 1136.9              | 0                  | 848.3         |

Source: Ministerio de Agricultura y Ganaderia, *Estadística Ganadera*, enero 1997 and enero 1998

Note: Data in metric tons

## Genetics Trade

As noted in the introduction, Paraguayan farmers are becoming more accustomed to employing advanced genetic material in their production systems. Leading exporters maintain contact with farm organizations and private firms to sell their product and also attend leading agriculture shows. The quality of the cattle has reportedly improved notably due to the employment of these advanced production methods.

**Table 4. Authorization for Import of Semen, CY 1996 and CY 1997**

| Country      | CY 1996       | CY 1997       |
|--------------|---------------|---------------|
| Argentina    | 0             | 6,100         |
| Australia    | 0             | 2,200         |
| Canada       | 26,400        | 9,080         |
| Germany      | 16,400        | 11,900        |
| Uruguay      | 2050*         | 0             |
| USA          | 39,018        | 47,446        |
|              |               |               |
| <b>Total</b> | <b>83,868</b> | <b>76,726</b> |

Source: Ministerio de Agricultura y Ganaderia, *Estadística Ganadera*, enero 1997 and enero 1998

Notes: Data in doses. \* Includes 250 units for sheep.

## Dairy Industry

In an effort to both provide for the basic food needs of its people and increase economic activity, the government of Paraguay and private industry would like to expand production of dairy products, an action which will at the same time benefit the health of the community and contribute to both increased domestic income and foreign exchange earnings through exports. International health organizations recommend that milk product consumption total about 150 liters per person per year, while recent surveys show that local consumption currently only amounts to only about 70-100 liters per person. Therefore, despite increased raw material availability due to improved dairy management and genetics, much work remains to be done.

## Milk Production

According to industry sources, the medium term outlook for milk production is not that favorable, with an increase of about 10 percent in 3-5 years expected as local demand is not expanding rapidly enough to increase incentives to the farmer. Furthermore, the industry was hit by unexpected bad weather in 1998, namely floods in the Chaco region, which seriously affected output. The productivity of the pasture in the affected regions has recovered, though, and production could increase in early 1999 by about 10 percent over last year's reduced level.

According to government sources, there are nearly 700,000 dairy cattle of all types and ages in Paraguay, with many of these held by either dairy cooperatives or Menoninte organizations. It is estimated that about 125,000 head are actually in milk at any one time, and Holstein and Jersey are the main breeds present, especially in the more modern dairy operations. Although expanding, the industry suffers from a lack of new investment capital due to high interest rates and a shortage of readily available credit. Total milk production is about 1.45 million liters per day within the commercial herds.

### **Milk Processing**

Paraguay has about 29 dairy plants that receive and process whole milk. Using official government figures from CY 1997 as a guide, average deliveries of fluid milk to processors were about 14.5 million liters per month, although deliveries during the first four months of 1998 averaged only 12.6 million liters due to higher temperatures negatively affecting output during the southern hemisphere summer and heavy flooding that destroyed pastures. The processing industry has capacity of about 25 million liters per month. The overcapacity in the industry is because the machinery (normally European technology) used is scaled for much bigger operations than those located in Paraguay.

Four major plants process about 70 percent of the milk, and a number of other smaller take the remainder. International companies are beginning to make investments in the industry, including plants that process whole milk into value-added products, as setting up facilities in Paraguay allows them tariff-free entry into the remainder of the Mercosur region.

Typically, over 60 percent of whole raw milk received in local plants is processed into either pasteurized or sterilized milk, as these products are convenient for the average consumer. Following those products in volume is whole milk yoghurt which accounts for another 20 percent, and then cheese and various other products making up the remainder. Some businesses in Paraguay, with the assistance of the export promotion arm of the Ministry of Agriculture (ProParaguay), are attempting to develop more diversified dairy products for the export market. The industry produces only a few other milk-based products and doesn't have the range such as that found in Argentina.

Farm gate prices for raw milk in Paraguay are about US\$ .20 per liter, and about US\$ .70-.75 in the store for processed milk.



**Table 5. Milk Received at Local Plants and Products Produced**

|                           | <b>CY 1996</b> | <b>CY 1997</b> |
|---------------------------|----------------|----------------|
| <b>Milk Received:</b>     |                |                |
| ---As Raw Milk            | 121,974        | 174,486        |
|                           |                |                |
| <b>Products Produced:</b> |                |                |
| --Pasteurized Milk        | 41,606         | 51,020         |
| --UHT Milk                | 44,495         | 58,462         |
| --Flavored Milk           | 7,052          | 7,269          |
| --Whole Milk<br>Yoghurt   | 25,612         | 31,420         |
| --Cheeses                 | 3,211          | 3,786          |
| --Other Products          | 3,952          | 5,064          |
|                           |                |                |
| <b>Total</b>              | <b>125,928</b> | <b>157,021</b> |

Source: Ministerio de Agricultura y Ganaderia, *Estadística Ganadera*, enero 1997 and enero 1998

Note: Data in 1,000 liters

## Milk and Products Trade

Nearly all of dairy product imports come from Argentina, who's dominating role can be explained by several factors. First, the nearness of that origin to the Paraguayan market allows shipments to be made more quickly and sized according to the buyer's requirements, and at a lower transportation cost. Second, the common Mercosur external tariff (set at zero within Mercosur countries, but 16 percent for dry milk and 20 percent for UHT products from origins outside of Mercosur) significantly raises costs for extra-region products thus putting them at a severe competitive disadvantage. Third, Argentina's dairy industry is expanding production, generating increased exportable surpluses.

**Table 6. Authorization for Milk and Products Imports**

| Product                           | Quantity, CY 1997 |
|-----------------------------------|-------------------|
| Non-fat Powder                    | 326,721           |
| Whole Milk Powder                 | 3,153,675         |
| Infant/baby Formula Powder        | 1,005,878         |
| Condensed Milk                    | 264,288           |
| Cheese                            | 812,426           |
| Dulce de Leche (caramelized milk) | 909,490           |
| Fat                               | 289,000           |
| Other                             | 556,735           |
|                                   |                   |
| <b>Total</b>                      | <b>7,318,213</b>  |

Source: Ministerio de Agricultura y Ganaderia, *Estadística Ganadera*, enero 1997 and enero 1998

Note: Data in Kilograms

In volume terms, milk powder is the leading item imported into Paraguay, accounting for around 57 percent of the approximately 7,300 metric tons per month of dairy products brought into the country during CY 1997, while others such as yoghurt, cheeses, and flavored milk make up most of the remainder. Argentina is the predominant origin, supplying essentially all of the milk powder, and as much as 97 percent of Paraguay's total dairy product imports. In general, imported dairy products are more expensive than those produced locally, but consumers have demonstrated that they are willing to pay for better quality.

Dry milk is brought in using bulk 25 kg bags, and in smaller packages to make reconstituted child/infant milk products (polvo crecimiento). Much of the bulk bag dry milk is used to produce ice cream, while the remainder is reconstituted into milk at 15 percent milk/powder ratio and for yoghurt the powder at a 20 percent ratio.

**Table 7. Market Share of Paraguay Imports of Milk and Products, CY 1997**

| Country       | Percent of Paraguay's Total Imports |
|---------------|-------------------------------------|
| Argentina     | 97                                  |
| Brazil        | 0.4                                 |
| Uruguay       | 1.7                                 |
| United States | 0.6                                 |
| Others        | 0.3                                 |
|               |                                     |
| <b>Total</b>  | <b>100</b>                          |

Source: Ministerio de Agricultura y Ganaderia, *Estadistica Ganadera*, enero 1998

## Swine

Paraguay's swine industry is still in a low state of development, but industry leaders are working with experts from other countries to develop and implement better production methods. The key will be to provide sufficient incentives to the farmer so that they are able to increase both output and quality.

**Table 8. Authorization for Pork Products Imports by Country**

| Country       | CY 1997    |
|---------------|------------|
| Argentina     | 50         |
| Brazil        | 260        |
| United States | 11         |
| Spain         | 1          |
|               |            |
| <b>Total</b>  | <b>323</b> |

Source: Ministerio de Agricultura y Ganaderia, *Estadistica Ganadera*, enero 1997 and enero 1998

Notes: Data is in metric tons, and may not add due to rounding

## Chicken Trade

The government of Paraguay realizes that it must be more proactive in the promotion of locally produced chicken products in international markets, and that one way to do this is have greater domestic production to get an exportable surplus. Currently, Paraguay is a net importer of chicken and products, as is shown in the two tables below:

**Table 9. Authorization for Exports of Chicken and Offals**

| Destination  | CY 1997      |
|--------------|--------------|
| Argentina    | 380          |
| Brazil       | 39.5         |
| Hong Kong    | 72           |
|              |              |
| <b>Total</b> | <b>491.5</b> |

Source: Ministerio de Agricultura y Ganaderia, *Estadistica Ganadera*, enero 1998

Note: Data in metric tons

**Table 10. Authorization for Poultry Imports by Country of Origin**

| Country       | CY 1997    |
|---------------|------------|
| Argentina     | 26         |
| Brazil        | 895        |
| United States | 11         |
|               |            |
| <b>Total</b>  | <b>931</b> |

Source: Ministerio de Agricultura y Ganaderia, *Estadistica Ganadera*, enero 1997 and enero 1998

Notes: Data is in metric tons and may not add due to rounding

**Table 11. Consumption of Selected Meat Products**

| <b>Product</b> | <b>Per Capita Consumption<br/>(1996 Data)</b> |
|----------------|---|
| Beef           | 45  |
| Pork           | 27  |
| Chicken        | 17  |
| Sheep          | 1.5   |

Source: Ministerio de Agricultura y Ganaderia, *Estadística Ganadera*, enero 1998

Note: Data in Kilograms