2.2 MIXED FEED CLUSTER

Soybean and corn can be purchased in this country 20% to 30% lower than the market price in Chicago. Since Paraguay is an inland country, freight costs and service fees are high, which lowers producer prices in Paraguay. If soybean and corn are exported without any processing, as in the past, value added will escape. The goal of the mixed feed cluster is increasing value added by raising the level of processing.

In this chapter, we propose a strategy to create the mixed feed cluster. At first, we analyze the current state that surrounds this cluster in Paraguay. Next, we present a model cluster. Then, we compare the current state and the model to seek for tasks to strengthen the competitiveness. Lastly, we propose a strategy to implement the tasks.

2.2.1 Analysis of current situation

In analyzing the current state of the mixed feed cluster in Paraguay, the structure of the cluster on a national level will be evaluated numerically for starters. We discuss actual actors in the agriculture and the manufacturing industry. Lastly, the analysis will be made on its bottleneck and benefit.

(1) Overall structure of the cluster

Paraguay abounds with various raw materials that make up mixed feed. (see Table 3) Among them, annual production of soybean pellet, corn, bran and cottonseed meal exceeds 50,000 tons respectively.

Table 3 Raw Materials of Mixed Feed Available in Paraguay

Unit : 1,000 tons

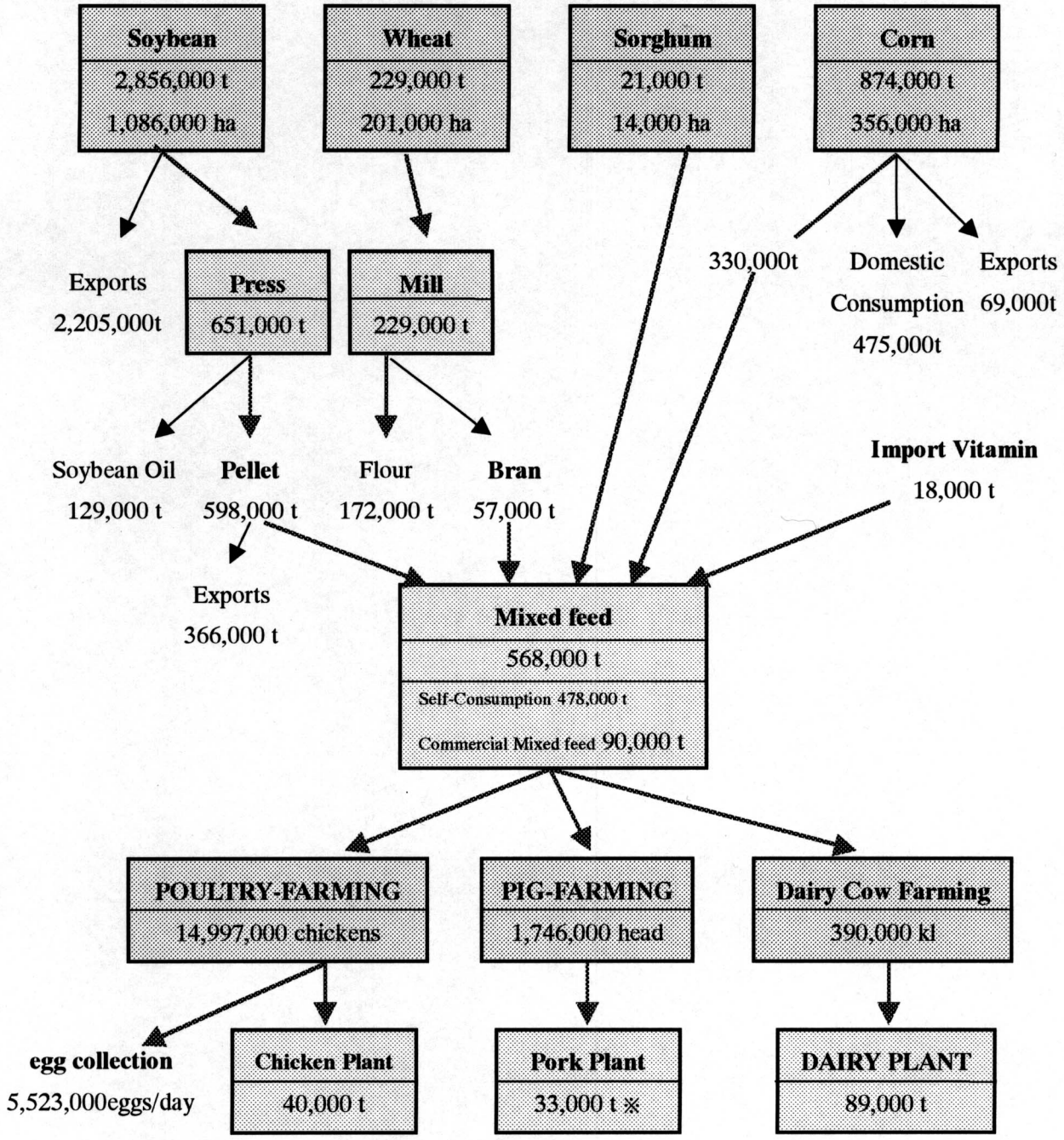
Product	Name of Raw Material	Remarks
Soybean	Soybean pellet, Irregular Soybean	Soybean 3,053、 Soybean pellet 600* High in protein
Corn	Corn	Corn 817 Contains much starch
Wheat	Wheat, Bran, Irregular Wheat (Refuse Wheat, Immature Wheat etc.)	Wheat 180、 Bran 70* Contains much starch
Sorghum	Sorghum	Sorghum 23. Contains much starch
Rice	Rice bran, Irregular rice (Crushed Rice, Colored Rice etc.) , Chaff	Rice 141, Rice Bran 21* Rice bran is abundant with lipid. Rice contains much starch. Chaff is high in fiber.
Sunflower	Sunflower Meal	Sunflower 73. Abounds in protein
Cotton	Cotton Meal、 Cottonseed Hull	Cotton Meal 101* Contains much protein and fiber
Peanut	Peanut Meal	Peanut 28 High in protein
Sugarcane	Syrup, Bagasse, Cane Top	Sugarcane 2,872, Syrup 115* contains much starch, which stimulates appetite. Baggase and cane tops are high in fiber.
Citrus and others	Strained lees of orange	Naranjo dulce and Naranjo agrio 370 in total
Cassava	Cassava	Cassava growing area 248,000 ha、 Starch 45、 tapioca 31 High in starch.
Copra, Palm Kernel	Copra Meal, Palm Kernel Meal	Copra Lipid 2 contains a lot of starch.
Raw Milk	Whey	Cheese 17, Whey is a by-product of cheese. It contains much protein.
Beef	Meat Meal, Meat Bone Meal, Blood Meal, Beef Tallow	Slaughter 1,300 head* Meat meal abounds in protein. Blood meal contains much albumin. Beef Tallow has much fat.
Chicken	Meat Meal, Meat Bone Meal, Blood Meal, Feather Meal	Slaughter 26 million*, Meat meal abounds in protein. Blood meal contains much albumin.
Beer	Brewers Grain	Beer 227 It contains much protein and starch.

Source: MAG, BCP, 『Livestock Dictionary』 (Edited by Komiya、 Asakura Shoten、 10.1.97)etc.

*estimate for 1999

When we chose 4 main raw materials for feed and took the mixed feed cluster on a national level, the materials flow is as Figure 1 shows. The figures are estimates based on the figures in 1998. The domestic market of mixed feed is 568,000 tons if self-consumption is also included. However, the production on a commercial basis accounts for only 16%. Therefore, mixed feed on a commercial basis with scientific evidences has a large room for expansion. Even if the amount of feed is not changed, efficient use of raw feed materials may increase the production of livestock products.

Figure 1 Mixed Feed Cluster



※According to the FAO statistics, pork production in Paraguay is 130,000 tons. In this paper, we use production figures by the BCP.

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