CASE STUDY: SITUATION OF CONCENTRATE FEEDS IN COLOMBIA

by

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1. The feedstuffs trade

1.1 Imports

In 1985 the concentrate feed industry in Colombia will import about 90 000 mt of sorghum grain, 60 000 mt of corn, 150 000 mt of soybeans, fish meal and almost all microingredients. These imports meet only part of the total requirements, the remainder being met by national production.

1.2 Exports

Colombia does not import or export compound concentrate feeds and does not export any ingredients.

2. The feed industry

2.1 Capacity and output

126 factories are registered at the Colombian Department of Agriculture as producers of concentrate feeds, but three of them only account for almost 50 percent of total national production, and fourteen produce 66 percent of total output.

In 1984, total national production was estimated at 1 516 000 mt distributed as follows: for poultry 65 percent, for swine 20 percent, for dairy cattle 11 percent and others 4 percent.

The installed capacity is estimated at 1 800 000 mt annually, in two shifts of 48 hours a week each shift.

2.2 Quality control

Quality control is exercised by each feed producer under the close supervision of the Instituto Colombiano Agropecuario (ICA), which is the government agency responsible for feed quality control.

2.3 Management

Management in the industry varies from high levels of sophistication to rudimentary levels, in which the manager is in charge of buying, formulating and selling.

The difficulty of acquiring enough ingredients and labour relations are the two main problems faced by management in the industry.

2.4 The commercial policy

The Government does not have a policy of subsidizing the industry. On the contrary, it has established minimum prices of basic grains that the industry has to pay to producers, making Colombian feed prices almost double those on the international market. The situation is such that the government earns from imports of ingredients that it controls: e.g. sorghum, grain and corn. For example, the CIF price for sorghum grain is estimated, as of 31 August 1985, at US$ 104 per mt compared with the government established minimum price of US $ 190. Thus, the government earns US$ 86 on this operation. On the other hand, the government has enforced price controls for concentrate feeds as a way to alleviate inflationary pressures on food.

In general, sales of ingredients are made directly to the producers by the industry.

Of the total industry sales to final consumers, 40 percent are made through independent distributors and 60 percent are made directly by the industry.

3. Substitution of imported feedstuffs by local feed resources

In the last few years, the total national output production of basic grains has been reduced in some cases, and in others, it has remained stable, even though requirements have increased. During the same period, 1970-85, imports have increased.

Imports of wheat present an increment of 300 percent over the period 1970-85, while national production has remained practically stable (60 000 mt).

National production and imports of sorghum have increased approximately 500 percent between 1970-85, but, during the last five years, production has remained about the same (600 000 mt) and imports represent a large amount of foreign exchange that the country badly requires for other products it has to import.

As corn is one of the staple foods production has not presented changes in the last fifteen years (900 000 mt) while imports, even though low, are needed every year.

As for barley, production reached its highest level in 1979, and decreased to about half that amount in 1981 and has remained fairly constant since (50 000 mt in 1985). Imports present just the opposite situation: they remained constant between 1979 and 1982, and in the last three years they almost tripled national production levels.

Soybeans, another product controlled by large interest groups along with barley, showed increased production, reaching its highest level in 1983 (120 000 mt) when it was almost 20 percent higher than imports. However, in the last two years, national production decreased by almost 20 percent and exports increased by 40 percent, imports now representing 70 percent of national production levels.

To reduce imports of basic grains, Colombia has two options:

a) Increase output production or

b) Replace part of these grains by the utilization of some traditional and non-traditional feedstuffs.

Colombia has proven the possibility of being self-sufficient in corn, sorghum grain, soybeans and barley. For the first two there has been lack of promotion, and for soybeans and barley production there has been some restraint by beer and vegetable oil producers, since it is cheaper for them to import grains than to buy from national production.

During the last few years the concentrate industry has made great efforts to substitute imported ingredients by the utilization of raw sugar and other non-traditional feedstuffs such as Matarratón (Gliricidia sepium), Aromo (Vachellia farnesiana Acacia), Trupillo (Prosopis juliflora), Canavalia (Canavalia ensiformis) and Leucaena (Leucaena leucocephala).

Raw sugar: this ingredient has been used since late 1984, and in 1985, with only 8 factories using it, consumption will be about 54 000 mt with a possibility of reaching a volume over 100 000 mt per year, thereby substituting the same quantity of sorghum grain.

Raw sugar presents many difficulties in its handling by the industry as it has a low fluidity in the hoppers, problems in transportating equipment, etc. At present we use the following levels with no probems:

Poultry mash: 15 percent poultry pellets: 12 percent

Swine; including 14 percent molasses: 25 percent
without including molasses: up to 50 percent
Swine pelletized up to 12.5 percent including 5 percent molasses

Dog feed 10 percent, easily reaching 20 percent.

Matarráton: (Gliricidia sepium) This legume tree has been used in Colombia for many years as a living fence in hot climatic regions and it has a tremendous potential because its dried leaves, are used as a protein source (21-27 percent), and principally to improve egg yolk coloration (see Table 2).

Today, only one feed factory (Solla) is using 300 mt/month, and it is expected that this amount will be increased up to 1 000 mt by January 1986.

Savings as a pigment can be calculated as US$3.00 per mt of layer feed, as formerly 21 g/mt of yellow carophil, plus 13 g/mt of red carophil were used.

Today 3 percent of mashed matarratón leaves are included in concentrate feed, the cost compensating for the cost of the raw materials that it displaces, and 10 g of red carophil are added. Its use is reducing carophil imports, and if used in all layer concentrate feed (870 000 mt) this would mean a direct saving of US$ 2.6 million.

Aromo: (Vachellia farnesiana Acacia) This legume considered as a weed in our hot climatic regions, has been used by cattle growers during droughts as a cattle maintenance ration. In late 1984, a feed mill could buy more than 300 mt from poor peasants, who pick it up with no other cost than their labour. It is calculated that the potential for 1986 is approximately 7 000 mt which would alleviate the pressure on other ingredients, and, ultimately over imports.

Trupillo: (Prosopis juliflora) Wild legume in hot and semi-desertic regions that has partially been used with goats; during 1985 some 100 mt have been purchased and we calculate the potential for 1986 as 6 000 mt/year.

The benefits are the same as with Aromo, and similarly, the maximum levels of consumption have not been determined, since its actual low production makes it unnecessary to include it at high levels.

Table 1: Comparison CIF vs. Internal costs (US$ per metric ton*)

	CIF	Internal Costs	Difference
Soybeans	225	407	182
Barley	132	267	135

*As of 31 August 1985

Table 2: Nutritive value of 3 legumes used as feed ingredients in Colombia

Common Name	Scientific Name	H2O	Protein	Fibre	Ether Extract	NFE	Ash	Ca	P
Aromo Espino, Espinillo Pela	Vachellia-farnesiana (Acacia)	12	17.07	14.79	3.52	47.60	5.02	1.3	0.16
Trupillo Southwest Thorn Mesquite	Prosopis juliflora	12	10.09	13.14	2.98	57.15	4.64	0.31	0.23
Matarratón Cola de ratón Piñón cubano, Nacedera Katavati	Gliricidia sepium	8.5	22.54	11.58	14.01	35.77	7.6	1.68	0.24