

Review

Indian Animal Industry Expo:

The Indian Animal Industry Expo 2007 took place in Pragati Maidan in New Delhi at the same time as the 60th anniversary of India's independence. A good opportunity to measure the dynamics of a giant, the Europeans should follow more closely in the future. A few European companies attended the Delhi Expo. Reducing feed costs was one of the main concerns of the exhibiting companies.

By Philippe Caldier

“We all need a business plan with a clear vision for the coming five years and we need to motivate the farmers”, said Subodh Kant Sahai, the Union Minister of State for food production, who inaugurated the IAI Expo on August 16. In his official speeches, which marked Indian Independence Day on August 15, agriculture and education were key words for Prime Minister Manmohan Singh. On a total of 120.8 million holdings, the Indian ministry of agriculture's statistics classify five major size groups of holdings. 76 million are classified as 'marginal', 22.8 million as 'small', 14 million as 'semi-medium', 6.5 million as 'medium' and 1.2 million as 'large'. The average area of these holdings (1.32 ha) is diverse ranging from 0.40 ha for the 'marginal' group to 17.18 ha for the 'large' group of farms. Another big issue affecting Indian agriculture is debt among farm households. According to data from the national survey of 2003, almost 49% of farm households were in debt. “In some states such as Andhra Pradesh, this percentage reached 83% in 2003 and the official figures are probably underestimated”, said Palagummi Sainath, editor at The Hindu, specialising in rural questions.

Another weak point of the Indian animal production sector is its very low processing rate: less than



IAI Expo was the second international agricultural exhibition organised in India after Ildex India 2006.

2% of meat production and only 10 to 14% of milk are further processed. IAI Expo had invited 40 veterinary students from all over India to participate in the exhibition by preparing posters on Indian animal production. Dr Ranade, who is in charge of the students, is Professor and University Head at Bombay Veterinary College. In his opinion, “a middle-class is emerging in India with new consumption habits, forcing the industry to change and to further process meats”.

Reducing feed costs

Given that the main Indian livestock organisations and research centres exhibited at IAI Expo, the exhibition was also a good opportunity to meet companies involved in the feed business. “Most of our clients are integrators or big animal farms producing their own feed”, Dr CB Singh said. He is CEO of MDEC (India) International; the Indian subsidiary of the American



Subodh Kant Sahai (Union Minister of State for food production): “We need a clear business plan for the coming five years”



Dr Ranade (Bombay Veterinary College): “new consumption patterns will lead to further processing in the meat industry”

Focus on reducing feed costs



Dr CB Singh (MDEC India International):
 “The majority of our clients are integrators”



Sudheer Adkar (Rossari): “We would like to increase our world presence and are looking for partners abroad”

MDEC specialized in software solutions for agriculture. What does the company offer the feed industry? “We help our clients to control their costs at any level and to improve their productivity”, explains Dr Singh. The company’s products monitor costs at every stage, from the raw material to mixing, including packing and transport. Dr Singh estimates that one of the major issues of the feed industry is to better control bacterial and mycotoxins contamination. The use of enzymes to reduce feed costs was also a relevant issue in Delhi with several exhibitors from India and abroad. “We have 60 offices in India and we plan to increase our world presence in Europe where we are looking for partners”, said Sudheer Adkar, senior manager of Rossari, India’s second largest enzyme producer. Until now Rossari was only active in industrial sectors such as textiles and has recently decided to broaden its activities to animal production. Being mostly active in the poultry industry, Rossari has a good image in India. “Compared to our competitors who import enzymes from Germany or Austria, we have the advantage of producing in India”, adds Sudheer Adkar.

Positive atmosphere

The same positive atmosphere could also be observed

at Biomin India’s stand. The Austrian company opened an office in Bangalore two years ago and works now with the biggest poultry integrators. “The whole company is watching India where it registers its highest growth”, said Sekhar Basak with a smile. Basak is sales & marketing director at Biomin and joined the company one year ago. He believes that natural feed additives will be used increasingly in India. Antibiotic growth promoters are not forbidden yet, but more and more companies decided to stop using them to be able to export on the world market. “Retail chains in India also promote the use of natural additives”, he adds. Basak thinks Biomin may produce directly in India within two years.

In the ruminant field, the Indian company Poshak Feeds presented an original idea in Delhi: TMR (total mix ration) which are small bales to feed cows or sheep. “90% of Indian dairy farms have between 5 and 50 cows and straw is a big issue as the sector is poorly supplied”, explained Ujwals S. Zombade, director of Poshak Feeds. The bales are made with different dry forages: wheat, straw, sorghum stalks, bagasse, paddy straw, maize stalks, soybean straw, oil cakes, oilseeds and grains. Three different types of bales are available, depending on the cows’ lactation levels. Zombade’s clients have between 20 and 30 cows pro-

Table 1 - Production of animal products in India (€ billion *)

	1999-2000	2004-2005	% change
Total animal products	24.6	32.7	+33%
Dairy products	16.7	21.9	+31.1%
Meat products	4.3	5.7	+32.5%
Of which - beef	0.41	0.51	+24.3%
- mutton	1.36	1.95	+43.4%
- pork	0.22	0.31	+41%
- poultry	1.55	2.12	+36.8%
- eggs	0.73	1.05	+43.8%

*) Based on €1 = 53 Rupees

Source: Central Statistical Organisation, Dept. of Statistics, GOI

Table 2 - Main Indian crops (average results on 5 years from 2001-02 to 2005-06)

	Area (million ha)	Production (million tonnes)	Yield (kg/ha)
Total food grains	120.35	201.56	1,675
Of which - rice	42.85	85.72	2,001
- Wheat	26.20	69.73	2,662
- Maize	7.12	13.64	1,916
Total pulses	22.22	13.18	593
Total oilseeds	24.63	22.60	918
Of which - soybeans	6.86	6.72	980
- sunflower	1.86	1.02	48

Source: Indian national statistics

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Sekhar Basak, Sales & Marketing Director Biomin India (left), and **Bikas Sarkar**, Sales Manager: “People are starting to use natural growth promoters in India”

ducing 4,000 to 4,500 litres per lactation. In order to survive, the farmers often have a second activity. Milk price rose from 11 to 12 Rupees last year (around €0.22 /litre) for milk with 4% fat and 8.5% non-fat solids. “Farmers often sell their milk directly to consumers to get added value from their product”, explains Zombade. Many investments are being made in dairy all over India. Most of these investments consist of increasing existing units, with farm sizes ranging from 100 to even 800 cows. Feed is often a major issue for these dairy farms since farmers feed their herd with what they find, creating unbalanced rations and sanitary problems.

A potential of 60 million tonnes

The Indian government’s target is to modernise agriculture and to boost exports of agricultural products. Exports are still at a very low level compared to the huge levels of agricultural products. Production forecasts presented in Delhi through different poster presentations are impressive: the Indian milk production (already number one in the world) should grow from 97 tonnes now to 225 million tonnes in 2020. At the same time, meat production should increase from 6.3 to 12.1 million tonnes, while egg production should jump from 46 to 60 billion eggs. The Indian feed industry association (CLFMA) estimates that India would require about 42 million tonnes of compound feed if livestock farming were to be primarily based on feed. This demand is expected to increase to about 60 millions tonnes in 2010. The potential is really high for dairy cattle feed at around 45 million tonnes assuming that only 50% of milk production in the country is from cattle that are fed manufactured feeds. The current estimated production of cattle feed is about 2 million tonnes. India without doubt will need western technologies and know-how to fulfill its targets. For the moment, the PM of India just launched a 5.6 billion rupees (€100.4 million) plan on August 16 for the farm sector. Its goal is to increase rice, wheat and pulse production and to double the growth rate of agriculture.

On the other hand, giant infrastructure projects have also been agreed upon in the same week, involving a mega project of a coast to coast Delhi-Mumbai corridor of 1,483 km including six big investment regions at a cost of US\$100 billion in just the first phase (Hindustan Times Friday, August 17, 2007).

Interview

Devegowda: “Mycotoxins is the main issue in India”



Prof. G. Devegowda is presently an advisor of Animal Biotechnology, Vice-President of the World Poultry Science Association, President of the Institution of Veterinarians of the Poultry Industry and editor of the World Mycotoxin Journal. Feed Tech spoke with him.

FeedTech (FT): “How does the Indian poultry industry compare to other countries?”

Devegowda: “India is the third largest egg producer in the world with 45 billion eggs produced per year and the fifth largest broiler producer. The number of layers is estimated at around 150-160 million birds and the breeder population at around 15 million birds. In broiler production, the level of integration depends on the state, varying from 50% in West Bengal to 90% in Tamil Nadu.”

FT: “How big is feed production in the Indian poultry sector?”

Devegowda: “Of a total poultry feed production of 15 million tonnes (year 2005), 8.5 million tonnes are for layers, 5 million tonnes for broilers and 1.5 million tonnes for breeders. The energy sources are corn, bajra (pearl millet), broken rice, sorghum, rice polish. Protein sources are soybean meal, peanut cake, rapeseed meal, sunflower meal, sesame meal, meat meal. Cost of production is estimated at Rs 1.60 (€0.03) per egg, of which 63% for feed costs.”

FT: “What is the main issue within the Indian feed industry?”

Devegowda: “It is without doubt the level of mycotoxins in feed that is too high. These mycotoxins are varied: Aflatoxins (maximum limit for total aflatoxins in India < 30 ppb), zearalenone, ochratoxin (maximum admissible levels in kidneys of swine: 5 ppb), and we find them in milk and meat products.

Following a survey conducted by ICRISAT (International Crops Research Institute for Semi-Arid Tropics), nearly 25% of the milk supplied in Hyderabad through retail outlets is contaminated by aflatoxins, which cause cancer and trigger mutations, especially to genes involved in the production of liver cancer. The Institute has stated that the number of humans contaminated by aflatoxins is not known. Aflatoxins act very slowly and prolonged consumption could lead to liver cancer in humans. They are also immunodepressive and could make a person susceptible to other health disorders. According to ICRISAT’s director general Dr William Dar, the major drawback in fighting aflatoxins in India was the low level of awareness. Prevention and control is needed to fight against this big issue. An integrated approach and good agricultural and manufacturing practices from the farm to consumption are necessary. Biotechnologies and herbal preparations can be used preventively; as some surveys have shown light anti-fungal activity of some spices (clove, cinnamon and thyme prevent growth of moulds: *A. flavus*, *A. parasiticus*, *A. ochraceus*, *F. moniliforme*). It is also known that Aflatoxin B1 and Fumonisin B1 are influenced by clove oil”.

FT: “What are the development forecasts for the Indian poultry sector?”

Devegowda: “Broiler meat consumption is only at 2.1 kg/inhabitant/year in India, in comparison to 47.6 kg in the USA. According to a McKinsey Report, the Indian poultry industry will continue to grow by the year 2010. Egg and chicken consumption should increase from 400 g in 1990 to 1.9 kg in 2007 and 3.6 kg in 2010. Poultry production value should grow from €1.4 to €3.4 billion from 2005 to 2010”. ●