

## **Introduction to the Poultry Industry in India**

Poultry is one of the fastest growing segments of the agricultural sector in India currently. As per industry sources, the domestic poultry market in India is valued at between USD 6-7 Billion of which chicken (meat and eggs) account for 90% of the market.

Chicken meat is growing at a faster pace than other meats like mutton, beef and pork. During the last ten years chicken meat production grew at a compound annual growth rate (CAGR) of ~ 8% compared with mutton (4.9%) and pork (2.8%). Beef production grew at 8.8%, primarily driven by exports. In India, Chicken is considered a much healthier source of animal protein than mutton, beef and pork, the last two of which are avoided by Hindus (80.5% of India's population) and Muslims (13.4% of India's population) respectively for religious reasons.

## **Key facts on Indian Poultry Industry**

India is now the third largest egg (~ 66 Billion eggs, per capita egg consumption at ~55 eggs) and fourth largest poultry meat (~3.4 Million tons, per capita consumption close to 2.8 kg per annum) producer.

Total chicken population has registered an annual growth of ~ 8% in the last decade. Organized sector accounts for nearly 70-80% of the total poultry output in the country and this is growing at a much faster pace. Poultry processing is now close to 20% of total broiler production, the rest being where the live chicken are marketed within a limited radius of the farm. With modern techniques and changing from live bird to fresh chilled and frozen product market the poultry sector in India is changing from a backyard activity to large scale integrated poultry farming.

As per ICRA, the India arm of Moody's, the domestic broiler meat demand is expected to grow at around 15-18%, while table egg demand is expected to grow at 5-7% in medium to long term.

The key factors responsible for the growth of the sector include

- Increasing urbanization
- Increasing penetration of QSRs (Quick Service Restaurants)
- Continued increase in proportion of working women
- Changing lifestyles with preference towards convenience food
- Higher purchasing power

## **Trends in the Indian poultry industry**

The production capacity has increased with increased integration and large scale implementation of contract poultry farming. Farmers in India have moved from rearing country birds in the past to rearing hybrids which ensure faster growth of chicks, higher eggs per bird, increased hatchability, low mortality rates, excellent feed conversion and consequently sustainable profits to the poultry farmers. The industry has been supported by indigenous advancements in genetic capabilities, veterinary health, poultry feed, poultry equipment, and poultry processing sectors.

The number of vaccinations for the layers has been going up with growing awareness of new diseases and new variants of the same disease. Many vaccines are imported but there are few vaccine manufacturing companies in India. Bivalent Marek's vaccines are prevalent, yet "Rispen" is not permitted for use. India does not vaccinate against highly pathogenic Avian Influenza (AI) but rather practices a 'stamping-out' policy in case out outbreaks. There is government monitoring system for AI guided by OIE regulations.

Least-cost formulations are used to feed layer birds and there is a constant search for cheaper, unconventional feed materials. Feed prices fluctuate during the year, with the grain becoming cheaper during the harvest and more expensive again just before the beginning of the crop season. Many layer farmers concentrate on bulk purchase of grains in season to save costs. More than one grain is being used. Most layer feeds are low-energy rations, having around 2,400 kcal of energy.

The healthy growth in poultry output over last decade makes India one of the fastest growing major world market in the segment with future growth potential remaining strong on back of wide gap against global per capital consumption norms and also favorable socio economic factors.

### **Insights into sub sector: Layer Industry**

India is the third largest producer of table eggs in numbers after China and US. Commercial layers in India are predominately white (>95 per cent). Few brown layers introduced could not maintain the market share due to higher feed intake and no price advantage for brown eggs.

Layer birds bred and adapted to Indian climate hold the largest share. International brands like Bovans, Lohmann and Hyline are also present in the market. The grandparents (GP) of the multinational brands are imported and multiplied. Layer chick placements remained constant for three years between 2004 and 2006 due to bird flu but have been going up steadily since. The placement of layer chicks was about 140 million in 2002 which rose to 220 million by 2012. All commercial layer birds are in cages. Three-tier California cages in raised floor houses are common. The individual house capacity is usually 100,000 birds.

Around 70 per cent of the layer farming is in the southern states. The lower land prices, grain prices as well as less variation in seasonal climates are the reasons for the distribution. Separate brood/grow facilities situated in the closed vicinity is the order of the day. The growing areas are used on 'all in-all out' basis. Layer flocks are mostly in multi-age group farms.

The eggs are being sold in numbers. Grading, packing and branding is not widespread. Few attempts to sell them as graded and value-added eggs have not been very successful due to limited cost-effectiveness in pricing and volume of sales. Layer farming is concentrated around few areas and lot of eggs move from place to place within the country. India has six egg powder plants exporting egg powder.

In recent years, with good farming practices, production is up to 320 eggs per hen housed in a 365-day laying cycle. The average production of hen is calculated at 300 eggs per hen housed. To increase the availability of eggs in the rural areas, backyard poultry backed with "mother units" is being encouraged by the governments as an alternative system of poultry production to augment egg production while addressing the health issues in poultry.

### **Insights into sub sector: Broiler Production**

India is the fourth largest broiler producer after China, US and Brazil. Parent breeder placements are estimated to be 30 million in 2012 against 1.5 million in 2002. They are concentrated in a few pockets and there is a heavy movement of hatching eggs to less productive areas. There are more than 500 breeding farms in the country housing the broiler parent stocks.

Most of the broiler breeders are in cages with artificial insemination. Best of the breeding flocks produce up to 200 hatching eggs and 160 chicks. Excellent health standards are maintained and

there are 'all in- all out' breeder flock units. Two-tier California cages in open-sided raised-floor houses are common. Power availability/cost, success in manure handling and artificial insemination will decide the increased usage of multi-tier cages systems in future.

A very significant percentage of broilers are marketed live in India and so there is limited opportunity to transport birds to distant locations. Hence, local integrators are coming up with huge volumes of parent stock and broiler rearing. The biggest of them have more than one million parent stock producing more than one 100,000 chicks a day.

All multi-national brands of broiler chicks are available in India produced from imported grandparents. Aviagen has established a Great Grand Parent (GGP) farm in India. There are local pure line breeding programmes running in India, producing birds scientifically in open-sided houses with lower energy feeds. Indian-bred birds dominate the replacements.

All the commercial broiler chicks are raised on deep litter on 'all in, all out' basis. In 2002, 80 per cent of the chicks produced were sold as day-old chicks and the farmers were rearing them. In 2012, the number of chicks sold has come down to 50 per cent and the rest are reared by the companies who hatch them as a part of integrated production. The trend shows that the shift in rearing may continue.

Due to large-scale rearing of broilers, reduced production cycle and marketing live birds, the live broiler market has remained speculative. Single flock-growers lose money when the prices are down and cannot realize the benefit of high prices prevailing for few weeks. Larger scale rearing companies are going in for contract farming to utilize the same facility to increase their volumes. The small growers are becoming a part of the big company which is proving to be healthy growth of the industry.

Broiler feed, which used to be all mash, is being processed in to crumbles and pellets. Efficient feeds rather than least-cost formulations are favored. Feed Conversion Ratio ("FCR") and overall cost of production are considered more important than the cost of feed alone. Broiler rearing companies are establishing large feed processing plants. Most of the pre-starter and starter feed is steamed and crumbled. FCRs are coming down - from 2.0 in 2002 to 1.75 in 2012, with the best of the flock recording 1.5 at 2.0 Kg bodyweight.

Broiler farms are open-sided; controlled houses are less than five per cent of the total volume. The main reason being the live bird market into which the birds reared under climate-controlled houses do not fit in besides the high capital costs and power requirements involved.

Live broiler markets fluctuate seasonally. Summer prices are high due to reduced production and availability under open-housing system. Festive seasons record low prices due to reduced consumption as a large part of the population abstains from eating meat during this time due to religious reasons.

### **Challenges faced by the industry**

Only seven per cent of the broilers are further processed into chicken products. This volume is not going up due to lack of cold chain availability and traditional consumption habits. People still like to buy a live bird slaughter and cook in their own way.

Other key challenges faced by industry include high feed costs, inadequate cold chain and transportation infrastructure, high vulnerability to disease outbreaks and highly volatile realizations affecting cash flows.

### **Our Comments**

India may not be an exporting country for eggs and chicken but the industry can assure feeding more than one billion populations with quality eggs and chicken at cheaper prices.

Indian poultry industry offers huge opportunity for international companies to set up farms and processing centers in India and cater to the growing domestic consumption. India is self-sufficient in all the ingredients required to set up farming and processing company.

Transition from a predominantly live bird/wet market to a chilled/frozen market is crucial for the future expansion of domestic poultry industry as well as to increase presence in international trade where India has negligible presence. Developing efficient distribution system with large investments required in cold chain infrastructure and increasing market acceptability of frozen chicken are going to be the key industry drivers in long term.

There is also an immense scope for international companies operating in the animal feed business.

As per market intelligence, a few European, Thai and US companies have initiated discussions to enter the Indian market.

India food and beverage market is at a phase where new mega brands will be created in next ten years and with reasonable certainty it can be guessed that one or more of these will be a processed chicken brand.

As suggested next steps once the international company has firmed up their India plans, Sparrow Advisory LLP will be happy to assist them in designing the India strategy and this may include organic and/or inorganic growth options. Sparrow Advisory will be glad to be appointed the trusted advisor for the India entry strategy.

### Notes

1. Some of the sources from which data has been picked include website of USDA (<http://www.usda.gov/>), ICRA (Moody's India arm) ([www.icra.in](http://www.icra.in)), Ministry of Statistics and Programme Implementation (<http://mospi.nic.in/>) and industry sources.
2. Certain statistics are not current.