

# How India's Industry Has Developed

Poultry production in India can be broadly classified into four phases.

The first phase, covering the period from 1947 to 1960, was marked almost by stagnation through traditional methods in poultry production. In 1960, there were about 35 million layers producing about 2340 million eggs with a per caput consumption of five eggs/year. Some 95% of the layer population consisted of indigenous varieties, about 5% being improved hens. Most were raised on backyard units with 10-15 birds and there was hardly any use of purchased inputs like hybrid chicks, mixed feeds, medicines or equipments.

With the commencement of the First and Second Five-Year Plan

programmes (51-56 and 56-61) the planners realised the urgent need for more food sources and established four central poultry breeding farms through importation of RIR and WLH strains from the USA, which were used for upgrading the native stock.

In the second phase, covering from 61-70, egg production increased from 2340 to 5340 million and per caput consumption to 10 eggs/year. This growth was mainly due to a rise in the improved hen population which constituted one third of the flock. At the same time, there was also the introduction of a few foreign commercial poultry breeding stocks by private breeders, who supplied hybrid chicks to farmers. Use of scientifically balanced feeds,

preventive vaccination programmes became popular. The government established poultry marketing centres in various states to promote egg sales and consumption. Broiler farming started in this period, output amounting to about 4 million birds by 1970. The backyard poultry units of the early 60's were transformed into commercial units of 5000-10 000 birds on deep litter by 1970. This second phase of poultry development also saw the introduction of 'Bank' credit and cash inputs into poultry operations.

During the third phase, covering the period from 71 to 80, the government established several co-ordinated research projects in various parts of the country to develop egg/meat strains suitable to Indian conditions and also to curb expenditure on the importing of commercial breeding stocks. Egg production reached around 12 500 million, the per caput consumption amounting to 19 eggs/year. More than three-quarters of output came from improved layers kept under intensive systems, flock sizes ranging from 10 000 to 50 000 birds. The ready availability of credit from the Banks facilitated rapid growth. Broiler farming, gained in popularity, output reaching 30 million by the end of this decade. Poultry marketing centres in state governments were upgraded to poultry corporations to provide better marketing facilities and other subsidised technical inputs to the farmers. All these resulted in a substantial growth in poultry industry during this decade.

At the beginning of the fourth phase, covering the decade 81-90, the industry experienced certain upheavals due to high feed costs and low egg prices. But, it has shown fast growth during the past 5-6 years. This has been mainly due to the formation of National Egg Co-ordination Committee (NECC) in 1982, which declared the daily egg prices for both producer and consumers, thus eliminating to a certain extent, the role of the middlemen, who had been exploiting the egg market. The role of the NECC is confined to a few

important, urban poultry pockets in the country. The average feed and egg prices before and after the establishment of NECC is shown in Table 2. These prices clearly indicate that the annual percentage increase in layer feed from 75 to 81 was greater than that of egg prices. After the formation of the NECC in 1982 however, the annual percentage increase of egg prices was greater than the price rise in layer feed. I believe therefore that the NECC has played a significant role in influencing egg prices during the past decade, resulting in further expansion of the layer industry. There has also been a big boom in broiler farming, annual production amounting to around 130 million in 1989.

The 1980's also saw the importation of several strains of GPs and pure-line breeding stocks of both egg and meat types to meet the growing demand for hybrid chicks. The government of India established a Central Avian Research Institute putting greater stress on poultry research, education and training. The private sector has established training and diagnostic facilities to help poultry farmers. The government has given a boost to food processing including poultry and this has resulted in further rapid growth in the broiler sector with annual output likely to reach 150 million birds in 1990.

With broilermeat cheaper than mutton and the stock performance almost comparable to that achieved in the USA (Table 3) the producer has found this business to be more profitable than egg production.

During the past three decades, the industry has faced many critical stages because of the following major constraints:

1. Lack of an effective and organised marketing structure. The role played by the NECC is not quite adequate and has yet to tap the full potential in the rural areas and find avenues for exporting eggs to other countries. The government has not provided any price support for eggs in times of crisis. There are insufficient cold storage facilities for processed chickens/eggs, and the transport/distribution service is inadequate to cover the country.

2. A lack of mandatory quality control. With the rapid expansion in poultry production some suppliers have sold poor quality chickens, feed, medicines and vaccines to producers.

There are no proper quality control measures enforced by the Federal/State governments. There is an

## New Publications From India

### Crystal Ball On India

A crystal ball on India's poultry future aptly describes the new edition of the Indian Poultry Industry Yearbook for 1990. Ninth in the series, the 618-page volume presents an in-depth profile of the emerging poultry scenario in the nineties, supported by over 65 statistical tables, graphs and charts. A wide range of articles and comments by industry leaders and foreign experts sum up the situation.

The Yearbook focuses on two main themes: Broiler Boom and Mechanical Poultry Processing. In addition, other subjects include prospects for feedingstuffs in 2000 AD and innovations in poultry housing. The compendium also highlights new avenues of investment and marketing opportunities as well as the growth trends relating to poultry inputs and products in the different parts of the country.

According to the 25-page profile of the industry by Dr A.K. Chatterjee, Animal Husbandry Commission, GOI, and Dr R.M. Acharya, the Deputy Director-General (Anim Scs), ICAR, the years ahead will herald the advent of modern poultry processing as an ancillary industry.

Just as the decade of the seventies saw an unprecedented growth in the production of eggs and that of the eighties of broilers, the mechanical processing of poultry is a relatively new development on the poultry scene. It would bring about the needed sophistication and diversification in poultry production. This development coincides with the fast-food revolution that is based on the availability of further-processed poultry products.

Within the poultry sector, broilers today occupy a pride of place with a phenomenal expansion in their production - from 30 million in 1980 to an estimated 200 million in 1989.

The coming decade of the nineties promises an unprecedented all-round expansion in all sectors of poultry, with an annual growth rate of 15% in egg production and 20% in broilers. By 1995, the annual production is expected to reach a record level of 30 000 million eggs and 450 million broilers.

Today, a network of over 500 commercial hatcheries and breeding farms, 100 feed mills, manufacturers of veterinary pharmaceuticals and equipment has made poultry farming a dynamic agri-business. These and related facts are dealt with comprehensively in the industry profile. It also highlights the true dimension of poultry development in the country for enhancing nutrition and providing employment. In the Indian context, the development of poultry can be seen as vital in building a better and healthier India. Poultry can dramatically alter the protein availability in the country. A set of ten charts pinpoints key growth indicators and supplements the profile for a reader in a hurry.

Serving as a databook-handbook of latest trends, buyer's guide and Who's Who, the new Yearbook is a handy source for locating new markets and sources of supply of inputs and services. The trends in prices of essential inputs and products would be of special interest. The compendium also presents exhaustive listings of over 7000 specialists and organisations in the various sections.

The Yearbook is priced at US\$80 plus \$14 (airmail) or \$7 (seamail) for postage and can be ordered from the Publisher at A-25, Priyadarshini Vihar, Delhi 110092, India.

### Recent Advances In Hatchery Management

This 200-page book containing the papers presented at the Izatnagar Summer Institute on 'Recent Advances In Hatchery Management' contains 34 papers by 26 eminent Scientists and Professors from National Institutes and Agricultural Universities of India with Chapters on Hatchery and Hatchery Management; Physical Environment in Incubation and Hatching; Artificial Insemination and Fertility of Egg; Genetics in Relation to Fertility and Hatchability; Nutrition in Relation to Fertility and Hatchability, Monitoring and Control of Hatchery Borne Diseases and Hatchery Waste Disposal.

To obtain a copy of the Proceedings of 'Recent Advances in Hatchery Management' send US\$25 (inclusive air mail postage) by Bank Draft, addressed to: Director, Central Avian Research Institute, Izatnagar, U.P., India, Pin 243 122. For prompt response intimation may be sent to Dr G.V. Rao, Head, Planning, Monitoring and Co-ordination, C.A.R.I., Izatnagar U.P. - 243 122, India.

Table 1: Growth Of India's Poultry Production (in millions)

Criterion	1961	1971	1980	1986	1990*	2000*
1. Total layers	35	53	86	87	103	205
(a) Native layers	33	35	30	20	15	5
(b) Improved layers	2	18	56	67	93	200
2. Total egg production	2340	5340	12 500	15 225	19 125	41 300
(a) Eggs from native birds	1980	2100	1 800	1 200	900	180
(b) Eggs from improved birds	360	3240	10 700	14 025	18 225	41 120
3. Total broilers	—	4	30	95	150	500
4. Value of poultry products (Rupees)	650	1755	6 630	15 200	20 500	45 000
5. Human population	439	548	675	760	850	1 000
6. No. of eggs/person /year	4	10	19	20	22	41

\*Projected

Table 2: Trends In Egg And Layer Feed Prices Before And After NECC Formation In 1982

Year	Feed Cost	% Price Change In Feed /Year	Egg Cost	% Price Change In Eggs /Year	Year	Feed Cost	% Price Change In Feed /Year	Egg Cost	% Price Change In Eggs /Year
1975	1275	—	30.27	—	1982	1975	2.3	37.28	13.7
1976	1225	- 3.9	30.87	2.0	1983	2100	6.3	40.93	9.8
1977	1460	19.2	31.91	3.4	1984	2180	3.8	42.15	3.0
1978	1460	—	29.23	- 8.4	1985	2260	3.6	40.15	- 4.7
1979	1550	6.2	30.50	4.4	1986	2400	6.2	43.51	8.4
1980	1745	12.6	31.50	3.3	1987	2510	4.6	46.82	7.6
1981	1930	10.6	32.80	4.1	1988	2630	4.8	51.23	9.4



inadequacy in domestic feed resources and feed analytical services (including proper disease diagnostic laboratories to help poultry farmers).

3. A lack of extension services. There is an urgent need to establish horizontal links between the State and Central governments and private sectors not only for the proper supply and distribution of inputs but also to render an efficient extension service to producers.

**Outlook For The Year 2000**

Poultrymeat and eggs will continue to play a major role in Indian diets in future, as other protein sources will become more costly and possible scarce. Egg output will have to expand by 10-12 times if the national recommended levels of half-an-egg/day/person is to be achieved.

By 2000 AD, the layer industry will have doubled to about 205 million, while broiler output will treble to about 500 million. Although the number of poultry farms may increase, the size of flock/farm will also expand such that viable poultry units for a small farmer will be between 15 000-20 000 birds. On the

Table 3: Comparison Of Broiler Production In The USA And India

	Market Age (Days)	Average Market Weight (kg)	Feed/Kg Wt (FCR)	Livability (%)
1962 USA	65	1.70	2.15	96.5
India	—	—	—	—
1972 USA	60	1.81	2.03	96.5
India	70	1.50	2.50	90
1977 USA	53	1.84	1.95	96.5
India	65	1.58	2.20	92
1982 USA	46	1.81	1.60	97.0
India	56	1.60	2.10	93
1987 USA	44	1.85	1.50	97.0
India	49	1.65	2.05	94

broiler side average production will be 50 000 broilers/year or 10 000/cycle.

By the year 2000 virtually all the unproductive native birds will have been replaced by hybrids. Egg production per layer and the efficiency in broiler growth and feed conversion will continue to improve.

The poultry marketing centres currently managed by various State

governments will be managed by public and private agencies and egg co-operatives/boards.

The trend towards mass production will continue. At the farm level operations will become more mechanised and involves less labour — *Dr C.V. Reddy, Former Professor in Poultry Science & Dean, A.P. Agricultural University, Hyderabad, India.*

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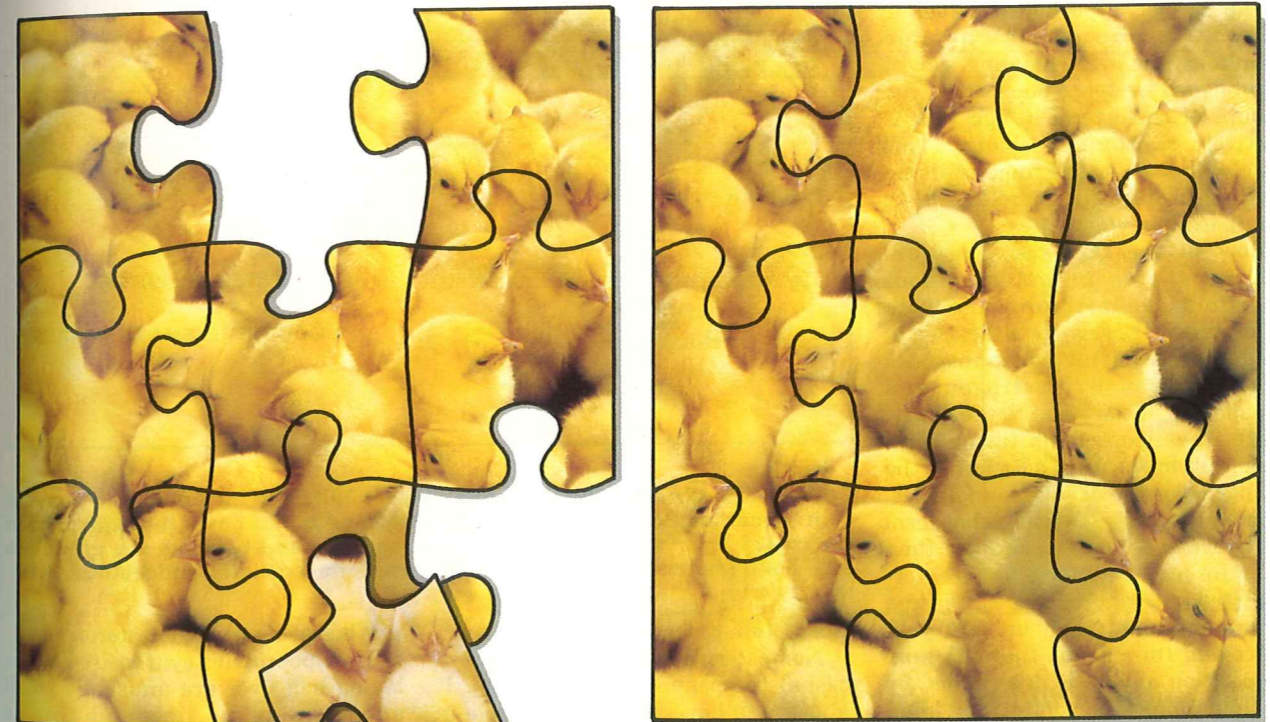
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