



Poultry Development Policies and Planning for Higher Production in India

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Introduction: -

Poultry is one of the fastest growing segments of the agricultural sector in India with an average growth rate of 8 to 10 per cent per year. Meanwhile India is Fastest growing economy in the world. The total Poultry in the country is 851.81 million in 2019, increasing by 16.8% over previous Census. India is now the world's third largest egg producer India produces around 5.8 million MT of Meat and 80 bn eggs annually and the fourth major producer of broilers. Backyard Poultry contributes around 317.07 million in 2019, increased by 45.8% over previous Census. Concurrently, backyard poultry sector is also one of the potent tools for subsidiary income generation for many landless/marginal farmers and also provides nutritional security to the rural poor. The total Commercial Poultry in the country is 534.74 million in 2019, increased by 4.5% over previous Census. Among the livestock sector Poultry industry contributes about Rs. 125 lakh Cr accounting for about 1 per cent of the national GDP and about 14% of the Livestock GDP.

Note: -The first major step towards poultry development in India was in the year 1939 establishment of poultry research division at IVRI, Izatnagar inUttarPradesh, which developed an effective vaccine against Ranikhet disease

Poultry development with five-year plans:-

- 1) **First Five-Year Plan ((1951–1956)** - A pilot project approved in 1956 had the provision to establish 56 extension centers



- 2) **Second Five Year Plan (1956-1961)**- 5 regional farms equipped with superior stock were started along with 269 poultry extension centers. Training programmers were conducted
- 3) **Third Plan Five Year Plan (1961–1966)**-. Development of deep litter system, multiplication of exotic breeds and organization of inter-state poultry development projects occurred during this period. Extension cum development centers and commercial hatcheries were set up in different states.
- 4) **Fourth Five Year Plan (1969-1974)**- Provision of tax reduction in poultry industry, Insurance and special credit for poultry against loss through epidemic diseases Marketing centers for. Egg and poultry production were established. Under All India Coordinated Research Project (AICRP)Launched All India Coordinated Research Project on Poultry Breeding”
- 5) **Fifth Five Year Plan. (1974–1978)**- emphasis were establish for proper marketing facilities.
- 6) **Sixth five Year Plan. (1980-1985)** - In the Sixth Plan periods, all aspects of poultry industry had developed. It was called the ‘Decade of Poultry’. Broiler farming emerged as a new wing
- 7) **Seventh five Year Plan. (1985-1990)**- focused on improvement in infrastructure for taking scientific breeding in egg and broiler strains and the proposed development of new lines of broilers. NAFED (National Agricultural Cooperative Marketing Federation of India) assisted in the marketing of poultry products
- 8) **Eighth five Year Plan. (1992-1997)**- , attempts were made to establish poultry cooperatives on the pattern of Anand in the processing, storage and marketing facilities. State level poultry training centers were started. A task force was set up to work out details of establishment and operation of National Poultry Development Board.
- 9) **Ninth five Year Plan. (1997-2002)**- I t was estimated that the egg production in the country is about 33.6 billion numbers (2001-02) against the Ninth Plan target of 35 billion numbers. The significant achievement in poultry development has come from the initiatives taken up by the private sector for commercial pure-line breeding.
- 10) **Tenth five Year Plan. (2002-2007)**- Commercial hybrid broilers and layers has become highly successful., Cold storage, pressured air cargo capacity and reference laboratory for certification of health and products, Improve indigenous birds and promotion of backyard poultry farming.
- 11) **Eleventh five Year Plan. (2007-2012)**- The Indian Council of Agricultural Research has initiated “Poultry Seed Project” launched on 15th May 2009 with a total budget out lay of Rs. 913.2 lakhs



target set for supplying chicks for main land and north east centers are 0.5 and 1.0 lakhs chicks per annum, respectively and to collect feedback on the performance of the germplasm.

12) **Twelve five Year Plan. (2012-2017)**-National Livestock Mission (NLM) comes in existence and following components related to Poultry are covered under NLM: -

Modernization and Development of Breeding Infrastructure Central Poultry Development

Organizations: -Central Poultry Development Organization's (CPDOs) located at four regions viz. Chandigarh, Bhubaneswar, Mumbai and Bengaluru have been playing a pivotal role in the implementation of the policies.

Strengthening of Breeding infrastructure of State/University farms: - Technological interventions in the areas of biosecurity, automation and modernization of Infrastructure in various Central / State Government poultry farms.

Interventions towards Productivity enhancement:

(a) **Rural Backyard Poultry Development**- This scheme component aims at supporting BPL beneficiary families wherein 4-week-old chicks, suitable for rearing in the backyard, reared at the 'mother units' are further distributed to them in batches

(b) **Innovative Poultry Productivity Project (IPPP)**- To encourage Broiler Rearing by giving 600 broiler chicks in 4 batches (150 every 2-3 months in a year- 4 batches

National action plan for Egg and Poultry-2022 For Doubling Farmers Income by 2022

(13) **Recently: - SCHEDULED CASTES SUB-PLAN (SCSP) AND TRIBAL SUB-PLAN (TSP)**According to guidelines issued by the Planning Commission in 2010 - Earmark 16.2% of Agriculture funds under Scheduled Castes Sub Plan (SCSP), financial year 2019-20, the Department has earmarked Rs. 425.72 crore. From 2018-19, 8.60% has been fixed under Tribal Sub Plan (TSP) FY 2019-20, the Department was earmarked Rs. 221.81.

Various ruler poultry development schemes and agencies

- ❖ National Meat & Poultry Processing Board (NMPPB)
- ❖ Indian Rural Development Programme (IRDP),
- ❖ Development of Women and Children Area (DWCRA).
- ❖ Integral rural development programme (IRDP)
- ❖ Special Livestock production programme (SLPP)
- ❖ Tribal development programme (TDP)
- ❖ Special component programme (SCP)



- ❖ Special livestock breeding programme(SLBP)
- ❖ Intensive poultry development (IRDP)
- ❖ Mass poultry production programme (MPPP)
- ❖ Pocket poultry project (PPP)
- ❖ Drought prone area development programme (DPADP)
- ❖ Dessert development programme (DDP)

Some agencies regarding Poultry insurance

- ❖ National Bank for Agriculture and Rural Development (NABARD).
- ❖ National Cooperative Development Cooperation (NCDC)
- ❖ Pradhan Mantri Gramin Sadak Yojana (PMGSY).
- ❖ The General Insurance Corporation (GIC) of India. has introduced poultry insurance which covers the following:
 - a. Comprehensive cover for poultry farmers
 - b. Epidemic poultry insurance through hatcheries
 - c. Poultry insurance schemes for parent stock through hatcheries

ICAR- Directorate of poultry research

2020 two-way chicken cross (**Janapriya**) was developed, annual egg production of 180-190 and 140-150 eggs, suitable for the backyard poultry farming breed registration is under process by ICAR-Directorate of poultry research backyard chicken variety **PD-2 (Vanaraja Female)** line registered by ICAR-Directorate of Poultry Research, Hyderabad the age at sexual maturity ranges from 160 to 175 days. The egg weight at 40-week ranges from 52 to 56 g. The annual egg production varies between 190 and 215 eggs. This chicken line has been registered.

Gramapriya, a layer type variety was developed for free range farming in rural and tribal areas. The bird has the production potential of 230-240 eggs in a year and can lay 160-180 eggs in free-range conditions with minimum supplementary feeding. The males weigh around 1.2 to 1.5kg at 15 weeks of age and suitable for tandoori preparations. The bird has colored plumage and lays bigger (57-59g) and brown eggs

Krishibro, a broiler cross developed by this institute ranked third among 9 broiler crosses from both private and public sector in the 24th Random sample poultry performance test (RSPPT) for broilers



held during 2005 at Gurgaon. Krishbro weighed 1.44 and 1.92kg at 42nd and 49th d and 7th weeks of age, respectively with the corresponding feed efficiency of 2.05 and 2.13. Dressing percentage was 72.6%.

Krishi layer, a commercial layer variety was evolved utilizing IWH and IWI lines for the benefit of the farmers. The variety has the potential to lay about 280 eggs/year on hen housed basis.

New breeds: -

JHARSIM - Multi-Colored rural bird for Jharkhand and Bihar (Annual egg production - Under rural / backyard system: 120-130 eggs)

NARMADA NIDHI – Dual purpose colored rural poultry bird for the state of Madhya Pradesh (Annual egg production - Under rural / backyard system: 180 eggs)

KAMRUPA - Multi-Colored bird for rural poultry for the State of Assam (Annual egg production - Under rural / backyard system: 118-130 eggs)

HIMSAMRIDHI- Location specific rural variety for Himachal Pradesh (Annual Egg Production: Under rural / backyard system: 140-150 eggs)

Cutting-edge Technology in Poultry Breeding and Nutrition:

1. Use of Biotechnological and immunological tools to develop robust.
2. QTLs through genome wide scan.
3. Microarray analysis for elucidating biological pathways.
4. Identifying the genes involved in particular biological processes.
5. The genetic modifications like transgenesis, , proteomics, nanotechnology, epigenetics, aptamers, in-ovo approaches and even CRISPR gene editing
6. Single-cell protein products such as algae, bacteria and yeasts, transgenic feeds with high protein and amino acid contents (quality protein maize with high lysine & tryptophan), low anti-nutritional factors (Canola meals with low erucic acid, tannins, and glycosinolates) and with high vitamin activity (yellow sorghum with high beta-carotene activity), etc.
7. (Probiotics and prebiotics) have been considered as suitable substitute of antibiotics, which are slowly being phased out, especially the gutacting ones.
8. Micro-organism have been selected and optimized production of amino acids in fermentation process to produce the limiting amino acids isproduced.
9. Production of trace mineral proteinates (organic minerals) utilizing yeast (*Saccharomyces cerevisiae*) has become feasible in augmenting availability of various trace minerals including zinc, manganese, chromium, selenium, copper.



10. Using Dried Distillers Grain Solubles which is left over after corn is turned into ethanol and other.

Poultry Health: -

- i. Network of 250 Disease Diagnostic Laboratories and 5 Regional Disease Diagnostic Laboratories in States / UTs. Each State Agriculture University / Veterinary College also has disease diagnostic facilities.
- ii. Indian Veterinary Research Institute and Disease Diagnostic Laboratory of National Dairy Development Board Anand, National Institute for High Security Animal Diseases (NIHSAD) [BSL-III+] at Bhopal, National Institute of Veterinary Epidemiology and Disease Informatics (NIVEDI) are World Class Laboratories providing disease diagnostic service and play crucial role in assessing epidemiological profile mapping.
- iii. National Institute of Animal Health (NIAH) and National Animal Disease Reporting System (NADRS) also play key roll.

Some Modern Farm house innovations

1. Automated public access control system with automatic showers, concrete flooring between houses to reduce vegetation, pad cooling with easy cleaning and disinfecting even when birds are present.
2. Chain-feeder technology promotes efficient feed distribution by accurately measuring feed and providing uniform nutrition for every bird.
3. Fluid LED light level control, flicker free lighting system, with multiple light level settings
4. Air Quality Monitor is designed to sample the air within the building every two minutes, and display the following air quality information CO₂ / Ammonia / Humidity / Temperature
5. Water system designs to keep water uncontaminated by preventing dirt, faeces and other pollutants from entering the automatic drinking system.
6. Innovative waste management methods: Manure belt systems in egg production. Pelletization of dried manure further stabilizes the material, reducing dust.

Remote Access Livestock Monitoring: Allows poultry farmers the ability to view their broiler sheds feed and drinker lines, hoppers, bird spread, all without the need to enter the houses as regularly as they normally would.