

# India's Poultry Production Landscape: Key Trends and Developments

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## ABSTRACT

The domestic chicken (*Gallus gallus domesticus*), originating from the red junglefowl, is essential to global food production, as well as entertainment and cultural traditions. In India, the poultry industry consists of both large-scale commercial operations and small-scale rural farms. Indigenous breeds like Aseel and Kadaknath are valued for their hardiness and cultural significance. As of 2019, India's poultry population reached 851.81 million, with significant growth in backyard poultry. India ranks as the third-largest global egg producer and fifth in chicken meat production. In 2022-23, total egg production was 138.38 billion, and poultry meat production reached five million metric tons, contributing 51% to the nation's total meat output. Leading poultry-producing states include West Bengal, Maharashtra, Tamil Nadu, Telangana and Uttar Pradesh. The rapid growth of the sector is primarily driven by commercial farms in southern India. Conservation efforts like The All India Coordinated Research Project (AICRP) on Poultry are crucial to protect traditional breeds amidst industrialization which focuses on developing location-specific chicken varieties, conserving and improving native and elite poultry germplasm, and promoting rural entrepreneurship.

## INTRODUCTION

The domestic chicken (*Gallus gallus domesticus*) plays a vital role globally, providing a key source of protein and serving as a popular choice for entertainment and ornamental purposes. Descended from the red junglefowl (*Gallus gallus*), chickens were first domesticated in Southeast Asia around 3,200 BC and have since evolved into a wide variety of breeds, including those raised for eggs (layers), meat (broilers), and ornamental purposes. The 20th-century industrialization of poultry farming led to the decline of many traditional breeds, placing several at risk of extinction. In India, the poultry industry is divided into a large-scale commercial sector catering to urban markets and a small-scale, traditional sector that is essential to rural economies. Indigenous breeds like Aseel, Kadaknath, Chittagong, and Nicobari are prized for their hardiness and cultural significance. The sector's rapid growth is primarily driven by commercial producers, particularly in Southern India.

### Poultry in India – Present Statistics

As of 2019, the total poultry population in India reached 851.81 million, marking a notable 16.81% increase from previous figures. This growth is characterized by a substantial rise in backyard poultry, which grew by 45.78% to 317.07 million, while commercial poultry saw a more modest increase of 4.5%, reaching 534.74 million.

Among the states, Tamil Nadu leads with the highest poultry population at 120.8 million, followed by Andhra Pradesh with 107.9 million and Telangana with 80.0 million (DAHD, 2019). India stands as the third-largest global producer of eggs and the fifth-largest producer of chicken meat. The poultry market was valued at ₹1905.3 billion in 2022, with egg production growing at a rate of 6.77% and chicken meat production expanding

by 7%-8%. The annual per capita egg consumption in India is 101 eggs, and total egg production for the period 2022-23 reached 138.38 billion eggs. The top five egg-producing states—Andhra Pradesh, Tamil Nadu, Telangana, West Bengal, and Karnataka—together account for 64.93% of the national production (BAHS, 2023). Of the total egg production, 85.40% comes from commercial poultry, while 14.60% is from backyard poultry. Within this, Improved Fowl dominates with 88.41% of the production, followed by Desi Fowl at 10.73%, Desi Duck at 0.74%, and Improved Duck at 0.12%.

In terms of meat production, India produced 4.995 million tons of poultry meat, making up 51.14% of the country's total meat output. The remaining meat production is contributed by buffalo (17.61%), goat (14.47%), sheep (10.51%), pig (3.85%), and cattle (2.43%) (BAHS, 2023). In 2022-23, the country's poultry meat production is around five million metric tonnes, contributing around 51% to total meat production. Poultry meat production also increased by 4.52% over the previous year (BAHS, 2023).

The top five poultry meat-producing states are West Bengal, Maharashtra, Tamil Nadu, Telangana and Uttar Pradesh. They together contribute around 50% to total poultry meat production (e-feedlink, 2024).

### Registered poultry breeds by NBAGR, 2024

S.N.	Breed	Home Tract	Utility
<b>Fowl breed</b>			
1.	Ankaleshwar	Gujarat	Meat and Egg purpose
2.	Aseel	Chhattisgarh, Orissa and Andhra Pradesh	Game, Meat and purpose
3.	Busra	Gujarat and Maharashtra	Meat and Egg purpose
4.	Chittagong	Meghalaya and Tripura	Meat and Egg purpose
5.	Danki	Andhra	Game and

		Pradesh	meat purpose
6.	Daothigir	Assam	Meat and Egg purpose
7.	Ghagus	Andhra Pradesh and Karnataka	Meat and Egg purpose
8.	Harringhata Black	West Bengal	Meat and Egg purpose
9.	Kadakhnath	Madhya Pradesh	Meat and Egg purpose
10.	Kalasthi	Andhra Pradesh	Meat purpose
11.	Kashmir Favorolla	Jammu and Kashmir	Meat and Egg purpose
12.	Miri	Assam	Meat and Egg purpose
13.	Nicobari	Andaman & Nicobar	Egg purpose
14.	Punjab Brown	Punjab and Haryana	Meat and Egg purpose
15.	Tellichery	Kerala	Meat purpose
16.	Mewari	Rajasthan	Meat and Egg purpose
17.	Kaunayen	Manipur	Game and meat purpose
18.	Hansli	Odisha	Game, Meat and Egg purpose
19.	Uttara	Uttarakhand	Meat and Egg purpose
20.	Aravali	Gujarat	Meat and egg purpose
<b>Duck Breed</b>			
1.	Pati	Assam	Meat & egg purpose
2.	Maithili	Bihar	Meat & egg purpose
3.	Andamani	Andaman & Nicobar	Meat & egg purpose
<b>Geese breed</b>			
1.	Kashmir Anz	Jammu and Kashmir	

### Poultry strains developed by ICAR-Central Avian Research Institute, Izatnagar, Bareilly (ICAR-CARI, 2024)

Strains are specialized groups of birds that share common traits, often representing subdivisions of a breed or the result of systematic crossbreeding. These strains emerge from targeted breeding programs, with their success evaluated based on the quality of individual birds. As the egg and poultry meat industries expanded, the emphasis shifted from individual bird qualities to the performance of entire flocks. Consequently, some breeders

began to focus on selectively breeding exceptional families, while others explored specific breed crosses. Today, the commercial poultry industry predominantly relies on the strain approach.

S.N.	Strain	Cross	Utility
<b>Fowl strains</b>			
1.	CARI PRIYA	Male (White Leghorn) × female (White Leghorn)	Egg purpose (White)
2.	CARI SONALI	Male (White Leghorn) × female (Rhode Island Red)	Egg purpose (Brown)
3.	CARI DEBENDRA	Male (Coloured synthetic broiler) × female (Rhode Island Red)	Dual purpose
4.	CARIBRO VISHAL	-	Meat purpose (White)
5.	CARIBRO DHANRAJA	Male × female (Coloured synthetic broiler)	Meat purpose
6.	CARIBRO MRITYUNJAY	Naked Neck × Coloured synthetic × White synthetic broiler	Meat purpose
7.	CARIBRO TROPICANA	Naked Neck × Frizzle	Meat purpose
8.	CARI NIRBHEEK	Aseel × CARI Red	Egg purpose
9.	CARI SHYAMA	Kadakhnath × CARI Red	Egg purpose
10.	UPKARI	Frizzle fowl × CARI Red	Egg purpose
11.	HITCARI	Naked Neck × CARI Red	Egg purpose
<b>Guinea fowl strains</b>			
1.	GUNCARI		Meat purpose
2.	KADAMBARI		Meat purpose
3.	CHITAMBRI		Meat purpose
4.	SWETAMBARI		Meat purpose
<b>Quail strains</b>			
1.	CARI UTTAM		Meat purpose
2.	CARI PEARL		Egg purpose
3.	CARI UJJAWAL		Meat purpose
4.	CARI SWETA		Egg purpose
5.	CARI BROWN		Meat purpose
6.	CARI SUNHERI		Meat purpose
<b>Turkey strains</b>			
1.	CARI VIRAT		Meat purpose

## AICRP on Poultry

The AICRP on Poultry began in 1970 with two coordinated projects: the All India Coordinated Research Project on Poultry for Egg and the All India Coordinated Research Project on Poultry for Meat. All India Coordinated Project on Poultry Breeding, being implemented in a total of 12 centres located in different Agricultural/Veterinary Universities and ICAR institutes. During 2023-24, 12 centres of Poultry Seed Project was merged with AICRP on PB. The main objectives of the project were development of location specific chicken varieties, conservation, improvement, characterization and application of local native, elite layer and broiler germplasm; development of package of practices for village poultry and entrepreneurs in rural, tribal and backyard areas. In addition, KVASU, Mannuthy and AAU, Anand centres are to maintain two elite layer germplasm (IWN and IWP). KVAFSU, Bangalore, GADVASU, Ludhiana, OUAT, Bhubaneswar and ICAR-CARI, Izatnagar are to maintain four elite broiler germplasm (PB-1, PB-2, CSML and CSFL).

## AICRP and PSP Centres

S.N.	AICRP Center	PSP Center
1	KVASU, Mannuthy	WBUAFS, Kolkata
2	AAU, Anand	BASU, Patna
3	KVAFSU, Bengaluru	TANUVAS, Hosur
4	GADVASU, Ludhiana	ICAR-NOFRI, Sikkim
5	ICAR-CARI, Izatnagar	ICAR-RC, Nagaland
6	OUAT, Bhubaneswar	ICAR-RC, Manipur
7	ICAR-RC, Agartala	SKUAST, Srinagar
8	NDVSU, Jabalpur	ICAR-CCARI, Goa
9	AAU, Guwahati	ICAR-CIARI, Port Blair
10	BAU, Ranchi	PVNRTVU, Warangal
11	MPUAT, Udaipur	SVVU, Tirupati
12	CSKHPKV, Palampur	ICAR-RC for NEHR, Barapani

## Different chicken varieties developed under AICRP

S.N.	Variety	Center	Utility
1.	ILI-80	CARI, Izatnagar	Layer
2.	ILM-90	KAU, Mannuthy	Layer
3.	ILR-90	APAU, Hyderabad	Layer
4.	B-77	CARI, Izatnagar	Broiler
5.	IBL-80	PAU, Ludhiana	Broiler
6.	IBB-83	UAS, Bengaluru	Broiler
7.	IBI-91	CARI, Izatnagar	Broiler

## Rural backyard Chicken Varieties released under AICRP

S.N.	Variety	Center	Utility
1.	Pratapdhan	MPUAT, Udaipur	Dual purpose
2.	Kamrupa	AAU, Guwahati	Dual purpose
3.	Narmadanidhi	NDVSU, Jabalpur	Dual purpose
4.	Jharism	BAU, Ranchi	Dual purpose
5.	Himsamridhi	CSKHPVK, Palampur	Dual purpose
6.	Tokbari	ICAR NEH Tripura Centre, Agartala	Dual purpose

## CONCLUSION

In conclusion, the domestic chicken plays a crucial role in global food security, entertainment, and cultural practices, with diverse breeds serving various purposes. In India, the poultry sector has experienced significant growth, driven by both commercial and traditional practices. Indigenous breeds hold cultural and economic significance, while modern breeding programs and research initiatives have helped improve productivity and resilience in poultry farming. The collaborative efforts of institutions and projects, like AICRP, continue to focus on enhancing chicken varieties, ensuring sustainable development for both rural and urban poultry sectors.

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