



Popular Myths and Misconceptions in Poultry Farming

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In an agrarian country like India, allied agricultural activities such as animal husbandry, dairy farming, goat rearing, and poultry farming serve as the crucial pillars of the rural economy. Among these, poultry farming has emerged as a rapidly developing sector with the potential to generate substantial income in a remarkably short period. Today, India ranks among the top producers of eggs and broiler meat globally. The sector plays an indispensable role in generating continuous employment in both rural and urban areas, fulfilling the nation's protein and nutritional needs, providing self-employment opportunities for women and youth, and significantly increasing farmers' incomes.

The poultry sector has made immense technological and scientific progress over the past few decades, transitioning from unorganized backyard farming to a highly specialized commercial industry. Thanks to improved genetics, balanced formulated feed, modern automated shed management, climate-controlled housing, advanced temperature and humidity control, precise vaccination schedules, stringent biosecurity, rapid disease diagnosis, and structured market management, today's poultry birds can yield much higher production in far less time compared to the past.

However, alongside this remarkable progress, many myths, rumors, and misconceptions regarding poultry farming have become deeply entrenched in society. Some of these misconceptions exist among end consumers, causing unnecessary panic, while others are found among the poultry farmers themselves, leading to poor farm management.

Today, social media platforms accelerate the spread of these misconceptions at an alarming rate. Videos based on an individual's personal experience, incomplete information, or entirely lacking a scientific basis often go viral, reaching thousands of people in hours. Consequently, vital dietary and business decisions are made based on dangerous misinformation. Therefore, it is absolutely essential to understand and systematically address some of the major myths based on both practical field experience and a rigorous scientific perspective.

Different Types of Poultry Businesses

Generally, when we think of poultry farming, two main commercial types come to mind—Layers and Broilers. The main purpose of layer birds is continuous commercial egg production, while broiler birds are reared specifically for high-quality meat. Apart from this, farming of indigenous (Desi) chickens, improved dual-purpose indigenous breeds (like Giriraja or Vanaraja), quails, turkeys, ducks, guinea fowls, and in some areas, emus, is also practiced. Each bird species and breed has a vastly different production capacity, daily feed requirement, growth rate, natural immunity, specific management method, and target market. Therefore, before starting a poultry farm, rather than just thinking "I want to keep chickens," an entrepreneur must plan out what kind of production to undertake, the scale of the flock, which breed or strain to select, the local availability of raw feed materials, the distance to the target market, and a realistic calculation of expected profit.

Now, let's critically examine and debunk some prevalent myths in this sector.

1. Broiler chickens are given hormones for rapid growth!

The biggest, most widespread, and most heavily discussed myth in poultry farming is that "broiler chickens are injected with hormones for rapid growth." Seeing a broiler chicken reach a marketable weight of 2 to 2.5 kg in just 40 to 45 days makes many consumers suspicious, wondering how such explosive growth is biologically possible in such a short time. The exact answer lies not in hormones, but in decades of genetic improvement and highly scientific management. Through rigorous selective breeding over the last 50-60 years, scientists have developed birds with rapid growth, exceptional feed conversion, fleshy body structures, and high meat-yielding capacity. Furthermore, injecting millions of birds with hormones regularly is economically, technically, and administratively impossible. Catching 10,000 birds daily to inject them would cause massive stress, fatal injuries, and require immense labor, wiping out any profit margins. Therefore, the belief that the rapid growth of broilers is due to hormones is completely false.

2. Broiler chickens are given steroids to gain weight!

Similar to the hormone myth, some consumers believe that birds are fed steroids or similar synthetic drugs to unnaturally increase their weight. This myth is also tied to the rapid growth of modern broilers. In reality, the rapid growth is driven by four scientifically optimized factors: Genetics + Nutrition + Management + Health. If the birds receive a nutritionally balanced diet (rich in essential amino acids like lysine and methionine), proper shed temperature is maintained, abundant and clean water is provided, overcrowding is avoided, and diseases are kept at bay, the birds will naturally achieve excellent growth according to their genetic blueprint. Farmers should rely on these proven scientific management practices rather than depending on unnecessary growth promoters or questionable substances.

3. Desi (Indigenous) chickens do not require any medical care!

The misconception that "Desi chickens are sturdy; hence they do not need vaccines, medicines, or special feed" is particularly common in rural and backyard farming. Indigenous birds do adapt well to the local climate, and in scavenging conditions, their survivability might be better than improved commercial breeds. However, this does not mean they are completely immune to lethal viral diseases like Newcastle Disease (Ranikhet) or Fowl Pox. Desi chickens also require proper vaccination protocols, clean housing to protect from predators and weather, parasite control (deworming), clean water, and nutritional supplements. Adopting the attitude of "it's a Desi bird, let it eat dirt and live anywhere" will inevitably lead to high mortality, reduced egg production, and an increased risk of disease outbreaks.

4. Crossbreed birds are always weak and sickly!

There are many misconceptions about crossbreed or hybrid birds as well. Some traditional farmers consider crossbreeds to be highly delicate and disease-prone. In reality, the overall health and vigor of a flock do not depend solely on their breed. Improper brooding temperatures in the first crucial weeks, low-quality moldy feed, poor shed ventilation causing ammonia buildup, overcrowding, damp litter, and poor farm hygiene are what actually make birds weak. Therefore, instead of blaming genetics and saying "the breed is weak," a farmer should ask, "what went wrong with my management practices?"

5. More feed automatically means more growth!

Novice farmers often believe that constantly overfeeding birds will make them grow much faster. However, in poultry farming, the *quality* and *conversion rate* of the feed are far more important than the *quantity*. We measure this through the Feed Conversion Ratio (FCR). Birds must receive exact calculated ratios of energy, proteins, amino acids, calcium, phosphorus, vitamins, and trace minerals depending on their growth week. Overfeeding, or feeding imbalanced diets, can lead to unnecessary abdominal fat accumulation, fatty liver hemorrhagic syndrome, reproductive difficulties in layers, and metabolic issues like ascites (water belly). The golden rule is simple: "Not more feed; but precisely balanced feed."

6. Feeding leftover household food makes chickens grow well!

Leftover household kitchen scraps can be used as an occasional supplement in small backyard flocks, but they are absolutely not a complete substitute for scientifically formulated commercial poultry feed. Depending on their age and production stage, poultry birds require exact micro-nutritional profiles. If birds are kept solely on leftover human food—which is often high in salt, oil, and empty carbohydrates—the delicate balance of proteins, calcium, and vitamins will be destroyed. In layers, this causes a drastic drop in egg production and weak eggshells. In growing birds, bone strength decreases, leading to lameness.

7. Feeding raw eggs or raw rice increases egg production!

In some rural areas, there is a bizarre superstitious belief that "feeding a raw egg or raw rice to a hen triggers her to lay more eggs." The avian reproductive system does not work based on sympathetic magic. Egg production is strictly dictated by the bird's genetic potential, its age, balanced nutrition (especially calcium and phosphorus), optimal daily light exposure (usually 14-16 hours), clean water, and stress-free health. To increase egg production, farmers must focus on providing standard layer feed and proper farm management rather than feeding items based on old wives' tales.

8. Chickens fall sick specifically because they are vaccinated!

This dangerous misconception regarding vaccination is often seen among uninformed farmers. A vaccine is a proven scientific method of stimulating the bird's immune system to build antibodies against future deadly infections. Sometimes, mild post-vaccinal reactions (like slight respiratory snicks) can be seen, but properly administered vaccines are the only defense against wipeout diseases. Vaccination failures usually occur due to poor cold-chain maintenance (storing vaccines at the wrong temperature), administering them at the wrong age, incorrect dosages, or poor water quality. If a mistake is made during administration, protection fails. Do not blame the vaccine; fix the vaccination protocol.

9. Herbal and home medicines can cure all poultry diseases!

Herbal or plant-based products (like turmeric, garlic, or aloe vera extracts) can be useful as immunity boosters or supportive supplements in certain mild situations. However, it is fatally wrong to assume they are the sole treatment for acute infectious viral or bacterial diseases. For diseases like Newcastle, Gumboro (IBD), and Marek's, preventive vaccination and strict biosecurity are the only solutions. If treatment is delayed because a farmer wants to "try home remedies first," the pathogen will multiply rapidly, and the disease will spread to the entire flock, resulting in massive mortality.

10. If one bird falls sick, it will recover on its own!

This is a highly dangerous assumption. In commercial poultry, infectious diseases spread like wildfire through the air, water lines, and litter. Therefore, if a bird looks dull, isolates itself, eats less, has difficulty breathing, shows abnormal droppings, or if flock egg production drops suddenly, it is a glaring red flag. A farmer must immediately isolate (or cull) the sick bird, properly and safely dispose of any dead birds, inspect the environment, and arrange for an immediate veterinary post-mortem and check-up. One sick bird is a ticking time bomb for the rest of the flock.

11. Antibiotics should be given daily in water for faster growth!

The reckless and unnecessary use of antibiotics is a severe global crisis, threatening both veterinary and public human health. Antibiotics must be used *only* to treat diagnosed bacterial infections, and strictly under professional veterinary guidance with proper withdrawal periods. Using them constantly in sub-therapeutic doses to promote growth leads directly to Antimicrobial Resistance (AMR)—meaning the bacteria mutate, and the medicines stop working entirely. Today, modern poultry farming emphasizes probiotics, prebiotics, gut health acidifiers, and strict biosecurity over indiscriminate antibiotic use.

12. Cleaning the shed thoroughly once a month is enough!

Cleanliness in a poultry farm is not a monthly event; it is an ongoing, daily biological necessity. The accumulation of wet droppings increases ammonia gas levels, which damages

the birds' lungs and eyes. Wet litter provides a perfect breeding ground for dangerous parasites like Coccidia, and various respiratory pathogens. Farmers must perform daily management: raking the litter to keep it dry, fixing leaking water drinkers immediately, ensuring cross-ventilation, and sanitizing feeders. Good hygiene prevents diseases before they start.

13. Letting visitors enter the farm doesn't cause any real harm!

Biosecurity is the invisible shield of a poultry farm. Microscopic pathogenic germs easily enter the farm riding on the shoes, clothes, unwashed hands, and vehicle tires of visitors, as well as through wild birds and rodents. Therefore, it is strictly necessary to lock the farm gates to unauthorized personnel, set up mandatory chemical footbaths at the entrance, sanitize all incoming equipment, and cover sheds with nets to keep wild birds out. Biosecurity is not a luxury or an extra expense; it is a critical insurance policy against catastrophic financial ruin.

14. Overcrowding the shed will maximize my profits!

Greed often leads farmers to stuff more birds into a shed than the floor space allows, assuming more birds equal more money. However, biological carrying capacity cannot be cheated. Overcrowding immediately increases heat stress, creates vicious competition for limited feeder and drinker space, reduces oxygen levels, rapidly spoils the litter, and triggers cannibalism (pecking). Consequently, the flock's overall growth is stunted, FCR plummets, and the mortality rate skyrockets. The equation "overcrowding = more profit" is entirely mathematically and biologically flawed.

15. Only large, jumbo eggs are of good quality!

Judging the nutritional quality of an egg purely by its size is a mistake. When layer pullets first begin laying, their eggs are naturally small. As the flock ages, the physical size of the egg increases, but the shell often becomes thinner. When determining true egg quality, scientists and chefs look at freshness, the thickness and structural integrity of the shell, the height of the thick albumen (egg white), the color of the yolk, and how the egg was stored. A small, fresh egg from a young hen is often structurally superior to a massive egg from an old hen.

16. Brown eggs are more nutritious, and white eggs are artificial or inferior!

The color of an eggshell is determined purely by the specific genetics and breed of the hen laying it (for example, Leghorns lay white eggs, while Rhode Island Reds lay brown eggs). Shell color has absolutely zero impact on the nutritional profile, protein content, or flavor of the egg inside. A brown egg is not "more organic" or healthier than a white egg. What truly matters is the freshness of the egg and the quality of the balanced feed the hen consumed.

17. Washed eggs look cleaner and therefore last longer!

Nature designed the egg perfectly. Eggshells are porous but are naturally coated with a protective invisible layer called the "bloom" or cuticle, which seals the pores and prevents bacteria from entering. Washing eggs with water (especially cold water or rough scrubbing) destroys this protective bloom, opening the microscopic pores and actually inviting bacterial contamination (like Salmonella) into the egg. If an egg is slightly dirty, it should be dry-wiped. Commercial washing requires strict temperature controls, specialized sanitizers, and immediate recoating to meet food safety standards.

18. Artificial or plastic eggs are being manufactured and sold in the market!

Every few months, sensational videos circulate on social media showing "plastic eggs," "bouncy artificial eggs," or "chemical eggs." This is a profound misunderstanding of egg chemistry. As an egg ages, or if it is subjected to freezing temperatures, the protein bonds in the egg white and yolk begin to alter. Boiling a very old egg, or one kept in improper cold storage, can make the albumen incredibly rubbery and the yolk hard to break. Consumers observe this strange, rubbery texture and jump to the conclusion that it is "plastic." Furthermore, manufacturing a convincing fake egg out of chemicals and synthetic materials would cost exponentially more than simply letting a hen lay a real one, making it commercially absurd.

19. Eating broiler chicken or commercially farmed eggs causes impotence!

There are many highly exaggerated, medically baseless rumors meant to scare consumers away from poultry products. There is absolutely zero scientific or medical evidence to support the claim that eating chicken or eggs causes impotence or hormonal imbalances in humans. Eggs and chicken are among the most highly bioavailable, easily digestible sources of lean protein, essential amino acids, and vital nutrients like Vitamin B12 and zinc. Health-related dietary decisions should be made based on peer-reviewed medical science and the advice of registered dietitians, not WhatsApp forwards.

20. Eating eggs causes heart disease because of cholesterol!

This is a severely outdated myth that has been debunked by modern cardiology. Decades ago, people assumed that the dietary cholesterol in egg yolks directly clogged human arteries. Today, advanced nutritional science proves that blood cholesterol levels are heavily influenced by saturated and trans fats, not just dietary cholesterol. Eggs contain essential choline, antioxidants (lutein and zeaxanthin), and high-density lipoprotein (HDL), known as "good cholesterol," which actually protects heart health. Major global health organizations, including the World Health Organization and the American Heart Association, recognize eggs as part of a healthy, balanced diet for the vast majority of people.

21. Poultry farming means effortless, quick money!

Because broilers are sold in just over a month, many outsiders view poultry farming as an effortless "get-rich-quick" scheme. This could not be further from the truth. It is a highly demanding, capital-intensive business requiring 24/7 vigilance. A farmer must meticulously calculate input costs: day-old chicks, fluctuating feed prices, veterinary medicines, electricity for heating/cooling, labor, infrastructure maintenance, unpredictable mortality events, and highly volatile daily market prices. Preparing a stringent technical and financial business plan, and securing a financial buffer, is absolutely crucial before building a shed.

22. A bigger farm automatically means a bigger profit margin!

While large-scale farms benefit from economies of scale (buying feed in bulk), raw profit does not magically materialize just by having 50,000 birds instead of 5,000. True profitability hinges entirely on management efficiency. Key performance indicators—like keeping mortality below 3%, achieving an excellent Feed Conversion Ratio (FCR), maximizing peak egg production percentage, controlling labor costs, and timing the market—are what determine net profit. A highly disciplined, scientifically managed small farm will easily out-profit a poorly managed mega-farm suffering from disease outbreaks and feed wastage.

23. Middlemen are the sole reason for farmers' financial losses!

It has become a popular narrative to blame the entire pricing structure on "greedy middlemen." While it is true that an unregulated market can sometimes result in farmers not getting their fair share of the retail price, middlemen (traders, transporters, and wholesalers) perform a vital logistical function. They absorb the risk of mortality during transport, manage logistics from remote villages to urban centers, provide immediate cash flow to farmers, and handle the daily supply-demand matching. Rather than just blaming the middleman, the industry needs better cold-chain infrastructure, cooperative farming models, direct-to-consumer marketing, and transparent daily price declarations.

Conclusion

Ultimately, modern poultry farming is far more than just the traditional, casual business of "keeping a few chickens." It is a highly specialized, scientific enterprise that demands the precise coordination of genetics, animal nutrition, veterinary health, automated shed management, micro-economics, and dynamic marketing. To achieve sustained financial success in the poultry sector, farmers must heavily rely on science, sharp daily observation, meticulous data recording, strategic planning, and professional veterinary guidance. A successful poultry farmer is one who walks their sheds every single day, listening to the birds and reading the environment. They must actively unlearn the superstitions, discard the social media rumors, and rely on evidence-based agriculture. The true and sustainable development

of the Indian poultry industry will be achieved not by living in fear of myths, but through the confident and rigorous application of scientific knowledge.

About Author

I am Dr. Nihalahmed A. Mulla, working as a Subject Matter Specialist (SMS) – Animal Science at SSM's Krishi Vigyan Kendra (KVK), Sagroli, Nanded, for the past six years. I graduated in Veterinary Science and Animal Husbandry from KNP College of Veterinary Science, Shirwal, Satara and completed my post-graduation in Poultry Science from Mumbai Veterinary College, Parel, Mumbai. My professional work focuses on livestock production, poultry farming, animal health, farmer training, and technology transfer. Through my role at KVK Sagroli, I actively contribute to capacity building of farmers, scientific livestock management, and promoting sustainable and profitable animal husbandry practices in the farming community.