
WHEN PROTEIN TURNS PERILOUS: THE EGG SCANDAL AND FSSAI'S REGULATORY ROLE

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ABSTRACT

Eggs are one of the cheapest yet most beneficial sources of the protein in India and they play an essential role in the domestic diet as well as in the nutrition programmes supported by the state. Their popularity, however, has made them very susceptible to regulatory laxity and market manipulation. Over the last few years, concerns regarding eggs being adulterated, chemically treated or artificially enhanced, as well as mislabeled, have become a massive popular topic and are not replaced by factual information and social media narratives.¹ These scandals, also known as the egg scandal, leave some burning questions regarding the effectiveness of the food safety governance of India and the efficacy of the regulatory oversight by the Food Safety and Standards Authority of India (FSSAI). The present paper analyses the egg scandal in terms of legal and regulatory aspects considering the statutory provisions of the Food Safety and Standards Act of 2006 and the regulations standards governing eggs and egg products, which are subordinate. It examines the legal construction and enforcement of concepts of unsafe food, misbranding, and misleading advertisements and liability distribution in the food supply chain. The paper also has interacted with the judicial reactions towards food adulteration, which the courts have been consistent with the focus on the health protection, deterrence, and consumer protection of the populace. In addition to the analysis of the doctrine, the paper places the issue of egg safety into the framework of the overall issues of nutrition of the population, the role of the state, and the

¹ Sanya Panwar, *Mumbai surgeon reveals if eggs cause cancer after alarming video accuses Eggos of using banned chemicals*, Hindustan Times (Dec. 10, 2025), <https://www.hindustantimes.com/lifestyle/health/mumbai-surgeon-reveals-if-eggs-cause-cancer-after-alarming-video-accuses-eggoz-of-using-banned-chemicals-101765339556859.html> (last visited Jan. 8, 2026).

constitutional rights, especially the right to life of Article 21. It claims that even though the law that regulates the safety of eggs is sound on paper, the gaps in enforcement, informal supply chains and ineffective regulatory capacity create a big problem regarding its efficacy. The paper provides for the recommendation of reforms that are geared towards governance in order to enhance preventive regulation, traceability, and to regain the confidence of people in crucial food commodities.

Key Words: - *Judiciary, Legal Education, Access to Justice, Judicial Reform, Constitutional Governance.*

INTRODUCTION

Eggs form one of the cheapest and most commonly eaten sources of proteins in the Indian eating system as demonstrated by numerous nutrition surveys. Eggs are at the center of the food web of the nation whether they are acquired through informal methods of street vendors or are part of official government food programs. However, this has been overridden by a flood of reports in various states of grave alarm as to egg adulteration, artificial enrichment, misbranding and the marketing of sub-standard or unsafe eggs. ²Claims of manufacturing synthetic eggs, of eggs being chemically treated to produce an artificially-enhanced hue, of preservatives being added to keep the eggs on the shelf, and of deceptive labelling being rife have created a lot of public panic and heightened regulatory scrutiny.³

These scandals which can simply be referred to as the egg scandal highlight how effective the food safety regime in India is, the role of the Food Safety and Standards Authority of India (FSSAI).⁴ The current paper examines legal framework laws that have regulated egg safety, provisions of the Food Safety and Standards Act, 2006⁵ that have been considered, FSSAI

² *Eggs in India pose no cancer risk, says food safety regulator*, Times of India (Dec. 22, 2025), <https://timesofindia.indiatimes.com/business/india-business/eggs-in-india-pose-no-cancer-risk-says-food-safety-regulator/articleshow/126109312.cms> (last visited Jan. 8, 2026).

³ *Why Eggoz egg scandal is scary and shocking*, Ground Report, <https://www.groundreport.in/viral/why-eggoz-egg-scandal-is-scary-and-shocking/> (last visited Jan. 8, 2026).

⁴ *Can your eggs cause cancer?*, The CSR Journal, <https://thecsrjournal.in/can-your-eggs-cause-cancer/> (last visited Jan. 8, 2026).

⁵ The Food Safety and Standards Act, 2006 (Act 34 of 2006).

regulations and advisories and judicial reaction to food adulteration and how the system can be reformed.

WHAT WENT WRONG? UNDERSTANDING THE CONTROVERSY

These are the main recurrent accusations that form the basis of the controversy. To begin with, we have had reports of synthetic or artificial eggs that are made out of chemical compounds. Although the FSSAI has always made it clear that large-scale production of fully synthetic eggs lacked scientific and economic viability, research has revealed cases of using chemically treated eggs to recreate the effect of freshness or to improve yolk colour.⁶ Second, the use of unapproved chemicals or coating with the intention of prolonging the shelf life especially in the course of inter-state transport has been recognised⁷. Third, labeling and falsehoods, including calling regular eggs organic, free-range, or nutrient-added in terms of regulations which have not been met, have become known.

Such practices are not only dangerous to their health, but also to consumer confidence. They affect, in disproportion, consumers with low income who make eggs one of their sources of proteins and who cannot afford and do not know how to check the quality of the products on their own.

EGGS: THE OBJECT OF REGULATION: RISK, SCIENCE AND PUBLIC RESPONSE.

Eggs have a complicated regulatory status, as they are viewed as natural and minimally processed food products, although it is biologically weak and very vulnerable to contamination. The shell eggs can be sold in the informal markets where there is limited regulation as opposed to packaged foods which have gone through a lot of testing and scrutiny by the lab. It is this misconception in the eyes of the consumer and this difference between real food safety hazards and the perception of the food that make eggs especially susceptible to both adulteration and

⁶*Eggs in India pose no cancer risk, says food safety regulator*, Times of India (Dec. 22, 2025), <https://timesofindia.indiatimes.com/business/india-business/eggs-in-india-pose-no-cancer-risk-says-food-safety-regulator/articleshow/126109312.cms> (last visited Jan. 8, 2026).

⁷ *Role of Judiciary in the Implementation of Food Adulteration Laws in India*, iPleaders Blog, <https://blog.ipleaders.in/role-of-judiciary-in-the-implementation-of-food-adulteration-laws-in-india/> (last visited Jan. 8, 2026).

misinformation.⁸ The cyclical nature of the assertions of the existence of so-called synthetic or so-called plastic eggs shows the challenge of balancing scientific truths about the issue with popular certainty. Although the FSSAI has made it clear that mass production of fully artificial egg is scientifically questionable, any case of chemical polishing, artificial yolk enrichment or surface enhancement to increase shelf life spark off legitimate regulatory apprehensions. Even small-scale practices like this undermine consumer confidence and make enforcement difficult by making people focus on the claims that can be proven.

Regulatory-wise, this underscores the need to have risk-based governance. The regulation of food safety should take care of real risks e.g. chemical residues, microbial contamination and misleading labelling and at the same time, the misinformation should be overcome by information made transparent.⁹ Otherwise, the risk of losing the confidence in the market and regulator and thus undermining compliance incentives through the food supply chain is a high likelihood.

STATUTORY FRAMEWORK: THE FOOD SAFETY AND STANDARDS ACT, 2006.

The major law in India that regulates food safety is the Food Safety and Standard act, 2006 (FSS Act).¹⁰ The Act is a science-based, preventative regulatory framework, thus replacing the punitive penalties imposed after the harm is done with assessment of risks and setting of standards. Section 3(1)(zf) refers to unsafe food as food that has a nature, substance or quality that is so impaired such that it causes injury to health.¹¹ Any product containing eggs that has undergone unapproved chemicals or addresses in unsanitary conditions definitely fits in this definition. Section 3(1)(zx) creates the definition of misbranded food, which refers to false or misleading labels, exaggerated claims or false descriptions, an especially relevant section in situations of falsely promoted organic eggs or special eggs.

⁸ *Egg quality and safety — dispelling the myth about plastic eggs*, Vikaspedia, <https://health.vikaspedia.in/viewcontent/health/health-campaigns/beware-of-adulteration/egg-quality-and-safety-dispelling-the-myth-about-plastic-eggs?lgn=en> (last visited Jan. 8, 2026).

⁹ E-Parliament (Sansad), <https://eparlib.sansad.in/bitstream/123456789/702446/1/53359.pdf> (last visited Jan. 8, 2026).

¹⁰ The Food Safety and Standards Act, 2006 (Act 34 of 2006), available at India Code, https://www.indiacode.nic.in/bitstream/123456789/7800/1/200634_food_safety_and_standards_act,_2006.pdf (last visited Jan. 8, 2026).

¹¹ The Food Safety and Standards Act, 2006 (Act 34 of 2006), s. 3(1)(zf).

Section 26 places the leading role of food safety on the food business operators (FBOs) which includes poultry farms, wholesalers, transporters, and retailers.¹³ These entities have a legal obligation to make sure that food meets the requirements of the Act and its related regulations in all levels of the supply chain. Section 27 also provides the joint responsibility of the supply chain, the manufacturers, sellers, distributors and importers all responsible in the event of violation.

FSSAI REGULATIONS AND GUIDELINES ON EGGS

According to the Act, the FSSAI has made elaborate regulations on eggs and egg products. The Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 has very high standards in eggs including both freshness and cleanliness, and the handling that may be carried out.¹⁴ Eggs should not contain any extraneous matter, odours, and those which are visibly contaminated. Addition of any food preservative or food additive on shell eggs is usually not allowed unless it is specifically authorized.

The FSSAI too has made advisories to make it clear that eggs may not be artificially coloured, polished, or chemically treated to provide appearance or shelf life.¹⁵ Any such practice will amount to adulteration. Regarding organic or free-range claims, the Authority must stipulate high standards of certification; the use of expressions by a marketing strategy without certification is considered as misbranding. Besides, the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 requires proper disclosure of nature, quality and source. False advertising involving false claims that the product is more nutritious or that it is produced more effectively is punishable.

¹² The Food Safety and Standards Act, 2006 (Act 34 of 2006), s. 3(1)(zx).

¹³ The Food Safety and Standards Act, 2006 (Act 34 of 2006), s. 26.

¹⁴ *Food Additives Regulations*, Food Safety and Standards Authority of India (FSSAI), https://fssai.gov.in/upload/uploadfiles/files/Food_Additives_Regulations.pdf (last visited Jan. 8, 2026).

¹⁵ *FSSAI launches egg safety drive: What it is and how it is going to help customers*, Times of India (Dec. 18, 2025), <https://timesofindia.indiatimes.com/life-style/food-news/fssai-launches-egg-safety-drive-what-is-it-and-how-it-is-going-to-help-customers/photostory/126001094.cms> (last visited Jan. 8, 2026).

INFORMAL SUPPLY CHAINS AND ATTRIBUTION OF LIABILITY

One of the structural issues of regulating the safety of eggs is the fragmentation and the informal character of the poultry supply chains in India.¹⁶ The eggs usually go through several middleman-filled processes- farmers, aggregators, transporters, wholesalers, and retailers, before they get to the consumer. Whereas Section 26 and 27 of the Food Safety and Standards Act hold the supply chain responsible, it will be challenging to assign responsibility to a party in real-life situations where documentation is limited or absent. Compliance failures related to hygiene, storage and transport are also aggravated by informality. Poor cold-chain facilities especially in inter-state transportation encourage the application of illegal chemical preservatives in order to postpone spoilage or improve cosmetic values. These practices are not often documented so that they can be spotted through the inspection as well as the laboratory analysis instead of the traceability measures.¹⁷ Consequently, the enforcement will be more reactive, as opposed to being proactive, responding to consumer complaints or media reports. This is a defeat of the preventive and science-based philosophy of the FSS Act and over-dependence on post-facto penalties, as opposed to systemic risk management.

CRIMINAL SANCTIONS IN THE ACT

The FSS Act offers a fine penalty framework.¹⁸ Penalties of misbranded food are provided in section 52, up to three lakh rupees. Section 53 is about misleading advertisements and Section 54 is about food with extraneous matter. Worst offences are punishable by Section 59 that involves the production or sale of unsafe food that may be punishable by imprisonment or heavy fines based on the seriousness and the possible health effects on the population. Where adulterated eggs cause harm or represent a significant health risk, the authorities can use the Section 59(1), without awareness of actual harm, provided that the food is capable of causing harm.

¹⁶ *Food Business Operators' rights & duties under FSSAI*, PFI Online, <https://pfionline.com/food-business-operators-rights-duties-under-fssai/> (last visited Jan. 8, 2026).

¹⁷ *Organic produce supply chains in India*, Indian Institute of Management Ahmedabad (IIMA), <https://web.iima.ac.in/users/webrequest/files/cmareports/222-Organic-Produce-Supply-Chains-in-India.pdf> (last visited Jan. 8, 2026).

¹⁸ *Compliance FAQs*, Food Safety and Standards Authority of India (FSSAI), <https://fssai.gov.in/cms/compliancefaq.php> (last visited Jan. 8, 2026).

MISBRANDING, CONSUMER AUTONOMY AND INFORMATION ASYMMETRY

More fundamental issues with misbranding eggs as organic, free-range, or enriched with nutrients are the autonomy of consumers and information asymmetry.¹⁹ The consumers do not have the resources to factually test the production methods or nutritional claims themselves, which puts them at a structural disadvantage to producers and sellers. This imbalance warrants stringent regulatory action and is also in favor of the establishment of liability in the defiance of its provable damage.²⁰ The focus of FSS Act on honest labelling and banning of false advertisements is a consumer-focused regulation. Misbranding is not taken as a light market distortion but rather a substantive one that has the potential to affect diet, especially in low-income families that depend on eggs as a low-cost source of protein. This gives enforcement against deceptive labelling a corrective as well as a deterrent role in supporting market integrity and consumer confidence.

LAW COURTS ON FOOD ADULTERATION

Indian courts have been very tough on food adulteration, viewing it as a crime against the health of people and not as a regulatory failure. In *State of Uttar Pradesh v. Kartar Singh* The Supreme Court stated that the laws governing food adulteration have to be construed so as to favour consumer protection since the seller and the buyer do not share the same information.²¹ Similarly, in *Municipal Corporation of Delhi v. Ghisa Ram*, the Court stressed that procedural failure or a delay should not in any way reduce the gravity of the food safety violations.²² Though these cases were resolved in accordance with previous legislation, the principles they have are still very applicable in the FSS Act.

¹⁹ Food and Agriculture Organization of the United Nations (FAO), *Food Safety and Quality along Agricultural Supply Chains* (FAO, Rome, 2019), available at <https://openknowledge.fao.org/bitstreams/f4f09298-b622-4658-87ca-00fe8ed8d045/download> (last visited Jan. 8, 2026).

²⁰ *Free-range labelling of food products can be misleading*, Swaab Attorneys (June 26, 2023), <https://www.swaab.com.au/publication/free-range-labelling-of-food-products-can-be-misleading> (last visited Jan. 8, 2026).

²¹ *State of Uttar Pradesh v. Kartar Singh*, AIR 1964 SC 1135.

²² *Municipal Corporation of Delhi v. Ghisa Ram*, AIR 1967 SC 970.

The constitutional validity of strict penalties in the context of food laws has been also endorsed by the High Courts who pointed out that the right to life in Article 21 also included the right to safe and wholesome food. This is the constitutional point that supports regulatory intervention in the case of unsafe eggs and other products.

EGGS, PUBLIC NUTRITION AND STATE RESPONSIBILITY

The egg debate is not limited to such consequences alone since it also has far reaching implications to state-funded nutritional schemes like mid-day meals and anganwadi programmes.²⁴ Eggs based on such programmes should be of higher standards of safety and quality due to the fact that the beneficiaries are the children and the pregnant women. Any breach of security begs the question of state responsibility and good diligence in procurement. Courts have already determined that where the state is a buyer and distributor of food, the state has a greater responsibility of care; any negligence in providing food safety standards content may not only result in statutory liability but constitutional scrutiny as well.

REGULATORY ISSUES AND IMPLEMENTATION LOOPHOLES

There is a strong legal framework even though the enforcement is disproportionate.²⁵ The food safety officers are often understaffed, not well trained, and overwhelmed. The laboratory facilities to carry out the timely testing are scarce and this creates delays compromising prosecution efforts. Poultry markets also have an informal supply chain which makes traceability more complicated making the system vulnerable.

²³ *Article 21, Protection of life and personal liberty*, Constitution of India, available at Indian Kanoon, <https://indiankanoon.org/doc/1199182/> (last visited Jan. 8, 2026)

²⁴ *Chhattisgarh HC directs Rs. 25,000 compensation after student consumed dog-licked mid-day meal*, LiveLaw (Dec. 12, 2025), <https://www.livelaw.in/high-court/chhattisgarh-high-court/student-consumed-dog-licked-mid-day-meal-compensation-25000-301425> (last visited Jan. 8, 2026).

²⁵ *Nitrofurans residues in eggs and poultry: total ban upheld; FSSAI says eggs safe for consumption*, TaxTMI (Dec. 20, 2025), <https://www.taxtmi.com/news?id=65386> (last visited Jan. 8, 2026).

The other problem is that of misinformation. The boundary between the validity of safety concerns and panic is unclear in the viral posts about so-called plastic eggs.²⁶ Although FSSAI clarifications serve to reduce confusion, uneven application corrupts the faith of people and creates uncertainty.

WAY FORWARD: FOOD SAFETY GOVERNANCE

The egg scandal should have a multi-pronged solution. First, inspections and random sampling should be institutionalised throughout the supply chain and not a reactive measure, in order to bring order to it.²⁷ Second, the explicit campaign on consumer awareness is inevitable in sorting out myths and facts on real risks that will help in creating informed choices.²⁸ Third, standard of certification and labelling of organic or specialty eggs should be done stringently to discourage misleading marketing.

Technological solutions can be used to improve the accountability, including QR based traceability and better cold-chain monitoring. Lastly, sanctions should be given uniformly to ensure deterrence especially to repeaters, which will strengthen the rule of law.

CONCLUSION

The current scandals involving eggs are not standalone cases but are reflective of even bigger regulatory and enforcement issues in the Indian food safety ecosystem. Food Safety Act and FSSAI regulations present a universal set of laws that can deal with the adulteration, misbranding and unsafe food practices. However, their success depends on their careful application, educated consumers, and the court.²⁹

²⁶ *Guidance Note on Plastic Eggs*, Food Safety and Standards Authority of India (FSSAI) (Aug. 8, 2018), https://fssai.gov.in/upload/uploadfiles/files/Guidance_Note_Plastic_Eggs_08_08_2018.pdf (last visited Jan. 8, 2026).

²⁷ *FSSAI Festive Drive — Food Safety 2025*, MyFSSAI, https://myfssai.in/fssai_updates/fssai-festive-drive-food-safety-2025/ (last visited Jan. 8, 2026).

²⁸ *How to identify fake eggs — नकली अंडों की पहचान कैसे करें*, NDTV (Dec. 20, 2025), <https://ndtv.in/food/how-to-identify-fake-eggs-nakli-ando-ki-pehchan-kaise-kare-asli-anda-hai-ya-nakli-kaise-pehchane-9715568> (last visited Jan. 8, 2026).

²⁹ *Eggs safe for consumption, cancer risk claims unfounded, says FSSAI*, The Tribune India (Dec. 21, 2025), <https://www.tribuneindia.com/news/india/eggs-safe-for-consumption-cancer-risk-claims-unfounded-says-fssai/> (last visited Jan. 8, 2026).

Since eggs remain among the Indian staple foods and form a part of government policy on nutritional programmes, it is not just a regulatory requirement to ensure the safety of eggs; it is a constitutional and moral necessity.³⁰ The ultimate challenge in rebuilding the lost trust and protecting health is the facilitation of the gap between law on paper and law in practice.

The egg scandal highlights the constriction of the strict rule-based system of regulation without proper enforcement and institutional capability. The prevention potential of the Food Safety and Standards Act, 2006 has not been realised despite its all-inclusive instruments to overcome adulteration, misbranding and unsafe food because of the structural gaps in monitoring, testing, and traceability.³¹ These loopholes are very alarming considering the focal position of eggs in social nutrition and food security.

To guarantee the safety of eggs, a change in the approach towards intermittent control to sustained regulation is hence warranted. To restore regulatory credibility, it is important to strengthen laboratory infrastructure, enhance the coordination between the state and central authorities, and combine the traceability mechanisms based on technology. It is also vital to maintain the public communication over an extended period to differentiate between the verified risks and rumours, thus avoiding panics with encouraging information-based consumer behaviour.

Finally, food safety control cannot be considered an administrative role only. In a constitutional system that the right to live implies the right to sufficient and healthy food, the inability to control basic commodities like eggs would lead to doubts about the responsibility of the state. Not only does bridging the digital to analog gap between law on paper and law in practice constitute a regulatory efficiency issue, but it is also a condition of ensuring that the food system thereby safeguards public health and maintains trust in the food system.

³⁰ *Explainer on nitrofurans, eggs, health & food safety*, ETV Bharat (Dec. 19, 2025), <https://www.etvbharat.com/en/health/explainer-on-nitrofurans-eggs-health-food-safety-enn25121901220> (last visited Jan. 8, 2026).

³¹ *Nitrofurans residue testing in eggs*, Auriga Research, <https://aurigaresearch.com/nitrofurans-residue-testing-in-eggs/> (last visited Jan. 8, 2026).