

Negative Perceptions of Broiler Consumers: Exploring Societal Attitudes, Cultural Ethics, and Health Concerns for Sustainable Production

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Abstract

Negative perceptions of broiler chicken remain a significant barrier to its acceptance and market sustainability. This study investigates the societal attitudes, cultural ethics, and health concerns that influence consumer perceptions and challenges the broiler industry. Ethical issues, including animal welfare and perceived unnatural rearing practices, often fuel consumer distrust. Health concerns such as antibiotic residues, growth hormone usage (often misunderstood), and lower nutritional value compared to native breeds further exacerbate negative views. Cultural factors, including preferences for traditional poultry breeds and mistrust in industrialized farming, also contribute to this resistance. Environmental concerns, such as pollution and resource inefficiency, amplify the criticism. By categorizing these perceptions into health, ethics, environment, and consumer behavior, the study provides a comprehensive analysis of the factors affecting broiler acceptance. Addressing these issues requires transparent production practices, improved animal welfare standards, enhanced consumer education, and the promotion of sustainable farming systems. This study underscores the need for an integrated approach to rebuild consumer trust while ensuring sustainability in broiler production. Insights from this research can guide policymakers, producers, and stakeholders in reshaping public perception and aligning broiler farming practices with ethical, cultural, and health priorities for long-term market success.

Keywords: Antibiotic residues, broiler chicken, consumer perceptions, cultural ethics, environmental concerns, health concerns, sustainable production, welfare standards

INTRODUCTION

The broiler chicken industry plays a vital role in meeting the global demand for affordable animal protein. Over the decades, advancements in genetics, nutrition, and management practices have led to significant improvements in production efficiency, making broiler chicken the most widely consumed poultry meat worldwide. However, despite its economic importance, broiler farming faces persistent challenges related to consumer acceptance. Negative perceptions concerning the health implications, ethical considerations, and environmental impacts of broiler production have increasingly influenced purchasing decisions [1]. These concerns have not only affected market dynamics but have also placed the industry under greater scrutiny to adopt sustainable practices.

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Received Date: March 12, 2025

Accepted Date: April 12, 2025

Published Date: April 15, 2025

Citation: Emran Hossain, Shilpi Islam. Negative Perceptions of Broiler Consumers: Exploring Societal Attitudes, Cultural Ethics, and Health Concerns for Sustainable Production. *Research & Reviews: Journal of Food Science & Technology*. 2025; 14(2): 9–22p.

Consumer resistance to broiler chicken is deeply rooted in societal and cultural factors. Many individuals question the welfare standards of intensively reared broilers, citing issues such as

overcrowding, limited mobility, and the use of perceived unnatural growth enhancers. Health concerns, including fears of antibiotic residues, antimicrobial resistance, and potential hormonal imbalances, further exacerbate negative perceptions [2]. Cultural preferences for traditional poultry breeds, often regarded as healthier and more flavorful, have also intensified the challenges facing broiler producers [3]. Furthermore, criticisms surrounding environmental sustainability, including resource inefficiency and pollution, have compounded these issues, creating a complex matrix of challenges for the industry to address.

This study provides a novel perspective by systematically categorizing and analyzing the factors contributing to the negative perceptions of broiler chicken. By exploring societal attitudes, cultural ethics, and health concerns, the study identifies critical barriers to consumer acceptance and offers actionable insights to address these challenges. Unlike previous research, this study integrates a multidimensional approach that links ethical, environmental, and cultural aspects with health concerns, thereby providing a holistic framework for understanding consumer resistance. The findings aim to guide stakeholders in aligning broiler production practices with consumer expectations, promoting transparency, and achieving sustainable growth in the poultry sector.

HEALTH AND SAFETY CONCERNS

Contain Antibiotic Residues

The presence of antibiotic residues in broiler meat is a major consumer concern, often associated with improper withdrawal periods or overuse of antibiotics in farming [4]. Residues can pose health risks, including allergic reactions and antimicrobial resistance, leading to growing skepticism about broiler chicken safety. Addressing this issue requires stringent monitoring and adherence to withdrawal guidelines.

Use of Growth Hormones

Consumers often believe that growth hormones are used in broiler production to accelerate growth, despite industry regulations prohibiting such practices in most countries [5]. This misconception negatively impacts consumer trust. Increasing transparency and educating consumers about modern broiler genetics and nutrition can help dispel this myth and improve public perception.

Overuse of Vaccines

Concerns about excessive vaccine usage in broiler production arise from fears of potential chemical residues or adverse health effects. While vaccines are crucial for disease prevention, miscommunication about their purpose can lead to consumer apprehension. Enhancing public awareness about the role of vaccines in ensuring food safety and flock health is essential.

Associated with Foodborne Diseases

Broiler meat is often linked to foodborne illnesses like *Salmonella* and *Campylobacter* infections. These risks are typically related to improper handling, cooking, or hygiene during processing [6]. Strengthening food safety protocols across the supply chain, combined with consumer education on safe handling practices, can significantly reduce such incidents.

Hormonal Imbalance

Some consumers associate broiler consumption with hormonal imbalances, such as early puberty, due to misconceptions about hormonal use in production [7]. This false narrative highlights the importance of transparent communication, emphasizing that broilers achieve rapid growth through selective breeding and optimized nutrition rather than hormone use.

Linked to Lifestyle Diseases

Broiler meat is sometimes linked to lifestyle diseases such as obesity and heart disease due to its perceived higher fat content compared to traditional poultry. Promoting balanced diets and improving

the nutritional profile of broiler meat, including fat reduction through better feed formulations, can address these concerns.

Linked to Antimicrobial Resistance

The use of antibiotics in broiler production is considered a key driver of antimicrobial resistance (AMR), a significant global health concern. Residual antibiotics in meat may contribute to AMR in humans [8]. Transitioning to antibiotic alternatives and adopting stricter antibiotic usage policies in poultry farming are essential to mitigate these risks.

Chemical Residues in Meat

Consumers are increasingly wary of potential chemical residues, including those from feed additives and medications, in broiler meat. Such concerns stem from fears of toxicity and long-term health impacts. Implementing residue monitoring programs and certifying residue-free products can help reassure consumers about meat safety.

Fear of Genetically Modified Feed Usage

Many consumers are apprehensive about broilers being fed genetically modified (GM) crops, fearing unknown health effects. This perception affects trust in industrial broiler farming [9]. Raising awareness about the safety of GM feeds and highlighting their role in sustainable production can help alleviate such concerns.

Reduced Omega-3 Fatty Acid Content

Broiler meat is often criticized for lower omega-3 fatty acid levels compared to traditional poultry or alternative meats, leading to perceptions of reduced nutritional value. Improving feed composition by incorporating omega-3-rich ingredients can enhance meat quality and address consumer concerns about nutritional deficiencies.

ANIMAL WELFARE CONCERNS

Raised in Cramped Conditions

Broilers are often reared in densely populated housing systems to maximize production efficiency. Such conditions restrict natural behaviors, leading to stress and poor welfare [10]. Consumers increasingly view these practices as inhumane, necessitating industry shifts toward enriched environments that provide more space and opportunities for natural activity.

Poor Welfare Standards

Criticism of broiler farming often revolves around insufficient welfare standards, including inadequate ventilation, lighting, and bedding quality. Poor conditions can result in health issues such as respiratory distress and footpad dermatitis [11]. Strengthening welfare regulations and adopting best practices can enhance consumer trust in the industry.

Overcrowding and Stress in Production Systems

High stocking densities in broiler farming are linked to stress, aggression, and compromised immune function. Overcrowding also contributes to poor air quality and disease outbreaks [12]. Implementing lower stocking densities and improved housing designs can alleviate these concerns and improve bird welfare.

Ethical Concerns About Rapid Growth

The rapid growth of broilers, achieved through selective breeding and optimized nutrition, raises ethical questions about the physical strain placed on birds [13]. Critics argue that this focus on growth prioritizes production over welfare. Balancing growth efficiency with health-focused breeding objectives is essential for addressing these concerns.

Unnatural Growth Rates Affecting Organ Development

Unnatural growth rates in broilers can lead to organ dysfunction, such as heart and lung failure, due to the inability of organs to keep pace with rapid body growth [14]. Consumers perceive this as a welfare compromise, highlighting the need for breeding strategies that prioritize physiological health over extreme growth.

Criticism for Chick Culling Practices

Culling of male chicks in the poultry industry, though less relevant to broiler production, draws ethical criticism from consumers concerned about animal welfare [15]. Advances in technology, such as in-ovo sex determination, can help reduce or eliminate this practice, aligning industry standards with ethical expectations.

Weak Skeletal Structure in Broilers

Selective breeding for rapid growth often results in weak skeletal structures, leading to lameness and reduced mobility in broilers [16]. These welfare issues are perceived as indicators of poor production practices. Improving genetic selection and nutritional strategies can address these concerns and enhance skeletal health.

High Mortality in Intensive Systems

Intensive broiler farming systems are often criticized for high mortality rates due to disease outbreaks, stress, and environmental challenges [17]. These rates are seen as a reflection of compromised welfare. Better biosecurity, disease prevention, and management practices are necessary to reduce mortality and improve production sustainability.

Associated with Industrial-scale Cruelty

Broiler farming is frequently linked to industrial-scale cruelty, with critics citing practices such as debeaking, rough handling, and inhumane slaughter methods [18]. These perceptions necessitate the adoption of more humane practices and third-party certifications to rebuild public confidence in ethical production standards.

MEAT QUALITY ISSUES

Inferior Taste and Texture

Broiler meat is often perceived as having inferior taste and texture compared to traditional or heritage breeds. The rapid growth and specific diet of broilers may lead to meat that lacks the depth of flavor and tenderness found in slower-growing, pasture-raised poultry. Improvements in breeding and feed formulations can help enhance taste and texture profiles.

Poor Fat Distribution Affecting Taste

The fat distribution in broiler meat is often seen as uneven or unnatural, with excess fat concentrated in certain areas. This uneven distribution can affect flavor and overall meat quality. Enhancing feeding practices and breeding strategies to promote balanced fat deposition could improve the taste and texture of broiler meat.

Higher Fat Content Compared to Native Breeds

Broiler chickens tend to have higher fat content compared to native or heritage breeds, which may impact consumer preferences for leaner meat [19]. This higher fat content, while improving yield, can be viewed negatively in terms of health and taste. Focusing on improving the fat-to-muscle ratio through breeding can mitigate this issue.

Dull Appearance Compared to Traditional Breeds

Broiler meat often appears pale or dull compared to the vibrant color of traditional poultry, which is a major aesthetic concern for consumers. This difference in appearance is linked to the specific feeding and farming practices used. Shifting to more natural, nutrient-rich feeds could improve the visual appeal of broiler meat.

Perceived Lack of Freshness

Consumers often perceive broiler meat as less fresh due to its mass production and long distribution channels. The perception of reduced freshness can affect the overall appeal of broiler chicken. Implementing better packaging, more localized distribution networks, and transparent sourcing practices can help restore confidence in the freshness of broiler meat.

Minimal Flavor Diversity

Broiler chicken is often criticized for lacking the flavor complexity found in more naturally raised poultry [20]. This is due to the homogenous diet and controlled growing conditions of industrial broiler systems. Introducing a more varied diet and exploring alternative feed ingredients could enhance the flavor profile of broiler meat.

Inferior Cooking Qualities

Broiler chicken is sometimes perceived to dry out more quickly during cooking, leading to concerns about texture and juiciness. This issue, often linked to the rapid growth of the birds, can detract from the eating experience. Enhancing moisture retention through improved feed strategies and selective breeding could address this cooking drawback.

Lower Quality Protein Compared to Alternatives

Broiler meat is often viewed as having lower-quality protein compared to other poultry or alternative meat sources. While broiler chicken is rich in protein, it may lack the amino acid profile or overall quality that consumers expect from higher-end meat options. Refining the broiler's nutrition could improve the amino acid composition and protein quality.

ENVIRONMENTAL CONCERNS

Contributes to Environmental Pollution

Broiler farming is often criticized for its contribution to environmental pollution, including water and air contamination from waste, chemicals, and antibiotics [21]. These pollutants can affect surrounding ecosystems, raising concerns among consumers and environmental advocates. Implementing sustainable farming practices, such as better waste management and eco-friendly feed, can reduce pollution levels.

High Water Footprint in Production

Broiler chicken production has a high-water footprint, primarily due to water usage in feed crop irrigation and processing. This contributes to significant water consumption in regions where water resources are scarce. Strategies such as optimizing water use efficiency, recycling water, and promoting sustainable feed practices can help reduce the water footprint of broiler farming.

Greater Susceptibility to Climate Change Effects

Broiler farming is highly vulnerable to the impacts of climate change, including rising temperatures, extreme weather events, and changing feed availability. These climate-related challenges can affect poultry health, production efficiency, and feed costs [22]. Adaptation strategies, such as climate-resilient infrastructure and climate-smart practices, are crucial to mitigating these effects and ensuring sustainable production.

Linked to Deforestation for Feed Crops

The demand for feed crops, such as soy, often leads to deforestation, particularly in regions like the Amazon. This deforestation contributes to biodiversity loss and greenhouse gas emissions. Sourcing feed from sustainable and certified suppliers and exploring alternative feed sources can help reduce the environmental impact associated with deforestation.

Criticized for Being Unsustainable

Broiler production, particularly on an industrial scale, is often criticized for its unsustainability, focusing on high output at the expense of environmental stewardship [23]. Critics highlight issues such

as excessive resource use, pollution, and waste. Shifting to regenerative practices, including reducing resource inputs, optimizing waste recycling, and promoting circular economies, could improve sustainability.

Environmental Contamination

Broiler litter, consisting of manure and bedding material, is a significant source of environmental contamination, particularly when improperly managed. It can lead to nutrient runoff, water pollution, and air quality issues [24]. Implementing more efficient litter management systems and converting waste into bioenergy or organic fertilizers can help mitigate this environmental issue.

Higher Carbon Footprints

The carbon footprint of broiler farming is often higher than alternative poultry systems, primarily due to feed production, transport, and waste management [25]. Reducing carbon emissions can be achieved through sustainable feed sourcing, energy-efficient farming techniques, and better waste-to-energy practices that minimize the environmental impact of broiler production.

Reliance on Fossil Fuels

Broiler production systems are heavily reliant on fossil fuels, whether for powering machinery, transportation, or heating poultry houses. This dependency increases greenhouse gas emissions and environmental harm. Transitioning to renewable energy sources, improving energy efficiency, and adopting low-carbon technologies can reduce the reliance on fossil fuels in broiler production.

Associated with Biodiversity Loss

The expansion of industrial-scale broiler farming, particularly in regions where feed crops are grown, is linked to biodiversity loss through habitat destruction and overexploitation of land. Promoting sustainable land use practices, protecting natural habitats, and sourcing feed from certified sustainable farms can help mitigate the impact of broiler production on global biodiversity.

PRODUCTION AND ECONOMIC ISSUES

High Feed-to-meat Conversion Ratio Concerns

Broiler production often faces criticism for its high feed-to-meat conversion ratio, meaning a large quantity of feed is required to produce a small amount of meat. This inefficiency raises concerns about the sustainability of the system, particularly in resource-scarce environments. Improving feed formulations and genetics to optimize feed conversion efficiency is essential to address this issue.

Dependency on Commercial Feed

Broiler farming is heavily reliant on commercial feed, which can fluctuate in price and availability, especially when feed ingredients like soy and corn are subject to global market shifts [26]. This dependency creates economic instability for farmers. Developing alternative, locally sourced feeds and promoting feed efficiency are crucial steps to reduce this dependency and stabilize costs.

High Cost of Production in Low-resource Areas

In low-resource areas, the cost of production for broilers is often high due to limited access to affordable feed, veterinary care, and infrastructure. These factors can make broiler farming economically unfeasible for small-scale farmers [27]. Supporting smallholder farmers with subsidies, access to affordable resources, and technical assistance could help reduce production costs and enhance economic viability.

Lack of Adaptability to Free-range Farming

Broilers are primarily bred for intensive farming systems and often lack the adaptability required for free-range or extensive farming practices. This limits their use in more sustainable, low-input systems. Developing more adaptable breeds or integrating systems that allow for better natural behavior while maintaining production efficiency could foster more sustainable farming models.

Low Resilience to Disease Outbreaks

Broiler chickens have relatively low resilience to disease outbreaks, particularly in high-density, intensive systems. The rapid spread of disease in these environments can lead to significant economic losses. Strengthening biosecurity, improving disease surveillance, and investing in resilient breeds can mitigate these risks and improve the overall stability of broiler farming.

Weak Genetics Limiting Flexibility

The genetics of broiler chickens are primarily optimized for fast growth and high yield, which limits their flexibility for adapting to different environments or production systems. This genetic focus also reduces their ability to withstand environmental stress or disease challenges. Genetic improvements that focus on resilience and adaptability could increase the overall flexibility and sustainability of the broiler industry.

Displacement of Small-scale Poultry Farmers

The rise of industrial broiler farming has led to the displacement of small-scale poultry farmers who cannot compete with large, mechanized operations. This economic shift can have significant social and economic consequences, particularly in rural areas [28]. Policies that support small-scale producers, such as access to credit, training, and markets, can help mitigate these challenges and support more diverse farming systems.

CONSUMER AND CULTURAL PERCEPTIONS

Viewed as Less Healthy Than Native Chicken

Broiler chicken is often perceived as less healthy than native or heritage breeds due to concerns over production practices, such as intensive farming and the use of antibiotics. This perception affects consumer preferences, as people may opt for perceived healthier alternatives. Promoting the health benefits of broiler chicken through transparency and improved production practices can help address this concern.

Associated with Mass Production Over Quality

Broiler chicken is frequently linked to mass production, leading consumers to associate it with lower quality. The focus on efficiency and high yields often overshadows aspects like flavor, texture, and nutritional content. Shifting towards quality-driven production methods, with an emphasis on taste, health, and sustainability, could help improve consumer perception of broiler chicken.

Perceived as a "Fast Food" Meat Product

Broiler chicken is often viewed as a cheap, "fast food" meat product due to its widespread use in fast food and convenience meals [29]. This association may lower its perceived value among consumers who prioritize gourmet or artisanal food. Changing the narrative around broiler chicken by emphasizing quality, nutrition, and responsible sourcing could alter this perception.

Lacks Cultural Significance in Some Societies

In certain cultures, broiler chicken lacks the cultural significance that native or heritage poultry breeds hold. Broiler chickens are seen as products of industrial farming, disconnected from traditional farming practices and cultural rituals. Reconnecting broiler production with cultural traditions or highlighting its versatility in various cuisines can help foster a stronger cultural connection.

Seen as Unnatural or Artificial

Broiler chickens are often perceived as unnatural or artificial due to their rapid growth, selective breeding, and intensive farming practices. This perception arises from concerns about the welfare of the animals and the industrial scale of production. Rebranding broiler chicken as a natural, sustainable, and ethically produced product could help change these perceptions.

Criticized as a Profit-driven Commodity

Broiler chicken is frequently viewed as a profit-driven commodity, with production focused on maximizing yield rather than quality or animal welfare [30]. This perception can alienate consumers who prioritize ethical considerations. By emphasizing ethical practices, fair pricing, and sustainable production methods, the broiler industry can shift the narrative from profit-driven to values-driven.

Lacks Trust in Production Transparency

Consumers often lack trust in the transparency of broiler production systems, especially concerning animal welfare, feed ingredients, and production processes [26]. This lack of trust leads to skepticism about the integrity of broiler chicken. Increasing transparency through certifications, clear labeling, and consumer education can build trust and foster more informed purchasing decisions.

Cultural Preference for Native Breeds Over Broilers

In many cultures, native or heritage breeds of chicken are preferred over broilers for their flavor, texture, and perceived authenticity [31]. The cultural preference for these breeds often limits the market appeal of broiler chicken. Promoting the benefits of broiler chicken while respecting cultural traditions can help expand its acceptance and popularity in diverse markets.

Seen as Less Prestigious than Native Chicken

Broiler chickens are often seen as less prestigious than native breeds, particularly in regions where native poultry is considered a symbol of quality and tradition. This perception can affect consumer choices, particularly for special occasions. Elevating the image of broiler chicken through improved production methods, branding, and marketing could shift its status in the market.

ETHICAL AND SOCIAL CONCERNS**Criticized for Displacing Traditional Poultry Farming**

Broiler production is often criticized for displacing traditional poultry farming practices, especially in rural areas where small-scale farmers have been the norm. Industrial-scale broiler farming reduces biodiversity and promotes monoculture farming systems, undermining local economies and cultural practices. Supporting traditional farming models and integrating them with sustainable practices could mitigate this displacement.

Accusations of Exploitation by Large Corporations

Large broiler corporations are frequently accused of exploiting small-scale farmers and workers. Critics argue that these companies prioritize profit over the welfare of both humans and animals, perpetuating inequitable economic systems. Implementing fair trade practices, improving corporate accountability, and empowering smallholder farmers could help address these concerns.

Linked to Unethical Labor Practices on Farms

Broiler farming is often associated with unethical labor practices, such as poor wages, unsafe working conditions, and exploitation of farm workers, particularly in large industrial operations [32]. These issues have sparked concerns over the ethics of labor in the poultry industry. Adopting fair labor practices, ensuring worker safety, and promoting ethical employment standards are necessary to address these challenges.

Poor Worker Welfare in the Poultry Industry

The welfare of workers in the poultry industry, especially in large-scale broiler production, is often criticized due to physically demanding and hazardous conditions. Workers may face long hours, exposure to harmful chemicals, and inadequate compensation. Improving labor conditions, offering fair wages, and ensuring worker rights can address these ethical issues and enhance the overall sustainability of the industry.

Perceived Threat to Food Sovereignty in Developing Nations

Broiler production, particularly in developing nations, is perceived as a threat to food sovereignty, as it can displace local food systems and undermine indigenous agricultural practices. The importation of cheap broiler products may outcompete locally produced poultry, leading to reliance on external markets. Supporting local farmers and promoting sustainable poultry production could help preserve food sovereignty and local economies.

Negative Influence on Rural Self-Reliance

The dominance of large-scale broiler operations can negatively impact rural self-reliance by discouraging small-scale, diversified farming [33]. This shift towards industrial agriculture can reduce local food production and increase dependency on external sources of food. Promoting community-based poultry farming systems and supporting smallholder initiatives can help maintain rural self-reliance and food security.

Questionable Ethical Practices in Production Processes

Broiler production is frequently criticized for questionable ethical practices, including concerns over animal welfare, unsustainable feed sourcing, and environmentally damaging practices [34]. These ethical issues often raise concerns among consumers and advocacy groups. By adopting more humane farming practices, increasing transparency, and ensuring sustainable sourcing, the broiler industry can improve its ethical standing and consumer trust.

FOOD SUPPLY CHAIN AND PROCESSING ISSUES

Poor Preservation Techniques Reducing Shelf Life

Inadequate preservation techniques, such as improper refrigeration or handling, can significantly reduce the shelf life of broiler chicken, leading to spoilage and food waste. These practices can undermine consumer confidence and reduce product quality. Implementing improved preservation methods, such as advanced cooling systems and proper packaging, can extend shelf life and improve product quality [35].

Unhygienic Environments in Processing Facilities

Processing facilities for broiler chickens are sometimes criticized for unhygienic conditions, which can lead to contamination and compromised food safety. Poor sanitation practices increase the risk of foodborne illnesses, damaging the reputation of the industry [36]. Ensuring strict hygiene standards, regular inspections, and employee training in food safety can mitigate these risks and improve processing standards.

Poor Handling in Live Bird Markets

The handling of live birds in markets, often under stressful and unsanitary conditions, can lead to injury and stress in animals. This poor handling can negatively impact meat quality and contribute to ethical concerns [37]. Strengthening animal welfare regulations, improving market conditions, and training workers in proper handling techniques can enhance both animal welfare and meat quality.

Lack of Traceability in Supply Chains

The lack of traceability in broiler supply chains is a significant concern, as consumers and regulators struggle to track the origin of products [38]. This can lead to issues with food safety, fraud, and lack of transparency. Establishing robust traceability systems through the use of technology, such as blockchain, can improve transparency, reduce fraud, and ensure food safety.

Criticized for Low Meat Quality in Export Markets

Broiler chicken from certain regions often faces criticism for its low meat quality in export markets, with concerns about taste, texture, and overall presentation. This can limit export opportunities and negatively impact the global reputation of broiler farming. Improving production standards, quality

control processes, and aligning with international quality certifications can help improve the global standing of broiler meat.

Concerns Over Improper Transportation Systems

Transportation of broiler chickens is frequently cited as a source of animal stress, injury, and meat quality deterioration. Improperly designed transport systems, lack of proper ventilation, and overcrowding can all contribute to these issues [39]. Upgrading transportation systems to ensure better animal welfare, reduce stress, and maintain meat quality is crucial for the integrity of the food supply chain.

NUTRITIONAL AND GENETIC ISSUES

Short Lifespan Affecting Meat Quality

The short lifespan of broiler chickens, bred for rapid growth, can affect the meat's quality, including tenderness and flavor. Their accelerated growth rates may lead to less developed muscle tissues and suboptimal meat characteristics. Extending the lifespan and allowing for more natural growth could improve the overall quality of broiler meat, enhancing its texture and nutritional profile.

Dependency on Imported Genetics

Broiler production often relies heavily on imported genetics, which can limit local adaptability and resilience [40]. This dependency on foreign breeds may not align with specific regional environmental or disease conditions. Developing local, genetically adapted strains of broilers could improve sustainability, reduce costs, and increase resilience to local diseases and climate challenges.

Limited Adaptability to Local Conditions

Many broiler breeds are not well-adapted to local environmental conditions, such as temperature, humidity, or feed availability, especially in tropical regions [41]. This limited adaptability can lead to poor growth rates and increased susceptibility to diseases. Selective breeding programs that focus on enhancing adaptability to diverse climates and environments can improve the overall efficiency and sustainability of broiler farming.

Lack of Genetic Diversity in Broiler Lines

The broiler industry has limited genetic diversity due to selective breeding for traits such as rapid growth and high feed conversion efficiency [42]. This lack of diversity can make broiler lines more susceptible to disease outbreaks and reduce long-term sustainability. Increasing genetic diversity through crossbreeding and incorporating more diverse genetic lines can improve disease resistance and overall productivity.

Poor Balance of Calcium and Phosphorus in Meat

The nutritional balance of broiler chicken meat, particularly in terms of calcium and phosphorus, can be problematic. Imbalances in these nutrients, often resulting from poor feed formulations, can affect bone health in the chickens and potentially impact the nutritional quality of the meat. Ensuring a balanced diet that provides adequate calcium and phosphorus is essential for improving both poultry health and meat quality.

MEDIA AND CONSUMER AWARENESS

Negative Media Coverage of Production Practices

Broiler farming practices are often portrayed negatively in the media, focusing on issues such as animal welfare, environmental impact, and unsustainable practices. Such coverage can shape public perception and influence consumer choices, leading to reduced demand for broiler products. Addressing these concerns through transparency, improved farming practices, and proactive media engagement can help restore consumer trust.

Poor Consumer Education About Broiler Farming

Many consumers lack detailed knowledge about broiler farming, including the benefits and challenges of industrial-scale poultry production [43]. This lack of education can perpetuate misconceptions and negative perceptions about the industry. Educational campaigns that explain farming practices, animal welfare standards, and the nutritional value of broiler products can help improve consumer understanding and confidence in the industry.

Increasing Preference for Organic or Free-Range Chicken

As consumers become more health-conscious and concerned about animal welfare, there is an increasing preference for organic or free-range chicken over conventionally farmed broilers [44]. These products are often seen as more natural and ethical. To remain competitive, the broiler industry must adapt by incorporating higher welfare standards, offering more transparency, and exploring opportunities to meet the growing demand for organic or free-range alternatives.

Perceived Incompatibility with Organic Farming Standards

Broiler production, especially at industrial scales, is often seen as incompatible with organic farming principles, particularly concerning animal welfare and feed practices. The use of antibiotics, growth hormones, and confined housing is at odds with organic certification requirements [45]. To appeal to consumers seeking organic products, the broiler industry could explore more sustainable production practices and certification pathways aligned with organic standards.

Lack of Branding or Weak Consumer Trust in Broiler Labels

Broiler products often lack strong branding or clear labeling that communicates the values consumers care about, such as animal welfare or sustainability [46]. As a result, there may be weak consumer trust in broiler labels. Strengthening branding efforts, adopting third-party certifications, and ensuring transparency in labeling can help build consumer trust and improve marketability.

CONCLUSION

Negative perceptions of broiler chicken, rooted in societal attitudes, cultural ethics, and health concerns, pose significant challenges to its acceptance and sustainable production. Ethical concerns about animal welfare, fears of antibiotic residues, and cultural preferences for traditional poultry breeds have shaped consumer resistance. This study highlights the need for addressing these concerns through improved welfare standards, transparent production practices, and effective consumer education. Integrating sustainability into broiler farming, including minimizing environmental impacts and enhancing meat quality, is crucial for rebuilding consumer trust. The findings provide a framework for aligning industry practices with consumer expectations, fostering ethical and sustainable growth. Addressing these multifaceted challenges will ensure long-term market success while maintaining public confidence in broiler production systems.

Future Directions

Future efforts should focus on integrating ethical, sustainable, and transparent practices into broiler production to address consumer concerns effectively. Advancing welfare standards through the adoption of enriched housing systems and minimizing stress in intensive farming setups can mitigate ethical criticisms. Research on antibiotic alternatives, such as probiotics and phytogenic additives, is essential to alleviate health-related fears. Enhancing public awareness through educational campaigns about the safety and sustainability of modern broiler farming can rebuild trust. Developing innovative production systems that balance efficiency with environmental sustainability, such as low-carbon farming technologies and improved waste management, is equally critical. Investigating consumer preferences and cultural sensitivities further will help tailor marketing strategies to specific demographics. Collaborative efforts among policymakers, producers, and researchers are vital to creating a production model that aligns with ethical norms, satisfies consumer expectations, and ensures the long-term viability of broiler farming systems.

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