

Examining the possibility of Integrating Sustainable Agricultural Practices into Laws for safeguarding the rights of farm animals: A Comparative Study

Examen de la posibilidad de integrar prácticas agrícolas sostenibles en la legislación para salvaguardar los derechos de los animales de granja: Un estudio comparativo

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Abstract

The relationship between sustainable agriculture and animal welfare is explored. Agricultural practices that promote economic prosperity and ecological balance are discussed. Ethical considerations and legal aspects that recognize animals with legal

rights are discussed. Global practices in farm animal welfare are compared with those in India.

Keywords: animal welfare; animal rights; sustainable agriculture; sustainable farming practices; environmental sustainability

Resumen

En el presente trabajo se estudia la relación entre agricultura sostenible y bienestar animal. Se debaten las prácticas agrícolas que fomentan la prosperidad económica y el equilibrio ecológico. Se analizan las consideraciones éticas y los aspectos jurídicos que reconocen derechos legales a los animales. Se comparan las prácticas mundiales de bienestar de los animales de granja con las de la India.

Palabras clave: bienestar animal; derechos de los animales; agricultura sostenible; prácticas agrícolas sostenibles; sostenibilidad medioambiental

1. Introduction

The exponential growth of the human population globally has put sustainable coexistence with other species on the fundamental pedestal for human survival (Muhie, 2022). Sustainable agriculture has been defined as “an integrated system of plant and animal production practices having a site-specific application that over the long term will satisfy human food and fiber needs, enhance environmental quality and the natural resource base upon which, the agricultural economy depends, make the most efficient use of non-renewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls, sustain the economic viability of farm operations, and enhance the quality of life for farmers and society as a whole” (Keeney, 1990). It is a way of farming that induces “economic prosperity”, “social inclusion”, “environmental quality”, and ecological balance (Trujillo-Barrera, Pennings & Hofenk, 2016). This involves practices that should be safe for the environment and consider the welfare of humans and animals along with supplementing the farmer’s income (Rathakrishnan et al., 2022). Recent approaches in sustainable agriculture include climate-smart agriculture, organic farming, agroecology, biodynamic agriculture, sustainable intensification, permaculture, regenerative agriculture, etc. with practices such as integrated farming, precision farming, agroforestry, integrated nutrient management, and integrated pest management (Muhie, 2022). In simple terms, sustainable agricultural practices (SAP) include “crop rotation, intercropping, organic farming, integrated pest

management, zero tillage” (Priya & Singh, 2024), cover cropping, and micro-irrigation, along with nurturing the well-being of the farm animals (Niranjan et al., 2023). Even though at the heart of sustainable farming lies the commitment to animal welfare as a fundamental principle (Keeling, 2005), the benefits of sustainable farming practices extend beyond animal welfare and contribute to the well-being of local communities and the global ecosystem (Kennady et al., 2023). Animal welfare can be defined as the “transient state within an animal that relates to what the animal experiences” (Fernandes et al., 2021). By promoting methods that are ecologically sound, economically viable, and socially just, sustainable agriculture ensures the fulfillment of the rights and needs of both current and future generations, including those of the farm faunae. These SAPs are essentially critical for all countries, especially for developing nations like India (Sundar, 2018; Niranjan et al., 2023; Priya & Singh, 2024). Sustainable practices ensure that farm animals are provided with living conditions that allow for the expression of natural behaviors, improved animal breeding, adequate space, proper nutrition, implementation of good housing design, utilization of proper feeding systems, and freedom from overcrowding and undue stress (Hsia, 2022). This approach not only respects the rights of farm animals to a life free from suffering but also acknowledges their well-being as integral to the sustainability of farming operations (Buller, 2018). Moreover, sustainable farming practices contribute significantly to reducing stress and enhancing the health of farm animals. Methods such as rotational grazing, access to the outdoors, and environmental enrichments that encourage natural behavior can improve animals’ physical and psychological health (Muhammed, 2023). Rotational grazing implies the alteration of grazing habits that prevent overgrazing and provide plants with enough time to regenerate. Healthier animals are less reliant on antibiotics, a common recourse in intensive farming systems that can lead to negative repercussions for animal welfare and human health (Fioritti, 2020; Appleby, 2005). These practices tend to improve animal productivity and effectiveness; thus contributing to increased production of food to meet the requirements of a growing population (Kennady et al., 2023). By emphasizing preventive health care and more natural living conditions, sustainable practices champion the rights of farm animals to better health and welfare (IISD, 2017). The environmental dimension of sustainable practices is also crucial for the rights of farm animals (Muhie, 2022). Organic farming methods, which avoid the use of synthetic pesticides and fertilizers, minimize animals’ exposure to potentially harmful substances, safeguarding their right to a safe habitat (Rigby & Cáceres, 2001; Hole et al., 2005). Practices aimed at reducing the ecological footprint of farming—such as low-

ering greenhouse gas emissions, conserving water, promoting good waste management, ensuring and promoting biodiversity—create healthier environments for animals (Rout & Behera, 2021; Adegbeye et al., 2020; Kennady et al., 2023).

Ethical considerations are at the core of sustainable farming, encompassing the treatment of farm animals with transparency and traceability (Buller, 2018). This transparency allows consumers to make informed choices that reflect their values concerning animal welfare, driving the demand for ethically produced products (Mulder & Zomer, 2017). The push for accountability and consumer education fosters a culture where the rights of farm animals are respected and upheld across the supply chain. Moreover, some researchers have claimed that, despite sustainable agriculture being mostly linked to farm animal welfare, trade-offs seem to exist between the two (Bergmann, 2021). Even the role of media, digital as well as social media has been recognized critically to ensure judicious approach in treating farm animals and safeguarding their welfare (García Rodríguez, 2020). Intensification, often associated with increasing agricultural productivity and ecological sustainability, can have negative impacts on farm animal welfare (Bergmann, 2021). However, there is a growing recognition of the importance of animal welfare in the context of sustainable development. The interconnections between animal welfare, ecosystem destruction, species extinction, and the emergence of zoonoses have come to the forefront (Narayanan, 2016). Religion can also play a role in shaping alternative animal husbandry and food production practices, expanding the social justice element of sustainable development to encompass “socio-zoological justice” (Nista et al., 2020). The United Nations has shown an increasing concern for animal rights in the context of sustainable development, with a broadening perspective towards animals in general. Overall, while there may be tensions and trade-offs, there is a growing recognition of the importance of considering farm animal rights within the framework of sustainable agriculture. In essence, the role of sustainable practices in safeguarding the rights of domesticated animals is expansive, intertwining the welfare of animals with the broader goals of environmental sustainability and social responsibility (Wicklund, 1997). The transition towards sustainable farming practices represents a critical step in ensuring the protection of farm animals’ rights, paving the way for a more ethical and sustainable future in agriculture (Wawrzyniak, 2023). The integration of SAP can play a pivotal role in safeguarding the rights of farm animals, marking a shift towards more ethical and responsible farming methodologies (Appleby, 2005). These practices extend beyond the realms of productivity and profitability, embodying a comprehensive approach that prioritizes the welfare of

animals, environmental preservation, and social equity. This holistic perspective ensures that the intrinsic value and rights of farm animals are recognized and protected. However, most of the time, it has been observed that the protection of animals legally is still considered to be in its infancy; thereby requiring a thorough understanding in this regard (Hiranandani, 2019). The adoption of sustainable practices has the added benefit of encouraging the development of supportive legislative and policy frameworks concerning animal rights. As awareness of sustainable farming and its affinity towards animal welfare and eco-friendly well-being increases, there is a growing call for policies that reinforce sustainable practices, further institutionalizing the protection of farm animals' rights.

This paper aims to examine the rights of farm animals in countries that incorporate sustainable practices as recognized under the current constitutional provisions and legal statutes in India and other nations and to assess the extent to which sustainable practices are promoted within these laws. The paper will delve into the specific provisions of Indian legislation that pertain to the welfare and rights of farm animals, highlighting how these laws facilitate or hinder the adoption of sustainable farming practices. It will also explore the interplay between legal frameworks and the practical aspects of sustainable animal farming, examining the challenges and opportunities presented by the current legal environment in India.

The premise of the article is that sustainable practices serve as a dual-purpose mechanism, safeguarding the rights of farm animals while concurrently aligning with human interests. This involves a thorough evaluation of sustainable practices within the context of animal husbandry, alongside an analysis of how various countries have successfully implemented such practices.

To provide a broader perspective, the study includes a comparative analysis of countries that are leaders in the integration of sustainable practices within their legal and regulatory frameworks for farm animal welfare. This comparison aims to identify best practices and innovative approaches that could potentially be adapted or adopted by India to enhance both the welfare of farm animals and the sustainability of its livestock sector. By conducting this comparative study, the paper seeks to draw out actionable insights and recommend specific practices that India could implement to improve the welfare of farm animals through sustainable farming practices. The ultimate goal is to propose a harmonious approach that not only advances the rights and well-being of farm animals but also addresses environmental concerns and meets the needs of the human population, thereby contributing to a more ethical, sustainable, and productive agricultural system.

The structure of the paper is meticulously designed to examine the multifaceted connection between humans and farm animals within the legal framework, emphasizing the integration of sustainable practices into this dynamic. The paper unfolds through a series of interconnected sections, each building upon the other to provide a comprehensive analysis of the topic, starting with the explanation of animals as legal persons as a part of the evolving jurisprudential concept that considers animals not merely as property but as entities with 'legal rights' or 'personhood'. This section looks into the philosophical and legal grounds that support the recognition of animals as subjects of law, capable of possessing rights and deserving of legal protection. Moreover, specific legal provisions that safeguard the rights of farm animals in India are explained. It covers the key statutes, regulations, and guidelines that constitute the legal framework for animal welfare, detailing how these laws are intended to protect farm animals from cruelty and ensure their well-being. Following this is the discussion on the existing complex interrelations between humans and farm animals. This includes an examination of how historical, economic, and cultural ties have shaped current legal and ethical perspectives on farm animals, highlighting the dependency and responsibilities that humans have towards these animals. The consequent section expands the paper's scope to include a review of global practices concerning sustainable farm animal welfare. It examines innovative and effective practices adopted by other countries in integrating sustainability and animal welfare into their legal and agricultural policies. Building on the global overview, a comparative study is conducted to draw parallels and contrasts between India and other nations regarding legal frameworks, sustainable practices, and farm animal welfare standards. This comparative analysis aims to identify best practices and lessons that could be beneficial for India and other countries. The final section of the paper synthesizes the findings from the preceding sections to offer a critical analysis of India's current legal and regulatory approach to farm animal welfare and sustainability. Based on this analysis, the paper proposes concrete suggestions and recommendations for legal reforms, policy adjustments, and the adoption of best practices from around the world. The goal is to outline a path forward that enhances the welfare of farm animals through sustainable agricultural practices, ensuring a balanced coexistence between human interests and animal rights. Through this structured approach, the paper attempts to contribute meaningfully to the discourse on farm animal welfare, legal rights, and sustainability, offering insights and recommendations that could inform future legal and policy developments, particularly in India.

2. Jurisprudence of “Animals”

The jurisprudence of animals implies application of legal principles, doctrines, and philosophy surrounding the treatment and rights of animals within the legal system (Prathyusha, 2024). This includes all laws and legal interpretations that control how people interact with animals including household pets, livestock, wildlife, and even animals used for amusement and research. The recognition of animals as legal persons is a significant jurisprudential development, representing a paradigm shift in the legal status of non-human animals and reflecting a growing recognition of their intrinsic value and rights (Deopa, Rawat & Singh, 2022). This concept challenges traditional legal norms where animals have been considered property, devoid of legal personality, and subject to ownership and control by humans (Jacob, 2022). The notion of legal personhood for animals is aimed at providing them with a certain set of constitutional rights, including the right to life, liberty, and protection from cruelty, thereby acknowledging their sentience and capacity to suffer (Pugliese, 2020). Coming to the historical context and philosophical underpinnings, the movement toward recognizing animals as legal persons can be traced back to philosophical debates about animal rights and sentience (Haldar, 2011). Legal acknowledgment of animal rights is a comparatively new trend, which depends upon the changing attitude of the public towards animals, scientific knowledge, and the efforts of campaigners for animal rights (Prathyusha, 2024). Academic discourse on animal legal personhood is diverse, encompassing legal theory, ethics, and public policy. Scholars like Gary L. Francione argue for the abolitionist approach, advocating for the recognition of basic legal rights for animals to protect their interests in not being used as property (Wicklund, 1997). Conversely, critics argue that legal personhood for animals could undermine human rights or lead to practical and legal complexities. Some of the common theories include Natural law theory as supported by Aristotle, Aquinas, Hugo Grotius, Descartes, Humphrey, Hobbes, John Locke, Rousseau, and Immanuel Kant, where it was suggested that the fundamental idea involves the elimination of animals from moral consideration while acknowledging that humans must treat them with kindness, given the harm that humans are capable of causing to other species (Jacob, 2022). This was also referred to as the indirect theory where it was believed that a hierarchy exists with humans on top, followed by animals, and lastly at the bottom are the plants. The two reasons for excluding animals from moral considerations were their lack of language usage and reasoning abilities as humans consider animals to be “lower sentient” just to be used for everyday chores (Boruah & Boruah, 2020). Thus, it was assumed that serving human beings forms

the core duty of the animals. Seldom were the rights of the animals acknowledged by the legal frameworks of developed countries. In contrast to all of this is the Positive law theory supported by Jeremy Bentham, Auguste Comte, Utilitarian theory, etc., where humans were compared equally to the animals, and any cruelty towards animals was considered barbaric. This was considered under the direct theory but with two divisions, one suggesting inequality and the other considering equality. In direct but unequal theory, the animals are given moral status, but it is argued that since animals unlike people do not own property, animals cannot have rights, but humans have a moral obligation to care for them. Finally, under the direct and equal theory, animals and humans have the same weightage and humans cannot claim superiority. Philosophers like Peter Singer and Tom Regan have argued for the ethical consideration of animals, emphasizing their ability to experience pain and pleasure. Singer's "Animal Liberation" (1975) drafted the "principle of equal consideration of interests", irrespective of species membership, while Regan's "The Case for Animal Rights" (1983) posits animals as "subjects-of-a-life," have intrinsic value and rights (Fox, 1978).

The concept of legal personhood for animals is further supported by advancements in cognitive science and ethology, which provide evidence of animals' complex emotional and social lives. This scientific evidence bolsters the moral and ethical arguments for recognizing animals as subjects of rights, rather than mere objects of use. However, just providing animals a personality status, tends to generate a significant number of problems, which cannot be mitigated on their own (Jacob, 2022). There is a need for human intervention, without which no animal can truly exercise the legal rights bestowed upon it. Historical evidence indicates that animals now function as people within the system, but not in a healthy manner. Animals do have rights, and some of those rights are protected by the law. However, because they typically lack the mental capacity to comprehend or knowingly exercise any legal rights that have been granted to them, thereby making human assistance necessary for the implementation of those rights; otherwise, it would be as though the animals had no rights at all. The current social viewpoint on the legal rights conferred and acceptable living environment for animals is susceptible to several exceptions and remains restricted as the interests of human beings are considered to be supreme even while dealing with fauna. In the rapidly evolving world of law, determining the exact status granted to animals is a difficult issue, especially when campaigners demand the concept of equal respect for animals and humans. This movement for animal rights is still based either on the convenience of human needs (Singh, 2021) or on "sympathy and mercy" and not on the natural scheme of things (Boruah &

Boruah, 2020). Moreover, it has been speculated that the direct application of animal rights may become a limitation in human welfare as humans are directly dependent upon the animals (Singh, 2021). On the other hand, providing legal status to animals lies in the hands of the human community as a whole as suggested by Salmond (Montes Franceschini, 2022). The issue of whether the human race will be able to stand in solidarity with these demands of retaining the dignity of animals remains unanswered, but there is hope that these changes will occur until the link of dependency between people and animals is completely severed.

Jurisprudentially, the recognition of animals as legal persons has been pursued through litigation and legislative reforms and varies from nation to nation (Deopa, Rawat & Singh, 2022). Notable cases include the Nonhuman Rights Project's efforts in the United States to secure habeas corpus rights for chimpanzees (Lynch, 2023), Steven Wise argues that they possess complex cognitive functions that justify legal personhood (Nonhuman Rights Project, 2022). Although these efforts have faced legal challenges, these signify a growing judicial willingness to reconsider animals' legal status (Gulatsi, 2023). Several jurisdictions have made strides in recognizing animal personhood. For instance, in 2014, the Supreme Court of India recognized animals as legal identities and provided them the same rights, obligations, and liabilities as those of people who are alive (Gulatsi, 2023). The Islamabad High Court also acknowledged in a case concerning the treatment of a chained elephant at a zoo that animals are entitled to legal rights (Gulatsi, 2023). Similarly, many European legal systems have taken steps towards the "de-reification of animals" (Michel, 2023). Ecuador's Constitution acknowledges the rights of nature, including animal rights, reflecting a holistic view of environmental and animal protection (Kauffman & Martin, 2023; Ortiz & Morejón, 2023), Argentina has also provided individual rights to animals such as orangutans and chimpanzees for representation of their interests (Vega, 2022). These examples highlight the growing recognition of animals as legal entities globally. This shows that there is an evolving view towards animals and a growing emphasis on the care and protection of animals at a legal level. Spain has introduced a new legislation that attempts to embrace animal welfare laws; this includes hefty fine up to two hundred thousand euros for abuse of animals. This legislation has attracted a lot of criticism on the account of excluding bull fights, hunting dogs, dolphins performing at the Marine Park, etc. On the brighter side, online sale of pets and a mandate to register pets have been noticed in this legislation. Even though it portrays a simplified approach towards animal welfare, it has been applauded as a solid attempt towards changing attitudes towards animal rights (Keeley, 2023).

3. Legal Practices in India

Before Independence, animals were treated as property by the Indian Penal Code (Section 289 and Section 428).¹ Under Section 428, the Indian Penal Code punishes wrongdoing by killing an animal worth Rs. 10 or more. The law specifies that anybody who kills, maims, poisons, or renders it useless will face up to ten years in prison, a fine, or both. The same offense is punished under Section 429 of the Code, but it relates to animals valued at a minimum of Rs 50. Any combination of a fine and/or a period of imprisonment up to five years is the punishment for this violation. Under the Drugs and Cosmetics Act of 1945, any form of experimentation or animal testing is prohibited, as stated in Rules 148 C and 135 B. Post-1960, the Constitution of India, “the supreme law of the land” (Deopa, Rawat & Singh, 2022), grants “a dignified existence” to each and every animal and safeguards them from any form of cruelty (Singh, 2021). There are many constitutional provisions available in the Indian constitution specific to animal well-being. This includes Article 21, Articles 48 and 48A of the Directive Principles of State Policy, and Fundamental duty in Article 51. Apart from this, some statutes include the Prevention of Cruelty to Animals Act (PCA), and Wildlife Protection Act (1972).

The Constitution of India’s Article 21 guarantees the “Right to Life” with dignity, which states that no one will be deprived of their life or individual freedom other than as per the legally prescribed process. This article has been expansively interpreted by the Supreme Court of India to encompass a broad spectrum of rights essential for human dignity, including the right to food, shelter, and learning. The definition of “life” has been widened to encompass all living things, including animal life, which is necessary for human existence. The case of *N.R. Nair v. Union of India* in 2000 is a significant legal decision in India that addressed the issue of animal welfare, particularly the treatment of captive elephants.² The conditions of these captive elephants that were used for multiple purposes including temple festivals and private functions in the state of Kerala were challenged. It was argued that such usage often resulted in cruelty and mistreatment, violating the provisions of the Prevention of Cruelty to Animals Act of 1960, and the Wildlife Protection Act of 1972. The Kerala High Court acknowledged the importance of elephants in the cultural and religious life of Kerala but emphasized the need to ensure their welfare and protection. The court observed that the use of elephants in festivals and events often involved

1. Indian Penal Code 1860, No. 45 of 1860, Acts of Parliament (India).; Boruah & Boruah (2020).

2. *N. R. Nair v. Union of India*, [2000] AIR [2000] Ker 340.

practices that caused unnecessary suffering and harm to the animals. Based on this, the court directed the state government to take certain measures and guidelines were formulated to improve the conditions of captive elephants and prevent their exploitation. The court's decision emphasized the importance of balancing cultural traditions with ethical considerations and legal obligations toward animal welfare. It underscored the need for proactive measures to safeguard the rights and well-being of captive elephants and set a precedent for future cases involving animal cruelty and exploitation. Overall, this case contributed to the advancement of animal welfare laws in India and highlighted the judiciary's role in protecting the rights of animals. In the landmark case of "Animal Welfare Board of India v. A. Nagaraja & Ors" in 2014,³ commonly referred to as the Jallikattu case, the Supreme Court extended the interpretation of Article 21 to include certain rights of animals, where they cannot be considered as sheer objects of public usage (Singh, 2021). Jallikattu, a traditional bull-taming sports competition practiced in the state of Tamil Nadu, was under scrutiny for causing severe distress and harm to the bulls involved. The animals were subjected to cruel treatment such as being prodded with sharp objects, having their tails twisted, and being forced to consume alcohol, leading to significant injuries or maybe death. A case was filed by the Animal Welfare Board of India against the practice, leading to a Supreme Court ruling that emphasized the rights of animals under Article 21. The court declared Article 51A (g) of the Constitution as the "magna carta of animal rights," acknowledging that the right to life and safety belongs to every species. The ruling underscored that the right to life extends beyond mere survival or existence to include living with dignity and worth, thereby bringing animal rights under the ambit of Article 21. However, on May 18, 2023, a larger bench of the Court overruled this historic ruling, upholding state-level changes to the Prevention of Cruelty to Animals Act of 1960 that legalized bull-taming games such as Jallikattu and Kambala (Gulatsi, 2023). In terms of the application of Article 21 to animals, the Court ruled that, while a "person" is protected under this, however, it is not wise for the Court to engage in judicial adventurism to bring bulls under the aforementioned protected mechanism.⁴

In another case linked to the interstate transportation and overloading of horses in India and Nepal, the ruling in *Narayan Dutt Bhatt v. Union of India* in 2018,⁵ The Uttarakhand and Punjab High Courts granted the entire animal kingdom legal status and guardianship based

3. *Animal Welfare Board of India v. A Nagaraja and Ors*. 7 SCC 547, (2014).

4. *The Animal Welfare Board of India v. Union of India* [2023] SCC OnLine SC 661, paragraph 24.

5. *Narayan Dutt Bhatt v. Union of India* [2018] SCC Utt 645.

on the “*Parens Patriae*” theory. In this case, the guardian gets to submit a case on their behalf.

Furthermore, the Directive Principles of State Policy, specifically Articles 48, 48A, and the Fundamental Duties outlined in Article 51A, lay down principles that indirectly support animal welfare. Article 48 advises the state to organize animal husbandry on contemporary and scientific lines and prohibits the killing of cows, calves, and additional milch and draught livestock, reflecting the cultural importance of these animals in India.⁶ Article 48A, included by the 42nd Amendment of 1976, requires the state to maintain, preserve, and promote the nation’s forests and wildlife as well as the environment.⁷ The Fundamental duties, particularly Article 51A(g), mandate all Indian citizens to safeguard and conserve nature and its available resources, which includes wildlife, and to show compassion for all living beings.⁸ This clause has been pivotal in judicial interpretations that advocate for animal welfare, reinforcing the constitutional obligation to ensure the well-being of animals. This was reiterated in the *Karnail Singh Case* decided in the Punjab & Haryana Court; while examining the relationship between human and animals, particularly in the context of India, the judgment emphasized the phrase and concept of ‘compassion for living creatures’ as a fundamental duty in the Indian Constitution. The judgment issued guidelines while recognizing them as juristic persons. Siding with the previous rulings of the Apex Court, Justice Rajiv Sharma, observed the need to protect the rights of animals in an eco-centric manner.⁹

India’s legal framework concerning farm animals is an intricate system designed to regulate animal husbandry practices, promote animal welfare, and safeguard animals against cruelty. This framework comprises many laws, regulations, and guidelines that collectively cater to safeguard the compassionate treatment of farm creatures while balancing the imperatives of agricultural development, economic growth, and environmental sustainability. At the core of this legal structure is the “Prevention of Cruelty to Animals Act, 1960 (PCA Act)”, which serves as the primary legislation prohibiting cruelty towards animals in India. The Act outlines the legal obligations of individuals and entities to treat animals with care and respect, prohibiting any form of cruelty. The Act also made it the obligation of everyone who has custody of an animal to take all reasonable care for its wellbeing, and these duties are no longer confined to the owners. It has also expanded the definition of cruelty under Section 11, and anybody who conducts such acts against animals

6. The Constitution of India 1950, Art 48.

7. The Constitution of India 1950, Art 48A.

8. The Constitution of India 1950, Art 51A.

9. *Karnail Singh and Ors v. State of Haryana* [2019] SCC OnLine P&H 704.

will face legal consequences. The purpose of this act includes encouraging financial aid for animal shelters and rescues, advising the federal government on changes to laws and regulations aimed at preventing animal cruelty, and advising the government on medical aid for animals in need (Deopa, Rawat & Singh, 2022). Furthermore, it established the Animal Welfare Board of India (AWBI), a statutory advisory committee tasked with guiding the government on issues of animal welfare and promoting the humane treatment of animals across the nation. The AWBI acts as a pivotal part in the augmentation of policies and regulations aimed at improving animal welfare standards, highlighting the government's commitment to protecting animal rights. Under the PCA Act, specific rules and regulations further detail the ethos for the humane conduct of farm animals. This includes The Prevention of Cruelty to Animals (Slaughter House) Rules, 2001, which prescribe humane slaughter practices to minimize animal suffering, The Prevention of Cruelty to Animals (Transport of Animals) Rules, 2001, which sets the guidelines for the transport of animals to safeguard their welfare during transit, and the Prevention of Cruelty to Animals (Regulation of Livestock Markets) Rules, 2017, aimed at regulating animal markets to ensure the welfare of traded animals.

Another one is the Wildlife Protection Act, 1972, which primarily focuses on the conservation of wild species, and also affects the management and treatment of domesticated species, especially those that are endangered or have significant ecological value. This legislation underscores the interconnectedness of wildlife and domestic animal welfare, recognizing the importance of a holistic approach to animal protection that includes both wild and farm animals. Coming to the environmental concerns related to animal farming, these are addressed under the Environment Protection Act of 1986, which, although not exclusively focused on farm animals, has significant implications for their welfare. By regulating pollution and promoting environmental sustainability, this Act influences farming practices and animal habitats, ensuring that the pursuit of agricultural productivity does not compromise ecological integrity or animal well-being.

Additionally, state-specific legislation allows for the adaptation of animal welfare laws to local contexts, acknowledging the diverse agricultural practices and animal husbandry traditions across India's vast geography. These laws complement national legislation, addressing unique local needs and enhancing the legal framework's responsiveness to regional variations in farming practices. The Food Safety and Standards Authority of India (FSSAI), primarily concerned with food safety, also impacts farm animal welfare through regulations directing the manufacture, processing, and trade of animal products. By ensuring

that these products meet specific health and safety standards, the FSSAI indirectly promotes the welfare of farm animals, linking food safety with humane treatment practices. Animal experimentation is banned in India and the Control and Supervision Rules oversee the breeding and experiments of animals (Singh, 2021).

Recently, *The Animal Factory Farming (Regulation) Bill, 2020* was introduced to control animal factory farming in India (Rajya Sabha, 2020). The emphasis is to minimize the use of potentially dangerous drug-resistant antibiotics, reduce the levels of greenhouse gas emissions from factory-farmed cattle, adopt the necessary steps to ensure the well-being of animals, lower the risk of food-related ailments, waste and water pollution management, and provide for a dedicated board to evaluate the practice that the statutes provided on prescribed practices, etc. It is yet to get the approval of the houses but seems to be a promising legislation for the protection of farm animals and sustainable practices.

Despite the comprehensive nature of India's legal framework for farm animals, it has been felt that there is not enough legislation for animal rights (Hiranandani, 2019). Moreover, the challenges remain particularly in terms of enforcement and implementation, which is lacking and can vary significantly across different regions. Ongoing discussions and efforts aim to strengthen animal welfare legislation, reflecting a growing recognition of the need to harmonize agricultural and economic development with ethical, environmental, and welfare considerations. This evolving legal landscape represents India's commitment to improving the lives of farm animals, acknowledging their intrinsic value and the ethical obligations of humans towards them.

4. Farm Animals and Human Interaction

The relationship between farm animals and humans is deeply intertwined (Edwards-Callaway, 2018), reflecting thousands of years of evolution across agriculture, domestication, economics, ethics, and culture (Croney, 2014). At the heart of human civilization lies the domestication of animals (Ahmad et al., 2020), a pivotal development that transitioned societies from hunter-gatherers to agrarian models (Sundar, 2018). Farm animals such as cows, pigs, chickens, and sheep have been domesticated to provide food such as meat, milk, and eggs, as well as products like leather and yarn, and even labor for plowing and transportation (Alves, 2016). This relationship has enabled the development of settled communities and the rise of civilizations reference.

Farm animals play a vital role in the global economy, serving as a primary source of protein and other nutrients, and supporting a signifi-

cant portion of economic activities worldwide, particularly in rural areas where the livestock sector supports the livelihoods of billions (Said, 2021). The interaction of farm animals with humans includes all facets of managing, caring, and using animals for agricultural purposes such as animal husbandry practices, animal welfare, handling, livestock production systems, and animal-assisted interventions. The cultural significance of these animals is profound, with different societies developing unique relationships with them, often reflected in traditions, religions, and folklore. For instance, cows hold a sacred status in Hinduism, while sheep and goats carry historical significance in many Middle Eastern and European cultures, becoming integral to cultural identities and practices (Rhouma et al., 2022).

Ethically, the human-farm-animal relationship is complex, raising questions about animal welfare, rights, and the environmental impacts of animal farming (Khandai & Shrivastava, 2023). Some common practices that the farm animals are subjected to include, “debeaking, dehorning, castration without anesthesia, repeatedly and forcibly artificially inseminating animals, mulesing, overcrowding, overloading, filthy living conditions, separating mother and child, and genetic mutilating” (Narayanan, 2016). Poor human-animal relationships (HAR) tend to induce negative productivity outcomes (Waiblinger et al., 2006; Mota-Rojas et al., 2020). A sequential association between the attitudes and behavior of the stock person tends to influence fear, stress, and welfare and productivity (Acharya et al., 2022). Debates continue over issues like factory farming, the use of antibiotics as well as growth hormones, and the sustainability of meat production, with a growing movement towards more humane and sustainable farming practices, such as organic farming, free-range husbandry, and the development of plant-based protein alternatives (Fioritti, 2020). Moreover, current regulations do not explicitly safeguard farm animals from the detrimental repercussions of breeding strategies (Voogt et al., 2023).

Scientific and technological advances have also significantly influenced this relationship, improving animal health, productivity, and welfare through advancements in veterinary medicine, genetics, nutrition, and farming technologies (Muhammed, 2023). However, these developments often come with ethical considerations, particularly regarding genetic modification and intensive farming practices. Moreover, the environmental footprint of animal farming is substantial, contributing to greenhouse gas emissions, deforestation, and water use (Adegbeye et al., 2020). This has spurred increasing awareness and exploration of more eco-friendly farming practices and sustainable protein sources, as the demand for balancing animal farming with environmental sustainability grows.

5. Global practices in Sustainable farm animal welfare

The quest for sustainable agricultural practices and enhanced animal welfare standards has led various countries around the globe to adopt innovative laws and regulations (Rout & Behera, 2021). Among these, Denmark, Sweden, Switzerland, and the Netherlands stand out for their comprehensive approaches to integrating sustainability and animal welfare into their agricultural sectors (Kim, 2022). This section aims to expand on how these countries have developed and implemented the best practices in sustainable farming and animal welfare, setting benchmarks for the rest of the world.

5.1. Denmark: A Model of Sustainable Agriculture and Animal Welfare

Denmark's approach to animal welfare and sustainability in farming is both comprehensive and exemplary, reflecting a deep-seated national commitment to ethical and environmentally responsible agriculture. Central to this commitment is the Danish Animal Welfare Act (2020) which codifies the country's dedication to ensuring that farm animals are accorded the highest standards of care and living conditions. This legislation meticulously outlines the requirements for animal housing, feeding, and general treatment, with the explicit aim of creating environments that address both the physical and psychological needs of animals.¹⁰ Such a focus ensures that animals are not merely seen as production units but as beings whose welfare is integral to the farming process. The provisions of this Act ensure that animals have access to appropriate space to exhibit natural behaviors, adequate and nutritious food to meet their health requirements, and protection from disease and injury through both preventive measures and prompt veterinary care when needed. By setting these high standards, Denmark not only elevates the quality of life for farm animals but also sets a benchmark for animal welfare that resonates globally.

Denmark's commitment to sustainability extends beyond animal welfare to encompass broad environmental concerns, particularly in the realm of agriculture's impact on the ecosystem. The country has emerged as a global leader in organic farming, a practice that eschews synthetic pesticides and fertilizers, prioritizes animal welfare, and promotes biodiversity (EU Cap Network, 2023). This leadership is supported by a raft of policies and initiatives designed to encourage sustainable agricultural practices across the sector. For instance, Denmark has

10. Animal Welfare Act (No. 133 of 2020) [Lov om dyrevelfærd (dyrevelfærdsloven)]. <<https://www.retsinformation.dk/eli/lta/2021/1597>>

ambitious programs aimed at reducing greenhouse gas emissions from farming, recognizing the agricultural sector's significant role in the nation's overall emissions profile (O'Donovan, 2021). These efforts include investing in renewable energy, improving manure management techniques to reduce methane emissions, and promoting carbon sequestration in agricultural lands (Hall, 2022). Limiting the number of animals per hectare of agricultural land and enforcing rules on manure and mineral fertilizers are two strategies for reducing nitrate and ammonia emissions (Hastrup, Brichet & Nielsen, 2022). Another measure that helps to stop the emergence of bacteria resistant to antibiotics is the voluntary prohibition of the use of antimicrobials as feed additives in animals raised for food (Andersen, 2017). Furthermore, initiatives like "good agricultural practice" and Veterinary Health Advisory Contracts, which promote preventative measures and resource efficiency, have been launched to raise awareness of sustainable farming methods (Sommer & Knudsen, 2021).

The holistic approach that Denmark adopts to integrate animal welfare with environmental sustainability, illustrates a model where rigorous welfare standards and successful, sustainable agricultural practices are mutually reinforcing (Saputra, 2023). This integration is supported by a policy framework that encourages innovation, research, and development in sustainable farming techniques. For example, Denmark invests heavily in agricultural research to improve productivity while minimizing environmental impact, leading to advancements in areas such as precision farming, which optimizes resource use and reduces waste. Apart from this, agroforestry, climate-friendly livestock production, sustainable food processing and distribution. Furthermore, Denmark's approach is characterized by a strong collaboration between the government, the agricultural sector, and research institutions, facilitating the continuous improvement of farming practices. Some of the policies include the Organic Action Plan, Climate and Agricultural Package, Agro-environmental Regulation, etc. This collaborative ethos ensures that policies and practices are both scientifically grounded and economically viable, enabling farmers to adopt sustainable methods without compromising their livelihoods. Denmark's leadership in animal welfare and sustainable farming is a testament to the country's belief in the importance of ethical practices and environmental stewardship in agriculture. The Danish model demonstrates that it is possible to achieve high productivity and economic success in farming while maintaining rigorous standards of animal welfare and minimizing environmental impact, offering valuable lessons for countries worldwide aiming to make their agricultural sectors more sustainable and humane (Animal Protection Denmark, 2020).

5.2. Sweden: Setting High Standards for Animal Welfare

Sweden's approach to animal welfare represents a paradigm of rigor and responsibility, reflecting a profound national commitment to the well-being of animals. The foundation of this approach is the Swedish Animal Welfare Act, which sets forth stringent requirements to ensure that animals are housed, fed, and cared for in ways that foster their health and allow for the expression of natural behaviors (Government-Offices-of-Sweden, 2009). This legislation is indicative of a broader ethos in Sweden that regards animal welfare not just as a regulatory requirement but as a moral imperative. It scored best on the benchmark and has the highest legal standards (Voogt et al., 2023).

A hallmark of Sweden's animal welfare legislation is its ban on battery cages for hens and gestation crates for pigs (Lundmark Hedman, Berg & Stéen, 2021). These bans were among the first of their kind and signaled Sweden's leadership in establishing higher welfare standards. By prohibiting such confining housing systems, Sweden has effectively eliminated practices that are widely considered to be cruel and detrimental to the animals' welfare. This bold legislative action has catalyzed a shift towards more humane and innovative approaches to farm management and animal housing. Farmers and producers have been motivated to develop and adopt alternative systems that provide animals with more space, better environmental enrichment, and opportunities for natural behavior, leading to significant improvements in animal well-being.

Sustainable agricultural practices implemented in Sweden to benefit farm animals include organic farming, efficient land use, and enhancing flooring solutions in dairy farming to improve animal welfare and economic outcomes (Basnet, 2023). Beyond the specifics of housing and handling, Sweden's commitment to animal welfare is integrated with a broader vision of environmental sustainability (Veissier et al., 2008). The country places a strong emphasis on sustainable agricultural practices, including the judicious use of resources and the reduction of antibiotic use in livestock. This approach is driven by an understanding of the interconnectedness of animal health, environmental health, and public health. By minimizing the use of antibiotics, Sweden addresses the global concern over antibiotic resistance, ensuring that these critical medicines remain effective for both animal and human healthcare (Björkman et al., 2021). Efficient resource use, another cornerstone of Sweden's agricultural policy, underscores the country's dedication to minimizing its environmental footprint, reducing waste, and promoting a more sustainable food production system. In terms of dairy

production, efficient dietary methane mitigating strategies and improved feeding management are being used to decrease greenhouse gas emissions and nitrogen losses (Ulvenblad, Ulvenblad & Tell, 2019).

Sweden's integrated approach to animal welfare and environmental sustainability is further supported by a robust system of education, research, and innovation (Ulvenblad, Ulvenblad & Tell, 2019). The country invests in research to develop and refine farming practices that are both animal-friendly and environmentally sustainable. Swedish agricultural universities and research institutions are at the forefront of studies on animal behavior, welfare assessment, and the development of sustainable farming technologies. This commitment to knowledge and innovation ensures that Sweden's animal welfare practices are based on the latest scientific findings and are continuously evolving. Moreover, public awareness and consumer demand play significant roles in driving and supporting Sweden's animal welfare and sustainability initiatives. Swedish consumers are increasingly informed about and concerned with how their food is produced, showing a strong preference for products that are ethically sourced and environmentally friendly. This consumer consciousness has bolstered the market for products from systems that prioritize animal welfare and sustainability, creating a positive feedback loop that encourages producers to maintain high standards.

5.3. Switzerland: Combining Tradition with Sustainable Practices

Switzerland's approach to animal welfare is characterized by a comprehensive legal framework that emphasizes the health and well-being of farm animals, underpinned by the Swiss Animal Protection Ordinance (The Swiss Federal Council, 2008). This ordinance is meticulous in setting out the conditions under which animals are to be kept, covering a wide range of care aspects from feeding and housing to handling practices. By specifying the nutritional needs that must be met for different types of animals, ensuring that housing facilities provide sufficient space and appropriate conditions for natural behaviors, and establishing protocols for humane handling, Switzerland places animal welfare at the forefront of its agricultural practices (Hall, 2022).

One of the hallmark features of Switzerland's animal welfare legislation is its stringent regulations on the use of antibiotics and hormones in animal farming (Coop, 2020). Recognizing the potential adverse effects of overusing such substances, both on animal health and human consumers, Swiss regulations aim to minimize their use by focusing on preventive health care (Schmidt et al., 2019). This involves regular

health monitoring, vaccination programs, and the maintenance of high hygiene standards to reduce the incidence of disease and thereby lessen the need for antibiotics. Hormonal growth promoters are strictly regulated to ensure that their use does not compromise animal welfare or consumer safety.

In addition to these regulations, Switzerland's agricultural landscape is notably marked by a prevalence of small-scale, family-run farms (Emmentaler Switzerland, 2022). These farms are often passed down through generations and embody a tradition of sustainable farming practices. The scale of these operations allows for a more personalized approach to animal care, where animals are known individually, and their health and welfare can be closely monitored. This tradition of small-scale farming not only supports high animal welfare standards but also promotes biodiversity, soil health, and local food systems, contributing to overall environmental sustainability. Moreover, the strong tradition of small-scale farming in Switzerland is supported by government policies and public sentiment that favor ethical and sustainable food production. This includes financial incentives for farmers who adhere to higher welfare standards and support for organic farming methods that eschew chemical inputs for natural alternatives. Additionally, the Swiss organic sector contributes positively to sustainability, with high scores in themes like good governance, environmental integrity, economic resilience, and social well-being. This sector focuses on issues such as socio-political engagement, emissions control, animal welfare, profitability, and workplace risks (Odermatt, Keil & Lips, 2018). The Swiss public's high regard for animal welfare and environmental conservation also plays a crucial role, with consumer demand driving the market for products that are ethically produced and sustainably sourced. Along with this, the provision of animal-friendly housing and management, which exceeds minimum legal standards, benefits farm animals. The Swiss government offers direct payments through programs, which incentivize group housing systems with comfortable lying areas and regular exercise in outdoor runs and pastures for dairy cows (Keller et al., 2023).

Switzerland's integrated approach to animal welfare, which combines rigorous legal standards with preventive health care and the promotion of small-scale, sustainable farming, serves as a model for balancing agricultural productivity with ethical considerations (Curran et al., 2020). By ensuring that the welfare of farm animals is protected through every stage of their lives, Switzerland not only enhances the quality of life for these animals but also supports the long-term sustainability of its agricultural sector, setting a precedent for other nations to follow.

5.4. *The Netherlands: Innovation in Sustainable Farming*

The Netherlands stands as a beacon of innovation in the realm of agriculture (Trujillo-Barrera, Pennings & Hofenk, 2016), demonstrating that a small nation can have a colossal impact on global food systems through the strategic use of technology and a commitment to sustainability (Baayen et al., 2023). This country has deftly navigated the challenges of limited space and environmental concerns to emerge as a world leader in agricultural exports, largely due to its forward-thinking policies and the embrace of cutting-edge technologies. Dutch laws (Animals Act, 2011, Nature Protection Act, 2017) and policies meticulously balance the goals of resource efficiency and high animal welfare standards, creating a sustainable agricultural framework that other nations look to as a model (Voogt et al., 2023). Sustainable agricultural practices implemented in the Netherlands to benefit farm animals include agroecology (Bakker & Demerouti, 2007), anaerobic digestion (AD) systems (Pierie et al., 2017), collaborations for the development of sustainable livestock farming concepts (de Olde, Carsjens & Eilers, 2017), and a focus on animal welfare in circular agriculture (Meijboom et al., 2021). Central to the Dutch approach is the investment in precision farming technologies (Whiting, 2019). This type of farming represents a leap forward in agricultural practices, utilizing data analytics, GPS technology, and IoT (Internet of Things) devices to monitor crop and animal conditions with unprecedented accuracy. This allows for the precise application of water, fertilizers, and pesticides, as well as the careful monitoring of animal health, resulting in a notable decrease in waste and an increase in the efficiency of resource use. For livestock, precision farming techniques ensure that animals are kept in optimal conditions, with their health and welfare closely monitored to address any issues promptly, thereby reducing the need for interventions like antibiotics. Many Dutch farmers provide outdoor access and enrichment opportunities for their animals, allowing them to engage in natural behaviors such as grazing, rooting, and socializing. Outdoor access promotes physical and psychological well-being for farm animals and enhances their quality of life.

Furthermore, the Netherlands is at the forefront of research into alternative proteins and sustainable feed sources, exploring innovative solutions to reduce the environmental impact of animal farming (Grasso et al., 2021). This includes the development of lab-grown meat, plant-based proteins, and insect farming, which offer sustainable alternatives to traditional animal protein sources. By diversifying protein sources, the Netherlands aims to lessen its reliance on resource-intensive live-

stock farming and mitigate the environmental pressures associated with meat production (Mulder & Zomer, 2017).

The Dutch model is a testament to the power of innovation to achieve sustainability in agriculture. It illustrates how practices that optimize productivity and efficiency can coexist with, and even enhance, environmental stewardship and animal welfare. The Netherlands has shown that through the judicious use of technology, it is possible to produce food in a manner that is both economically viable and sustainable, setting a standard for responsible agriculture in the 21st century.

6. Comparative Analysis with India

Comparing the animal welfare and sustainable farming practices of India, Sweden, Denmark, the Netherlands, and Switzerland reveals similarities as well as distinct approaches and priorities shaped by each country's specific socio-economic, environmental, and cultural contexts based on the global practices in the sustainable farming of animals. Below is an overview of the key differences among these countries in terms of the legislative framework, innovation and technology, sustainable practices, antibiotic and hormone usage, small-scale against large-scale farming, animal-friendly housing and management, public awareness, and consumer demand, followed by a comparative table (Table 1) summarizing the main points.

- *Legislative framework*: Sweden, Denmark, the Netherlands, and Switzerland have robust and specific animal welfare legislation, focusing on ensuring high welfare standards through detailed requirements for housing, handling, feeding, transportation, slaughter practices, and overall animal care, whereas India has general welfare legislation under the Prevention of Cruelty to Animals Act, 1960, but it is less specific and comprehensive compared to the European examples. Moreover, enforcement can be inconsistent due to resource constraints and cultural factors. However, there is increasing awareness and advocacy for improving animal welfare standards.
- *Innovation and technology*: The Netherlands stands out for its emphasis on innovation and technology in agriculture, particularly in precision farming and the development of alternative proteins and sustainable feed sources. This approach significantly reduces the ecological footprint of farming. Most European countries also invest in research and innovation to advance sustainable farming practices.

- *Sustainable practices*: Denmark and Switzerland are noted for their strong emphasis on organic farming, crop diversification, soil conservation, agroforestry, and reducing environmental impacts through sustainable agricultural practices. Sweden and the Netherlands also prioritize sustainability but with a distinct focus on technology and innovation to achieve these goals.
- *Antibiotic and hormone use*: Sweden and Switzerland have stringent regulations on the use of antibiotics and hormones in livestock, focusing on preventive health care to minimize the need for such interventions. India's regulations in this area are less stringent, reflecting a broader global challenge in managing antibiotic use in agriculture.
- *Small-scale vs. large-scale Farming*: Switzerland's agricultural sector is characterized by small-scale, family-run farms employing sustainable practices, a contrast to India's diverse agricultural landscape, which includes both small-family farms and large-scale industrial agriculture.
- *Livestock production systems*: Livestock production in India includes a mix of intensive, semi-intensive, and extensive systems. While traditional systems predominate, there is a trend towards intensification and industrialization in certain sectors. In contrast, these European countries often involve modern, intensive systems and also support extensive and organic production methods that prioritize animal welfare and environmental sustainability.
- *Animal-friendly housing and management*: In India, animal housing and management practices vary widely, with traditional systems coexisting with modern facilities. There are efforts to improve housing conditions and management practices, particularly in commercial farming operations while these European countries have invested in animal-friendly housing systems that prioritize the comfort, health, and natural behaviors of farm animals. This includes providing access to outdoor areas, enrichment opportunities, and comfortable resting areas.
- *Public awareness and consumer demand*: Consumer demand for ethically produced and sustainably sourced products is a significant driver of animal welfare and sustainable farming practices in Sweden, Denmark, the Netherlands, and Switzerland. In India, while there is growing awareness, the market for such products is still developing.

Sweden, Denmark, and the Netherlands share a common commitment to high animal welfare standards within the European Union's

regulatory environment, yet each has its distinctive legislation and policies. Sweden is renowned for its stringent animal welfare laws, including specific requirements for the care and living conditions of farm animals, and a proactive stance on reducing antibiotic use. Denmark emphasizes not only the welfare of farm animals through comprehensive legislation but also leads in sustainable agricultural practices, particularly in organic farming. The Netherlands stands out for its innovative approach, integrating technology and research to enhance both animal welfare and environmental sustainability, evident in its investments in precision farming and alternative protein sources. Switzerland, while not a European Union member, mirrors these high standards through its robust animal protection laws, focusing on detailed welfare requirements and sustainable farming practices. The Swiss approach is characterized by a strong tradition of small-scale farming, which naturally incorporates sustainable and animal-friendly practices.

In contrast, India's legal framework for the welfare of farm animals, primarily embodied in the Prevention of Cruelty to Animals Act, 1960, is less specific compared to the detailed regulations found in the Euro-

Table 1. Comparison of global practices in various countries

Feature	Sweden	Denmark	Netherlands	Switzerland	India
Legal Framework	Stringent animal welfare laws	Comprehensive welfare legislation	Innovative agricultural policies	Robust animal protection laws	Prevention of Cruelty to Animals Act, 1960
Welfare Standards	Highly-specific care requirements	High, emphasis on organic farming	High; technology-driven welfare	Highly-detailed welfare requirements	General; evolving standards
Sustainable Practices	Efficient resource use; minimal antibiotic use	Leader in organic farming; sustainable practices	Precision farming; alternative proteins	Small-scale farming; sustainable practices	Emerging, focus on sustainability
Enforcement & Compliance	Strong enforcement mechanisms	Effective compliance monitoring	Advanced technology & research integration	Tradition-driven compliance	Challenges in enforcement
Innovation & Research	Research on welfare improvements	Sustainable agriculture research	Leading in agricultural innovation	Focus on sustainable small-scale practices	Developing; increasing in scope
Public Awareness & Demand	High consumer demand for welfare	High demand for organic products	High awareness and innovation acceptance	Strong tradition and public support	Growing awareness and demand for welfare

pean countries mentioned. India's approach is evolving, with growing awareness and initiatives aimed at improving animal welfare and sustainability in agriculture, but it faces challenges in enforcement and integration with broader environmental and agricultural policies. Thus, while each country has its unique challenges and priorities, all share a commitment to improving animal welfare and promoting sustainable farming practices. Collaboration and knowledge exchange between countries can further advance agricultural sustainability and animal welfare on a global scale.

7. Conclusion and recommendations

In conclusion, this study explored the crucial intersection of safeguarding the rights of farm animals with the integration of sustainable practices into legal provisions and evaluated whether sustainable practices are recognized and encouraged under the current legal framework. It assesses the extent to which the laws support sustainable farming methods that contribute to the welfare of farm animals, environmental conservation, and the sustainability of agriculture as a whole. It can be noted that consideration of animals as sentient creatures was almost unanimous, however, the laws associated with animal welfare vary geographically. It has become evident that a multifaceted approach like this requires a thorough understanding of environmental sustainability as well as the legal frameworks. The comparative analysis underscores that while European countries like Sweden, Denmark, the Netherlands, and Switzerland have established detailed and specific legal frameworks for animal welfare and sustainability, with strong enforcement and public support, India is on a path of development, with increasing awareness and initiatives aimed at improving standards. Some challenges persist, including the need for effective enforcement mechanisms, consumer education, and international cooperation. Additionally, there is a continuous need for research, innovation, and adaptation to evolving societal values and environmental pressures. Overall, while there are differences in the level of development and implementation of animal welfare and sustainable farming practices among these countries, there is a shared commitment to improving the welfare of farm animals and promoting agricultural sustainability. The differences highlight the impact of economic development, societal values, and governmental priorities on the adoption and implementation of legal provisions for farm animal welfare and sustainable agricultural practices. Collaboration and knowledge exchange between countries can help address common challenges and advance agricultural practices globally. Thus, for moving forward, con-

tinued collaboration between policymakers, farmers, animal welfare organizations, and researchers is essential to drive progress in this area. By working together, a legal framework can be created that not only safeguards the rights of farm animals but also fosters a more sustainable and humane agricultural system for future generations (Sundar, 2018).

Some of the statutes in India can be altered to include the following suggestions as learned from other countries. To significantly enhance the welfare of farm animals, India's revision of the Prevention of Cruelty to Animals Act, 1960, should incorporate specific, science-based standards that broadly focus on the needs of farm animals. Integrating the proposed enhancements to animal welfare standards and enforcement mechanisms within the context of the hypothetical "Animal Factory Farming (Regulation) Bill, 2020" offers a strategic pathway to modernize India's approach to farm animal welfare. This collaboration aims to bridge the existing gaps in legislation, aligning India's practices with international standards and addressing both ethical concerns and sustainability challenges in agriculture. Animal welfare can be enhanced in collaboration with the "Animal Factory Farming (Regulation) Bill, 2020", which would serve as a pivotal legislative framework, specifically targeting the regulation of intensive animal farming practices. By incorporating the detailed animal welfare standards into this bill, India could set a benchmark for the care, housing, feeding, and treatment of farm animals within these systems. The bill should explicitly outline the housing standards, nutritional healthcare protocols, behavioral needs, and social grouping. Within the housing standards, environments should be mandated to allow for the expression of natural behaviors, with sufficient space and access to outdoor areas for all animals, reducing the stress and health issues associated with confinement. Coming to the nutritional and health care protocols, it should be ensured that all farm animals receive diets that meet their nutritional needs without excessive reliance on antibiotics or growth promoters and establish comprehensive healthcare protocols, including preventive measures and regular veterinary oversight, to maintain high health and welfare standards. In terms of behavioral needs and social grouping, the importance of social structures and behaviors unique to each species needs to be recognized, mandating practices that support psychological well-being and social interaction among animals.

For strengthening enforcement through the 2020 bill, efficiency is crucial for the success of the bill. The legislation should incorporate a robust framework for ensuring compliance through regular inspections and implement a system of routine, unannounced inspections by trained professionals to monitor adherence to the established welfare standards across factory farms. A clear, tiered penalty system for violations, cou-

pled with incentives for establishments that exceed basic welfare standards needs to be introduced. This could include financial benefits, recognition programs, and other support to encourage compliance. Moreover, the allocation of resources for training and support programs should aim at farmers and workers in the animal farming industry, focusing on welfare practices, sustainable farming techniques, and compliance with the new regulations. Mechanisms that allow for the transparent public reporting of welfare violations and ensure transparency in the enforcement and compliance process, building trust among consumers and stakeholders need to be established. Fostering partnerships with various stakeholders including animal welfare non-governmental organizations (NGOs), academic and research institutions, and international experts to continuously update standards and practices will ensure that the latest scientific research and international best practices remain aligned. In collaboration with the “Animal Factory Farming (Regulation) Bill, 2020,” these proposed enhancements and enforcement mechanisms would significantly advance the welfare of farm animals in India. By doing so, India would not only address the ethical imperatives of animal welfare but also improve the sustainability and global competitiveness of its agricultural sector. This integrated approach demonstrates India’s commitment to humane, responsible, and sustainable farming practices, setting a precedent for future legislation and policy development in the field of animal welfare and agriculture.

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