

Farm Animal Welfare

Subjects: Zoology

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Animal welfare concepts encompass biological functioning in terms of health, growth and productivity; the animals' affective state; and naturalness of the animals' life, especially with regard to the ability to perform the normal behaviour repertoire. Farmers are responsible to produce food and they play a key role in improving the welfare of their animals. Farmers interpersonal and external characteristics can influence their decision-making process. For example, farmers' empathy for animals influences the adoption of animal welfare practices. An extensive overview of how the farm animal welfare concepts have been perceived by farmers and a thematic analysis of the characteristics that influence this perception can lead to future directions on implementation of farm animal welfare innovation. The review further highlights the need for promoting interdisciplinary collaboration and stakeholder participation. This study suggests strategies to improve farm animal welfare, including tools to support behavioral changes amongst farmers.

Keywords: farm animal welfare ; farmers ; perceptions ; attitudes ; empathy ; human animal relationship ; policy ; stakeholders ; communication ; knowledge transfer

1. Introduction

Globally 70 billion animals are farmed annually for meat, milk and eggs. Two-thirds of these are farmed intensively ^[1]. In the growing debate about how food of animal origin is produced it is a challenge to disentangle the producer and stakeholder interests. Many factors contribute to the well-being and health of animals in commercial production systems including housing and environment; nutritional and health programs; handling and caretaker interactions; animal group dynamics; and common management practices. These factors have been established in more than four decades.

However, despite the scientific progress in FAW, reflected by an annual publication growth of 13.3% ^[2], the implementation in practice is still poor in many areas. For example the level of neonatal lamb mortality has remained consistently high in some countries, despite 40 years of research to identify the risk and protective factors to reduce mortality ^[3]; another example is provided by Green et al. ^[4], which illustrates deficiencies in the implementation of 'new' best practice for the treatment of lameness in sheep.

As the world population continues to grow, the scientific community is facing a great challenge in order to sustainably increase agricultural production, to decrease food losses and maintain high animal health and welfare standards. Nevertheless, these efforts and innovations cannot be implemented without stakeholders' support, including, farmers, veterinarians, agriculture advisors, consumers, policy makers, and retailers.

Farmers are one of the key stakeholders for the successful implementation of enhanced FAW standards ^[5]. Since Seabrook's ^[6] research on human and animal relationship (HAR), there has been a growing body of literature focused on exploring farmers' attitudes towards animal health and welfare problems with the aim of optimizing the future programs designed to implement FAW. To better explore these aspects, socio-psychological approaches have been implemented since the late eighties ^[7]. Interdisciplinary studies focusing on farmers' perceptions of FAW have reported that personalities ^[8], knowledge ^{[9][10]}, values ^{[11][12][13]} economic advantages ^{[9][13][14]}, communication with their veterinarian and agriculture advisors ^{[10][15][16]}, time and management influence the perception of FAW.

A deeper understanding of how farmers perceive and value FAW can lead to more effective development of extension programs, policies, and management initiatives aimed at maintaining healthy animals. Additionally, insights into factors that influence farmers' decision-making process could support policy interventions aligned to the habitual behavior of target communities ^[17].

2. Animal Welfare Topics of the Studies

For the purpose of this review all the studies that investigated farmers' perceptions, attitudes, values, knowledge of FAW were analyzed. Considering the scope of animal welfare science, the papers examined covered a wide variety of themes (Figure 1). Attitudes of farmers to painful procedures represented one of the main themes (pig tail docking $n = 7$; cattle disbudding/dehorning $n = 10$; claw trimming $n = 1$; pig euthanasia $n = 1$). Only 15% of the papers reviewed focused on understanding farmers' perceptions and attitudes towards animal welfare in general. Analysis of data on farmers' attitudes, beliefs, emotions and personality together with health management was the second most common theme investigated (cow and sheep lameness $n = 8$; mastitis $n = 1$; pig disease $n = 2$). Farmers' attitudes towards participation in existing or improved quality assurance schemes was investigated in 15% of the studies reviewed.

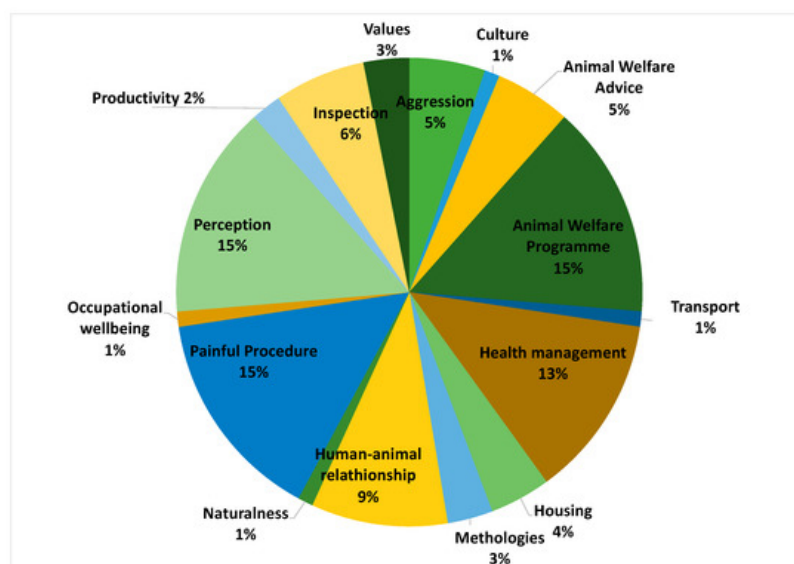


Figure 3. Range (%) of topics in the reviewed articles ($n = 96$) focused on farmers' perceptions, attitudes, values, knowledge on farm animal welfare (FAW).

3. Discussion and Conclusions

This semi-systematic review synthesizes the evidence published in the last 30 years, worldwide, to address two main questions “what do farmers think (farmer’s general view) about farm animal welfare?” and “what are the factors that influence their thinking?”. A thematic analysis was conducted to identify factors that influenced the implementation of FAW innovation. The main outcomes extracted from 96 peer-reviewed publications on a range of livestock species identified 11 internal factors including farmer knowledge, empathy, personality, values, and human-animal bond; 15 external factors including economic advantages, communication, time and labor influenced the perception of FAW. Farmers’ knowledge and cost implications of FAW were the most frequently reported factors. The evidence highlighted the instrumental relationships between societal and individual farmers’ values, personality, behavior and perception of animal’s needs. This knowledge is fundamental to stimulate and qualify the farmer’s decision-making in a way that will increase the farmer’s satisfaction and subjective well-being. Farm animal welfare remains an important societal and economic concern. Nevertheless, behavioral changes among stakeholders are necessary for the realization of such a paradigm shift and adopting a shared responsibility, underpinned by improved communication. Further research in this field should take into account the social network of livestock production in which the veterinarian, farmers, researchers, and advisors contribute to knowledge on FAW that is translated into on-farm application. Educating and involving stakeholders in the development of FAW innovation are key determinants of the success of such a system. More emphasis should be placed on tailoring solutions towards improving how stakeholders acknowledge the existence of the problem and their responsibility to act accordingly. For example, including farmers, consumers, and policy makers, in the FAW debate, accounting for their perception of the feasibility and cost effectiveness of any recommended management strategy could bring feasible innovation on FAW.

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