agriculture

MDPI

Editorial

Implementation of Animal Welfare: Pros and Cons

Giancarlo Bozzo * and Michela Maria Dimuccio

Department of Veterinary Medicine, University of Bari Aldo Moro, Strada Provinciale per Casamassima, km 3, 70010 Valenzano, Italy

* Correspondence: giancarlo.bozzo@uniba.it; Tel.: +39-080-4679851

Animal welfare is defined as a permanent state reflecting an animal's subjective perception of its situation indicated by behavioral, postural, and physiological parameters. Although the issue of animal welfare has been a source of concern in the scientific community and of attempts to build common protocols over recent decades, many aspects are still under debate, such as the validity and reliability of the welfare indicators chosen [1].

A potential animal welfare indicator must include the following principles: validity (i.e., be meaningful for animal welfare), reliability (i.e., produce consistent results when used by different observers), and feasibility (i.e., easy to use in the field). Resource—and management—based measures (RBMs and MBMs) are considered indirect indicators of animal welfare. On the other hand, direct indicators, or animal-based measures (ABMs), assess the animal's response to the resources available and to management practices [2]. The adoption of ABMs over non-ABMs is also encouraged by the European Food Safety Authority [3].

It is important to clarify that the absence of negative welfare indicators does not necessarily suggest optimal conditions of animal welfare [4], just as good management and environmental resources do not necessarily result in a high welfare standard [5].

There have been many attempts to define animal welfare. According to the Farm Animal Welfare Committee (FAWC), welfare includes both physical and mental health and is determined by the skills of stock people and owners and systems of farming. External factors, such as infectious disease epidemics, adverse environmental conditions, global economics, and geo-political influences, can have a significant impact on animal welfare [6]. In fact, environmental aspects may show high variation from country to country due to different housing and management conditions, while individuals with different genetic backgrounds (e.g., different breeds) may respond differently to the same environment [3].

A recent market study highlighted how important protecting animals is to European citizens. Consumers emphasized the importance of animal protection, regardless of cost, and were willing to pay a higher price for food from animal breeding systems where animal welfare is respected [7].

This growing interest in animal welfare, especially concerning husbandry and transport methods, has led to the possibility of using the claim "from certified herds" for herds that meet welfare requirements above the minimum standards established by law [8]. Thus, animal welfare would have additional economic value, as it would offer consumers a product of higher quality and, at the same time, become an opportunity to increase farmers' income. However, some pain and distress are unavoidable in all animal sectors, even with current knowledge, husbandry, and farming practices, although the goal should be to minimize their occurrence [6].

It is also evident that welfare-friendly products should be properly labelled with clear information provided by an internationally accepted, transparent, and traceable monitoring system that also highlights the high hygienic and organoleptic standards of the products [7,9]. Indeed, labels with rational, comprehensible, and scientific-based information increase transparency and confidence in the food chain participants and satisfy

check for updates

Citation: Bozzo, G.; Dimuccio, M.M. Implementation of Animal Welfare: Pros and Cons. *Agriculture* **2023**, *13*, 748. https://doi.org/10.3390/agriculture13040748

Received: 28 February 2023
Accepted: 21 March 2023
Published: 23 March 2023

Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

consumers' concerns about farming and animal welfare. Labelling information could also help consumers to make informed buying decisions and to assume their political responsibility as participants in a free market, becoming "ethically competent consumers" [10].

In this context, the study conducted by Fernandes et al. [11] shows the costs and benefits of improving the standard of farm animal welfare over the minimum legal requirement, thus enabling people with animals in their care to draw conclusions based on the latest knowledge to improve animal welfare. In addition to the cost of infrastructure changes, extra expenses are mandatory for personnel training. The costs related to infrastructural changes and staff training can be significant, so access to public funding is an essential element to improve the welfare of farm animals [12]. Clearly, many of these changes are achievable by large farms at the expense of smaller family farms. In fact, smaller farms will find it much more difficult to adapt to the growing market demand for welfare, and in this sense a possible solution could be to create consortia between small- and medium-sized enterprises. However, even large companies need well-standardized methodologies to determine whether to invest money in improving animal welfare standards.

The farmer–entrepreneur, before making any kind of change, has to make sure that it brings a real benefit to the welfare of animals. Indeed, studies have shown that some improvements in animal welfare can compromise others [13]. Where there is high uncertainty about the welfare benefits to the animal, an objective assessment of welfare using multiple physiological parameters and behavioral indicators could reduce some of this uncertainty, making the decision regarding which infrastructure and management practices to change easier.

As was shown by Fernandes et al. [11], there are many factors to consider when making decisions about improving the welfare of farm animals, and the optimal course of action is not always clear to the decision maker. Therefore, it is crucial to balance (i) the benefits to the animal, (ii) the benefits to the business, and (iii) the benefits to society. Only through such a comprehensive approach will companies be able to access important financial incentives.

Many aspects have to be considered when making decisions to improve the welfare of farm animals, and the farmer may find him/herself in one of several situations: (i) the change results in higher animal productivity but decreases animal welfare; (ii) negative effects on animal welfare and business; (iii) benefits for animal productivity and business; (iv) no change is possible because funding is insufficient.

Certainly, the most correct approach for operators in the agrifood sector is to operate in transparency and in compliance with the regulations in force to guarantee increasingly high standards of animal welfare. Most of the choices and changes that will be made to farms regarding animal wellbeing will be functional to the market, which is in turn subordinate to the consumer. In fact, there is an association between farm animal welfare and higher human health benefits, and this is one of the main reasons why people prefer to buy animal-welfare-friendly products. Organic production systems are also viewed by consumers as being more welfare friendly, with higher standards of farm animal welfare than conventional livestock systems, and better for human health due to low or no use of chemicals. However, animal-friendly products are not only perceived by consumers as healthier but are also considered to be of higher quality, tastier, more hygienic, safer, more acceptable, more authentic, more environmentally friendly, and more traditional. On the other hand, consumers also perceive that farming conditions that have a negative impact on animal welfare could damage other aspects of quality. Therefore, consumers demand a certification that guarantees that animals have been bread ethically.

Author Contributions: Conceptualization, G.B. and M.M.D.; writing—original draft preparation, G.B. and M.M.D.; writing—review and editing, G.B. and M.M.D.; supervision, G.B. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Lesimple, C. Indicators of Horse Welfare: State of the Art. *Animals* **2020**, *10*, 294. [CrossRef] [PubMed]
2. Spigarelli, C.; Zuliani, A.; Battini, M.; Mattiello, S.; Bovolenta, S. Welfare Assessment on Pasture: A Review on Animal-Based Measures for Ruminants. *Animals* **2020**, *10*, 609. [CrossRef] [PubMed]
3. EFSA Panel on Animal Health and Welfare (AHAW). Statement on the use of animal-based measures to assess the welfare of animals. *EFSA J.* **2012**, *10*, 2767. Available online: www.efsa.europa.eu/efsajournal (accessed on 20 February 2023).
4. Napolitano, F.; Knierim, U.; Grass, F.; De Rosa, G. Positive indicators of cattle welfare and their applicability to on-farm protocols. *Ital. J. Anim. Sci.* **2009**, *8*, 355–365. [CrossRef]
5. Winckler, C. On-farm welfare assessment in cattle-From basic concepts to feasible assessment systems. In Proceedings of the XXIV World Buiatrics Congress, Nice, France, 15 October 2006; pp. 493–500.
6. Farm Animal Welfare Committee (FAWC). Opinion on the Welfare of Animals during Transport. Area 2D, Nobel House, 17 Smith Square, London SW1P 3JR, UK, April 2019. Available online: https://www.gov.scot/binaries/content/documents/govscot/publications/corporate-report/2020/04/fawc-opinion-on-the-welfare-of-animals-during-transport-sg-response/documents/fawc-opinion-on-the-welfare-of-animals-during-transport/fawc-opinion-on-the-welfare-of-animals-during-transport/govscot%3Adocument/FAWC%2BOpinion%2Bon%2Bthe%2BWelfare%2Bof%2BAnimals%2Bduring%2BTransport%2B05042019.pdf (accessed on 21 February 2023).
7. Bozzo, G.; Barrasso, R.; Grimaldi, C.A.; Tantillo, G.; Roma, R. Consumer attitudes towards animal welfare and their willingness to pay. *Vet. Ital.* **2019**, *55*, 289–297. [CrossRef] [PubMed]
8. European Commission. *Directorate-General for Health and Food Safety, Attitudes of Europeans towards Animal Welfare: Report*; European Commission: Brussels, Belgium, 2016; Available online: https://data.europa.eu/doi/10.2875/884639 (accessed on 20 February 2023).
9. Bozzo, G.; Barrasso, R.; Marchetti, P.; Roma, R.; Samoilis, G.; Tantillo, G.; Ceci, E. Analysis of stress indicators for evaluation of animal welfare and meat quality in traditional and Jewish slaughtering. *Animals* **2018**, *8*, 43. [CrossRef] [PubMed]
10. Cardoso, C.S.; Hoetzel, M.J.; Weary, D.M.; Robbins, J.A.; von Keyserlingk, M.A.G. Imagining the ideal dairy farm. *J. Dairy Sci.* **2016**, *99*, 1663–1671. [CrossRef] [PubMed]
11. Fernandes, J.N.; Hemsworth, P.H.; Coleman, G.J.; Tilbrook, A.J. Costs and Benefits of Improving Farm Animal Welfare. *Agriculture* **2021**, *11*, 104. [CrossRef]
12. Coleman, G.J.; Hemsworth, P.H.; Hay, M.; Cox, M. Modifying stockperson attitudes and behaviour towards pigs at a large commercial farm. *Appl. Anim. Behav. Sci.* **2000**, *66*, 11–20. [CrossRef]
13. Cronin, G.M.; Rault, J.L.; Glatz, P.C. Lessons learned from past experience with intensive livestock management systems. *Rev. Sci. Tech.* **2014**, *33*, 139–151. [CrossRef] [PubMed]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.