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# Animal welfare in Mexican poultry and livestock production at a glance

#### Dear editor,

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Concerns about animal welfare are pervasive across the world and history. In Mexico, most of the egg and chicken production originates from intensive farming systems, a situation that has attracted the interest of different stakeholders in terms of animal welfare performance in these settings. For instance, certain productive management practices in dairy or beef cattle, such as castration and dehorning, that are banned in other countries, are still legal in Mexico, with minimal refinement, i.e., pain relief measures.<sup>(1)</sup>

Mexican consumers have triggered important changes in how animals are produced. They are also interested in farm animal welfare issues and their ethical, sociological, and economic implications.<sup>(2,3)</sup> However, more species-specific and science-based recommendations are needed to educate the consumer and support future legal frameworks. This letter to the editor aims to raise awareness of the growing concern about how poultry and livestock are produced and studied in Mexico as a country representative of a resilient economy but with underlying social inequalities.<sup>(4)</sup>

Transport and slaughter procedures have been identified as the main critical points for animal welfare regarded by Mexican consumers. Moreover, Mexicans appeared to be willing to pay more for welfare-friendly products, as they are sensitive to animal welfare, demand proper regulations, and are concerned about efficient labeling systems.<sup>(2)</sup> These demands have been echoed by several legal frameworks initiatives that have not succeed yet.<sup>(5)</sup> Perhaps, more tangible data is needed to support this aspiration.

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There is little scientific information about species-specific public attitudes toward poultry or livestock production practices in Mexico. In poultry production, however, we believe that the consumers central welfare concern, as in several other countries, is the use of battery cages. However, other factors that have a close relationship with animal welfare should not be minimized, i.e., ventilation, genetics, timely euthanasia, etcetera.

Most scientific research conducted in Mexico has focused on poultry health management, albeit there is growing interest in other poultry welfare issues. Similarly, research on dairy livestock welfare is limited, which may be related to the difficulty of consumers to clearly recognizing welfare issues in these production systems. A similar situation occurs in small ruminants, with the special case of dairy sheep and goats, where there is a vast research area to develop.<sup>(6)</sup>

Ley Federal de Sanidad Animal is the top legal framework for farm animals in Mexico. Although it does requirements for animal management practices, its definition of animal welfare and its interpretation differ significantly from those in other national and international regulations.<sup>(8)</sup> In fact, animal welfare requirements are scattered across several codes and regulations, i.e., good production practices, animal transport and slaughter practices, biosecurity and animal disease control programs, among others. Overall, these requirements briefly cover animal welfare topics and include very minimal animal-based measures,<sup>(9)</sup> contrary to what is suggested by the World Organization for Animal Health for Animal Welfare Assessment.<sup>(10-12)</sup> Therefore, there is a need for species-specific integrative research and legal frameworks that account for what the animal needs and the human resources that are involved in very specific production tasks. If those requirements are met, production efficiency, animal welfare, and economic profit will be improved.

Taken together, stakeholders and industry players related to livestock production could benefit from research on animal welfare. The generated science-based evidence could lead to more comprehensive legal frameworks that guarantee that animals are treated with care across the production continuum. Alternatively, voluntary certification systems may be put in place to help farmers and dairy companies aiming to commercialize value-added products through the incorporation of extrinsic quality attributes, i.e., animal welfare standards.<sup>(7)</sup> Ultimately, consumers will obtain products that match their expectations and retailers can get value added to existing and even newly developed products.

In summary, poultry production in Mexico has received increasing attention and criticism due to the use of systems that compromise birds' welfare. Moreover, welfare improvements in livestock production have been limited to certain management practices, especially those related to animal transportation and slaughtering. Hence, further research is needed to expand animal welfare requirements and wellbeing.

From an ethical standpoint, keeping the physical and mental state of food animals is critical, as well as being competitive in the current trends of consumer demands. To achieve this goal, the research efforts that have been made should be further encouraged to obtain the crucial knowledge advancements that are needed in this field.

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## **Conflicts of interest**

The authors have no conflicts of interest to declare.

## **Author contributions**

Conceptualization: E Hernandez, E Vargas-Bello-Pérez Writing-original draft: E Hernandez, E Vargas-Bello-Pérez Writing-review and editing: E Hernandez, E Vargas-Bello-Pérez

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