

Specific Welfare Requirements on Commercial Cattle Farms in Romania

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ABSTRACT

On commercial cattle farms in Romania, it is essential to comply with the specific requirements regarding animal welfare and protection in accordance with the applicable European legislative framework. In particular, this article focuses on higher welfare standards for young cattle in fattening operations.

The study focuses on cattle farms authorized by the sanitary-veterinary authorities that house young female and male cattle up to 32 months of age, with a minimum live weight of 450 kg per head, and addresses three specific requirements that support the welfare of these animals, namely: an increase of at least 15% in the space allocated to each animal, ensuring enhanced comfort in the resting area, and providing optimized feed rations to enhance animal welfare and reduce greenhouse gas emissions.

It can be concluded that the results observed as a result of the improved animal welfare following the implementation of these requirements will be appropriately highlighted for the farms analyzed.

Keywords: Young Cattle, Animal Welfare, Greenhouse Gas Emissions

Introduction

As a scientific field, animal welfare emerged as a distinct discipline around 1990, following decades of ethical debate and numerous scientific contributions from fields such as ethology, nutrition, anatomy, and veterinary medicine. Scientific interest was not the sole factor contributing to its development. Public concern regarding the way animals were treated and raised also played a significant role in shaping animal welfare science [1].

However, global standardization remains limited. In principle, welfare assessment programmes have been developed to establish benchmark levels for cattle welfare and to provide consumers with assurance that farmers comply with higher welfare requirements. In order to highlight similarities and differences among existing approaches, an analysis was conducted of several cattle welfare assessment programmes commonly used at European level and implemented at farm level. In addition, observations are provided regarding the types of indicators included in the assessment of animal welfare on

farms raising young cattle for fattening [1].

Prior to 2006, the various Member States of the European Union had their own national standards, coordinated by their respective national veterinary authorities. Subsequently, the Community Action Plan on the Protection and Welfare of Animals was established. Its main objectives included setting the strategic direction for animal welfare and protection, as well as promoting welfare principles and research in this field. In 2009, the first animal welfare assessment protocols were published within the European Union. This Action Plan paved the way for European research projects developed by scientists with extensive expertise in this field and a strong interest in improving the welfare of farm animals throughout the European Union [1].

The present scientific analysis focuses on a series of studies addressing the legislative framework applicable within the European Union, with the aim of identifying higher welfare conditions. Otherwise, the analysis may also be interpreted from the perspective that improvements in welfare standards for young cattle could contribute to the development of

advanced European standards for the livestock sector under consideration.

Animal welfare is a complex concept, and assessing an animal's welfare status requires effective monitoring tools. A recent analysis of animal welfare assessment systems has demonstrated that current protocols are comprehensive, covering various aspects related to housing, feeding, health, and behaviour [2].

We reviewed a range of scientific studies on cattle welfare that aimed to describe higher welfare standards and associated them with specific benefits and risks. Most of the articles examined adopted a predominantly positive perspective and, in some cases, made general statements that had not been subjected to sufficiently thorough evaluation. We therefore conclude that approaches to animal welfare are often biased, placing greater emphasis on benefits to humans rather than on the welfare of the animals themselves [2].

In the future, greater attention is expected to be given to welfare standards in general and to cattle welfare in particular, together with the increasingly widespread use of different monitoring methods to continuously assess the welfare status of farm animals. The primary objective of this study is to upgrade welfare parameters based on farm records. The final assessment of welfare performance will depend on how these parameters and assessment tools are used by the end beneficiaries [2].

Materials and Methods

At European Union level, welfare conditions for young cattle raised for fattening can be improved through three main approaches: increasing the available space allocated to each animal by at least 15%; providing enhanced comfort conditions in resting areas; and providing optimised diets designed to improve animal welfare while reducing greenhouse gas emissions [3-5].

Increasing the Available Space Allocated to Each Animal by at Least 15%

• Housing systems consisting of Individual Pens or Group Pens

Where the housing facility is divided into pens, the usable floor area available in each pen or compartment is determined through measurements as follows:

- the length and width of the pen, compartment, or rearing area are measured;
- the area occupied by feeding and watering equipment within the pen, compartment, or rearing area is determined by measurement;
- the number and category of animals present in the respective pen, compartment, or rearing area are recorded.

Where pens of different dimensions are present, measurements are carried out separately for each pen.

• Housing Systems without Separate Pens

Where the housing facility is not divided into pens and consists of a common rearing area, the length and width of the rearing area are measured.

- the area occupied by feeding and watering equipment, structural columns, and passageways within the rearing area is determined;
- the number and category of animals present in the rearing area are recorded.

The above data are entered into a calculation formula to determine the available floor space, as follows:

Available floor space per animal = (length × width – area occupied by feeding and watering equipment) / number of cattle

The resulting value is then compared with the minimum floor-space requirements established under the higher welfare conditions.

Welfare Indicators for Young Cattle Raised for Fattening Increase in the Available Space Allocated to Each Animal by At Least 15%

Body weight cattle*	of	young Minimum standard	usable	floor-space Specific requirement
Up to 150 kg		1.50 m ²		1.725 m ²
150–220 kg		1.70 m ²		1.955 m ²
221–300 kg		1.80 m ²		2.070 m ²
Above 300 kg		2.50 m ²		2.875 m ²

* Animal body weight may be determined using one of the following methods:

- Using a weighing scale, which must have a valid and up-to-date metrological verification.
- If the farm does not have a weighing scale or if the scale has not undergone valid metrological verification, animal body weight may be estimated using body measurements. The thoracic circumference (P) and the oblique body length (L) are measured, and body weight is subsequently calculated in kilograms according to the following formula:

$$G \text{ (kg)} = P^2 \text{ (cm)} \times L \text{ (cm)} / 10,000$$

Provision of Enhanced Comfort Conditions in Resting Areas

The second approach concerns the assessment of absorbent bedding materials used in the areas selected for determining stocking density.

For compliance with the minimum requirements, it is verified whether the farmer uses absorbent materials at a rate of 2 kg/animal/day. For compliance with higher welfare requirements, it is verified whether absorbent bedding materials are provided at a rate of 3 kg/animal/day.

For rearing areas in which the requirement of 3 kg/animal/day is not met, the quantity of absorbent material used per young bovine per day is calculated by relating the quantity recorded in the farm's material-use register to the number of animals present in the respective rearing area on the date of the inspection.

In addition:

Farms Using Mattresses and Hygroscopic Materials

For farms using mattresses and hygroscopic materials, it is verified whether mattresses are provided and whether hygroscopic material consisting of chopped or shredded plant fibres—such as wood shavings, sawdust, or chopped straw—is applied over the insulating layer, as documented in the farm's hygroscopic-material register.

For compliance with the minimum requirements, the use of mattresses is verified. For compliance with the higher welfare requirements, the use of hygroscopic materials consisting of chopped or shredded plant fibres (wood shavings, sawdust, or chopped straw) over the insulating layer is verified, at a rate of **300 g/animal/day**.

The quantity of hygroscopic material applied per young bovine per day is determined by relating the quantity of material used on the respective day, according to the farm records, to the number of animals present.

Provision Of Optimised Diets to Improve Welfare and Reduce Greenhouse Gas Emissions

The third approach involves the verification of monthly feed analysis reports issued by a specialised laboratory.

The availability of the relevant analytical documents is verified, together with evidence that each animal receives an optimised and nutritionally balanced diet. In particular, the crude protein content of the feed should range between 10% and 20% of dry matter, while the dry matter content should range between 40% and 90%.

Results and Discussion

The complexity of animal welfare assessment, particularly in the case of young cattle, has led to the development of several assessment systems, each presenting specific strengths and limitations. The analysis of three relevant animal welfare programmes—namely, increasing the available space allocated to each animal by at least 15%, providing enhanced comfort conditions in resting areas, and providing optimised diets aimed at improving welfare and reducing greenhouse gas emissions—demonstrated the importance of considering several complementary aspects [3-5].

These include the environmental conditions in which animals are kept, direct measurements performed on the animals, and management decisions adopted at farm level. Animal welfare programmes should incorporate assessments covering animals of all ages. They should also contribute to the identification of methods for detecting pain and suffering, as well as to the evaluation of farmers' ability to provide a safe, hygienic, and appropriate environment for the animals [3-5].

Assessment systems for the welfare of young cattle raised for fattening are also beneficial to farmers, given that animal welfare is directly associated with production performance. Appropriate housing conditions, adequate resting areas, and nutritionally balanced diets can contribute not only to improved welfare outcomes but also to the sustainable performance of cattle production systems [3-9].

Conclusions

The primary objective of this study is to contribute to the improvement of animal welfare performance in farmed animals. The final assessment of higher welfare conditions will depend on the purpose for which the assessment system is implemented and used by farmers.

If the implementation of these measures across all livestock holdings provides a reliable support tool capable of effectively contributing to the improvement of animal welfare conditions, the resulting impact can be considered positive. Achieving this objective currently represents an important concern for the Member States of the European Union.

The systematic application of welfare indicators based on measurable parameters and farm records may provide a practical framework for monitoring welfare conditions and supporting evidence-based decision-making at farm level. Such an approach may also contribute to the progressive harmonisation and improvement of welfare standards for young cattle within the European Union.

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