

# PRELIMINARY RESULTS ON EVALUATION THE CALVES WELFARE IN RAISING AND FATTENING FARMS FROM BANAT REGION IN ROMANIA

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## ABSTRACT

The aim of the paper was to present preliminary results of the calf welfare assessment in four farms from Banat region, SW Romania. Based on the Council Directive 91/629/EEC a questionnaire was developed and used to assess the welfare of calves in raising and fattening farms. Two farms reared and fattened calves, one was using cow-calf technology, and one was a dairy farm. Questions were divided in two categories: minimum standards (housing, barn, tethering, areas, cleanness, feeding) and supplementary requirements (personnel, records, microclimate). Results showed that calves were not kept in individual pens after 8 wks of age. Pen dimensions were appropriate for calves with appropriate space allowance. Barns, pens and equipments used were made of proper materials. Equipments were inspected at least once a day in all farms. Only one farm had an artificial ventilation system. All farms had artificial lighting systems for calves rearing facilities. All the calf housing systems allowed animals to lie down, stand up, rest and groom themselves without difficulty. Three out of four farms used proper cleaning and disinfecting methodology. Feeding colostrum, milk and vegetal feedstuffs was carried out adequately in all farms. Microclimate factors were maintained within recommended limits in all farms. Generally, we could state that all the farms provided good conditions for calf rearing and fattening, except for one farm where the barn and pen cleanness was improper.

**Key words:** calves, welfare, evaluation, farms

## INTRODUCTION

The word 'welfare' can be used by the scientific community, and it can be included in laws provided that it is defined precisely and the concept of welfare can be adequately related to other concepts [1].

Animal Welfare issues about food-producing and laboratory animals are becoming an increasing concern, but it is not an easy task to describe welfare of animals objectively, nor qualitatively or quantitatively. However, an overall welfare assessment seems necessary to implement standards in animal welfare [6].

There is increasing societal concern about the moral and ethical treatment of animal. To enable the dairy industry to effectively respond to these concerns, there is a need for more in-depth data on management practices that are actually being used [3].

There is increasing interest in group housing of calves to improve labor efficiency or because of concerns over the effect of individual housing on animal welfare. European law on animal welfare stipulates that calves must be kept in groups after 8 wks of age [9].

The aim of this was to present preliminary results of the calf welfare assessment in four farms from Banat region, SW Romania.

## **MATERIALS AND METHODS**

Based on the Council Directive 91/629/EEC, Animal Welfare Act, 2001 and Romanian laws (ANSVSA Order No. 72/2005 laying down the minimum standards for calves protection and ANSVSA Order No.75/2005 laying down the farm animal protection rules) a questionnaire was developed and used to assess the welfare of calves in raising and fattening farms.

The questionnaire included 76 lines of problems to be answered to. Out of these 44 addressed the minimal standards to be fulfilled in calves rearing and 32 represented supplementary requirements concerning calves. The minimum standards of calves rearing addressed the following issues: calves are not kept in individual pens after 8 wks of age, pen dimensions, free area according to their weight, facilities materials, electric system and equipment, procedures to fix troubleshoots, ventilation system, inspection frequency of the equipment, lighting, animal inspections, area for laying down, tying systems, manure removal, cleaning and disinfection, bedding, feeding calves (iron content, fiber content, feeding frequency, water access, feeding equipment, colostrum feeding). The supplementary requirements addressed the following issues: personnel, documents and document handling, rearing facilities temperature, relative humidity, air drafts, lighting, and gases concentration.

The evaluator had the opportunity to answer to the questions by YES or NO and to make remarks for each line.

Because this is a preliminary study, four farms were included into the evaluation. Two farms were rearing and fattening calves, one was using cow-calf beef cattle technology and one was a dairy farm. These farms were chosen to apply to the all types of calves rearing systems. Evaluations were carried out in March, 2008.

## **RESULTS AND DISCUSSION**

### **Minimum standards**

Calves were not kept in individual pens after 8 wks of age in all farms. One fattening farm was not even using individual pens for calves. In all the farms the pen dimensions were appropriate for calves, and allowed an unobstructed space allowance of 1.8 m<sup>2</sup>/head up to 150 g live weight, 2 m<sup>2</sup>/head for 150-220 kg, and 2.2 m<sup>2</sup>/head over 220 kg.

Materials used for buildings, pens and equipments were not harmful to calves and allow mechanical and chemical cleaning. In one fattening farm the facilities had deficiencies regarding the roof and windows.

Electrical circuits and equipments were designed to avoid electrical shocks. The mechanical and/or automatic equipments are inspected at least once a day in 2 farms and twice a day in the other two farms. One fattening farm has its own qualified employee for this job. Generally, there were procedures to fix troubleshoots in all farms.

Ventilation system properly worked in all the farms. Only one fattening farm had artificial ventilation system equipment with a heating device. Neither farm had alarming system.

In all farms calves were not kept permanently in darkness and there was an artificial lighting system.

Irrespective of their age calves were inspected at least twice a day in all farms while they were reared inside the barns and at least once a day when they were kept in open air. Sick calves were confined in special designed pens, isolated from the other calves.

All calf housing systems allowed animals to lie down, stand up, rest and groom themselves without difficulty. Calves were not permanently tethered. In the dairy farm calves were tethered during milk feeding and measures were taken to avoid strangulation or injury.

In three farms, housing, pens, equipment and utensils were properly cleaned and disinfected, the lying area was clean, dry and adequately drained, and the floor was smooth and not slippery. The manure, urine and unconsumed feedstuffs were evacuated daily. In one fattening farm the last disinfection was carried out in 2005, straw bedding was wet, and surfaces were not clean and manure was evacuating twice a week.

No farm was using muzzles for calves.

Iron for calves was provided using alfalfa hay in all farms except for one fattening farm where poor quality hay was used. Calves were fed milk or milk replacer at least twice a day, except for the cow-calf farm where calves had *ad libitum* access to their mothers' udder. When kept in groups all calves of the group had simultaneous access to feed. Calves older than 2 wks of age had permanent access to clean fresh water in all farms. In hot climate and for sick calves the water was permanently provided. In all farms the feeding and watering equipments limited feed and water contamination. All farms provided colostrum during the first 6 hours of life, except for one fattening farm that collected calves after the colostrum period.

### **Supplementary requirements**

Usually the personnel that were responsible for calves caring were trained, at least verbally, and in three farms there was a list with duties. In all farms documents were properly stored and maintained for at least 3 years, and also there were records on treatments and number of dead animals.

The temperature in the calves rearing facilities was 12 to 20°C, according to the age of calves, and humidity ranged from 65 to 80%. Luminosity was maintained between 40 and 80 lux. No measurements were carried out regarding the air drafts and gases concentration.

In a similar study carried out in 32 large farms from the South-West England, Howard, 2004 found that the compliance with the European regulations regarding the calf health and welfare was variable. The requirements for isolation of sick calves, provision of bovine colostrum within six hours of birth, the provision of fresh, clean water and restrictions concerning tethering were not well complied with. However, the requirements for twice-daily feeding and inspection, visual and tactile contact between calves, access to forage and the provision of clean, dry bedding were well complied with.

## CONCLUSION

Basic requirements for individual keeping after the age of 8 weeks, pen dimensions, resting area facilities and equipment maintenance, tethering restrictions, provision of colostrum within 6 hours of birth, and requirements for twice daily feeding and inspection were well complied with the regulations.

Requirements regarding the provision of clean, dry bedding and access to a good quality feed were not well complied with.

Generally, we could state that all the farms provided good conditions for calf rearing and fattening, except for one farm where the barn and pen cleanness was improper.

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