

HUMAN-ANIMAL RELATIONSHIP AS A FACTOR OF CALF WELFARE IN THE FIRST MONTH OF LIFE

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Abstract

Contact with a breeder is extremely important for the welfare of calves in the first month of life. In the intensive way of raising cattle, it is increasingly difficult to establish a good relationship between breeders and animals. The authors defined 12 criteria for assessing animal welfare, which they classify into four groups, one of which is good behaviour in terms of social and other forms of behaviour and a good human-animal relationship. This implies the absence of fear because fear is an important animal welfare problem. The attitude of farmers towards calves in the first month of life was examined on two farms with an intensive production system. The relationship of human to calves was assessed using the test of approach and touch. Farmers' competence assessments on the surveyed farms were satisfactory. It is characteristic of both farms that breeders who handle calves do not have a formal education in the field in which they work. Accordingly, their knowledge and skills are based on many years of work experience. The approach and touch test indicated a positive relationship between breeders and calves. The largest number of calves allowed approaching 1 or 2 steps, and a significant number also allowed touch, while a negligible number of calves avoided eye contact, as the most unfavourable type of contact.

Key words: *human-animal relationship, calf welfare, approach and touch test.*

Introduction

A good human-animal relationship is essential for the welfare of calves. This is very difficult to achieve and, at the same time, meet all the conditions of the intensive production system. To improve the human-animal relationship, the behaviour of breeders must change comprehensively. The personal attitude of the individual is not enough (Burton et al., 2012). This fact is confirmed by the conclusions of a group of authors (Elingsen et al., 2014) who evaluated the attitude of farmers towards calves on farms in Australia. The behaviour of the workers caused a compatible reaction in the calves. The calves reacted to the positive behaviour with positive behaviour. Calves with more contact with humans, according to Lensink et al. (2001), are less afraid of people and do not withdraw in contact with strangers, they have more confidence, easier to "manage" and are less stressed than calves who are in minimal contact with people. The results obtained by Lürzel et al (2015) are in agreement with the present study. Female calves who were pet for 42 minutes longer than the usual treatment and who were "spoken to" manifested less avoiding behaviour to people after treatment, had a less negative reaction to weaning, higher growth, and later higher milk production. However, Schütz et al. (2012) find that pet calves respond better to humans and do not avoid contact with humans, but

with no reliable evidence that a positive relationship with humans also influences the provocation of positive emotions in calves. Depending on the treatment, they reacted positively or negatively to known persons, but they had uniform reactions to strangers.

The key factor in the success of raising calves is the workers in charge of their nutrition and care. An unprofessional and incompetent workforce can jeopardize everything that is achieved by applying the latest technology. Also, the professional and competent activity of employees can compensate for some technological shortcomings. The attitude of workers towards calves affects the overall assessment of the quality of welfare of calves. Broom (2004) states that neglect, calculated, accidental or ignorant, is a possible cause of animal welfare problems. Hristov et al. (2011) have determined that the welfare of calves is endangered by the delayed reaction of workers, especially in the medical treatment of calves and the necessary dietary corrections.

An assessment of the relationship between farmers and calves can be obtained by performing a proximity and contact test. In the worst case, calves avoid eye contact. At best, calves also allow physical contact. Meagher et al. (2016) present results on the reliability of the proximity and contact test. They believe that a positive test is not reliable enough (0.22), but that the frequency of negative reactions is moderately reliable (0.55). The proximity and contact test, in addition to analysing the human-animal relationship, is also used to determine early on the incidence of diseases in calves. Diseased calves are less prone to exploratory behaviour and less likely to approach strangers (Cramer et al., 2015).

Material and method

The manifestation of the basic physiological forms of behaviour of Holstein Friesian calves in the intensive system of production, in the period from birth to 30 days of age, was observed on two farms (marked as farm A and farm B). The established rearing technology differed to some extent. Calves were separated from their mothers immediately after birth. For the first 7 days of life, they were housed in a maternity ward, tied to a bed on farm A and in an individual box, on farm B. From days 8 to 30, calves were housed in group boxes.

The attitude of humans towards calves was assessed by the proximity and contact test on a scale: avoidance of eye contact; allowing visual contact but avoiding proximity; allowing approaching by 1 step; allowing approaching by 2 steps, but without contact; possible contact.

Considering that the competence of farmers is one of the most important factors and impacts on the welfare of calves and the manifestation of positive forms of behaviour, the competence of workers who were in direct contact with calves was assessed on the mentioned farms. Knowledge, skills, abilities, level of education, work experience, training and coaching of workers were analysed. But an important part of the farmers assessment was also their attitudes, reaction time and making unnecessary noise.

Results and discussion

Raising offspring is of key importance for the entire livestock production. Due to its sensitivity, this category of animals requires extreme care and attention. Therefore, the attitude of farmers towards calves in the first month of life has great consequences on the quality of welfare of calves and the success of production in cattle breeding.

Proximity and contact test

The results of the proximity and contact test on farms A and B at different ages of calves, by months and seasons, during the study period are given in the following table.

Table 1: Results of the proximity and contact test

Test of proximity and contact	Farm A	Farm B
Avoiding contact	40	18
Visual contact	175	131
Approaching by 1 step	849	648
Approaching by 2 steps	1165	1310
Allowing contact	751	753

Analysing the presented data, it can be seen that the situation on farms A and B is similar to each other and is relatively favourable on both. The majority of calves allowed approaching by 1 or 2 steps, and a significant number also allowed contact, while a negligible number of calves avoided eye contact, as the most unfavourable type of contact. This indicates a positive relationship between breeders and calves, and an improvement can be expected in reducing the number of calves that do not allow approach and contact and increasing the number of those that allow contact. Every contact, physical and visual, was avoided by the small number of calves on both farms during the research, 40 and 18 on farms A and B, respectively. Also, a small number of calves allowed only eye contact. The number of calves allowing one-step proximity on both farms is 849 and 648, on farms A and B, respectively, while the majority of calves allowed 2-step proximity (1165 and 1310, on farms A and B, respectively). The number of calves that allowed workers to touch and pet them was very similar on both farms (751 and 753).

A significant contribution to the quality of welfare of calves on farms is given by the relationship between people who come into direct contact with calves. This relationship must be good and friendly because calves "reciprocate" in a way similar to the way people treat them. Friendly, kind, patient behaviour of people leads to lively and positive behaviour of calves, friendly and full of trust. On the other hand, nervous and aggressive behaviour leads to fear, tension, and anxiety in calves (Lensink et al., 2001; Lürzel et al., 2015).

Competencies of farmers

The choice of workers to be engaged in raising offspring is the result of careful monitoring of the quality of their work over a long period. It is necessary for the workers dealing with rearing offspring to have a certain level of knowledge and skills necessary for working with calves, to be educated and trained, and to be ready to react timely to some extraordinary events. Above all, they must have a positive attitude towards the animals they take care of and be conscientious and responsible. Average grades (from 1 to 5, where 1 is the worst and 5 is the best score) for the expertise and competence of workers in maternity and calf nurseries, are given in Table 2.

Table 2: Average assessment of the competence of workers on farms A and B

Competencies of farmers	Farm A	Farm B
Knowledge	3.33	3.50
Skills	3.17	4.00
Capabilities	4.17	4.17
Attitudes	2.83	3.83
Level of education	3.00	3.00
Work experience	5.00	4.17
Training	4.67	4.33
Coaching	3.50	3.50
Response time	3.83	4.00
Making unnecessary noise	2.83	4.00
Average score	3.63	3.85

The competencies of the workers on the surveyed farms are satisfactory, but with a lot of room for improvement. On farm B, the overall score was slightly higher (3.85) compared to farm A (3.63). It is characteristic of both farms that the workers donot have a formal education in the field in which they work. Accordingly, their knowledge and skills are based on many years of work experience. In addition, there was no special training for farmers on the farms, but the necessary knowledge and skills were acquired along with the work, and most often the "coaches" were farmers with the most experience. That is why it is necessary to improve their knowledge and skills. At the same time, the personal attitude of farmers towards animals needs to be improved. This is especially important for Farm A. Although the workers on this farm have little more experience and training, the better assessment of the workers on Farm B has been influenced by personal attitudes and commitment. The obtained results are in accordance with the research of numerous authors (Lensink et al., 2001; Burton et al., 2012; Elingsen et al., 2014; Lürzel et al., 2015).

The overall assessment of the quality of welfare of calves in the first month of life includes an assessment of the competence and attitude of workers, which is shown in Table 3.

Table 3: Assessment of welfare indicators (human-dependent items are coloured)

Indicator	Farm A	Farm B
Assessment of planning, organization and implementation of welfare protection	1.00 - 1	1.00 - 1
Employee Welfare Awareness Assessment *	2.75 - 3	3.00 - 3
Competences of employees regarding welfare protection*	2.78 - 3	3.22 - 3
Relation of breeders to the needs of animals *	2.67 - 3	3.00 - 3
Assessment of monitoring and inspection of animals and equipment *	4.62 - 5	4.62 - 5
Treatment of animals *	2.67 - 3	2.67 - 3
Feeding and watering*	3.73 - 4	3.73 - 4
Housing conditions	2.70 - 3	3.00 - 3
Microclimatic conditions	2.25 - 2	2.12 - 2

Hygienic conditions in the facility *	2.67 - 3	2.55 – 3
Animal body hygiene and care *	3.00 - 3	3.00 – 3
Reproduction	3.00 - 3	3.00 – 3
Productivity	3.33 - 3	3.22 – 3
Behaviour	3.45 - 4	3.18 – 3
Health	3.33 - 3	3.33 – 3
Average score	2.93 - 3	2.98 -3

The assessment of biosecurity indicators was higher on farm B. One of the reasons is the better attitude of workers toward the needs of animals, which agrees with the statements of Hristov et al. (2011).

Employees should be trained in the importance of all aspects of welfare and biosecurity on farms, and certain written procedures and protocols should be adopted accordingly. Raising the awareness of breeders about the importance of respecting the principles of welfare would also improve their treatment of animals, care for hygienic conditions in facilities and hygiene of animal bodies.

Conclusion

The proximity and contact test in calves on farms A and B showed that calves did not show many negative feelings such as fear or threat during the study period. Only 40 calves on farm A and 24 calves on farm B avoided any contact.

Employed farmers on both observed farms did not have formal education in the field of animal husbandry, nor organized education and training. They acquired the necessary knowledge and skills by working with more experienced colleagues. The response time of farmers to any problems related to the health, nutrition and care of calves was satisfactory, slightly better on farm B than on farm A. On farm B, more positive attitudes of employees towards calves were recorded.

It is recommended that continuous training of breeders be carried out to improve the quality of work and the relationship with calves. This has far-reaching consequences for the health and emotional state and behaviour of calves. Raising the awareness of breeders about the importance of respecting the principle of welfare would also improve their treatment of animals, care for hygienic conditions in facilities and hygiene of animal bodies.

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