IN-FIELD ASSESSMENT OF BREEDING HENS' WELFARE IN A FARM FROM ILFOV COUNTY

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Summary

The researches were run in December 2006 and aim to establish the livestock welfare level in an Ilfov county farm of laying hens reared in intensive system on litter. During the study there were assessed two shelters divided in two compartments each, where are housed parent flocks of Hybro PG+ industrial broiler.

The method used in order to assess the hens' welfare is an Austrian assessment system, respectively Animal Needs Index 35. The method consists in combining as a unique result engineering-based parameters (details concerning shelter architecture and endowments) with animal-based parameters (physiological e.g. feathers condition, skin condition or ethological e.g. number of cocks in the flock). The parameters are ranged in five areas of influence – locomotion, social interaction, flooring, light and air, stockmanship; being scored either based on measurements, anamnesis data or direct observation of the flocks, or based on investigations with last generation devices as BK 2250 sonometer (used to assess noises level), Drager Miniwarn gas-meter (used to assess air quality) and LM-8000 multifunction devices (used to assess draughts velocity, airflow and light intensity). In order to assess the parameters feathers condition and skin condition were used the methods suggested by R. Tauson in 2004. The final ANI 35 score are obtained by summing scores for all parameters.

The hens' welfare final score at the farm studied was 15,5 points in shelter 1 compartment A and shelter 2 compartment B, 16 points in shelter B compartment A and 17 in shelter A compartment B. These value shows that the welfare of the laying hens are poor in the first two compartments (final scores being between 11 and 16 points) and average in the last two (final scores being between 16 and 21 points).

At present, consumers and general public became aware due to own experience, knowledge gained during school and media and due to the proofs offered by scientific researches that the animal welfare is extremely important in public health, food safety, environmental protection and biologic diversity.

The continuous improvement of animal welfare is on one side a moral duty of mankind and on the other side a vital necessity for wealth and existence on Earth, in complete harmony with nature.

In developed country animal welfare is a major issue, of public interest, in some of these countries is included in constitution.

As Romania joined European Union, it became necessary a radical change of the way of thinking and approaching the above subject. The most practical way of long and short-term improvement of livestock welfare in our country would be the increasing of the number of assessments in farm and household units, in order to create a national database and to be able to decide our own acceptable levels of animal welfare.

This paperwork joins this trend, having the objective to establish the welfare level of the laying hens reared in intensive system, in a farm situated in Ilfov County.

Materials and methods

During the researches, which were run in December 2006, there were assessed two shelters divided in two compartments each.

In each shelter are housed parent flocks of Hybro PG+ industrial broiler: 4760 hens and 560 cocks.

As our country doesn't have an official system of animal welfare assessment; the study was done using an Austrian system: ANI 35 for laying hens (Bartussek H., 1995).

The level of animal welfare was established by awarding points to 35 objective welfare indicators (OWI) grouped in five areas of influence: locomotion; social interaction; flooring; light and air, stockmanship.

These indicators were scored based on some measures, anamnesis data and behavior observations at group level or by using the last generation equipments, as: BK 2250 sonometer (used to assess noises level), Dräger Miniwarn gas-meter (used to assess air quality) and LM-8000 multifunction devices (used to assess draughts velocity, airflow and light intensity). It was applied an improvement of the assessment system in the case of two factors among assessment sheets, respectively feathers condition and skin condition, by correlating the ANI 35 sheets with feathers status score and skin status score, methods suggested by Tauson R. in 1984 and 2004 and shown in figures 1 and 2.

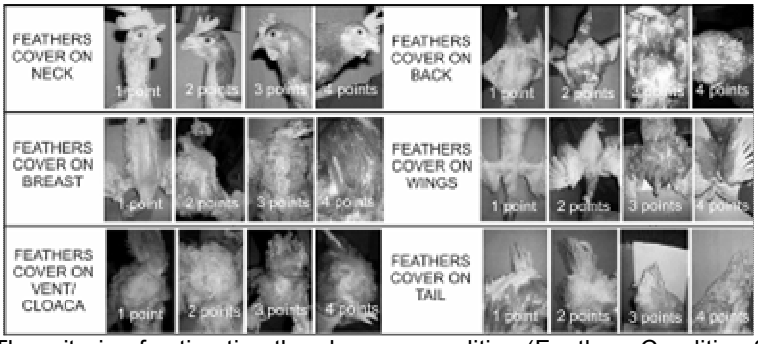

Fig.1.The criteria of estimating the plumage condition (Feathers Condition Score)

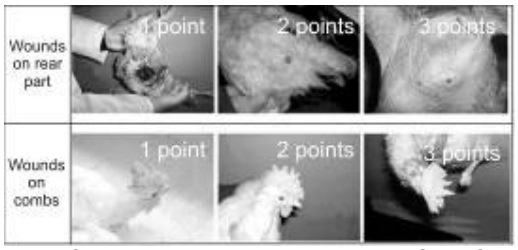

Fig.2.The criteria of estimating the skin condition (Skin Condition Score)

Results and discussions

In table 1 are shown the general scores for each areas of influence, the final ANI 35 scores and the welfare level for all the shelters and compartments had in view.

Table 1

The scores obtained following the assessment of the welfare of laying hens reared in intensive system in an Ilfov county farm

	Shelter 1/comp. A	Shelter 1/comp. B	Shelter 2/comp. A	Shelter 2/comp. B
Locomotion	1 point	1 point	1 point	1 point
Social interaction	1.5 points	1.5 points	1.5 points	1.5 points
Flooring	3.5 points	3.5 points	3.5 points	3.5 points
Light and air	0.5 points	2 points	1 point	0.5 points

Stockmanship	9 points	9 points	9 points	9 points
Final scores	15.5 points	17 points	16 points	15.5 points
Welfare level	**poor**	**average**	**average**	**poor**

As shows the above table, the lowest scores were those recorded for the locomotion area of influence (1 points), social interactions (1,5 points), light and air (0.5 to 2 points), being generated by some critical situations as: too small space allowance, too small percent of scratching area reported to the total floor area, the oversized flocks, the lack of the perches (for scoring perches, there have been taking into account the perches allowing nest access), uneven and low intensity light, poor air quality.

The highest score was that recorded for the stockmanship area on influence, respectively the maximum score (9 points), this fact showing a good farm management system, correctly applied.

Conclusions

1. The welfare of the hens reared in intensive system in the above Ilfov county farm was poor in two of the compartments (shelter 1, compartment A and shelter 2/compartment B) and average in the other two (shelter 1, compartment B and shelter 2/compartment A).
2. Although the farm management and practices are good (this fact reflecting in maximum score awarded for stockmanship area of interest), this fact could not compensate the critical situations recorded for some other housing conditions factors: oversized flocks, with high density; the lack of the perches, uneven and low intensity light, poor air quality.
3. In order to increase the level of welfare in the farm to an acceptable level, all this situations must be resolved, by: decreasing the number of the hens in the flock, decreasing the number of hens housed in every shelter, introducing good quality perches (perches in hens is benefic for welfare of these birds, assuring freedom of movement and expressing agonistic behavior, this reason explains the higher and higher number of EU construction projects that includes perches), fixing light system deficiency and improving air quality.

Fig. 3.Hens shelter with perches, build by a modern European construction project

References

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