

THE INFLUENCE OF MANAGEMENT ON THE POULTRY MEAT PRODUCTION

Dr. Marco H. Delaner

Laboratorios Delamer, Investigaciones Microbiológicas Veterinarias, Buenos Aires, Argentina.

e-mail: labdelamer@cotelcam.com.ar

Studies related to animal behavior have started thousands of years ago, perhaps before the beginning of its domestication, however most of them were only empirical observations.

When the zoologists Konrad Lorenz and Nico Timbergen received the Medicine Nobel prize in 1973 for their studies regarding animal behavior, the world scientist community began to be interested in the ethology issue.

In poultry production, there are many researches focused on the bird adaptation mechanisms to the artificial environment created by man for raising them.

There are different areas for the study of poultry behavior including social, reproductive and dietary ones, all of them having in mind both, the animal welfare and the economical benefit of the producers. Regarding to this, there is a popular myth that establishes that the last two situations are necessarily opposite and shows the animal producers as monsters who are able to perform cruel practices for good profits.

Only people deeply misinformed can sustain this point of view, since without the optimum standards of comfort it is not possible to obtain any profitable production. On this respect, animals by instinct give a direct response because they are not culturally censured, consequently if they are ill-treated they diminish or stop the production of meat, milk, eggs, etc. As an example, the selection of chickens for weight gain had decreased the adaptation to extreme temperatures, hence nowadays the producers need to fine tune the internal temperature of poultry houses in cold and hot climates. Selection had also diminished the aggressive instinct in broilers and the competitiveness for water and feed. Consequently, the producers had to increase the supply of feeders and drinkers, but on the other side nowadays they can avoid debeaking with hot plates in order to prevent cannibalism, a cruel practice utilized some years ago.

Feeding is the main activity of birds under intensive production and the feed represents a high percentage of the whole production cost, however the feeding behavior is still only partially known. Consequently the observation and measurement of animal behavior is an effective tool for a better evaluation of the management practices, and to improve the knowledge of different factors and their interaction that are responsible of some adaptation problems observed.

Man needs to rediscover how to observe the birds in order to know how to offer the environment to which the animals know how to adapt.

In spite of more than fifty generations of chickens growing without the presence of the hen, they remain nowadays strongly gregarious and look constantly for company and close contact, even if they are in cages or on the floor. They also react intensively to any signal of atavistic risk such as the presence of a predator, exposure to strong lights or bright colors, the presence of unexpected movements or noises. Any of those stimulus trigger the escape reaction and impair production.

Comparing the jungle fowl which still produces 3 kg/meat/year to the actual one, where the domestic breed is able to produce more than 300 kg/year of the best quality meat through the offspring, we can conclude that producers are doing a delicate job caring about them.

References

- Appleby, M.C. and Hughes, B. O. (1997) Animal Welfare, CAB Internacional, Wallingford.
- Dawkins, M.S. (1990) From an animal's point of view: motivation, fitness and animal welfare. *Behavioral and Brain Sciences* 13: 1-61
- Dawkins, M.S. (1998) Evolution and animal Welfare. *Quarterly Review of Biology* 73: 305-328
- Dawkins, M.S. (1999) The vole of behavior in the assessment of poultry Welfare. *World's Poultry Science Journal*, vol. 55, 295-303, September 1999.
- Petherick, J.C and Rutters, M.S. (1990) Quantifying motivation using a computer-controlled push door. *Applied Animal Behavior Science* 27: 159-167
- Picard, M., Turro, I., Launa Y. F., Mills, A., Melin, J. and Faure, J. (1992) Food intake patterns of three week old broilers caged individually or in groups. *19th Worlds Poultry Science Congress*, Amsterdam (NLD), 2: 429-434
- Picard, M., Vilariño, M., Yo, T, FAURE, J. (1996). Comportement de l'animal vis a vis de l'aliment: exemple de Gallus. *3^{eme} Journée SEPALM*. Cassen - France. June 1996.
- Richard, P., Vilariño, M., Faure, J. M., Leon, A. and Picard, M.L., (1997) Etude du comportement du poulet de chair en élevage intensif tropical au Venezuela. *Revue Elev Méd. Vét. Pays trop.*, 50 (1): 65-74