A chickens' life; An introduction to poultry behavior.

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This is my first contribution to this column so let me tell you a little bit about myself. My background is a bit unusual in relation to the type of work I do nowadays. I am a zoologist and I started my career in research as a wildlife ethologist. A couple of years later I started to work in poultry behavior, …that was more than 10 years ago! During this time my work focused mainly on the effects of density in broiler behavior, performance and use of space, although I conducted several projects with laying hens and other types of poultry as well.

During my research as a Ph.D. student, and later on during my post doctoral training I had the great opportunity to live for extended periods of time in several countries (Canada, Sweden, France and of course my home land, Spain) and also visited many other countries. This experience gave me the opportunity to learn different aspects of poultry production and management practices in different places. Broiler production in every country has its own peculiarities not only in terms of buildings but also related to feed ingredients and management. In each of these countries consumers focus their attention on different characteristics of poultry: food safety in Sweden, meat taste in France, and price in Spain. However I was to some extent amazed at how similar the broiler production systems are overall and by the fact that the industry in all these countries confronts almost identical problems (production cost, environmental issues, animal rights and media pressure….).

I would like to take the opportunity that this column brings me to introduce you to the fascinating world of poultry behavior, with the hope that you will find it useful and interesting. The first thing to understand about behavior is that it is not equivalent, or even similar, to animal rights. Ethology (or Animal Behavior) is the scientific discipline that studies the life and relationships of animals, as well as the interrelation of the animals with their environment. This is why I entitled my column as "A chickens' life", and also because it better reflects, in my opinion, what studies in poultry behavior try to accomplish; to improve the life, health and growth of the millions of chickens that are raised annually in the world. I imagine you already have at least two important questions; How do we do this? And even more importantly, how much will these improvements cost you?

Most people associate research in behavior with the development of alternative housing conditions and free range. However about 85-90% of the research in applied

animal behavior is done with the aim of improving animals' health, productivity and well-being in conventional commercial conditions. Research in behavior can lead to simple changes in management practices, or small modifications in housing and equipment design to better accommodate the biological and behavioral "needs" of the animals.

Changing the environmental conditions to accommodate the needs of our animals (rather than adapting the animals to the environmental conditions) means that the animals will have to make fewer adjustments to feel comfortable in such conditions. Their stress levels will be much lower, and as result they will perform a lot better, which means more dollars in your pocket. Animals with low levels of stress fight viruses and bacterial infections better, and will convert more energy into body weight. Feed conversion and carcass quality also improve in less stressful conditions. On the contrary, when faced with environmental or social stress birds have more difficulties fighting disease challenges, and also spend more energy because they have a more expensive metabolism and need more food for body maintenance rather than growth. Therefore, stress is not only a matter of animal well-being, but is expensive for the industry and heavily cuts back the economic returns.

Unfortunately, many producers think that adapting environmental conditions to the chickens is expensive in relation to the potential improvements in health and performance they may get. Actuality, most of the time housing alternatives are inexpensive, and often it doesn't cost a penny to you because all you may need to improve production, from the behavioral standpoint, could be a slight change in management practices. Also, simply a broader knowledge of the behavior of your birds will help you to find potential problems earlier on while you still have time to take the necessary steps to correct the problem.

One reason why behavioral research doesn't have the impact that it should have in animal production is due to a lack of good communication and understanding between researchers and industry. After all the years that I have worked as an ethologist I have learned how important is, not only to do good applied research, but also to be able to transmit the results and implications to your audience. Unfortunately, researchers in behavior haven't done a good job communicating with the industry, not because we are uninterested but possibly because we are poor communicators or simply because we have been too immersed in our own world of research and teaching. Also, a contributing factor that has kept researchers in a shell is the fact that it is easy for the industry to simply ignore research in behavior because is not on the "priority" list such as research in nutrition, diseases or genetics. We behavioral researchers, need to improve our communication skills and our ability to bringing our research to you. Behavior involves a lot more than dealing with animal welfare issues, and it can really help you to do a better job in raising up those yellow feathered chicks. I am sure it also will improve your own satisfaction. I am looking forward to this challenge!