

Phytobiotics in animal production

Summary

Phytobiotics are plant-derived preparations obtained from herbs that contain biologically active secondary metabolites. They constitute an interesting feed additive, an alternative product to replace traditional various growth promoters in animal feeding. A vast body of research conducted on different species of farm animals provides evidence on multidirectional effectiveness of herbs and herbal preparations in animal feeding, i.e. improvement of animal health and higher weight gains as well as overall beneficial impact on products of animal origin. It has been proven that better effects are obtained if a mixture of phytobiotics composed appropriately for given age and a direction of animal production is included into animal diet than a single herb feed supplement. A form of herb application depends on animal species, production group, management system and finally, feed type and form. Herbs in a dried form (0.5 to 5%) are usually obtained from herbal manufacturing units that provide herbal waste or processed herbs. Application of herbal active compounds as infusion or water extract (from 0.1 up to 2%) is practically uncommon due to an inconvenient administration mode, especially under large scale breeding and production system of animals. Hence, an increasing interest in dried extracts or herbal essential oils used as friable or pellet feed additives. Multicomponential herbal extracts (0.5 kg/t feed) as immunomodulators are applied to relieve stress in animals under the commercial breeding system. They stimulate liver functions, have protective, promotional and regenerative effects, so contribute to improved feed conversion and enhanced growth rate. Consequently, they strengthen animal health that translates into higher slaughter performance. On the basis of the current state of knowledge, researches and experiments on animals, when there have not been enough studies done to explore organism responses to herbs and phytobiotic extracts, it is not possible to ascribe a definite and explicit operation to phytobiotics but rather operations supporting the biochemical-physiological processes. Herbal mixtures should be composed taking into account properties of active compounds in plants, physiological needs of animals as well as consumers' expectations about quality of meat, eggs or milk.

KEY WORDS: herbs, cattle, horses, pigs, poultry, production effect