Review of Livestock Feed Additives that have Direct Beneficial Effect on the Environment

Livestock productivity is dependent on the animals being well kept and healthy and this is dependent on them receiving adequate nutrition. Much of this is derived from maize, wheat and soybean meal but these diets can often be deficient in some essential nutrients or may suffer from issues associated with digestibility, palatability and presentation. Diets can, however, be improved by the use of feed additives. Additives are also useful mechanisms for the introduction of other substances into livestock diets that can, for example, improve animal health and performance. Various desirable end effects can be sought such as higher milk yields, greater dry matter intake, improvements in digestion, improved health, suppression of the oestrus cycle and stimulated growth. When properly used in a well-managed environment, many of these additives can improve performance and farm profitability substantially.

Environmental benefits

Much research has been undertaken that clearly demonstrates that many feed additives can not only meet the necessary safety standards but can go beyond these standards delivering environmental benefits. Consequently, some feed additives could have an important role to play in delivering sustainable increases in productivity. For example, additives can be used to improve digestive processes such that nutrients are used more efficiently leading to a reduction in waste production. In turn this will reduce N and P lost to the environment as well as reducing methane, ammonia and other metabolic gases.

The project

This project, funded by the European Food Safety Authority (EFSA), will undertake a thorough, critical and systematic review of existing evidence identifying feed additives that offer environmental benefits. The review will include grey literature and unpublished reports as well as journal publications and project reports. The critical analysis will compare the study methodology against a set of pre-determined criteria and will produce an inventory of current feed additives together with other relevant and descriptive data on efficacy, mode of action, usage and regulatory status as well as physico-chemical and toxicological data on a global basis. Data will be accessible for both individual studies and on the basis of accumulated evidence. The information collated will support the European regulatory process. It will be completed in Spring 2013.

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