

## **The Future of Humates and Animal Husbandry**

### **The Effects of Mass Production**

The increase of mass production in animal husbandry throughout the world has had undesirable effects on the nature of animals. First vitamins, then antibiotics, and finally hormones have been used extensively as growth promoters in livestock production. Recently, however, the negative effects of such growth promoters on animal and human health have been evidenced through various studies as well as real-life cases. Consequently, at present there, there is a search for natural growth enhancers without the negative environmental or residual problems.

As a result of increasing consumer pressure, and in particular concerns about increased microbial resistance to antibiotics, a ban on the use of antibiotic growth promoters in animal feed has been already introduced in several countries. In 1998, the European Union (EU) had banned antibiotics important in human medicine from use as growth promoters in livestock production.

### **Overuse of Antibiotics**

There is considerable mounting evidence that today's antibiotic arsenals are being depleted due to the development of resistant organisms. The more micro-organisms that become resistant to antibiotics, the greater the risk of a resurgence of untreatable infectious diseases. The overuse of antibiotics, not only in human medicine, but also in livestock feeding is seen as a major cause of antibiotic resistance in food-borne illnesses. Almost 80% of antibiotics used in animal husbandry today are not used to treat sick animals, but merely to promote efficient growth of cattle, poultry, and swine.

### **Hormones and Alternatives**

Similar to antibiotics, the use of hormones in animal feed can also have direct impacts on human health through residue remaining in the animal product. There are a number of animal feed additives in the market currently that do not contain any antimicrobial substances or hormones. These are mainly probiotics, prebiotics, plant extracts, and organic acids presently enjoying a resurgence of interest following the EU-wide ban on antibiotics. These substances however present certain deficits regarding their effects on animal health and growth promotion.

Probiotics do not have any activity other than providing beneficial micro-organisms to the natural micro flora of the digestive system. The benefit of prebiotics is also limited to supporting the development of micro flora. Both probiotics and prebiotics do not have any proven effects on the immune system of animals or astringent effects on the mucous membrane of the gastro-intestinal tract. They also do not have any antibacterial or viricidal effects against pathogens either. Various performance studies have shown that both probiotics and prebiotics fail to show any considerable effects on animal growth. Plant extracts are believed to be beneficial for the digestive system, but their functioning mechanism is not completely known and should be different for each product under this category. They give better results as protective agents rather than as growth promoters.



## **Humates as a Feed Additive**

Various research trials have shown positive results concerning the use of Humates (Carbon-Based Acids or CBA's) as an organic feed ingredient. Some of the common results documented in these trials include: increased live-weight of animals, improved growth rates and increased feed intake and feed/grain conversion ratios.

CBA's are one of the most exciting feed additives available today. CBA's can improve the bottom line, while helping to decrease environmental impact. CBA's are purely natural. CBA's also improve diet digestibility as a result of maintaining optimum pH within the gut, resulting in lower levels of nitrogen excretion and therefore less odor. They are also proven powerful chelators, allowing the animals to more readily absorb the nutrients available from the feed. By improving digestibility and food utilization, CBA's improve gastric and intestinal conditions of animals. CBA's have a positive impact on the environment by improving digestibility, which aids in reducing gases and amounts of undigested nutrient waste such as ammonias, urea's, nitrates, etc.

The use of CBA's as a growth promoter in animal feed does not cause any loss in the performance of animals. Performance factors (such as ADG, feed intake, feed conversion ratio, and the level of looseness of feces – scour assessment) of the animals are considerably improved.

**NOTE: FeedBiotics' Feed Grade Humic Products are currently undergoing FDA review and we will be uploading product information data sheets to our website as soon as agency approval is received.**