

# Antibiotics in Animal Feed

Antibiotics in animal feeds is one of the most widely used technologies in the production of food animals. The practice of adding low levels of antibiotics to animal feeds started in 1949, when it was shown that this helped reduce the incidence of disease, increase rate of growth and improve the animal's efficiency in converting feed to weight gain.

U.S. Department of Agriculture economists have estimated use of antibiotics in feeds saves consumers as much as \$3.5 billion annually on purchases of beef, poultry and pork products. Livestock producers save as well, because use of antibiotics has lowered costs of production and increased efficiency of production methods.

### FDA Assures Safety

The U.S. Food and Drug Administration (FDA) is the federal agency responsible for assuring health products used in livestock agriculture are safe for both animals receiving them and consumers of animal protein. FDA has approved use of some 21 different antibiotic products for use in feeding livestock. Each has different benefits depending on the animal it is fed to, the disease-

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causing organisms it is designed to combat and the growth promotion or feed efficiency benefits it shows. Some products have as many as two dozen disease-preventing uses approved by FDA.

Antibiotics with this kind of broad spectrum effect against disease are fed to all five major species of food-producing animals. It is estimated 80 percent of all chickens and turkeys, 75 percent of swine, 60 percent of cattle grown in feedlots and 75 percent of dairy calves produced each year receive antibiotics in their feed during some period of their lives.

Antibiotics and the other pharmaceuticals administered to animals in their feed are

also among the most carefully tested products in livestock agriculture. For instance, it currently takes about \$15 million and 8½ years of research to gain FDA approval for a new drug to be added to cattle feed, estimates the Animal Health Institute (AHI), the national trade association representing the manufacturers of animal health and nutrition products. Most of the research is conducted in an effort to prove that the product presents no health hazards to people eating meat, milk, poultry or eggs.

### Restrictions Proposed Despite Benefits

Despite substantial economic benefits from the use of antibiotics in animal feeds, and considerable investment in research to assure these products are safe, FDA has challenged the use of some antibiotics. In 1977, the agency proposed to ban low level feed use of penicillin and restrict use of the tetracycline group. FDA's proposal was based on concern raised over the theoretical possibility that use of these antibiotics in animal feed might compromise their effectiveness in human medicine. The theory involves antibiotic resistance, the situation in which some disease-causing organisms sur-

vive exposure to antibiotics and become resistant.

Following a National Academy of Sciences (NAS) report to Congress on the issue, it was decided that action by FDA should be postponed pending further scientific study of the issue. In order to provide additional scientific data, Congress asked FDA to conduct a number of studies recommended by NAS in its report. FDA has funded research work that is now nearing completion.

#### **AHI Believes Use Is Essential**

AHI believes use of antibiotics in animal feed is essential to modern livestock production. Today's efficient livestock and poultry production systems could not continue without the use of antibiotics, the Institute points out. Without antibiotics, the time and feed required to bring animals to market weight would increase drastically with consequent consumer price increases.

Despite millions of dollars and tens of thousands of scientific man-hours spent by government and industry in efforts to prove, or disprove, the FDA theory, there is still no solid scientific evidence that any hazards exist, AHI states. In the absence of a demonstrated human health hazard, and as long as research results remain inconclusive, AHI feels it would be improper for FDA to take any action to restrict the availability of antibiotics.

from an assortment of proven, effective pharmaceuticals, basing their selections upon many factors, including their own knowledge of on-the-farm efficacy."

The debate over the safety of low level antibiotic use has been underway for more than 15 years. During all this time, FDA has had full authority to halt such drug uses if evidence demonstrated that they presented an imminent hazard to human health. As recently as 1980, when NAS made its recommendations for further study of the issue, the NAS report concluded that "the hazard to human health has neither been proven nor disproven . . .". AHI believes data presented to date support a conclusion that more research is needed. **AJ**

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When FDA proposed its ban in 1977, the agency argued there were alternative approved antibiotics that could be substituted for penicillin and the tetracyclines. AHI has taken the position that it is improper for FDA to inject the "availability-of-substitutes" concept into its arguments against the continued use of the specific antibiotics under attack. In fact, AHI points out, Congress has emphatically rejected past efforts to authorize the agency to make judgments about the comparative efficacy of the products under its control. In effect, the Congress has consistently told FDA that each regulated product should be judged separately, on its own merits.

"An arsenal of antibiotics is required to protect food-producing herds and flocks against a wide variety of disease-causing organisms and against other hazards to animal health, including the complex problems caused by environmental stress, shipping and handling," states AHI. The trade group adds, "It is important that livestock and poultry producers retain the right to select