Control forage diseases with management

LEXINGTON, Ky. — Plant diseases now costing U.S. forage growers millions of dollars a year could be controlled by intensive management and disease research, a USDA plant pathologist announced.

Speaking to scientists gathered at the XIV International Grasslands Congress on Thursday, Kenneth T. Leath of the U.S. Regional Pasture Research Laboratory in University forage crop damage by fungi, bacteria, viruses, nematodes, and air pollution.

For alfalfa alone, forage and seed losses in the United States annually amount to $400 million, Leath said. The cost for all forage crops is believed to be much greater.

Leath stressed the need to improve present management practices, which are generally effective and economical. Even a brief lapse in good management, however, can cause great loss, he warned.

Part of the problem is forage crop damage is usually not immediately obvious to the grower. Forages are commonly sold in bulk, are of relatively low cash value per acre, and are used mainly on the farm where they are grown.

Diseases, which often attack the roots, are difficult to detect. They are also chronic, taking a small but continuous toll in yield and quality over a long time.

"We cannot continue to be complacent," Leath said. "Fundamental research into pathogen biology and disease development must first be done. Then models for controlling these diseases must be developed and incorporated into overall crop management models."

Successful models for disease control recognize that certain production practices contribute to disease prevention.

Controlling insects and weeds and fertilizing the forages, for example, are doubly valuable. Weeds not only compete with forage plants for space and nutrients, but also serve as alternate hosts for pathogens. And fertilizing with potassium not only promotes vigorous growth but reduces root pathogens.

The immediate future is not likely to bring major changes in forage crop management, Leath said, although the effects of new techniques, such as sod seeding and chisel plowing, are not known. But intensifying present management strategies, adapting forage crops to their environment, and judiciously applying established techniques will appreciably reduce staggering economic losses.

The eventual emergence of forage crops as a major market commodity will benefit and intensify the study and control of forage crop diseases.