SPRING DISEASES IN MASSACHUSETTS ALFALFA

D.R. Cooley, P. Colyer and W.S. Manning
Department of Plant Pathology
University of Massachusetts

The Department of Plant Pathology started their part of the alfalfa IPM program by surveying fields in different areas of the state. The survey is intended to find out what diseases are present in Massachusetts alfalfa. This information will hopefully identify not only the diseases of sporadic importance, but those of a more chronic nature. There is a problem with alfalfa stands declining rapidly (2-4 yrs) in many areas. This is often attributed to winter injury. Research has shown that root and crown diseases are at least as important as winter injury, and in some cases many make alfalfa more susceptible to cold damage. Preliminary work last season indicated that Fusarium crown and root rot, an important disease in other Northeastern states, is also present in alfalfa in the Connecticut Valley of Massachusetts. If the disease is present in many Massachusetts stands, current techniques and methods being developed in the Plant Pathology Department could be utilized to minimize its effect.

This year's sampling to date suggests Fusarium is a major problem in the state. Roughly 80% of all crowns and roots have had Fusarium associated with them. Fusarium also caused a major damping-off problem at the new planting in the South Deerfield Experimental Farm.

This spring, the wet weather caused a major spring black stem epidemic caused by the fungus Phoma medicaginis. While this disease does not generally cause a serious decline like Fusarium, it can reduce amount and quality of the yield. The spring black stem has been greatly reduced by the hot, dry weather.

The survey will continue through the season.

Fungi Isolated From Alfalfa
Spring 1983

	Fusarium	Phoma	Others*
Leaves	0%	73%	27%
Shoots	27%	62%	11%
Crowns & Roots	75%	4%	21%

* Considered unimportant as pathogens