

Verticillium wilt help available to Pa. farmers

UNIVERSITY PARK — While putting in this year's alfalfa crop, Pennsylvania farmers have access to at least three *Verticillium* wilt-resistant varieties with more expected next year, reported Donald Barnes, secretary of the National Alfalfa Improvement Conference.

Barnes, also a research geneticist at the University of Minnesota, said small quantities of the following resistant varieties are available this year. Apollo II by North American Plant Breeders; Trumpeter by Northrup-King and Company; and WL 316. A fourth variety, Vernema has been developed by the USDA and Washington State University, but Barnes reported that seed is currently not available.

In addition to the use of resistance varieties, farmers can further control the disease with proper crop rotation and Thiram applications, said USDA plant pathologist Ken Leath.

Crop rotation, with two years minimum between alfalfa crops should help to decrease fungal inoculum said Leath. However, he warned, other plants including red clover, Canada thistle, shepherd's purse and yellow rocket can harbor the pathogen.

Thiram, applied correctly and at proper dosage, does not interfere with nodulation, will kill most fungi within a seed lot and may

delay introduction of the disease into a field, Leath explained.

Although Thiram, a nonsystemic fungicide, can be expected to kill the fungi on contact when applied to the exterior of the seeds, the fungicide will not kill fungi borne within seed and possibly not the fungi borne within any accompanying plant debris, warned Extension agronomist John Baylor.

The alfalfa-killing fungus, which resembles fusarium wilt and anthracnose, was first discovered last summer on a few Central Pennsylvania farms. However, subsequent state-wide checks for the fungus were negative, Leath confirmed.

Leath explained the fungus, native to Europe, is usually found in cooler climates. The disease, first discovered in the U.S. in 1977, showed up in Idaho, Washington and Oregon, major seed producing states. Wisconsin and New York also experienced *Verticillium* damage in 1980.

Although the same fungus exists now in both Europe and the U.S., the big difference, said Leath, is the stage of the disease.

In Europe, the fungus produces

spores on the outside of the alfalfa stems and easily can be carried in the wind or rain.

However, the disease discovered in Centre County last year was located within the stem and roots and would move slowly or creep along within a field. The fungus showed up in 1978 seedlings and Leath explained the disease worsens in the second and third year of the stand.

Verticillium wilt interferes with

water movement throughout the plant, said Leath. The leaflets wither and turn brown followed by stem dehydration. Eventually, the fungus invades the crown and kills the plant.

Leath suggested that farmers familiarize themselves with the following symptoms:

- ✓ Yellow blotchiness of leaflets on a single stem;
- ✓ V-shaped yellow segments form at the tips of leaflets. This

often turns pinkish-brown. Younger leaflets curl upward or inward from the tip or twist along midrib to form a loose spiral;

- ✓ Leaves die and turn a light-tan color, but stem remains green and erect;
- ✓ Roots are often yellow-orange inside, but this symptom is not very reliable;
- ✓ Diseased plants get progressively weaker and die.

USDA extends maturity date on some 1980-81 crop loans

WASHINGTON, D.C. — Producers with certain 1980 and 1981 crop commodity loans now have the option to extend their loans for an extra year, according to Under Secretary of Agriculture Seeley Lodwick.

"This option is being offered because prices for these commodities are currently low," Lodwick said.

The option applies to all 1980-crop barley, corn, oats, grain sorghum and wheat loans, and all

1981-crop barley, oats, rye and wheat loans. All producers with outstanding loans on these commodities are eligible, Lodwick said.

Producers extending their 1980-crop loans for an additional year will be charged an interest rate of 12.25 percent through Dec. 31, 1982. This rate will be subject to change Jan. 1, 1983, to reflect the cost to the Commodity Credit Corporation of borrowing from the U.S.

Treasury.

Extended 1981-crop loans will continue to bear interest at a rate applicable to the loan. Interest on 1981-crop loans is calculated to reflect the CCC's cost of borrowing from the U.S. Treasury.

Producers wishing to extend their loans should contact their county office of USDA's Agricultural Stabilization and Conservation Service, Lodwick said.

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(From left) Dr. Joseph Graham, Plant Pathologist with W-L Research, Inc., Alfred Dugan, Director of Research with Milton Hershey School Farms, and Kenneth Beachley, President of Beachley-Hardy Seed Co with the award for the 1981 Forage Silage winner, captured by WL 311 at the Hay Crop Silage Show.

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