

**Multiple Pest Resistance In Alfalfa** How Much Is Enough?

In an earlier column, I discussed multiple pest resistance in general. And at that time I also took a brief look at the five most serious diseases attacking alfalfa in our region. These are: Bacterial Wilt, Verticillium Wilt, Anthracnose, Phytophthora Root Rot and Fusarium Wilt. There are, of course, several other disease and insect pests that can damage this valuable crop.

In this column I'd like to look at multiple pest resistance in somewhat greater depth and try to help you rate it in terms of choosing a variety or varieties for your farm.

But first let's consider for a moment what you as a producer should expect from your alfalfa crop. I've asked a number of farmers like yourself and they generally agree on the following: high yield, quality forage, persistent stands, and yes, they'd like to know that they can depend on consistent performance every time they establish a new stand.

High yields, of course, start with varieties that have high yield potential. But soil and moisture conditions, your fertility and cutting management programs, and pest control, along with other management factors, all enter into the yield picture very strongly.

Most growers agree that the most important single factor affecting quality is stage of maturity at the time of harvest. You control that. But we also now know that it's possible to breed for high quality in alfalfa without losing yield potential.

Persistence also starts with improved varieties that have the potential to persist. And here's where multiple pest resistance in alfalfa has its biggest impact. If you start with healthy plants that have an adequate level of resistance to the diseases common to your area - and then keep those plants healthy with a good fertility and management program - your stands should persist for the four or more years desired by most growers

In my earlier column, I stated that an alfalfa variety with a moderate to high level of multiple pest resistance for a given area is generally superior in yield and resistance to a variety with high resistance to one disease or pest but without resistance to others.

But what is an adequate level of multiple pest resistance? The National Alfalfa Variety Review Board, made up of respected alfalfa breeders from both the public and private sector, established guidelines for the industry to use when reporting the resistance of a variety to a given disease. Briefly, varieties in which less than 5% of the plants are resistant to a particular disease or insect are rated susceptible (S). Those with 6-14% resistant plants have low resistance (LR), while populations with 15-30% of the plants resistant are considered moderately resistant (MR). Varieties with 31-50% resistant plants are called

resistant (R) while those with more than 50% resistant plants can be called highly resistant (HR).

Alfalfa breeders are, of course, striving to develop high levels of resistance to all the major pests. However, numerous studies have shown that varieties rated MR or better to the problem diseases in your area usually provide adequate protection under most field conditions. The important thing to remember is that the variety should be rated MR or higher to each of the important diseases. While very high levels of resistance are impressive, this level of resistance is more than is needed for most situations.

## **Montour County Accepting Orders For Seedlings**

cover plantings.

DANVILLE (Montour) --- The Montour County Conservation District is offering you the opportunity to invest in the future. Twelfth Annual Tree Sale orders now are being accepted for spring planting.

Included in this year's sale are evergreen and deciduous seedlings, fruit trees, ground covers, barberry bushes and spice bushes.

The most important purpose of having a tree sale is to promote conservation by the establishment of adequate cover on erodible areas. Land left empty without ground cover or trees has a greater tendency to erode than land with

Cover plantings provide benefits other than soil and water conservation. Areas with trees and shrubs provide wildlife food and shelter in places where animal habitat is diminishing.

The Montour Conservation District will use monies earned through this sale to purchase educational materials and programs throughout the year.

To receive an order form call the Montour County District office at 271-3059 or stop in at the

