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A LITTLE BIT COUNTRY
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Fungal Disease Can Threaten Pulse Crops

The three pulse crops (peas, lentils and chickpeas) are all susceptible to ascochyta, a fungal disease that can affect leaves, stems, flowers, pods and seeds.

Although each pathogen is affected by a different species of ascochyta, conditions favoring development are similar, approximately 60-75° F and lots of rain.

In field peas, initial symptoms are irregular dark purple specks located first on the lower leaves. Lentil and chickpeas tissue damage tends to appear as gray to tan lesions, often surrounded with a darker margin, with small black spots in the center.

Chickpeas are the most sensitive to the disease. Fungicide applications can be very useful in protecting the yield potential of the crop.

Lentils are susceptible to the disease and yield loss under high disease pressure is well documented. In trials conducted at the North Central Research Extension Center during the last decade, a significant yield increase was observed in over half the trials. Yield loss has been documented in field peas, but yield increase in fungicide trials has not been documented in North Dakota as frequently as in the other pulse crops.

Sam Markell, NDSU Extension Plant Pathologist, suggests several factors when considering a fungicide application. First, the more ascochyta you have at early bloom on the lower canopy, the greater the risk. If ascochyta has moved

into the middle section of the canopy at early bloom, he suggests a fungicide application. Secondly, a frequent rain event in the previous two weeks, the more the crop is at risk. He says one or two might not matter much but five or six increases the risk substantially. Third, a dense plant population places the crop at higher risks. Lastly, he encourages a watchful eye on weather forecasts. This includes both rainfall and temperatures.

Given current high temperatures and little rainfall, the early seeded crop may be okay if it escaped the very favorable weather pattern we received last month. However, vigilance is recommended on the crop seeded later in May.

Wheat Protein Enhancement

According to Dave Franzen, NDSU Extension Soils Specialist, the time for post-N wheat protein enhancement is immediately after flowering until the wheat berries begin to turn milky. Any application of N after this time does not contribute to wheat protein enhancement. However, application of N from milk stage to harvest may constitute fraud on behalf of the grower. Ammonia that clings to the wheat kernel may show up as a false positive for protein in elevator tests and result in the illusion of higher protein wheat than was harvested. The potential for fraud is greatest the closer the application of N is to harvest, but N can cling to the surface of a wheat kernel for some time. Do not apply any N fertilizer to wheat once the kernels begin to turn milky, except for the ammonium sulfate required to enable a pre-harvest glyphosate application.