

TEDFORD, ERIC C.*, DAVID LAIRD, BRETT MILLER and GARY PASTUSHOK, Syngenta Crop Protection, P. O. Box 18300, Greensboro, NC 27419. **Inspire™ XT, a new triazole mixture fungicide for sugar beet diseases control.**

ABSTRACT

Inspire™ XT fungicide is a new fungicide for control of *Cercospora* leaf spot and powdery mildew on sugar beets. The formulation contains 2.08 pounds each of the active ingredients difenoconazole and propiconazole per gallon of product. Numerous field trials were conducted over the past 3 years to evaluate Inspire XT in fungicide programs against other standard fungicides. The objective of these experiments were to evaluate Inspire XT for efficacy against *Cercospora* leaf spot and powdery mildew as well as to determine what effects, if any, this fungicide has on root yields and extractable sugar content.

Contract trials were conducted by leading University cooperators in California, Idaho, Michigan, Minnesota, Montana, Nebraska, North Dakota, and Wyoming using standard fungicide programs and agronomic practices for each state. All trials were small plot trials with 4 replications per treatment. Assessments of disease incidence and/or severity were recorded over the growing season and root yields and sugar content were quantified in most trials.

Alternation programs of Inspire XT with either Headline or Super Tin provided excellent control of *Cercospora* leaf spot and powdery mildew. Difenoconazole and propiconazole (the active ingredients in Inspire XT) are excellent mixture partners as they are both efficacious against *Cercospora beticola* and *Erysiphe polygoni*. In addition, yields and sugar content generally increased in fungicide treated sugar beets relative to the untreated controls.

Although Inspire XT has protective, curative and eradicated properties, it is best to begin applications prior to the onset of disease. The first application should go on preventatively or based on a forecast system. For resistance management purposes, Inspire XT must be used in alternation with any non-triazole fungicide (non-Group 3 fungicide) that is registered for use on sugar beets for control of *Cercospora* leaf spot and powdery mildew.