

## **Ten Keys for Higher Sugarbeet Quality (Tip #6)**

**Controlling Rhizoctonia root rot is one of the ten key components to improve sugarbeet quality.**

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Root diseases of sugarbeets will decrease revenue per acre by reducing both tonnage and sucrose levels. In Michigan, Rhizoctonia root rot is by far the most significant of the root diseases. Research conducted by Michigan State University Extension Sugarbeet Advancement program has shown that moderate levels of disease can reduce yields by five tons per acre and sucrose content by one percentage point. Under severe conditions losses can be double. Recent USDA research (Campbell and Fugate) also indicates that diseased beets put into storage have significantly higher respiration rates and will not store as well as non-infected beets.

Options for minimizing the impact from this disease include utilizing tolerant varieties and in-furrow and/or foliar applications of Quadris fungicide. There are also several cultural practices that can improve disease levels. These include improving soil health through the use of cover crops such as clover and oil seed radish. Research conducted at two locations in 2012 showed that with clover/wheat stubble as the previous crop, Rhizoctonia levels were reduced about half compared to wheat stubble alone. Also be aware that improving soil drainage by reducing compaction and improving tile drainage can reduce disease levels. Crop rotation can help reduce disease inoculum levels. Since soybeans are a good host for Rhizoctonia, sugarbeets following this crop can have increased levels of the disease. Corn is also considered a host depending on what strain of Rhizoctonia is present. Generally sugarbeets following wheat have the least amount of disease.

Rhizoctonia tolerant sugarbeet varieties should be considered, particularly for planting in fields that have had serious problems. Research has shown in these types of situations, a tolerant variety used in tandem with Quadris can further improve yield and quality. Recent surveys conducted at Michigan grower meetings in 2013 indicate about 90 percent of growers are using Quadris to control Rhizoctonia either as a foliar or in-furrow application. Almost half are doing both an in-furrow at planting followed by a second spray at about the 6-8 leaf stage.