

Select Sugarbeet Varieties to Match Traits Needed for Each Individual Field

Sugarbeet variety selection is a key component to minimize production problems associated with each individual field.

Steven Poindexter, Senior Sugarbeet Extension Educator, MSU Extension
Poindex2@msu.edu; Cell 989-798-5848

Planting a variety with the wrong traits in the wrong field can spell financial disaster. Sugarbeet variety selection is more complicated than just simply picking the variety with the highest tonnage potential and planting it in each field. Varieties vary significantly in sugar content, pest resistance and emergence. Some varieties are considered high maintenance and will require additional crop protection. Each variety has its own genetics that incorporates unique traits. Matching these traits with specific field conditions is extremely important. It is critical to know what issues have been present in previous years and the severity. Utilizing field history data from grower records is the perfect place to start.

Two issues that cause huge yield losses every year are Rhizoctonia rot root and Sugarbeet cyst nematode. Fields with severe nematode issues can cause up to 15 ton per acre yield loss. It is estimated that up to half the Michigan beet acreage could benefit from tolerant varieties. Rhizoctonia, in severe conditions, can also reduce quality and yield by 10 tons per acre. Field history tends to be a good indicator of potential Rhizoctonia levels. Also, sugarbeets following soybeans will increase Rhizoctonia disease levels. When selecting varieties, growers need to keep in mind their level of fungicide usage. Are they using an in-furrow and a foliar application, a single application, or no applications?

Other yield and quality robbers include Aphanomyces, root aphids, Cercospora leaf spot, and poor emergence. Varieties vary greatly in their genetic resistance to these problems. Aphanomyces infects seedlings in warm wet conditions. Do certain fields tend to be wet and planted later than others? All of our varieties have some tolerance at varying levels to root aphid. Root aphid tends to be mostly a problem during years of drought conditions. Growers should be careful to not be over exposed to some of the poorer root aphid tolerance varieties. With Cercospora leaf spot, growers should consider their previous history in controlling this disease. Also, consider your field location. Are there field locations where neighbors traditionally do a poor job of controlling the disease or areas that tend to be hotter due to physical obstructions of air flow? Emergence can be a concern for every grower even in good fields, but consider whether fields tend to be wet or cloddy.

Michigan State University Sugarbeet Advancement and Michigan Sugar company researchers conduct research trials to evaluate the positive and negative traits of each variety. The testing program is comprehensive and involves both small and field scale trials. Growers should thoroughly evaluate the research data before ordering seed. In early December, the 2012 REACH Variety Trial Results will be printed and mailed to each grower. This comprehensive report includes all the data available on the varieties related to yield, quality and resistance traits. Time spent studying this document can be very profitable in selecting varieties.

Growers are encouraged to also attend the 2012 REACH Seed Week meetings. For the dates and locations see the schedule on Table 1. The programs will be held December 3-7, 2012 in five locations in the growing region (See Table 1). In these 3 ½ hour sessions; variety data will