



Can We Help Sugarbeets Damaged by Heavy Rains Recover?

Sugarbeets damaged from heavy rainfall often exhibit stunting, nutrient deficiency and root disease. Managing for this often is difficult to produce positive results.

Climate change modelers have predicted that as earth warms, weather patterns and conditions will potentially change and lead to more violent/extreme storms. It is apparent that every year, exceedingly heavy rainfall occurs sporadically in the Michigan/Ontario sugarbeet growing area. Some areas like Gratiot County seem to get more than their share of excessive rainfall events. High intensity rainfalls are extremely damaging to young crops. This is particularly true when it comes to dry beans and sugarbeets.

Long term planning and management can be helpful in reducing the impacts of these extreme events, but will not eliminate all the damage. Sugarbeet producers have been very aggressive in narrowing tile spacing, creating surface drains, minimizing tillage and utilizing deep rooted cover crops such as oilseed radish. In combination, this will create the best opportunity for plants to survive a high intensity rainfall. The faster standing water or saturated soils are eliminated the less damage that will occur. High temperatures associated with excess moisture increases crop damage.

Sugarbeets damaged from heavy rainfall will often exhibit stunting, yellowing and an increase in root diseases. Trying to correct these symptoms after a near death experience is difficult at best. The plant's metabolism is not functioning well and extra energy is utilized just to stay alive. Often the roots are damaged and not allowing for proper uptake of nutrients or moisture once it does dry out. Standing water will either denitrify nitrogen or flush it through the soil profile, making it unavailable for root uptake.

Root diseases are often the result of extreme heavy rainfall. These diseases are often Aphanomyces, Rhizoctonia or Pythium. Most root diseases like excess soil moisture and damaged roots allow the disease a pathway to enter. It is virtually impossible to control root diseases once they have entered the plant. We have seen Quadris applied T-band in furrow offer some early season benefit when these conditions exist. Sugarbeet Advancement trials have also shown that some varieties tolerate excess moisture better than other varieties.

Correcting water damaged plants is difficult at best. With symptoms of nitrogen deficiency mid-season you may want to consider one or more foliar applications such as Coron or NDemand. Results may depend on how damaged the roots are and whether the plants can uptake needed moisture and other nutrients during the season. Sugarbeet Advancement experience in applying a single application of some of these nitrogen/fertilizer products did not green up healthy plants that were exhibiting N deficiency. Earlier in the season, side dress application of 28% nitrogen may be more effective if you feel nitrogen has been lost.

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