



Intact Sugarbeet Foliage is Important to Minimize Frost/Freeze Damage

When freezing temperatures threaten during sugarbeet harvest, intact canopies will offer some freeze protection.

Michigan is very fortunate that the Great Lakes help moderate our fall temperatures. This often allows us to extend our harvest season longer than many areas in the continental growing regions. However we are not immune from freeze events and growers need to be aware when those are predicted. Foliage of sugarbeets can help protect the crown from freezing. Michigan Sugar Company and Michigan State University Extension observations confirm that heavy foliage will help keep the beets insulated and reduce freeze injury. **Do not** leave defoliated beets unharvest during freeze events.

Intact sugarbeet canopies will act as a short term insulating blanket to help minimize freeze damage to the roots. How effective the canopy protects the beet root will depend on the density of the canopy, how cold it actually gets and the duration of the freeze. Beets that have been defoliated are highly susceptible to freeze damage. Both frozen or freeze injured beets that are put into long term storage piles will not store properly. Even a small quantity of frozen/freeze injured beets can cause a hot spot in the piles and jeopardize surrounding beets. We are now into November harvest and chance of subfreezing temperatures are increasing.

The impact of the freeze events often does not occur uniformly in the Michigan beet growing area. The severity in each area will depend on elevation, proximity to the Great Lakes along with the density of the canopies. When an event occurs it may take Ag staff sometime to evaluate the impact and overall occurrence. If crowns are frozen they will appear yellowish and translucent when cut with a beet knife. Depending on the intensity of the freeze harvest may be delayed for a few hours or up to three days when injury is more significant. Longer delays can allow sugarbeets to “heal”. On projected frost/freeze nights, Make sure defoliation is not done too far ahead of harvest. Should a breakdown occur that will not allow topped beets to be harvested, contact your Agriculturist for the handling procedure. Do not mix these beets with undamaged beets as a degradation will likely occur in storage.

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