MICHIGAN SUGARBEET REACh
Research & Education Advisory Council

Factors That Affect Sugarbeet Stand Establishment

Successful sugarbeet stand establishment involves knowing the key factors that affect emergence and manipulating them accordingly.

Stand establishment of sugarbeets involve the combination of several factors that together will impact the chances of success. Overlooking any one factor could mean the difference between establishment of an ideal stand or a marginal one. Optimum plant population sets the foundation for profitable and high quality sugarbeet production.

Michigan State University Extension research has shown that sugarbeet producers will average about 60-70 percent emergence of seed planted. Ideal populations of beets at 30 days after planting for either narrow or wide rows would be about 180 to 220 beets in 100 foot of row. Based on these assumptions, seed spacing's of about 4 inches at planting is needed to achieve 200 beets per 100 foot of row with average emergence. General seed spacing recommendations can vary depending on a host of factors including environmental conditions, in-furrow fertilizer and variety selection. Seed selection alone can impact emergence by up to 20 percent.

Preparing the soil for sugarbeet planting should begin in the fall with primary tillage that leaves the soil in a level state. If primary tillage does not leave the soil in a level/semi-level state, than a fall secondary tillage pass is beneficial. This will allow for stale seedbed planting or a one-time shallow spring tillage pass. Multiple spring tillage passes dries out the soil. Additionally, working the soil too deep creates a fluffy loose soil that does not allow for good seed to soil contact and allows the seed to sink after significant rainfall. Firm seedbeds will give the best seed to soil contact and emergence. Make sure seed trenches are closed. This often results when planting in marginally wet conditions. Excess corn residue can affect emergence by hair pinning seed and causing erratic seed depth. Be sure residue removers are set appropriately.

Proper planting depth is always a calculated guess. It can depend on soil moisture, planting date, soil type and impending weather. A one inch depth is considered standard for most situations. If planting early under cool moist conditions or by stale seedbed and there is expected rainfall, consider ¾ to 1 inch depth. When planting under warm temperatures, lower soil moisture conditions, loose soil and no expected rainfall, target a 1 to 1 ¼ inch depth. In soils that are warm with marginal moisture conditions and no expected rainfall a 1 ¼ to 1 ½ inch depth may be needed. It is very important that seed depth be checked in every field and as field conditions change.

REACh Research Contacts

Steve Poindexter, MSU Senior Extension Education, (989) 798-5848
Jim Stewart, MSC Director of Research, (989) 225-6720
Greg Clark, MSC Agronomist, (989) 891-6785
Lee Hubbell, MSC Research Agronomist, (989) 225-6708

Research & Education Advisory Council (REACh)
c/o MICHIGAN SUGAR COMPANY
2600 South Euclid Avenue
Bay City, Michigan 48706
(989) 686-0161