

### **Ten Keys for Higher Sugarbeet Quality (Tip #3)**

**Optimum plant population is one of the ten key components to improve sugarbeet quality.**

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Achieving optimum plant population with uniform stands is the foundation in establishing the potential for high yield and quality of sugarbeets. When populations are thin, yield and quality will suffer. Research conducted by Dr. Tim Harrigon, Agricultural Engineer for Michigan State University Extension, indicates that optimum beet weight for best quality is 1.5 to 2.5 pounds. His research indicated that as beets became larger, quality was reduced. Sugarbeets that are less than 1.5 pounds may have issues due to being too small to get into the harvester.

Uniform stands of sugarbeets are also important when it comes to defoliation. Uneven stands will often cause what we call “Big Beet-Little Beet Syndrome”. With thin or un-even stands, a sugarbeet will compensate and grow larger as in-row spacing increases. If in-row seed spacing is poor by two plants being too close together, a dominate beet will often over shadow the other beet. In either case, topping/scalping becomes more difficult. Poorly defoliated beets will lower Clear Juice Purity (CJP) and reduce long term beet storability.

A poor stand of sugarbeets can reduce sucrose by as much as 2.5 percentage points. Many factors can affect your stand establishment including: variety, crusting, planting depth, seedling disease, insects and a host of other maladies. Research has shown that seedling emergence in Michigan is generally between 60-75%. The Research Education Advisory Council (REACH) recommends a final stand of 175-225 beets per 100 feet in both narrow and wide rows. In 30 inch rows, 200 beets would be 35,000 plants per acre. And in 22 inch rows that would equate to 48,000 plants per acre. Most growers in Michigan are targeting seed spacing at planting between 4 - 4.5 inches to achieve the desired plant population.