Best Management Practices

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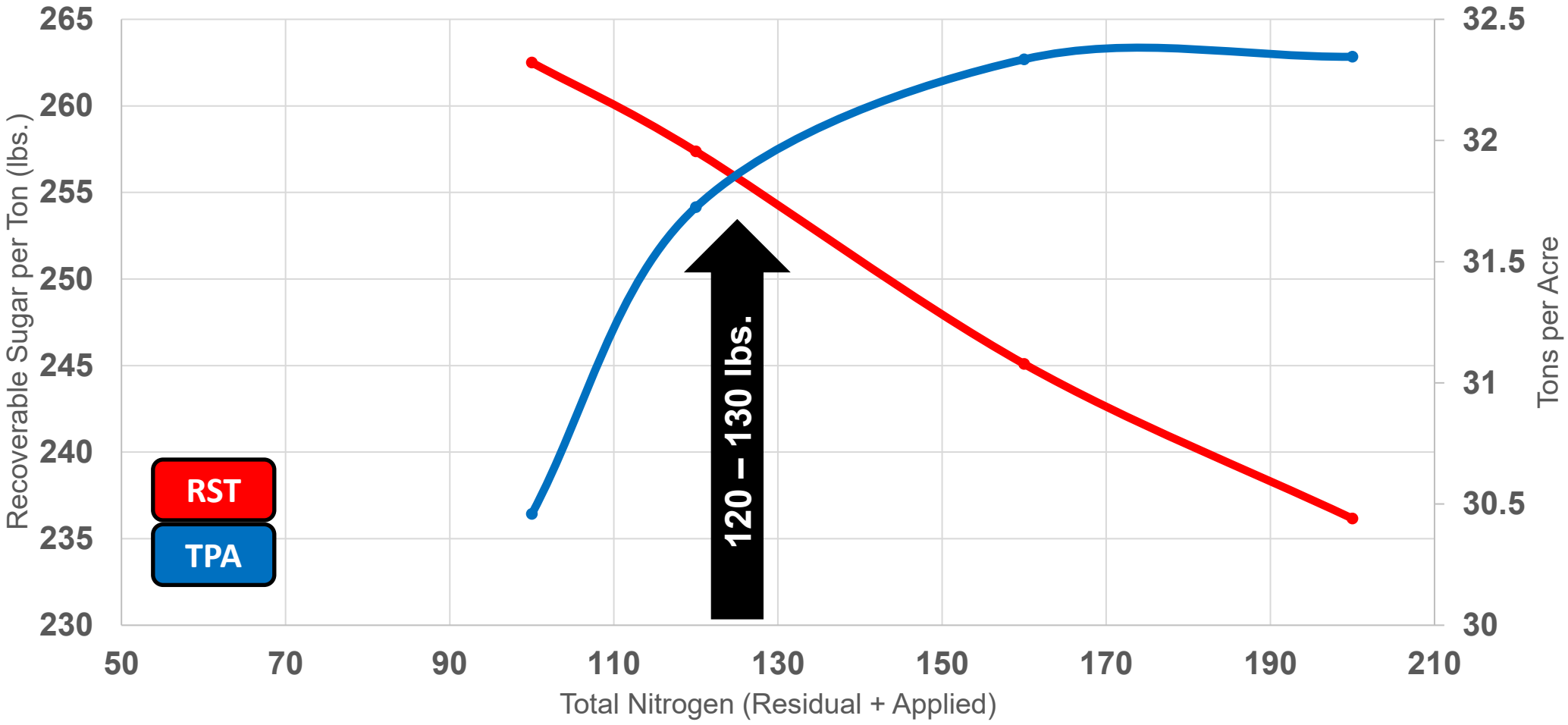
Major Factors Impacting Beet Quality…

- ***Controllable:***
  - Variety Selection
  - Planting Date
  - Plant Population
  - Row Spacing
  - Rotation Management
  - Fertility Management
  - Disease
- ***Uncontrollable:***
  - Rainfall
  - GDD's
  - Length of Growing Season
  - Amount of Sunlight Received
  - Etc.

N Rate x Variety (Combined Years)

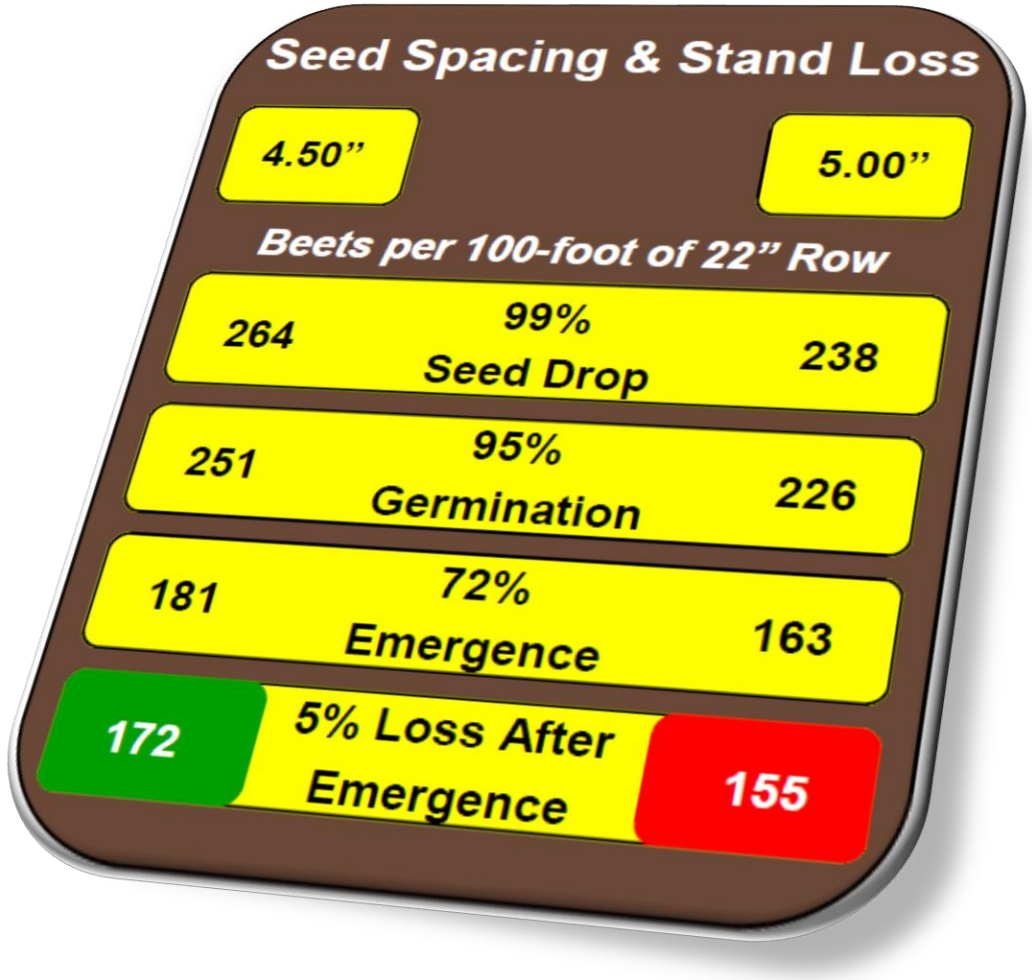


Seedbed Preparation & High Plant Populations…

- Seedbed Preparation:
  - Minimal Tillage + Packer Unit most common
  - 2 – 3” Tillage Depth
- Ideal Plant Populations at Harvest:
  - 22” Rows (23,760 foot of row per acre)
    - Planting - 4.5 inches (63,360 plants per acre)
    - Harvest - 180 Beets per 100 Foot of Row (42,240 plants)
  - 30” Rows (17,424 foot of row per acre)
    - Planting - 3.5 inches (59,739 plants per acre)
    - Harvest - 210 Beets per 100 Foot of Row (36,363 plants)

Example: Seed Spacing and Stand Loss Effects

- Start with a 5-inch seed spacing
  - = 240 seeds/100 ft of row



Stand Establishment

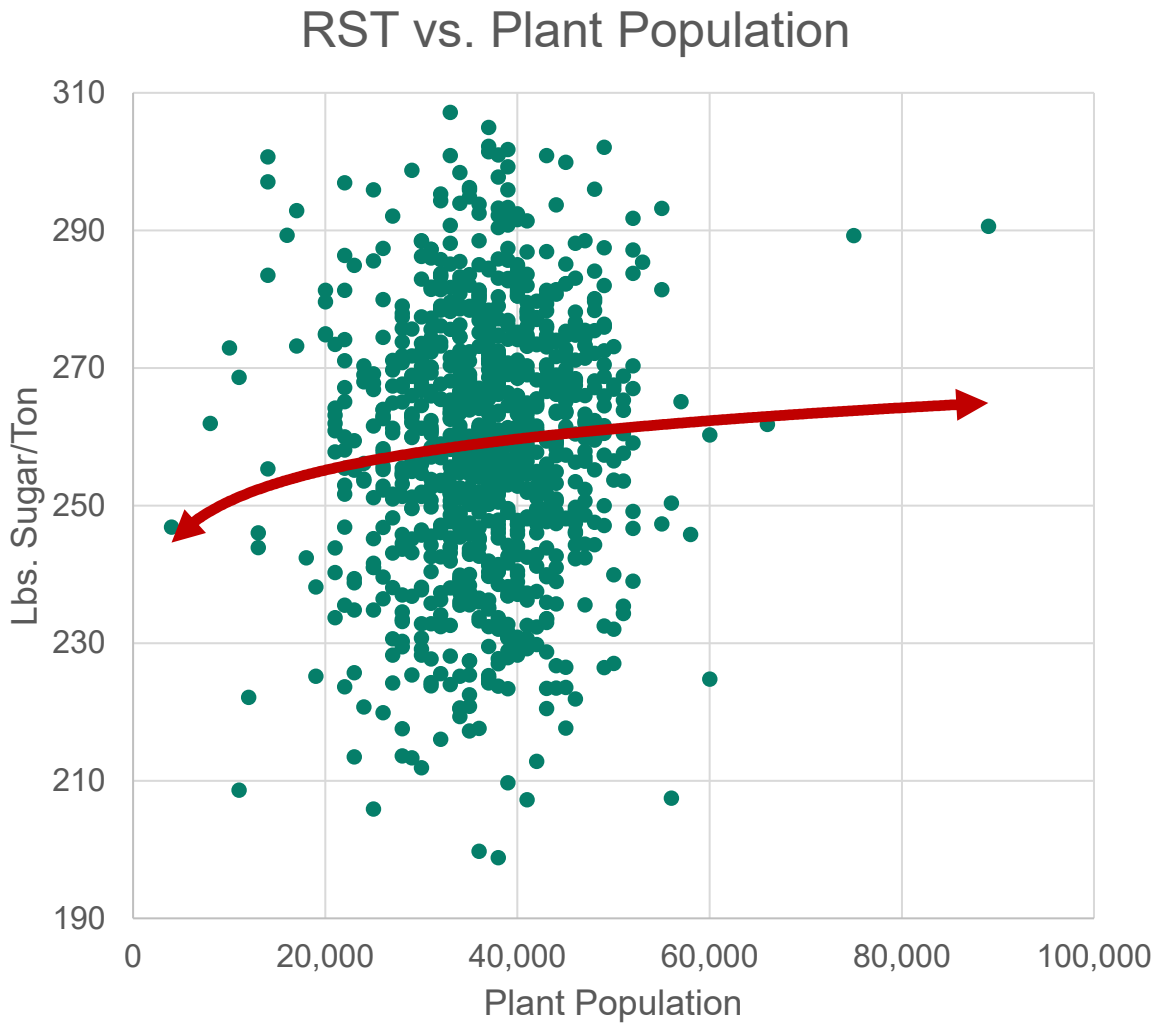
- There are lots of things that can reduce stand establishment
  - Uncalibrated planter (skips, doubles, seeds don't drop)
  - Poor germination
  - Poor emergence
  - Plant loss after emergence
- Almost impossible to predict stand establishment
- Growers should expect only 60 to 80% of the seeds they plant to establish.
- In the absence of extreme conditions or disease, losses after emergence usually range from 5 to 15%

Plant Population

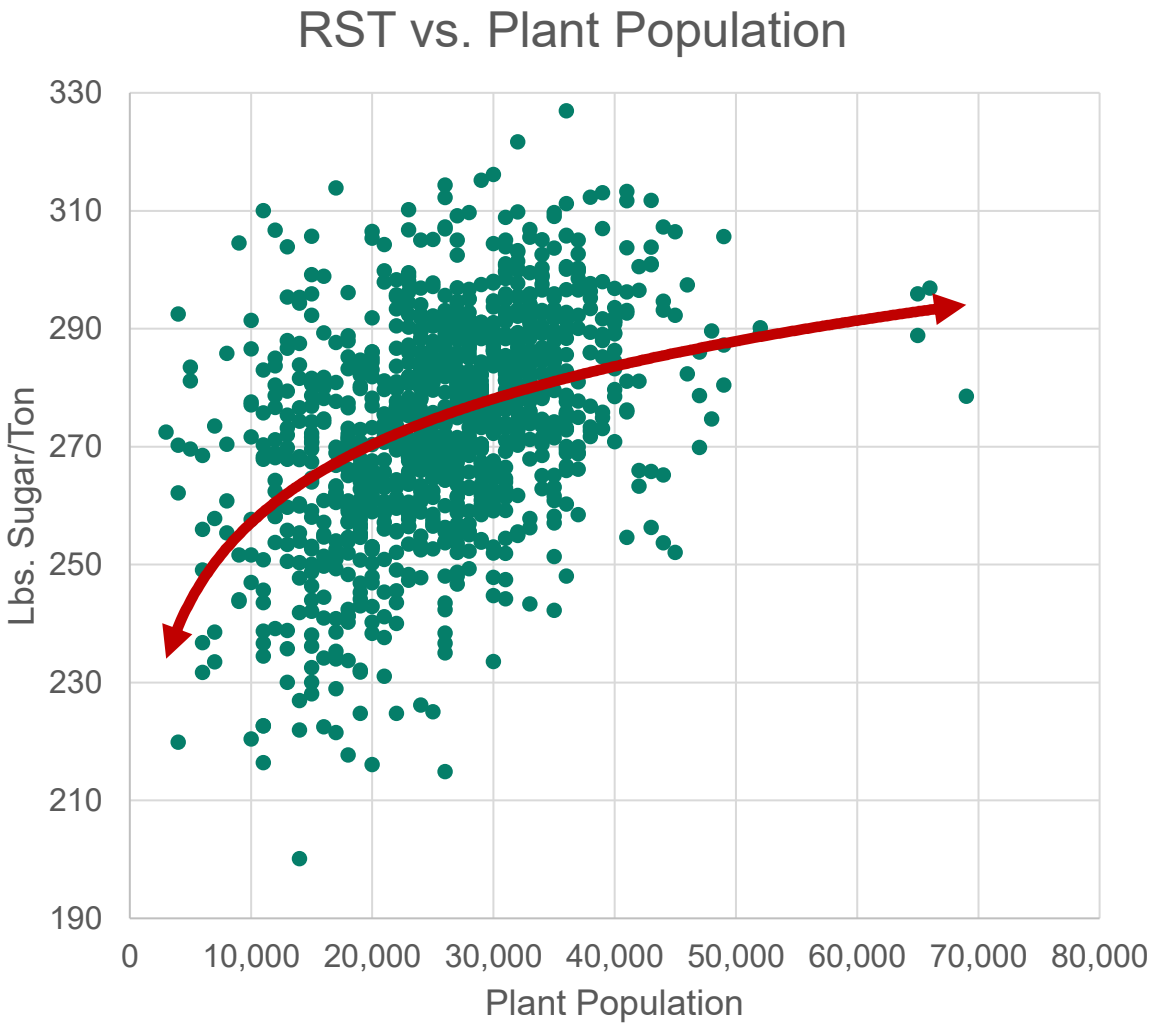
- The optimal sugarbeet plant population at harvest should be near **40,000-45,000** evenly spaced plants per acre
  - Determined to be the optimal balance of high root yield and high sugar content

- Increase Seed Spacing to Reduce Cost
  - Increasing seed spacing from 4.5 to 5” (10%)
    - Seed costs $250/acre you can save $25/acre.
    - The value of 10 beets/100’ of row is $41/acre.
    - The subsequent loss of 18 beets/100’ of row is worth $74/acre. **Net change is a loss of $50/acre**.

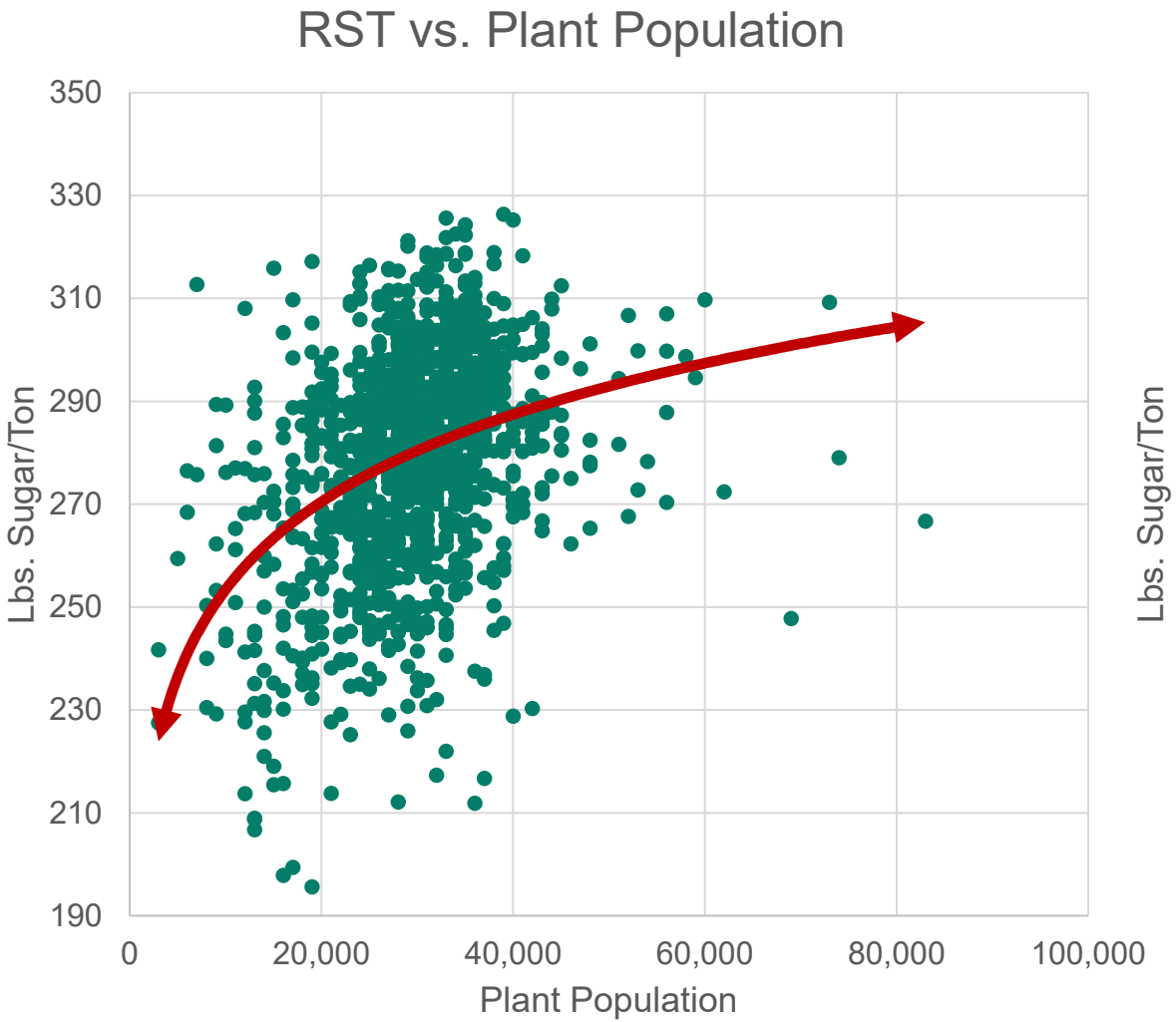
2016 Crop
15.72% Sugar



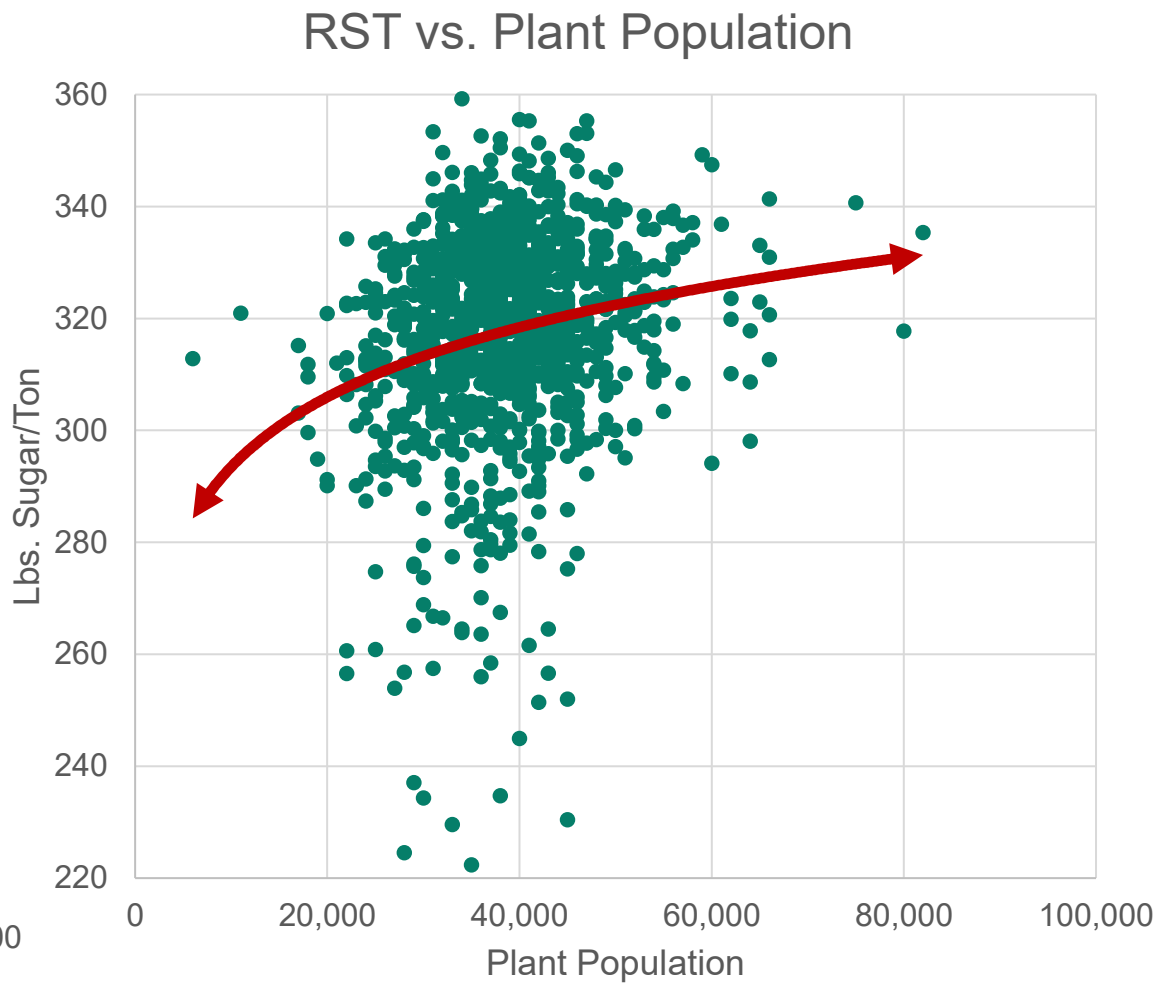
2005 Crop
16.49% Sugar



1998 Crop
17.43% Sugar



2012 Crop
19.08% Sugar



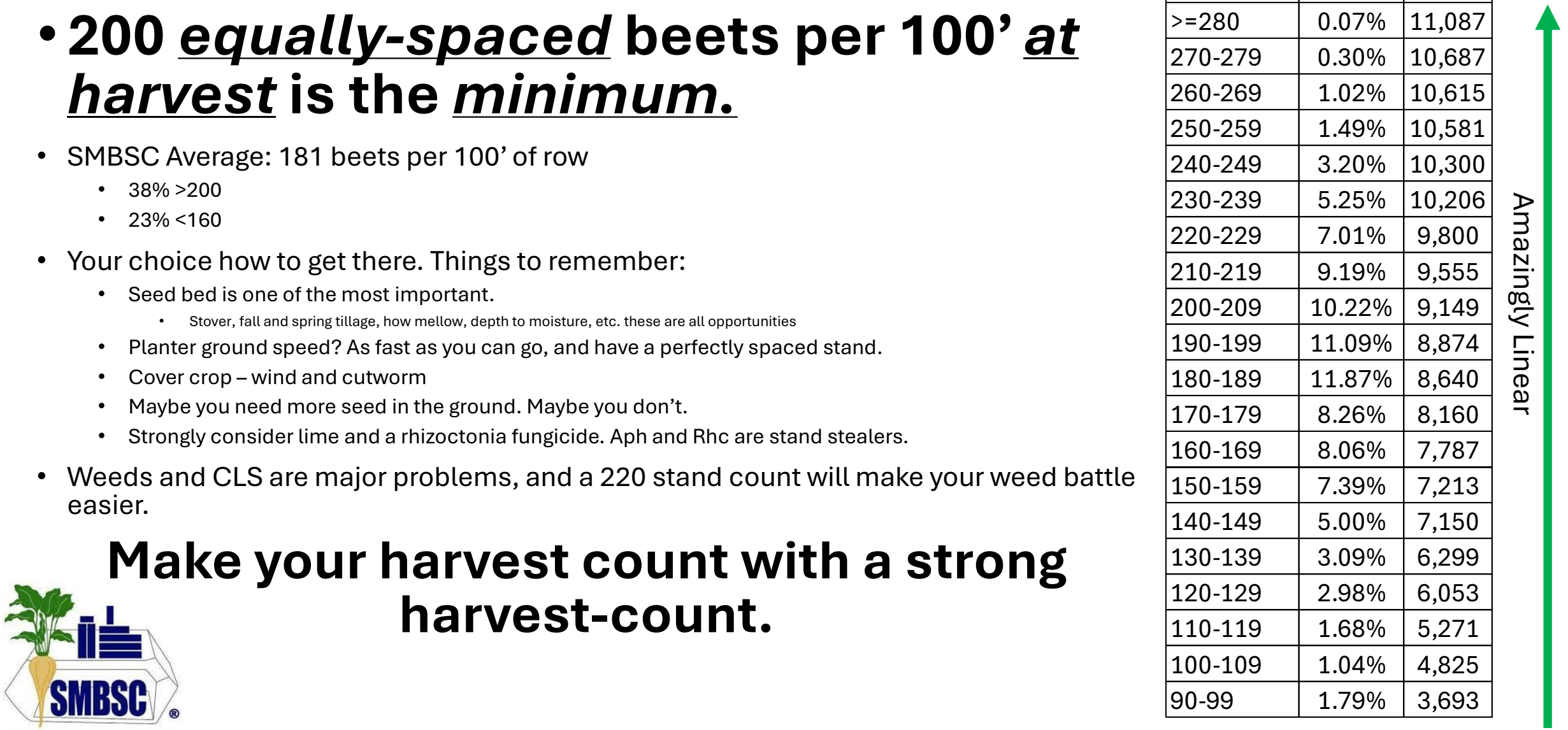
Opportunities: Harvest Population

- **200 *<u>equally-spaced</u>* beets per 100' *<u>at harvest</u>* is the *<u>minimum</u>*.**

- SMBSC Average: 181 beets per 100' of row
  - 38% >200
  - 23% <160
- Your choice how to get there. Things to remember:
  - Seed bed is one of the most important.
    - Stover, fall and spring tillage, how mellow, depth to moisture, etc. these are all opportunities
  - Planter ground speed? As fast as you can go, and have a perfectly spaced stand.
  - Cover crop – wind and cutworm
  - Maybe you need more seed in the ground. Maybe you don't.
  - Strongly consider lime and a rhizoctonia fungicide. Aph and Rhc are stand stealers.
- Weeds and CLS are major problems, and a 220 stand count will make your weed battle easier.

Make your harvest count with a strong harvest-count.

Stand/100'	Percent of Acres	ESA
>=280	0.07%	11,087
270-279	0.30%	10,687
260-269	1.02%	10,615
250-259	1.49%	10,581
240-249	3.20%	10,300
230-239	5.25%	10,206
220-229	7.01%	9,800
210-219	9.19%	9,555
200-209	10.22%	9,149
190-199	11.09%	8,874
180-189	11.87%	8,640
170-179	8.26%	8,160
160-169	8.06%	7,787
150-159	7.39%	7,213
140-149	5.00%	7,150
130-139	3.09%	6,299
120-129	2.98%	6,053
110-119	1.68%	5,271
100-109	1.04%	4,825
90-99	1.79%	3,693



Weed Control

Fungicides & Water Volume…

Turbo Twin Jet

Turbo Tee Jet

XR


10 GPA
20 GPA

2026 MDFC Fungicide Program

1. Proline + EBDC
2. Tin + Topsin
3. QoI + EBDC
4. Tin + EBDC
5. Inspire XT* or Provysol* + EBDC
6. Tin + EBDC
7. Triazole** + EBDC

Remember to rotate the triazoles:
**Inspire XT / Provysol / REGEV / Luna Flex*
***Domark / Minerva / Lucento / Topguard*