Seed Week 2019

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Sugarbeet Advancement Update
Thank You Tom!
2019 Variety Trials

- Nematode
- Non-Nematode
Looking Back on 2019…
Impact of Weather

- Wet spring
  - Delayed planting for several locations
  - Good emergence overall
- Dry weather in July and August
  - Negative influence on yield
  - Impacted disease pressure
- Wet, cold fall made harvest “memorable”
  - Particularly in the West and Central Districts
  - Shaffner trial was not taken to yield
Early Emergence

Average of 6 trials from 11 to 20 days after planting. Does not include Kearns.
Average of 6 variety trials, from 36 to 51 days after planting. Does not include Kearns.
Influence of Weather on Disease Pressure

*Root Diseases*
- Generally low
  - Chaffin and Shaffner Trials higher
- Increased levels of adult Aphanomyces
- Low if any yield impact

*Foliar Diseases*
- Less leaf spot than in previous years
  - Good fungicide application programs
  - Selection of more resistant varieties
- Weather
  - Overall lower pressure than last year
Dead Beet Counts

Average of 7 variety trials.
Leaf Spot: 2018 vs 2019

- Same or fewer applications at most locations
- Only 1 location rated in 2019
  - 2018: avg of 4.1
  - 2019: 1.4
Leaf Spot Summary

- Found early (June 18th), but never progressed
  - Only 1 trial with enough to rate, 6 could not be rated
  - Dry summer, cooler fall temps

- Decisions for next year cannot be made based off of this year’s lower disease pressure
- Good management and selection of resistant varieties will be essential to managing both Cercospora and Alternaria leaf spot next year
Half of 2019 variety trials had significant nematode pressure
  More than in previous years
Nematodes have a major influence on variety performance
  First trait to look for when selecting varieties

No combined averages for yield, sugar, and revenue
  Two averages reported
    Non-nematode trials
    Nematode trials
Non-Nematode Trials

- Chaffin – Ithaca
- DVL – Ruth
- Kearns – Ontario
- Shaffner – Freeland (Not included in yield averages)
Average RWSA
Non-Nematode

CV = 4.4
Average RWST Non-Nematode

CV = 2.2
Average Tons/Acre
Non-Nematode

CV=4.2
Chaffin Trial - Ithaca

- Planted April 25th
- Harvested November 8th
- Trial quality: Good

Key characteristics:
- Irrigated, muck soil, manure applied in the fall
  - Highest trial for tonnage (avg 43.6 tons/acre)
  - Low sugar (avg 241 RWST)
- Weed pressure
- Minor water damage
- High dead beet count (avg 49/1200 ft)
  - Low compared to previous trials
  - Likely impacted rank
Dead beet counts
SX-1278N: 126
SX-1275N: 274

RWSA

CV=6.3
DVL Trial - Ruth

- Planted May 6th
- Harvested November 2nd
- Trial quality: Very Good

Key characteristics:
- Loamy sand soil type
  - Hurt more severely by drought
- Low to moderate level of root diseases
  - Rhizoctonia and adult Aphanomyces both observed
  - May have impacted yield, but did not have large influence on variety rank
DVL Trial
RWSA

CV=5.4
Kearns Trial - Ontario

- Planted May 18th
- Harvested October 18th
- Trial quality: Excellent

Key characteristics:
- Exceptional quality, no major outside influences
- Only trial rated for Cercospora (avg 1.4, highest 1.8)
- Very high sugars (avg RWST 311)
Kearns Trial
RWSA

Sugarbeet Advancement
CV=2.7

![Graph showing RWSA values for different cultivars with CV=2.7. The graph compares HIL-9865, C-G752NT, B-1606N, SX-1275N, C-G675, SX-1278N, SX-1264, B-1690, B-1399, MA-709, HIL-9908, and HIL-9879NT.]
Shaffner Trial - Freeland

- Planted May 14th
- Not taken to yield
- Trial quality: Excellent

Key characteristics:
- No yield data taken due to extended harvest
- Highest level of root diseases (avg dead beet count: 83)
- Rhizoctonia, adult Aphanomyces, and Fusarium observed
Nematode Trials

- Herford - Elkton
- Sylvester - Quanicassee
- Wadsworth - Sandusky
Average RWSA Nematode

CV=5.4
Average RWST Nematode

CV = 2.4
Average Tons/Acre

Nematode

CV = 5.5
Herford Trial - Elkton

Planted May 19th
Harvested November 6th
Trial quality: Very Good

Key characteristics:
- Sugarbeet cyst nematode pressure
- Visible difference between varieties
- Very low dead beet counts
Herford Trial
RWSA

Sugarbeet Advancement
CV=4.2
Sylvester Trial - Quanicassee

- Planted April 9\textsuperscript{th}
- Harvested October 15\textsuperscript{th}
- Trial quality: Good

Key characteristics:
- Sugarbeet cyst nematode pressure
- Planted early
- Population
  - Took a long time to emerge, final population lower
- Low leaf spot pressure
  - Observed both Cercospora and Alternaria very early, did not progress

June 18\textsuperscript{th}
Sylvester Trial
RWSA

CV=5.0
Wadsworth Trial - Sandusky

- Planted April 9th
- Harvested November 9th
- Trial quality: Good

Key characteristics:
- Sugarbeet cyst nematode pressure
- Planted early
- Excellent population
- Low disease levels
- Hail storm, July 23rd
  - Impact visible on leaves until harvest

Hail damage, pictures taken October 17th
Wadsworth Trial
RWSA

CV = 7.0
## Summary

<table>
<thead>
<tr>
<th>Non-Nematode Trials</th>
<th>Nematode Trials</th>
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<tbody>
<tr>
<td>1. C-G752NT</td>
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<tr>
<td>2. B-1606N</td>
<td>2. SX-1278N</td>
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<td>3. C-G675</td>
<td>3. SX-1275N</td>
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<tr>
<td>4. SX-1275N</td>
<td>4. B-1606N</td>
</tr>
<tr>
<td>5. HIL-9865</td>
<td>5. C-G675</td>
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This year was… different…

Planting and harvesting were both a struggle
Weather influenced diseases

Do not allow one unusual year to change your fundamental management practices
Select varieties with traits needed on your farm
Continue to practice good leaf spot management
Resistant varieties