American Crystal Sugar Company
AgNotes

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Issue 617
Joe Hastings, Editor

www.crystalsugar.com

AG GOLD STANDARDS

https://www.crystalsugar.com/sugarbeet-agronomy/7-gold-standards/

- Fertility
- Variety Selection
- Stand Establishment
- Weed Control
- Disease & Insect Control
- Harvest

Link to 2020 SBRM Severity Map

https://www.crystalsugar.com/media/563709/2020-sugar-beet-root-maggot-severity.pdf

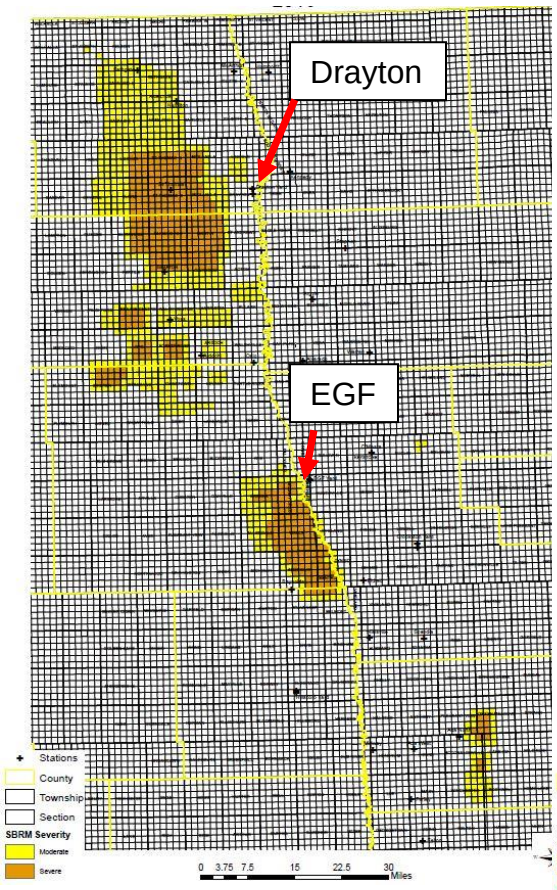
Root Maggot Warpath

Sugarbeet Root Maggot (SBRM) has significantly increased its footprint on American Crystal's growing area. The number of sugarbeet acres located in moderate to severe areas is about 130,000 acres. This creates the need for **aggressive** control measures to control losses and to stop and shrink the expanding footprint.

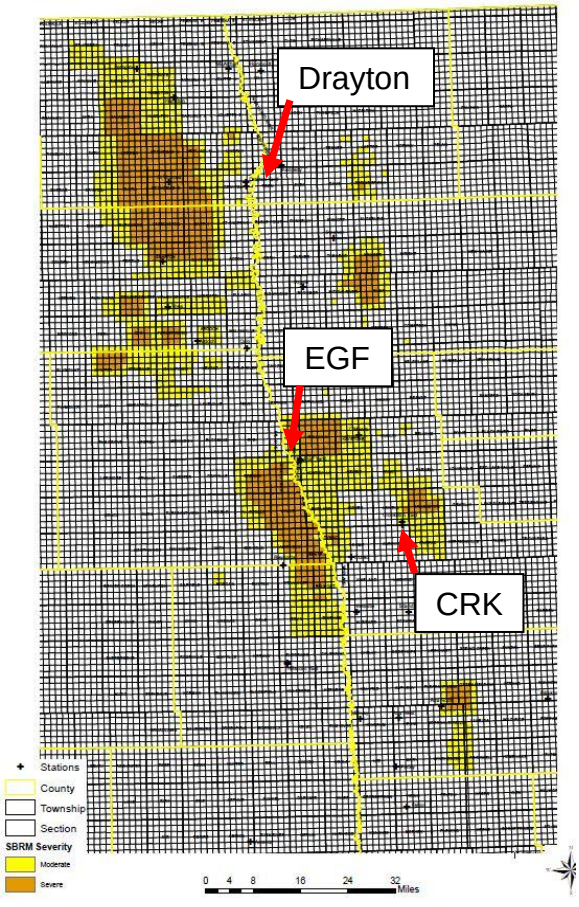
The Ag Staff have developed SBRM severity maps. Below is a comparison of what was witnessed in crop year 2015 to what was seen in 2020. Expansion has occurred significantly from East Grand Forks (EGF) to Crookston as well as new areas east of Stephen and Argyle.

Sugarbeet Root Maggot Severity Maps Comparison

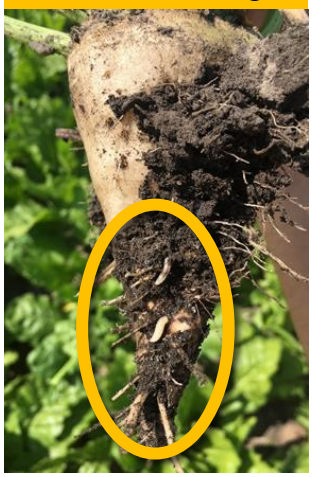
2015



2020



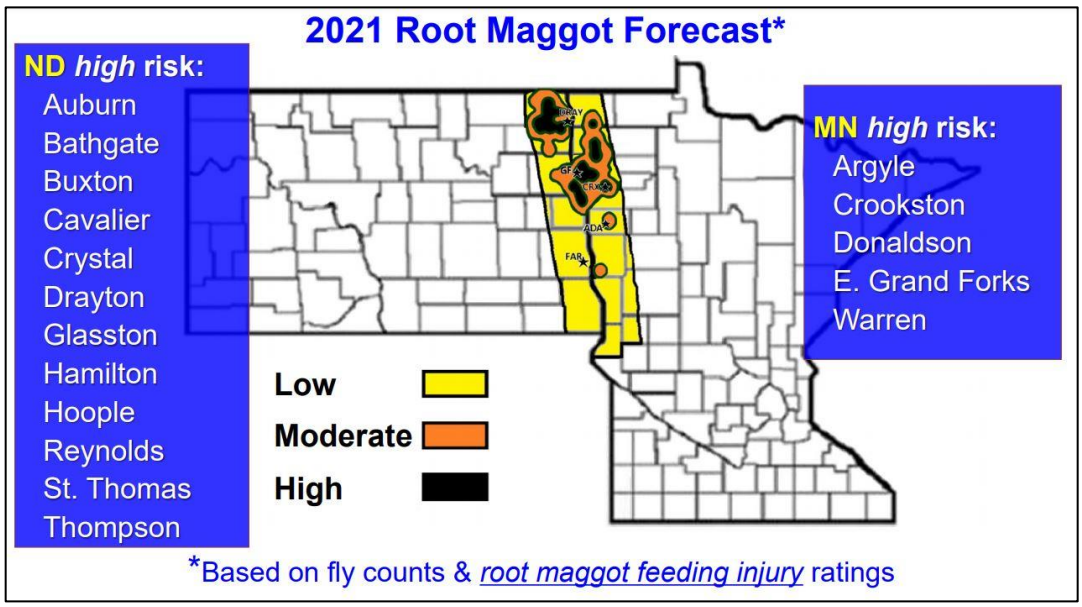
Larvae Feeding



Feeding Damage

2021 SBRM Forecast Map

Dr. Mark Boetel at NDSU has developed a 2021 SBRM Forecast Map based on the 2020 populations and sugarbeet damage ratings taken in the early fall. Damage ratings are a direct correlation to SBRM larvae that made through last year's control practices, fed on last year's sugarbeet crop, and will become flies in 2021 to complete the life cycle.



Knocking down SBRM populations is a twofold process

1. Apply an effective At-Plant insecticide to control the feeding larvae the flies will lay.
2. Use well-timed effective POST insecticides to knock down the SBRM fly population, there-by reducing the population of larvae the At-Plant insecticide must control.

Dr. Boetel: Postemergence Spray Timing for SBRM Control St. Thomas, ND: Combined Analysis (2015-2018)

Treatment	Timing (from peak fly)	RSA (lb/ac)	$$ above Check
Counter 7.5 lb + Lorsban Adv. 2 pts **2X**	7 days pre / 4 days post	9,132 a	$436
Counter 8.9 lb + Lorsban Adv. 2 pts	2 days pre / 4 days post	8,764 ab	$330
Counter 7.5 lb + Lorsban Adv. 1 pt **2X**	7 days pre / 4 days post	8,593 abc	$361
Counter 7.5 lb + Lorsban Adv. 1 pt + Mustang Maxx 4 fl oz	2days pre	8,557 abc	$292
Counter 7.5 lb + Lorsban Adv. 2 pts	2days pre	8,352 bc	$296
Counter 7.5 lb + Mustang Maxx 4 fl oz	2days pre	8,113 c	$304
Counter 7.5 lb + Lorsban Advanced 1 pt	2days pre	8,038 cd	$267
Counter 20G 8.9 lb		7,451 de	$180
Counter 20G 7.5 lb		7,090 e	$136
Check	---	5,884 f	---
LSD (0.05)		**639.6**	

2021 ACSC SBRM Control Recommendations – click the link below

https://www.crystalsugar.com/media/589618/2021-root-maggot-reference-card.pdf

Fly Count Stake

The Best Control Plan

- Counter At-Plant followed by Chlorpyrifos and/or Thimet POST Applied
- As fly populations surge, POST insecticides may need to be applied prior to predicted "Peak Fly" at increments of 70-100 Flies/stake count, as flies are present at high enough levels to warrant control.

Economic Risk Based on SBRM Fly Counts on Sticky-stake Traps

Daily Capture Flies/stake	Cumulative Capture Flies/stake	Risk Level	Suggested Management
0 - 25	0 - 50	Low	Monitor fields closely
26 – 50	51 – 100	Slight	Postemergence insecticide may be needed if at-plant was used at a low rate, is weak, or none used at all.
51 – 75	101 – 150	Moderate	Postemergence insecticide is justified even if at-plant insecticide was applied at a moderate or high rate.
76 – 100+	151 – 200+	Elevated	Apply a Postemergence liquid insecticide as soon as possible. Repeat if daily fly counts exceed 100/stake.

https://www.crystalsugar.com/media/25201/flycat.pdf

For prompt answers to your questions and comments, call and leave a message and Tom Astrup or one of his staff will respond as soon as possible.

Shareholders: 1-800-633-8941

Fly Stake Counts

NDSU and American Crystal Ag Staff take SBRM fly stake counts to monitor fly activity. You can monitor your area's numbers by following the below link. Counts are made every Monday, Wednesday, and Friday during SBRM season.
https://tinyurl.com/SBRM-FlyCounts

SBRM Degree Days (DD)

SBRM flies start to show up typically in the last week of May to first week of June. Peak Fly typically occurs at 651 DD.

Degree Days are monitored on the NDAWN site at:
https://ndawn.ndsu.nodak.edu//sugarbeet-root-maggot.html

For more information on Degree Days click this link:
https://ndawn.ndsu.nodak.edu/help-sugarbeet-root-maggot.html

This is information has been provided to help develop a Sugarbeet Root Maggot control plan. As always, please contact your Agriculturist with any questions and further refinement.

Important Notice: Please read and follow label directions on all pesticides, this document is not a substitute.