

Insect Management in Sugarbeet



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EXTENDING KNOWLEDGE >> CHANGING LIVES

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Chlorpyrifos Update*

Proposed EPA ruling: revoke all but 11 ag. crop uses

Current approved ND/MN field crops:

Alfalfa, soybean, sugarbeet, wheat (spring & winter)

Registered for sugarbeet use in 2025:

Chlorpyrifos 4E-Ag (Adama, Drexel)
Govern, Pilot 4E, Warhawk

Chlorpyrifos 15G and Pilot 15G

***Questions:** NDSU Extension, coop. agriculturists,
state ag. depts. (kellysolutions.com/ND or [/MN](http://kellysolutions.com/MN))

Midac Update: active ingredient = imidacloprid (a neonicotinoid)

- All neonics are under EPA review
- 2024: no production or sale of new Midac to retailers
 - Midac in supply chain could be sold & applied to sugarbeet
 - Vive pursued SLNs for Midac in ND & MN sugarbeet for '25 (not expected to be granted)
- 2025: no production of new Midac
 - Limited supply, can still be sold & applied to sugarbeet in 2025

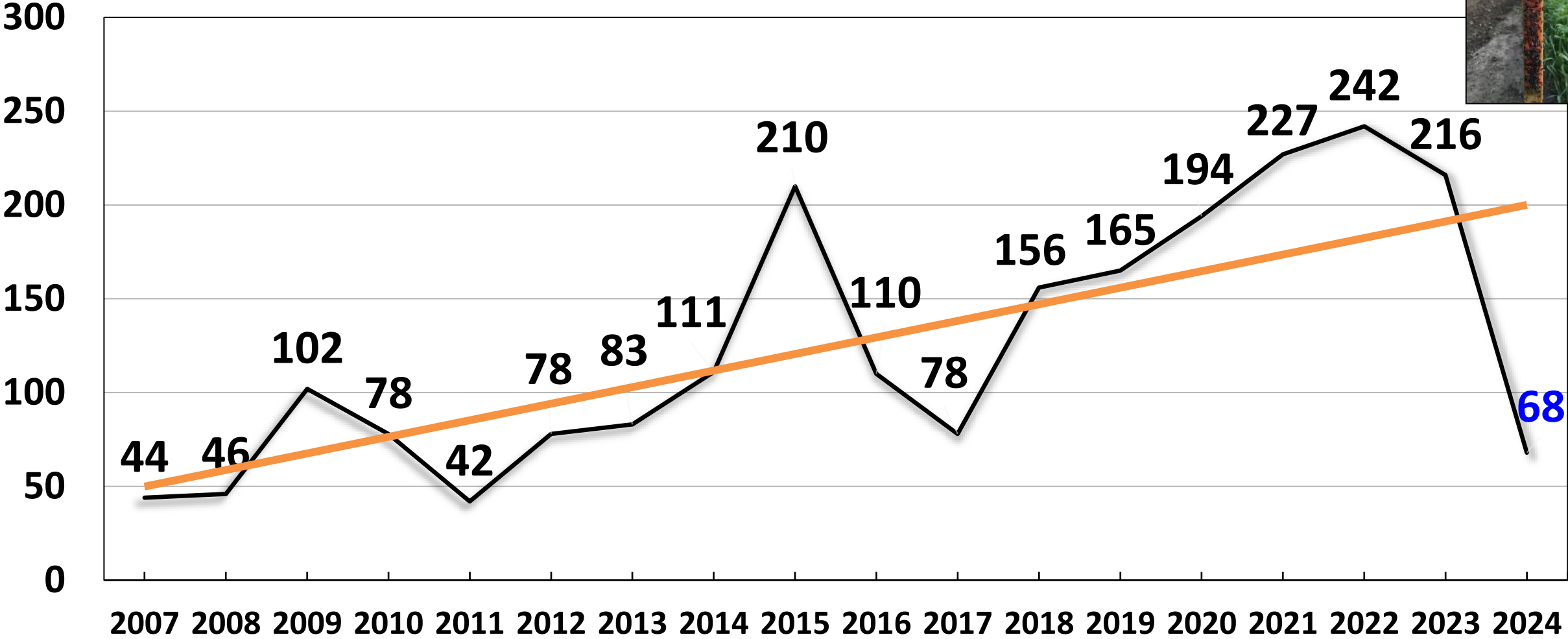
Insect Pest Outlook

- Grasshoppers: low activity last year ==> low risk for 2025
- Lygus bugs: rest of winter will affect risk
 - cold weather & little snow cover reduces survival
 - early springs allow buildups
- Cutworms: it's complicated
 - CWs that overwinter here: this winter may reduce survival (last year's problem areas most at-risk)
 - Those blown in as moths: harder to predict



RRV Sugarbeet Root Maggot Populations

Root Maggot Flies / Trap (RRV Average)



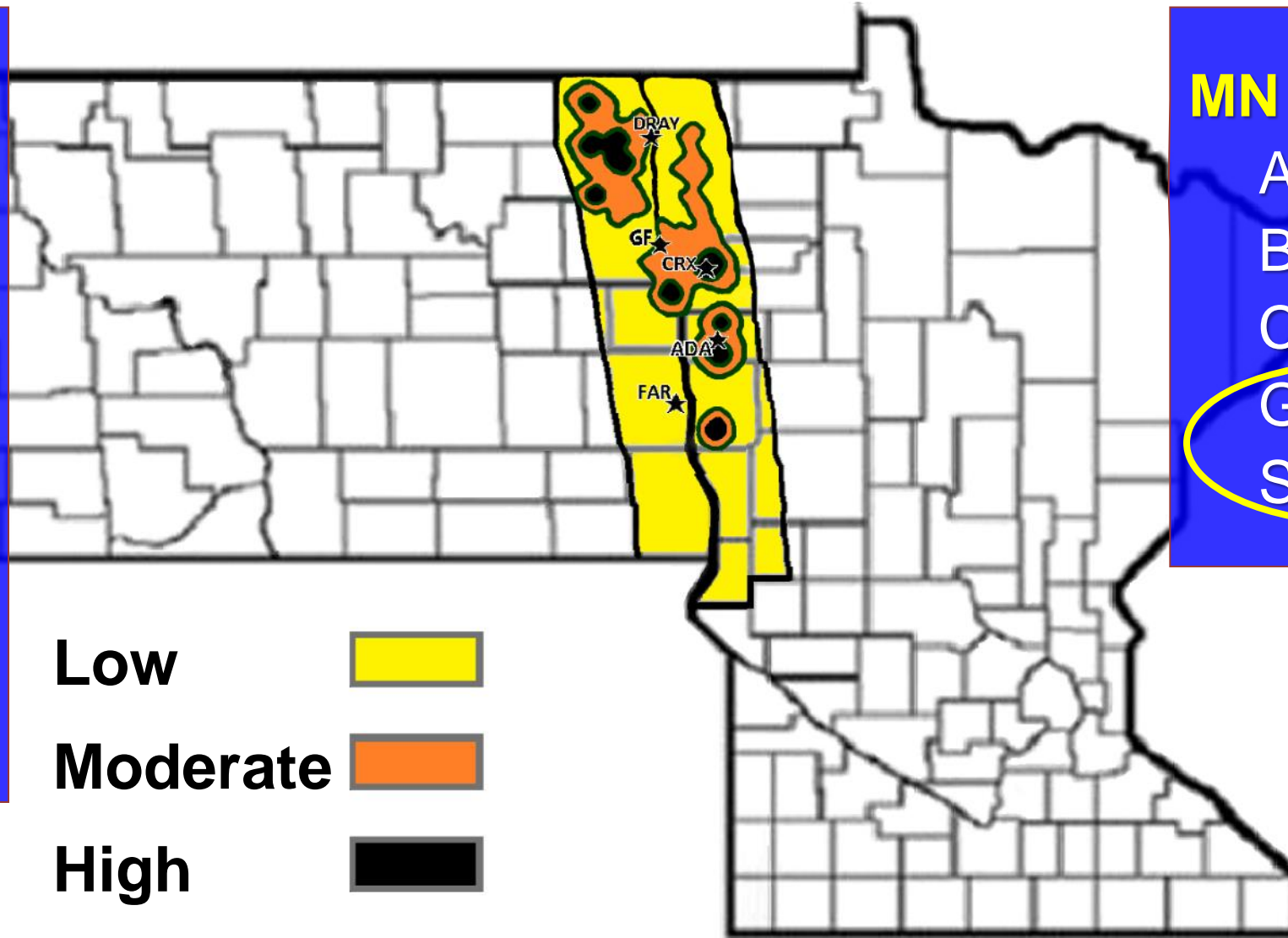
2025 Root Maggot Forecast*

ND high risk:

Auburn
Buxton
Cavalier
Cashel
Crystal
Reynolds
St. Thomas
Vesleyville

MN high risk:

Ada
Borup
Crookston
Glyndon
Sabin



*Based on fly counts & root maggot feeding injury ratings

Post Insecticides & Exponent Synergist for SBRM Control

St. Thomas, ND – 2024

At-Plant	Post (4d Pre-Peak Fly)	RSA (lb/ac)	Tons/ ac	Gross Rev/ac	Gain over Check
Counter 20G 8.9 lb	Pilot 4E 2 pts	10,610.5 a	34.4 a	\$2,297	\$808
Counter 20G 8.9 lb		10,400.3 a	34.0 a	\$2,229	\$740
Counter 20G 7.5 lb	Pilot 4E 2 pts	10,389.2 a	34.0 a	\$2,226	\$737
Counter 20G 7.5 lb	Mustang Maxx + Exponent	10,188.2 a	33.8 ab	\$2,146	\$657
Counter 20G 8.9 lb	Pilot 4E 1 pt	10,025.3 a	32.9 ab	\$2,143	\$654
Counter 20G 7.5 lb	Mustang Maxx	9,991.2 a	32.8 ab	\$2,131	\$642
Counter 20G 7.5 lb	Pilot 4E 1 pt	9,894.6 a	32.7 ab	\$2,091	\$602
Counter 20G 7.5 lb	Asana 9.6 oz	9,707.9 a	33.3 ab	\$1,961	\$472
Counter 20G 7.5 lb	Asana + Exponent	9,341.1 ab	32.9 ab	\$1,821	\$332
Poncho Beta	Pilot 4E 2 pts	8,396.5 bc	30.2 bc	\$1,587	\$98
Poncho Beta		7,702.7 c	27.1 cd	\$1,504	\$15
CHECK		7,475.0 c	25.9 d	\$1,489	---
LSD (0.05)		1,287.0	3.59		



Integrating Insecticide, Fungicide, and Fertilizer Applications



Combining POST SBRM Insecticides with Foliar Fungicides

St. Thomas, ND, 2024

POST Treatment*	SBRM Damage (0-9)	RSA (lb/ac)	Tons/ ac	Gross rev./ac
Mustang Maxx + Elatus	2.5 cde	11,134.7 a	35.1 a	\$2,488
Mustang Maxx 4 oz	2.1 de	11,087.4 a	35.0 a	\$2,473
Pilot 4E + Elatus	1.8 e	10,904.8 a	34.3 a	\$2,442
Pilot 4E + Excalia	3.0 bcd	10,904.7 a	35.3 a	\$2,368
Mustang Maxx + Excalia	3.6 b	10,875.4 a	34.7 a	\$2,400
Pilot 4E 2 pts	2.9 bcd	10,732.3 a	35.1 a	\$2,298
Mustang Maxx + Quadris	2.5 cde	10,710.6 a	34.3 a	\$2,354
Pilot 4E + Quadris	2.2 de	10,590.4 a	34.1 a	\$2,308
Counter 20G B 8.9 lb (no post insecticide)	3.3 bc	10,151.9 a	33.1 a	\$2,183
Untreated	6.0 a	9,033.7 b	28.2 b	\$2,039
LSD (0.05)	1.0	1,051	2.8	

* All insecticide plots received Counter 20G 8.9# at planting.

Summary: root maggot trials

- Pilot 4E, Mustang Maxx & Asana XL: similar performance at max. rates
 - Exponent synergist: no significant benefits (SBRM control or yield)
- Well-timed post sprays provide excellent SBRM control (use model)
- POST Insecticide/Fungicide Combinations:
 - Few negative impacts
 - Trends: 1) Elatus - more safe to combine w/ insecticides
 - 2) Quadris - least “ “ “ “ “

Springtail Control: 7 locations between 2006 & 2022

Treatment	RSA (lb/ac)	Root yield (tons/ac)	Revenue/ ac	Gain over Check
Counter 5.9# B	8,669 a	31.2 a	\$1,341	\$476
Counter 7.5# B	8,664 a	31.2 a	\$1,336	\$470
Counter 4.5# B	8,513 a	30.6 a	\$1,311	\$445
NipsIT Inside 60 g	8,264 a	29.7 a	\$1,273	\$408
Poncho Beta 68 g	8,161 a	29.3 a	\$1,268	\$402
Cruiser 60g	8,154 a	29.6 a	\$1,255	\$390
Check	5,731 b	21.4 b	\$866	---
LSD (0.05)	856.2	2.12		

Insecticide Programs for Springtail Control – Prosper, ND, 2024

Treatment	RSA (lb/ac)	Tons/ac	Rev./ac	Gain
Poncho Beta + Mustang Maxx 4 fl oz 3" T-band	9,584 a	34.3 a	\$1,825	\$425
Poncho Beta + Midac FC 13.6 fl oz DIF	9,411 a	33.6 ab	\$1,796	\$395
Poncho Beta + Mustang Maxx 4 fl oz DIF	9,318 ab	33.2 abc	\$1,784	\$384
Counter 20G 7.5# Band	9,315 ab	32.8 abc	\$1,814	\$413
Counter 20G 8.9# Band	9,308 ab	33.0 abc	\$1,798	\$397
Mustang Maxx 4 fl oz DIF	9,302 ab	32.9 abc	\$1,804	\$403
Mustang Maxx 4 fl oz 3" T-band	9,218 abc	32.6 a-d	\$1,788	\$387
Poncho Beta	9,179 abc	32.8 a-d	\$1,757	\$356
Poncho Beta + Movento HL 2.5 fl oz 10" Post Band	9,049 abc	31.9 b-e	\$1,764	\$364
Counter 20G 5.9# Band	8,817 bcd	31.4 cde	\$1,690	\$290
Midac FC 13.6 fl oz DIF	8,705 cd	31.0 de	\$1,672	\$272
Counter 20G 4.5# Band	8,446 d	30.6 e	\$1,579	\$178
Check	7,350 e	26.3 f	\$1,401	---
LSD (0.05)	589.3	1.74		



NS

Springtail Control

Prosper, ND – 2024



Check



Counter Band 7.5#



Mustang Maxx 4 oz DIF



Poncho Beta +
Mustang Maxx 4 oz DIF

Springtail Control Tips

- **Consistent performance:**
 - Seed treatment insecticide + an at-plant spray (Midac or Mustang Maxx)
 - Moderate to high rate of Counter 20G (5.9 to 8.9 lb/ac)
- **No benefit from Movento (10" POST Band) in 2024:**
 - not recommended
- **Lowest surviving plant stands & yield:**
 - single trts. of Mustang Maxx, Poncho Beta, Midac, low rate of Counter
- **High risk:** use Counter or a combo of seed treatment + at-plant spray



Root Maggot Control Tips

- SBRM risk still high near Baker, Sabin, Glyndon area
- **Know your risk:** monitor fields (and online fly counts)
- **Most of Minn-Dak:**
 - Counter, Mustang Maxx, Midac, or a seed trt.
 - Unexpected high fly activity:
Chlorpyrifos, Asana, or Mustang Maxx (2-3 d pre-peak)
- **High-risk areas (Sabin, Baker):**
 - Use a 2 or 3-component combination

Cutworm Control Tips

- Don't rely on seed treatments
- Key: catching infestations early (scouting)
- Rescue options:
 - Chlorpyrifos
 - Mustang Maxx or Asana XL
 - Coragen or Exirel?

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- **Seed & Crop Protection Industry**

got white grubs?



Thank you!



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