

Insect Pest Outlook & Control Tips



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EXTENDING KNOWLEDGE >> CHANGING LIVES

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EXTENSION

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: ongoing 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

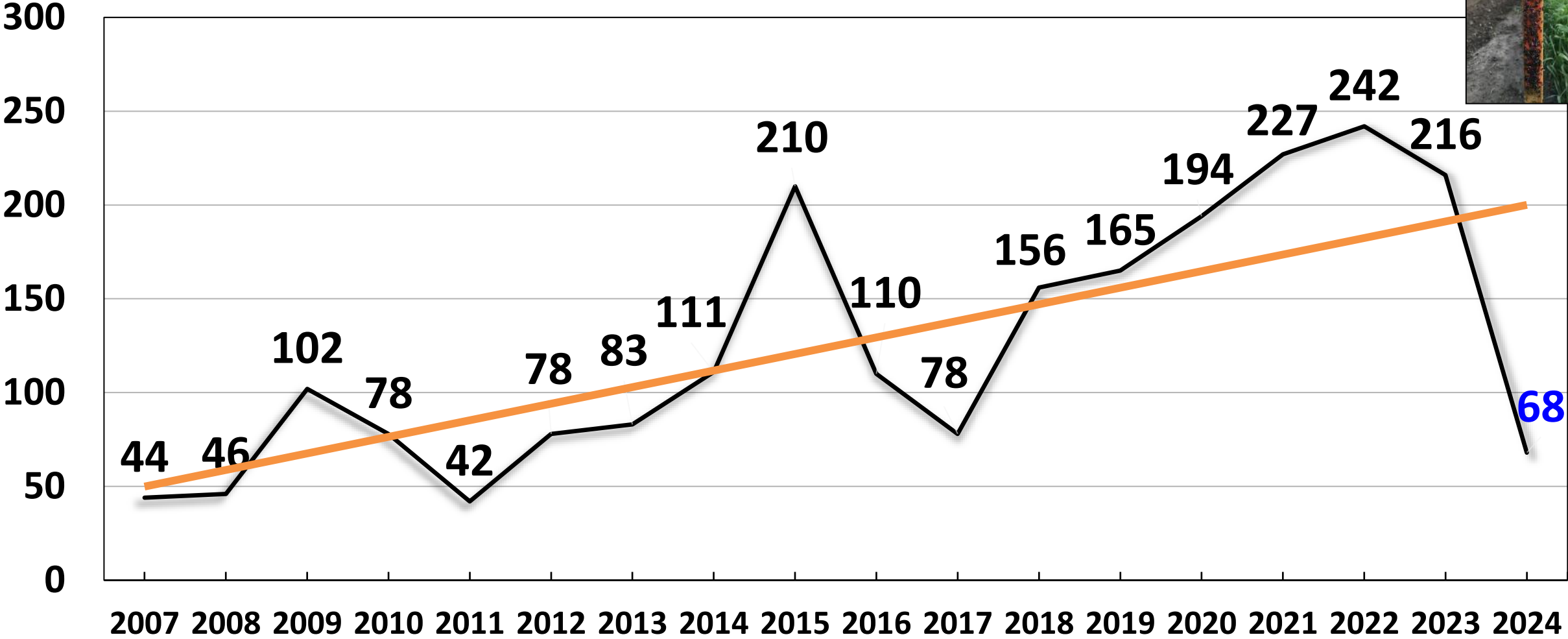
Insect Pest Outlook

- 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)



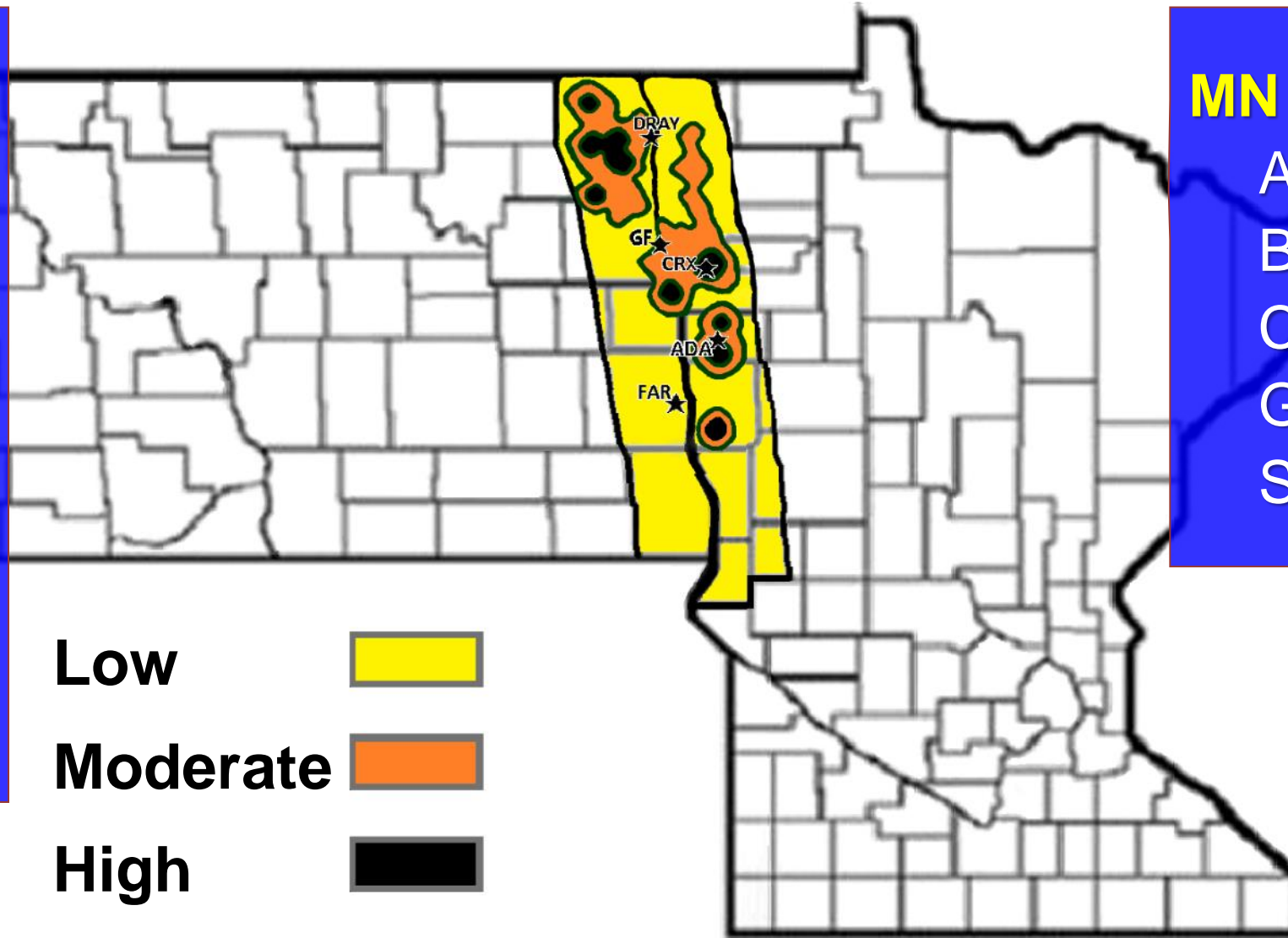
2025 Root Maggot Forecast*

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

Root Maggot Control



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	10,611 a	34.4 a	\$2,297	\$808
Counter 20G 8.9 lb		10,400 a	34.0 a	\$2,229	\$740
Counter 20G 7.5 lb	Pilot 4E 2 pts	10,389 a	34.0 a	\$2,226	\$737
Counter 20G 7.5 lb	Mustang Maxx + Exponent	10,188 a	33.8 ab	\$2,146	\$657
Counter 20G 8.9 lb	Pilot 4E 1 pt	10,025 a	32.9 ab	\$2,143	\$654
Counter 20G 7.5 lb	Mustang Maxx	9,991 a	32.8 ab	\$2,131	\$642
Counter 20G 7.5 lb	Pilot 4E 1 pt	9,895 a	32.7 ab	\$2,091	\$602
Counter 20G 7.5 lb	Asana 9.6 oz	9,708 a	33.3 ab	\$1,961	\$472
Counter 20G 7.5 lb	Asana + Exponent	9,341 ab	32.9 ab	\$1,821	\$332
Poncho Beta	Pilot 4E 2 pts	8,397 bc	30.2 bc	\$1,587	\$98
Poncho Beta		7,703 c	27.1 cd	\$1,504	\$15
CHECK		7,475 c	25.9 d	\$1,489	---
LSD (0.05)		1,287.0	3.59		



Dual Insecticide Programs for SBRM Control, St. Thomas, 2024

At-Plant	Post (4 d pre-peak)	RSA (lb/ac)	Tons/ac	Rev./ac	Gain
Counter 20G B 7.5#	Pilot 4E 2 pts	11,544 a	36.3 a	\$2,582	\$544
Counter 20G B 8.9#	Pilot 4E 1 pt	11,434 a	36.4 a	\$2,526	\$488
Counter 20G B 8.9#	Pilot 4E 2 pts	11,412 a	36.7 a	\$2,495	\$457
Counter 20G B 7.5#	Pilot 4E 1 pt	11,155 ab	35.8 a	\$2,444	\$406
Poncho Beta + Midac		11,155 ab	35.1 a	\$2,492	\$454
Poncho Beta + Midac	Pilot 4E 2 pts	10,718 ab	36.1 a	\$2,215	\$177
Poncho Beta + Midac	Pilot 4E 1 pt	10,535 abc	35.4 ab	\$2,186	\$148
Counter 20G B 7.5#		10,524 abc	35.6 ab	\$2,167	\$129
Poncho Beta		10,317 bc	33.4 bc	\$2,237	\$199
Midac		10,182 bc	32.0 c	\$2,277	\$239
Check		9,548 c	31.3 c	\$2,038	---
	LSD (0.05)	1,071.4	2.26		

Integrating Insecticide, Fungicide, and Fertilizer Applications



At-Plant Insecticide, Starter Fertilizer & Fungicide Applications, St. Thomas, ND, 2024

Treatment	RSA (lb/ac)	Tons/ac	Revenue
Counter 20G 8.9# + 6-24-6	12,216.6 a	38.7 a	\$2,709
Counter 20G 7.5# + 6-24-6 + AZteroid	11,226.5 ab	36.9 ab	\$2,388
Counter 20G 8.9# + 10-34-0	11,074.0 ab	37.1 ab	\$2,304
Counter 20G 7.5# + 6-24-6	11,056.6 ab	35.9 ab	\$2,385
Counter 20G 7.5# + 10-34-0 + AZteroid	10,986.4 b	36.4 ab	\$2,316
Counter 20G 7.5# + 10-34-0	10,941.4 b	37.0 ab	\$2,254
Counter 20G 8.9# + 10-34-0 + AZteroid	10,926.1 b	35.8 ab	\$2,332
Counter 20G 8.9#	10,774.1 bc	35.1 bc	\$2,317
Counter 20G 7.5#	10,724.8 bcd	34.8 bc	\$2,317
Counter 20G 8.9# + 6-24-6 + AZteroid	10,695.2 bcd	35.0 bc	\$2,288
6-24-6	9,614.2 cde	31.8 cd	\$2,033
10-34-0	9,531.5 de	31.0 d	\$2,052
Check	9,221.2 e	31.8 cd	\$1,846
LSD (0.05)	1,205.3	3.4	



7
Counter 20G
7.5 lb Band
+
6-24-6 starter
DIF

Counter B 7.5 lb
6-24-6 starter DIF



9
Counter 20G
7.5 lb Band
+
Azteroid 5.7 oz +
6-24-6 DIF

Counter B 7.5 lb
Azteroid 5.7 fl oz +
6-24-6 starter DIF



8
Counter 20G
8.9 lb Band
+
6-24-6 starter
DIF

Counter B 8.9 lb
6-24-6 starter DIF



10
Counter 20G
8.9 lb Band
+
Azteroid 5.7 oz +
6-24-6 DIF

Counter B 8.9 lb
Azteroid 5.7 fl oz +
6-24-6 starter DIF

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.



Pilot 4E 2 pts +
Elatus 7.1 fl oz
7" Band



Pilot 4E 2 pts +
Excalia 0.64 fl oz
7" Band



Pilot 4E 2 pts +
Quadris 10 fl oz
7" Band

Summary: root maggot control

- Pilot 4E, Mustang Maxx & Asana XL: similar performance at max. rates
 - Exponent synergist: no significant benefits
- Well-timed post sprays provide excellent SBRM control
- At-Plant Insecticide/Fungicide/Fertilizer Combinations:
 - Applying Counter concurrently w / starter fert. & AZteroid?
Reduce rate of Counter (esp. with 6-24-6)
- POST Insecticide/Fungicide Combinations:
 - Trends: 1) Elatus - more safe to combine w/ insecticides
 - 2) Quadris - least “ “ “ “ “ “


Successful Root Maggot Control

- “Know thine enemy”:
 - Forecast map
 - Online fly counts
 - Monitor your fields
- **Root maggot model:**
 - tracks progress to peak fly
 - guidelines for POST insecticide timing
- **High-risk areas:** 2- or 3-component insecticide combo

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	---
*14 replications	LSD (0.05)	589.3	1.74	

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 higher rate of Counter 20G (5.9 to 7.5 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



Cutworm Control (no data shown)

- 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 or
springtails?



Thank you!



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