

# REVIEW OF INSECT PEST PROBLEMS IN 2008



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# Topics



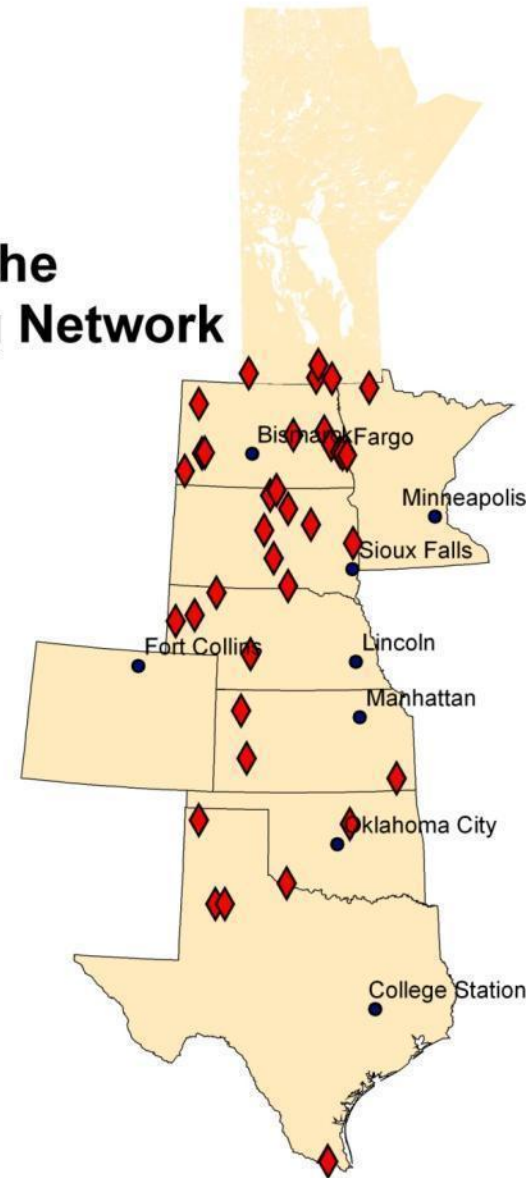
- Regional Sunflower Insect Trapping Network
- 2008 NSA Sunflower Survey - Insects
- Sunflower Insecticide Trial
  - ▣ Head-infesting insects
- *Dectes* Insecticide Trial

## 2008 Trap Sites for the Sunflower Insect Trapping Network



**40 trap sites total in  
7 States and one Province**

**Target Insects include:  
Sunflower moth  
Banded sunflower moth**



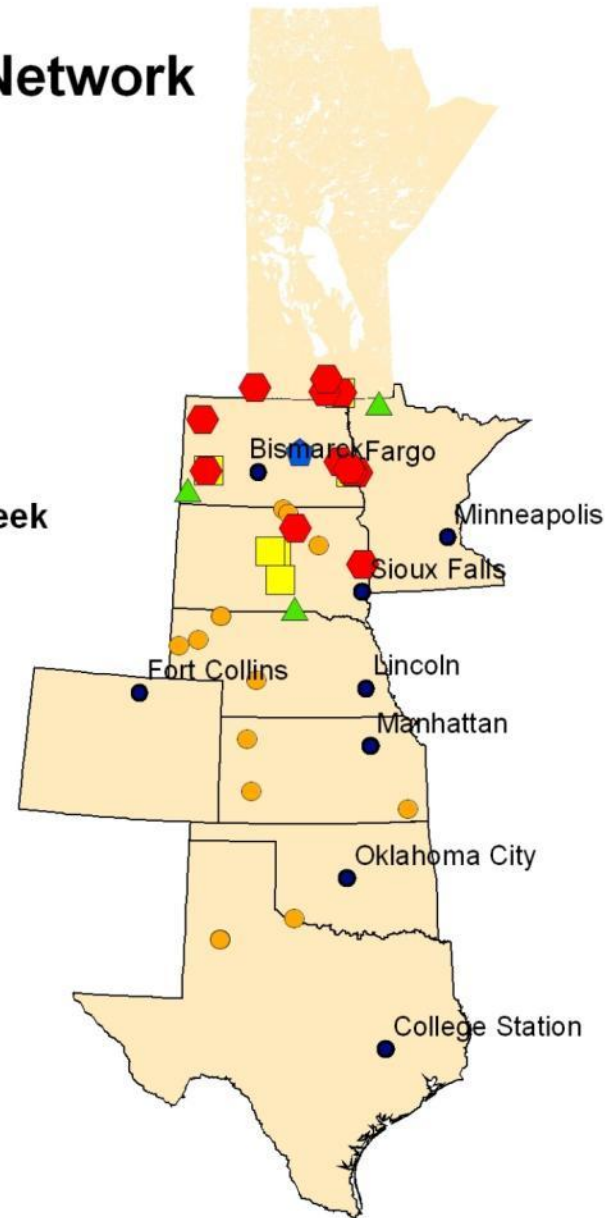
# Banded Sunflower Moth Trapping Network

*Cochylis hospes* Walsingham

July 21-27, 2008

Number of banded sunflower moths per trap per week

- 0 moth
- ▲ 1-25 moths
- ◆ 26-50 moths
- 51-100 moths
- ⬢ >100 moths



# Sunflower Moth Trapping Network

*Homoeosoma electellum* Hulst

July 28 - August 3, 2008

Number of sunflower moths per trap per week

● 0 moth

▲ 1-10 moths

■ 10-27 moths

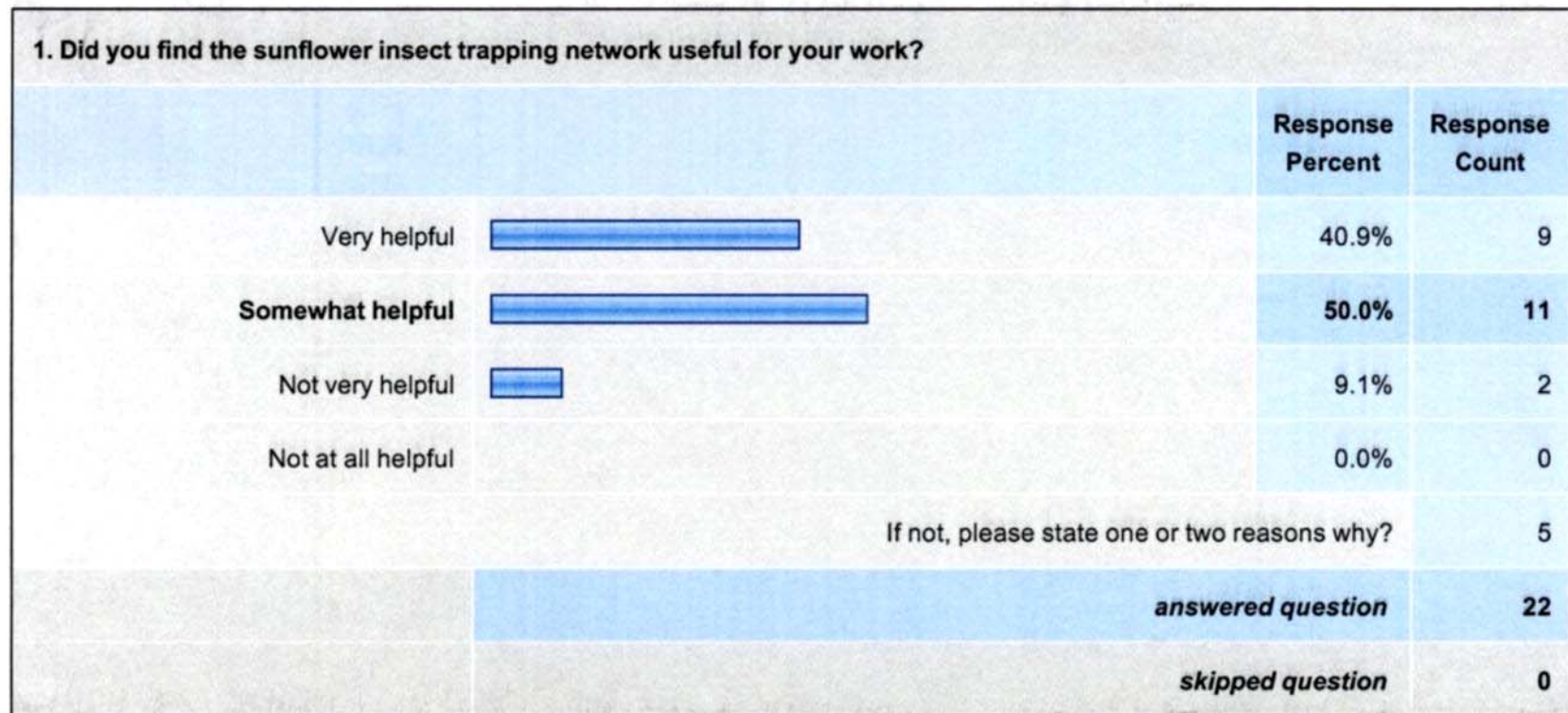
● >28 moths

Economic threshold during R3-R5



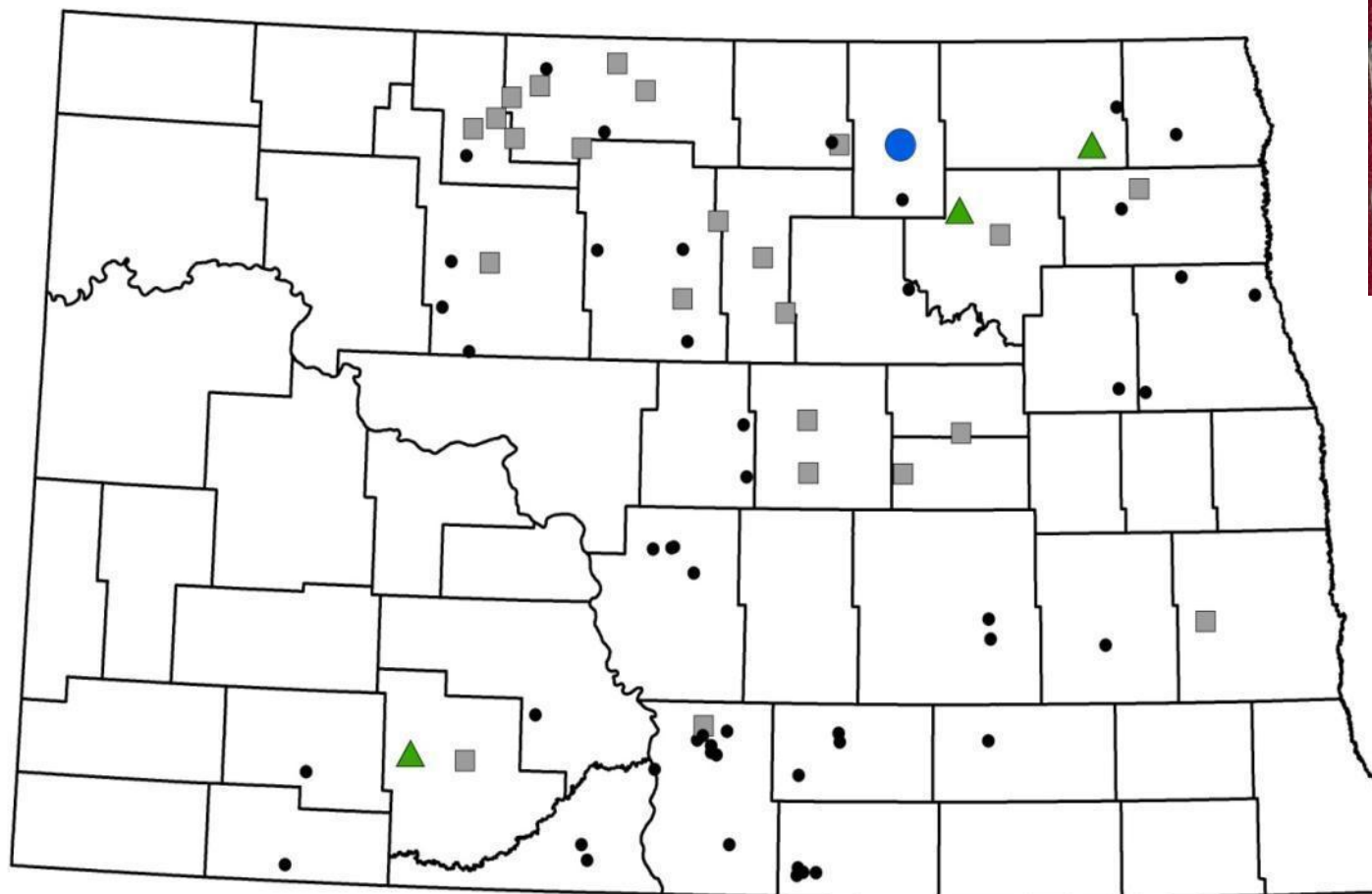


# Feedback from 2008 Sunflower Insect Trapping Network



# 2008 Sunflower Survey

## *Banded Sunflower Moth*



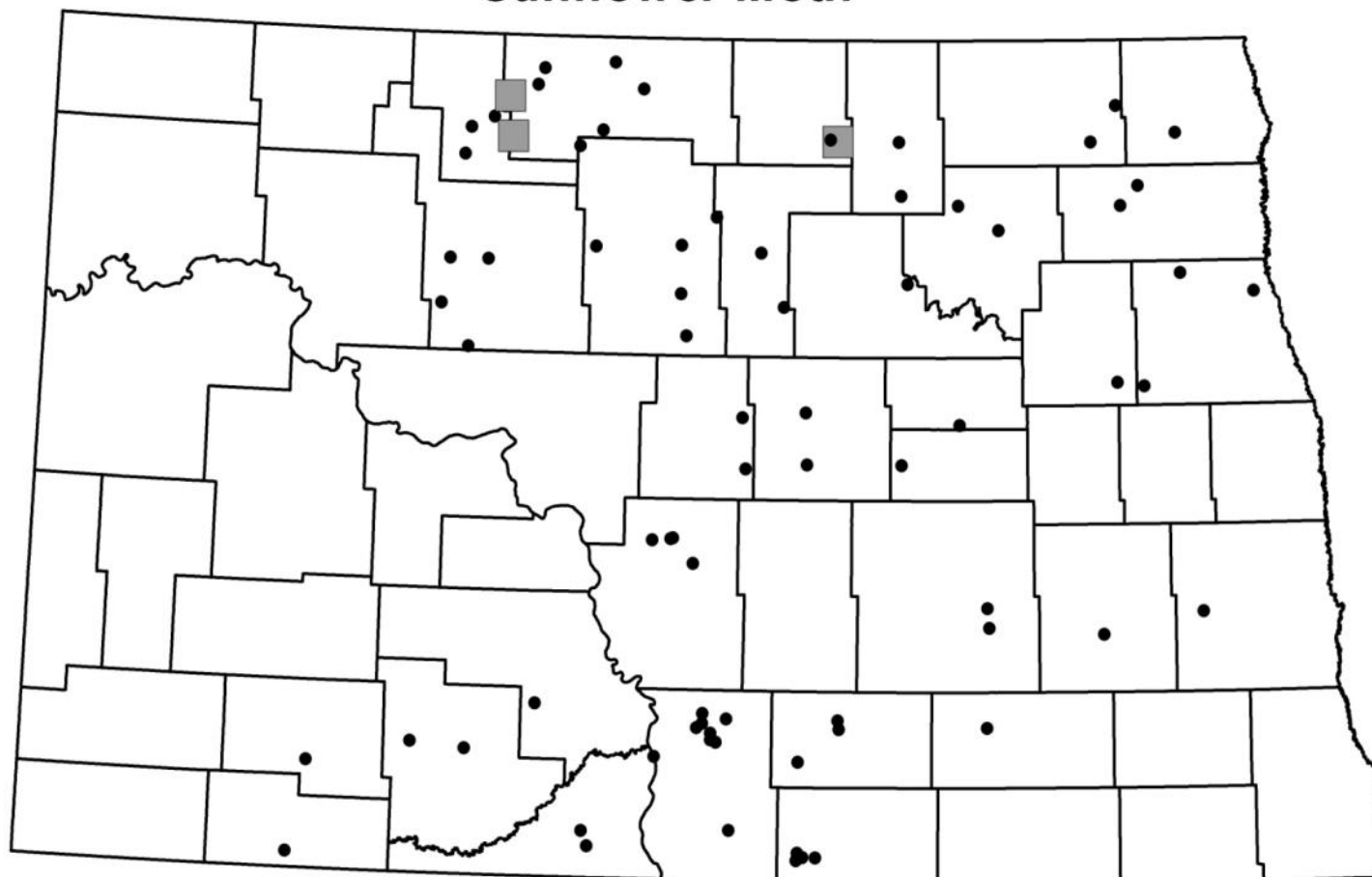
Percent Insect Damage to Seed

● 0    ■ 1-10    ▲ 11-25    ● 26-50    ■ 51-75    ▲ 76-100



# 2008 Sunflower Survey

## *Sunflower Moth*



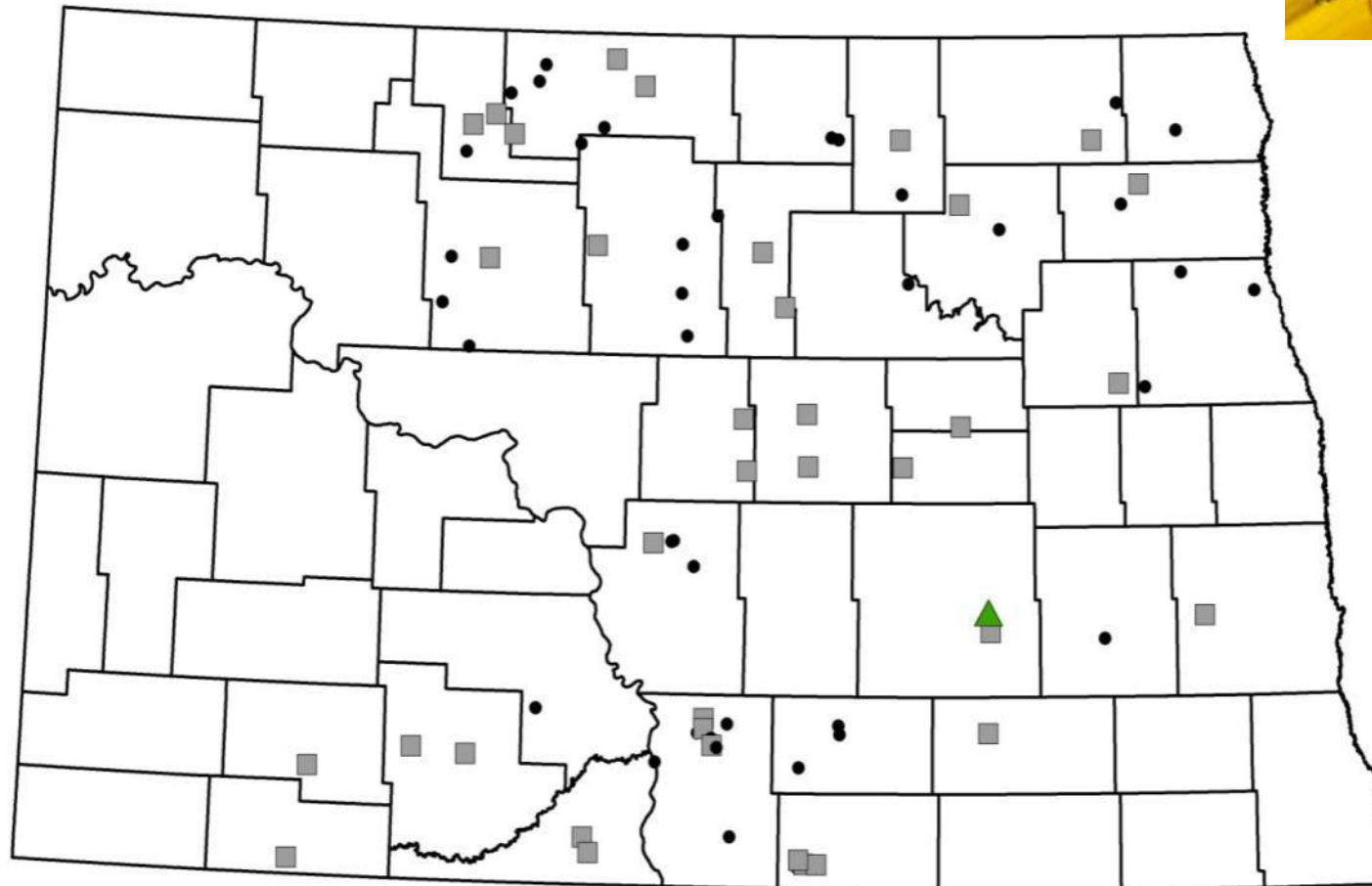
Percent Insect Damage to Seed





# 2008 Sunflower Survey

## *Red Sunflower Seed Weevil*



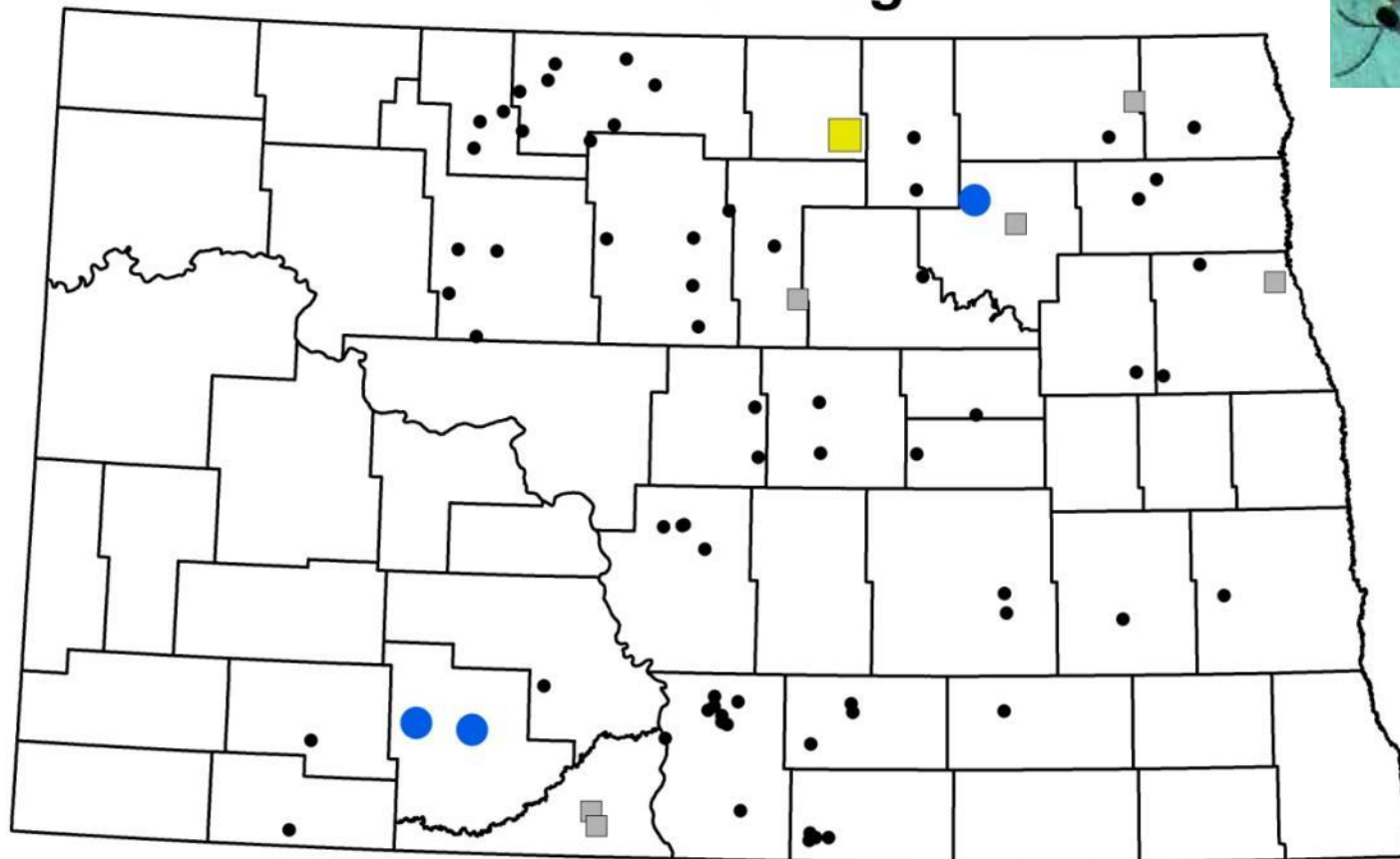
Percent Insect Damage to Seeds

● 0    ■ 1-10    ▲ 11-25    ● 26-50    ■ 51-75    ▲ 76-100



# 2008 Sunflower Survey

## *Sunflower Midge*



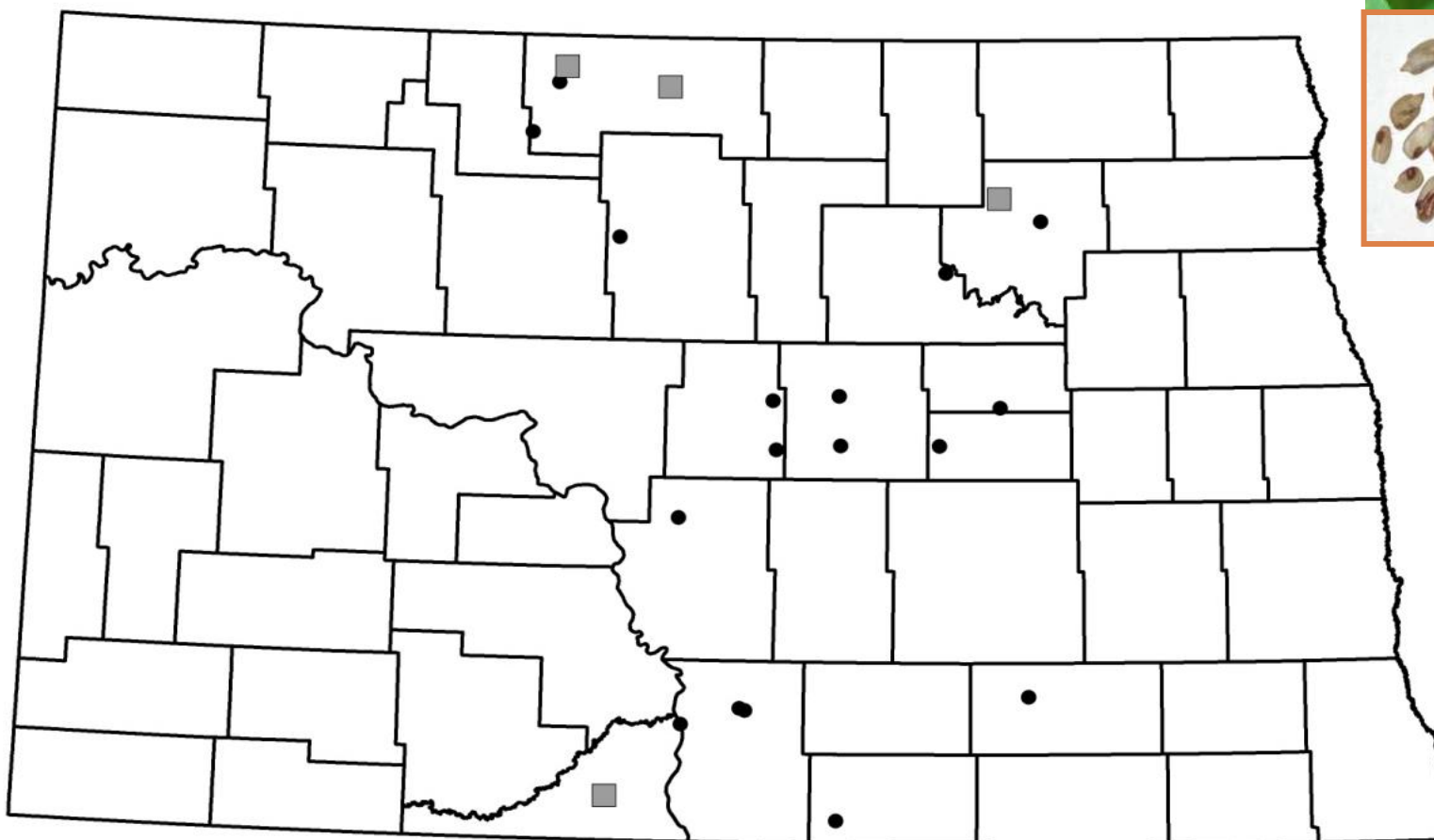
### Damage Rating (Bracken)

- No Damage
- Light bract damage, may be creased
- ▲ Bract damage, some cupping, start of central hole or seedless area
- Heavy bract damage, central hole or seedless area, receptacle thickening
- Extreme cupping to hole or seedless area, receptacle thickening >1/2 diameter
- ▲ Head Closed



# 2008 Sunflower Survey

## *Lygus bug Injury to Confection Sunflowers*

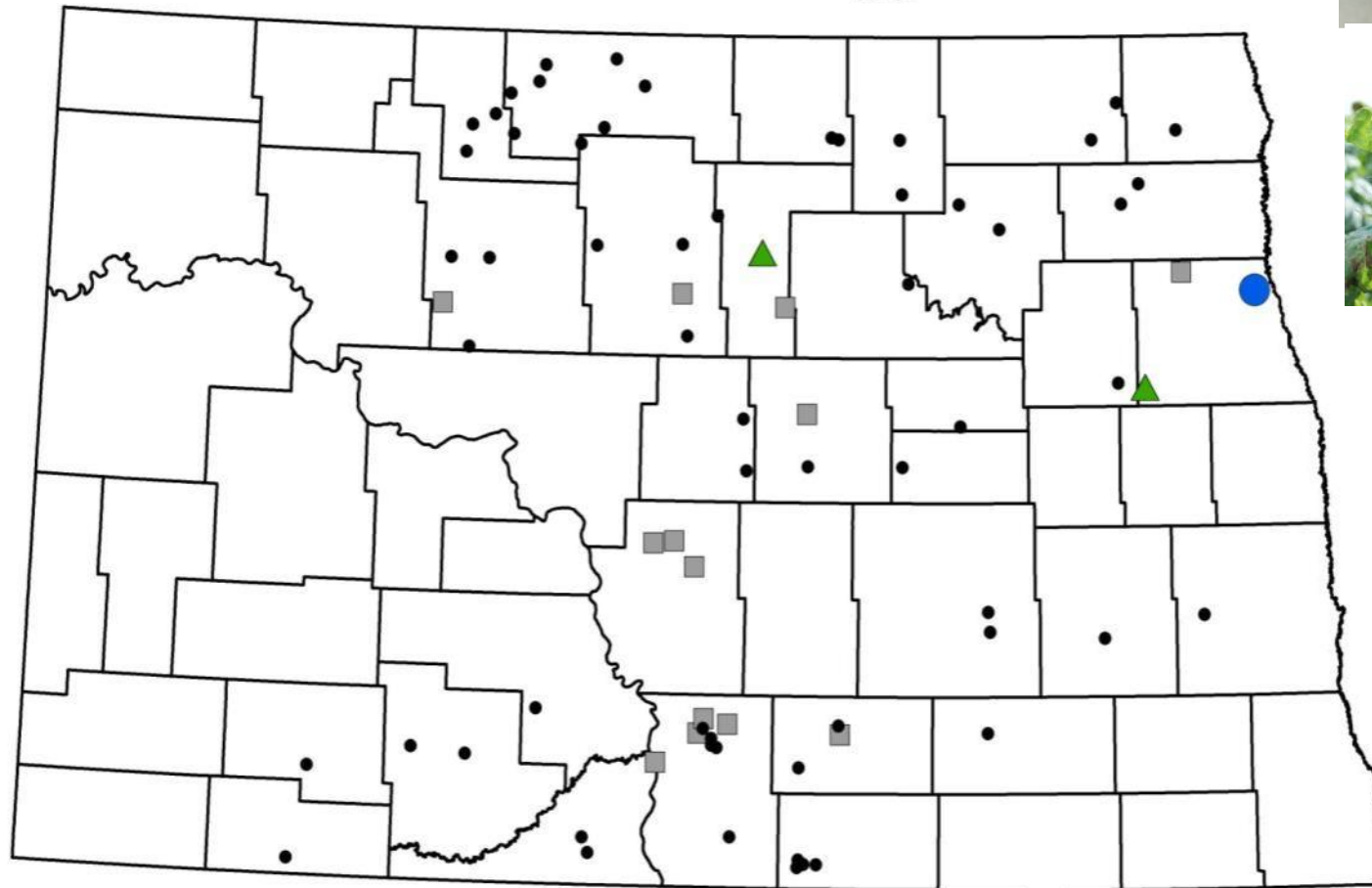


Percent Brown Spot on Seed



# 2008 Sunflower Survey

## *Sunflower Seed Maggot*



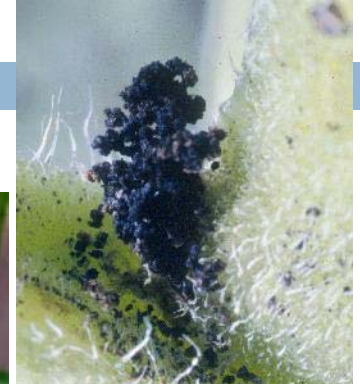
Percent Heads with Damage





# Sunflower Bud Moth (*Suleima helianthana*)

- Two generations a year
  - Mid-June
  - August
- Larvae typically damage fleshy tissue of stalk or head
- Black frass or excrement at entrance hole
- No Economic Threshold
- Insecticides are NOT effective because larvae are protected inside plant



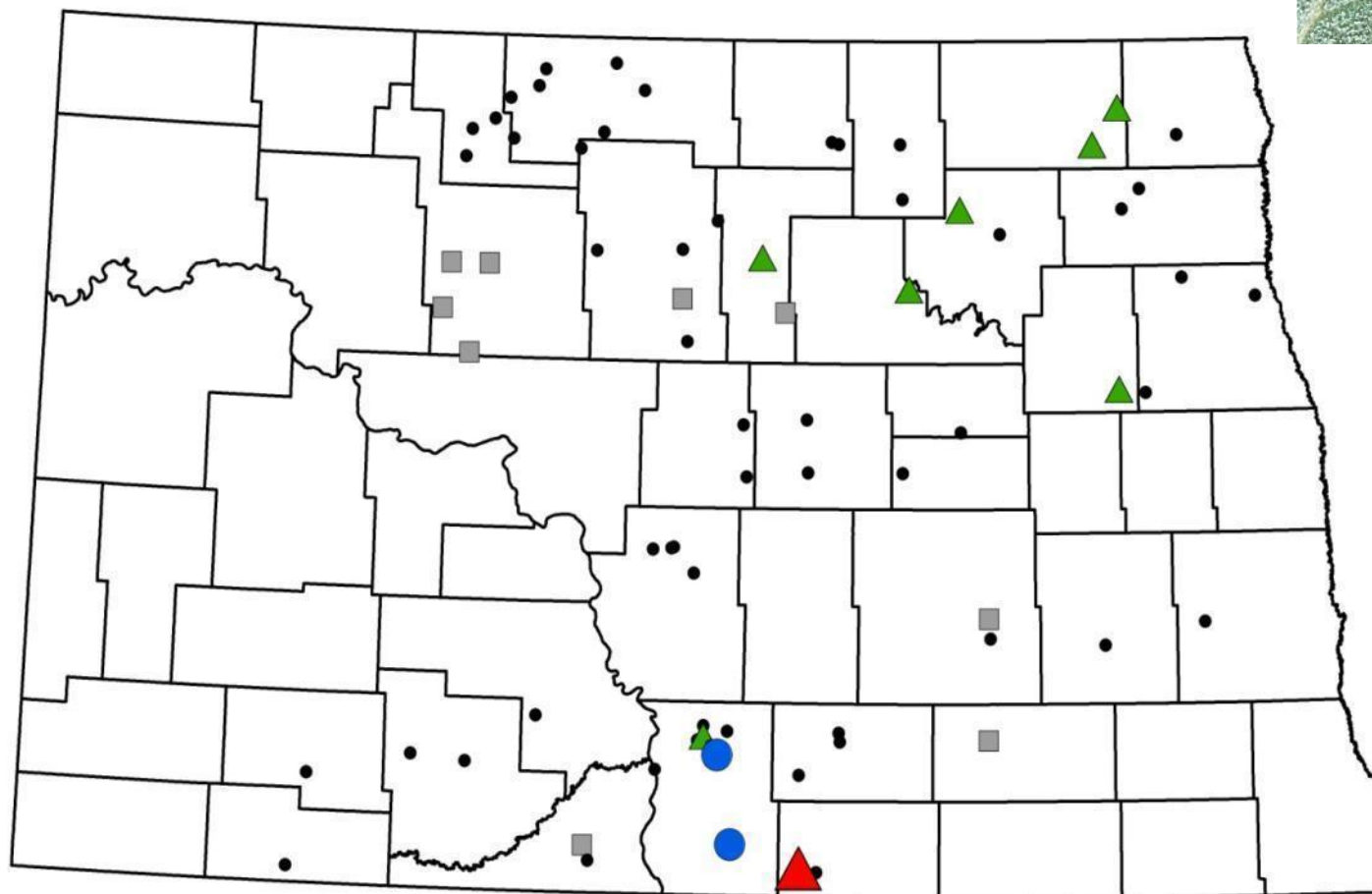
Close-up of frass





# 2008 Sunflower Survey

## *Sunflower Bud Moth*

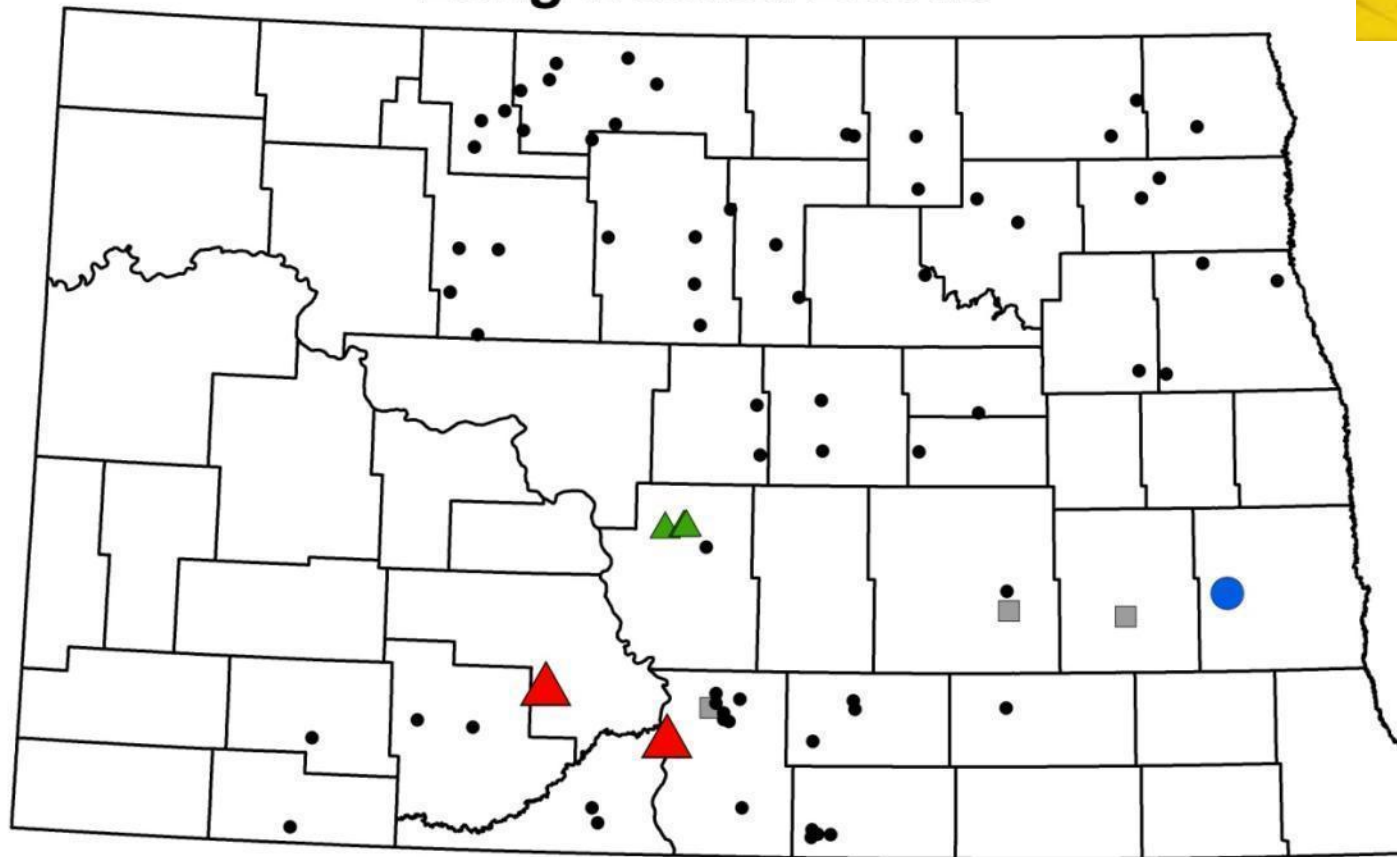


Percent Heads with Damage



# 2008 Sunflower Survey

## *Long Horned Beetle*



Percent Infested Stalks

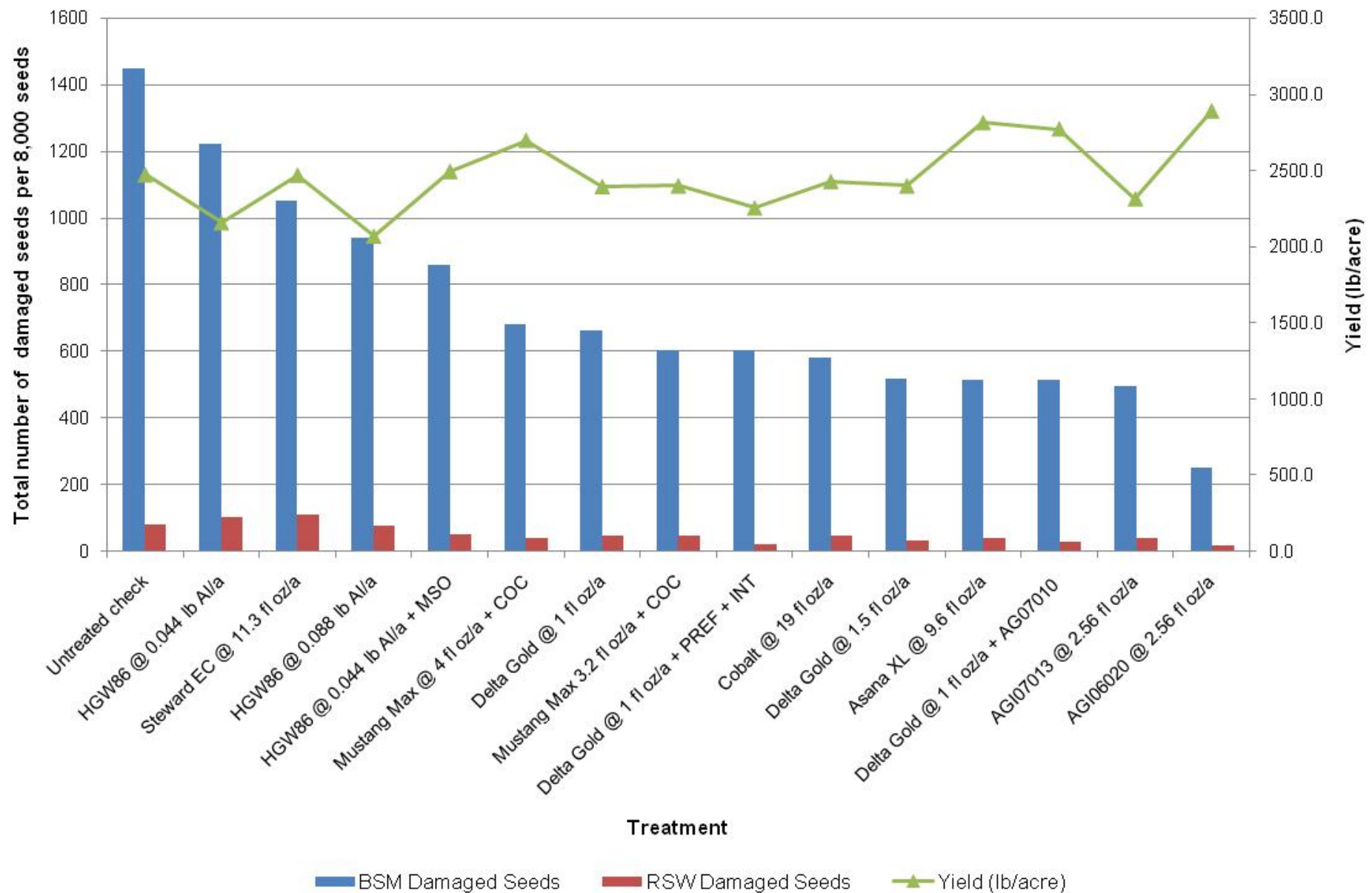


# 2008 Sunflower Insecticide Trial

- Prosper NDSU Agricultural Research site
- 15 treatments including untreated check
- Planted May 15
- Advanta-Pacific 6111 Oilseed
- RCBD
- Applied at R5.3 growth stage
- 10 GPA, Tee-Jet 8002
- Harvested 10 heads per plot on Sept 26
- Counted number of damaged seed for BSM and RSW per 200 seeds per head



## BSM Damage, RSW Damage and Seed Weight for Sunflower Insecticide Treatments at Prosper, ND 2008



# 2008 *Dectes* Insecticide Trial



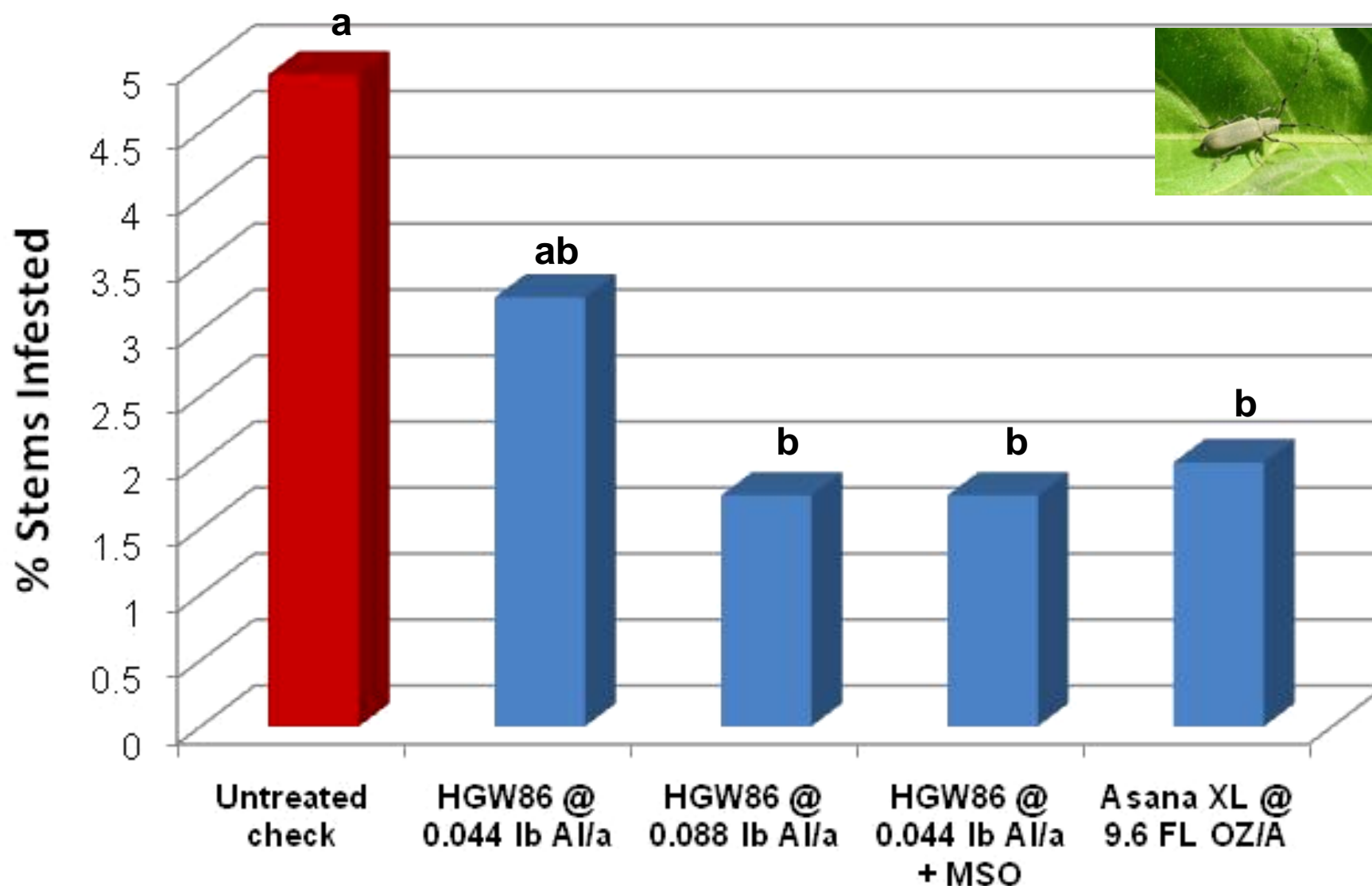
- ❑ Emmons County, near Linton, ND (Doug Birchler)
- ❑ 5 treatments including untreated check
- ❑ Planted May 18
- ❑ Mycogen 8N337 Oilseed
- ❑ RCBD
- ❑ Applied at 10-12 leaf growth stage
- ❑ CO<sub>2</sub> backpack sprayer, 20 GPA, Tee-Jet 80015
- ❑ Split 10 stalks per plot on Sept 17
- ❑ Counted number of infested stems





## 2008 *Dectes* Insecticide Trial - Linton, ND

### % Stems Infested



Means were compared using LSD,  $P \leq 0.05$

# DPX-HGW86 Insecticide - Cyazypyr™

20

- Active ingredient
  - ▣ DuPont Code: DPX-HGW86
  - ▣ Common Name: Cyantraniliprole
  - ▣ Trade Name: Cyazypyr™
- Second generation ryanodine receptor insecticide from DuPont Crop Protection
- Cross-spectrum activity (Homops, Leps, others)
- Foliar and systemic activity
- Multiple application methods being investigated: foliar, drip irrigation, soil drench, seed treatment

**Thank you!**  
**2008 International Sunflower Conference**  
**Cordoba, Spain**

