2007 National Sunflower Association Survey

Presented by Hans Kandel
NDSU Extension Agronomist

Project Leader:

Dr. Duane Berglund, Retired NDSU Extension Agronomist and Professor Emeritus- Crop Science

2007 Crop Survey Teams ND

North Dakota	Counties
Terry Gregoire & Scott Knoke	Benson, Ramsey & Towner **(North Central)**
Greg Endres, Richard Maine Tim Becker & Darcy Uhrich	Foster, Wells, Eddy, Sheridan and Stutsman **(East Central)**
Max Dietrich, Cal Thorson & Gabriele Kelly	Logan, Emmons and McIntosh **(South East Central)**
Larry Kleingartner, Mark Hulcup Roger Ashley & Duane Barondeau	Burleigh, McLean, Morton, Hettinger Grant **(W and WC)**

2007 Crop Survey Teams ND & MN

North Dakota	Counties
Kent McKay & Denise Markle	Bottineau, Renville **(NCW)**
Jan Knodel, Larry Charlet, Theresa Gross, Jerry Miller, Dale Rehder & Brent Hulke	Walsh and Cavalier **(NE)** Grand Forks and Nelson
Duane Berglund and Hans Kandel	Ward and McHenry **(NC)**

Minnesota	Counties
Tom Gulya, Gerald Seiler Sam Markell & Bruce Gorden	NW Minnesota

2007 Crop Survey Teams SD

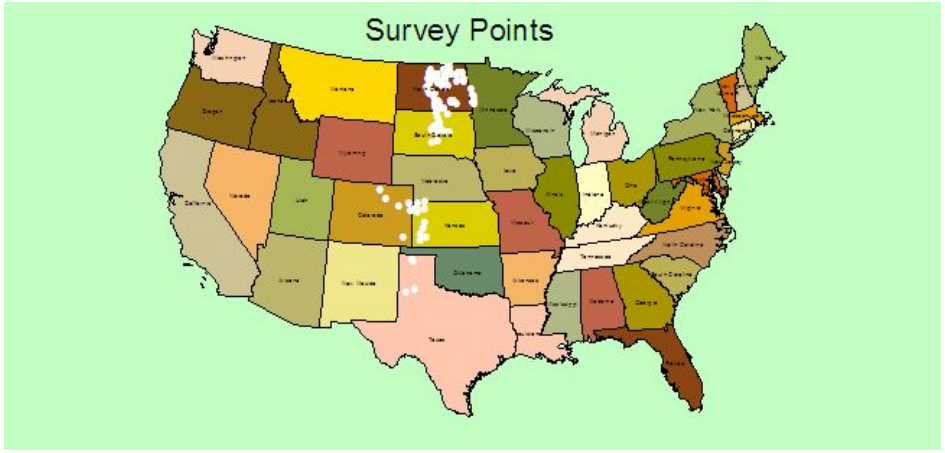
South Dakota	Counties (13)
Bob Fanning	Bennett
Kathy Grady	Campbell
Lee Gilbertson	Corson
Ruth Beck	Dewey
Terry Hall	Hand
David Vander Viet	Hughes
Mike Huber	Hyde
Sandy Huber	Jones
Tom Young	Lyman
Gabriele Kelly	Perkins
	Potter
	Sully
	Walworth

2007 Crop Survey Teams

Colorado Scott Brase and Bruce Bosley	**Counties (5)** **Adams, Baca, Cheyenne, Kiowa, and Lincoln**
Manitoba Arvel Lawson Darcelle Mabon & Fred Parnow	**19 Locations**
Kansas Jeanne Falk, Area Crops Specialist, KSU Extension, Colby, KS	**Counties (4)** **Sherman, Stevens, Thomas, Cheyenne**
Texas Calvin Trostle, Extension Agronomist, Texas A&M, Lubbock, TX	**Counties (4)** **Lamb, Pecos, Dallam & Hockley**

2007 Sunflower Survey- # Fields

- North Dakota-78
- Minnesota-12
- South Dakota-30
- Kansas-8
- Colorado-6
- Texas-5
- Manitoba 19
- TOTAL-158 Fields



2007 Sunflower Survey

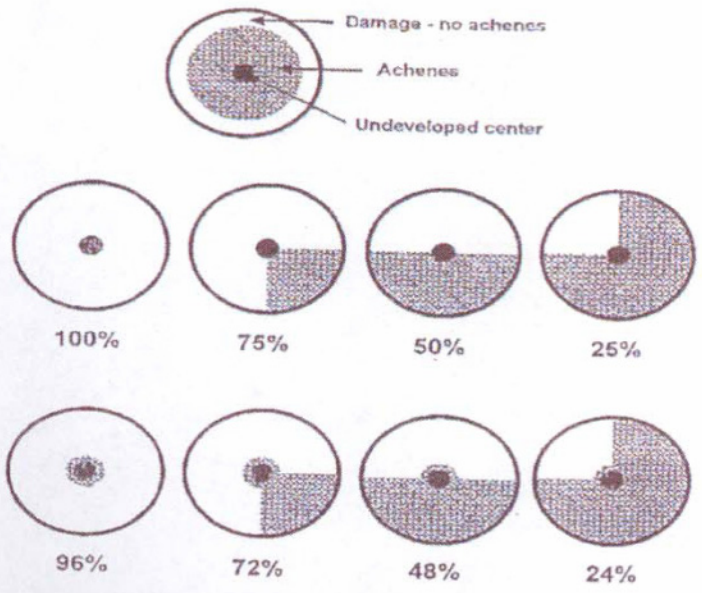
- Only counties with 20,000 planted Acres or more
- One field stop per 10,000 Acres
- Fields Surveyed in 2005 - 146
- Fields Surveyed in 2006 - 162
- Fields Surveyed in 2007 - 158

USA Sunflower Survey

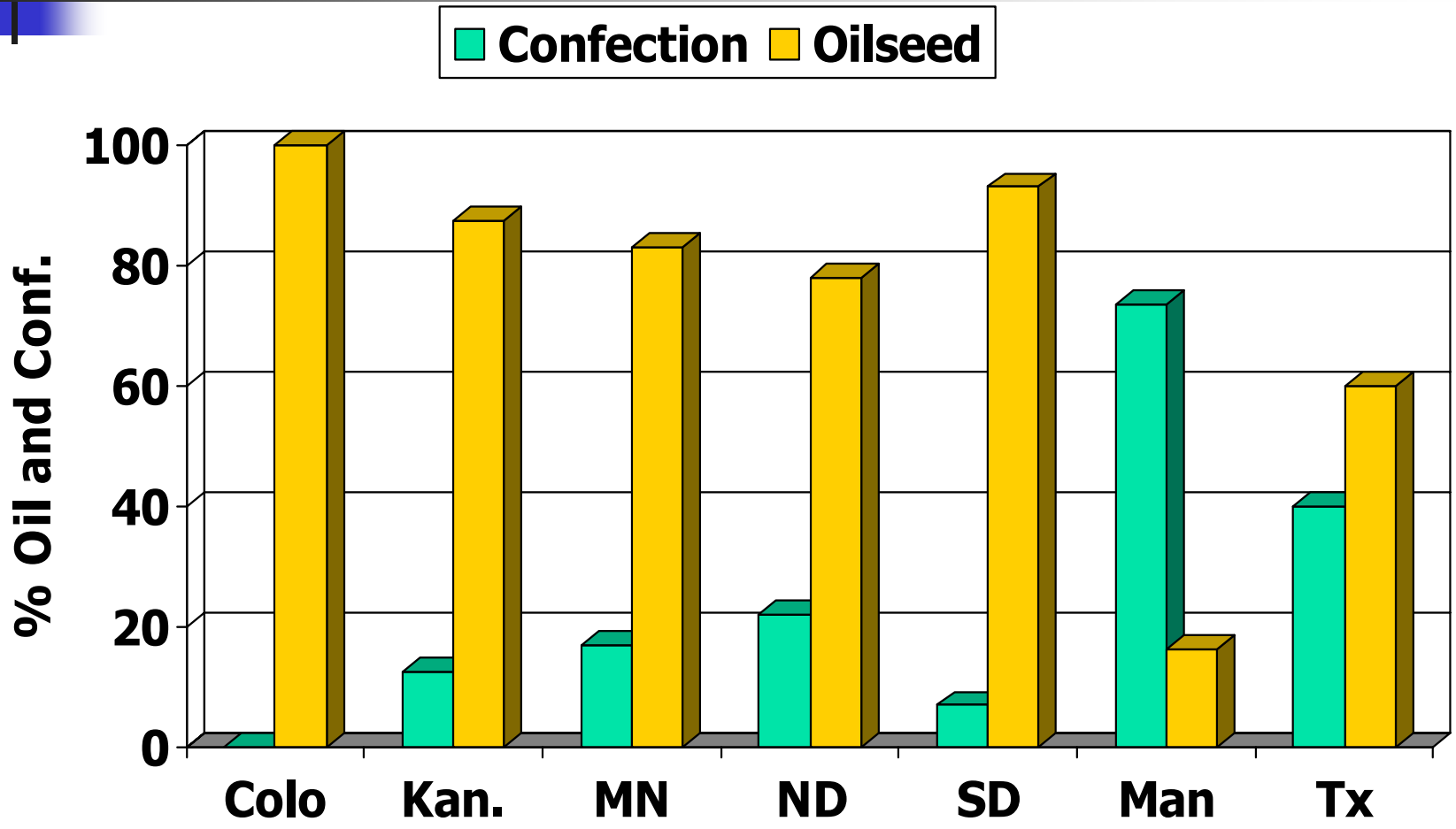
Partnership of University, USDA & Industry

Recording observations

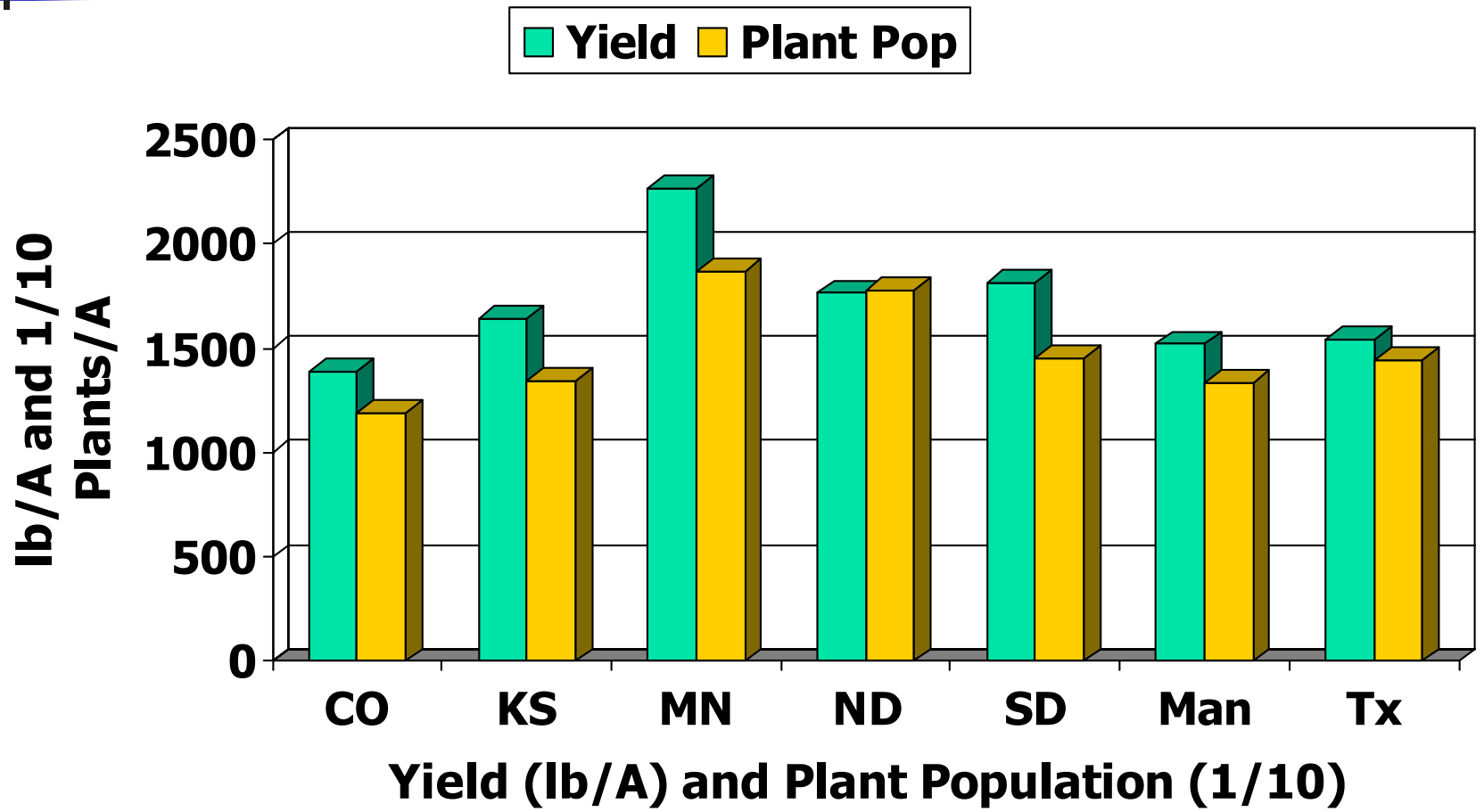
Sunflower Midge Damage Rating after Brackenn 1991		Bird Damage % Seed Loss
No Damage	0	
	1 Light bract damage, may be creased	
	2 Bract damage, some cupping, start of central hole or seedless area	



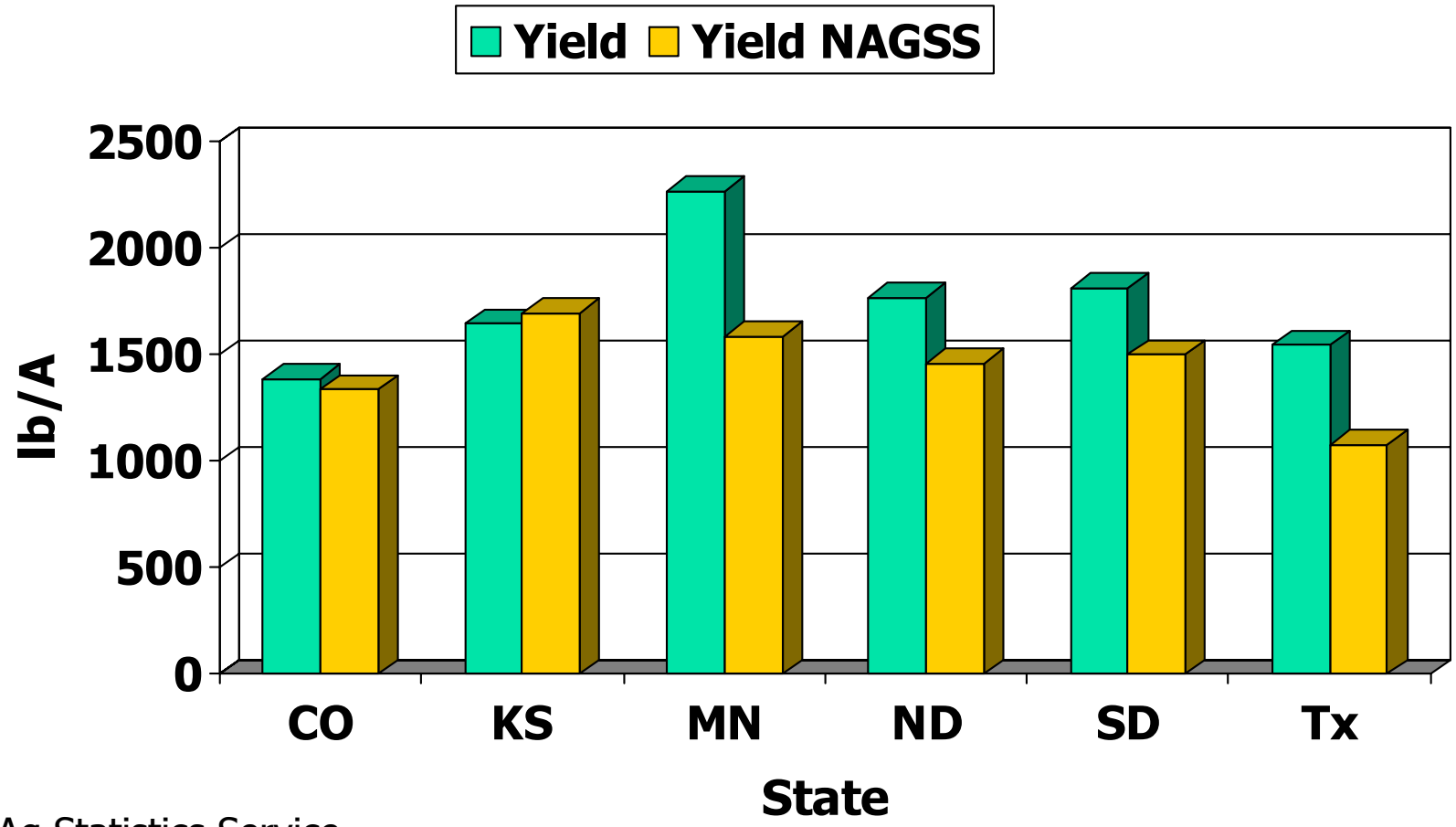
Confection and Oilseed Sunflower-2007 Survey



Sunflower Yield and Plant Population: 2007

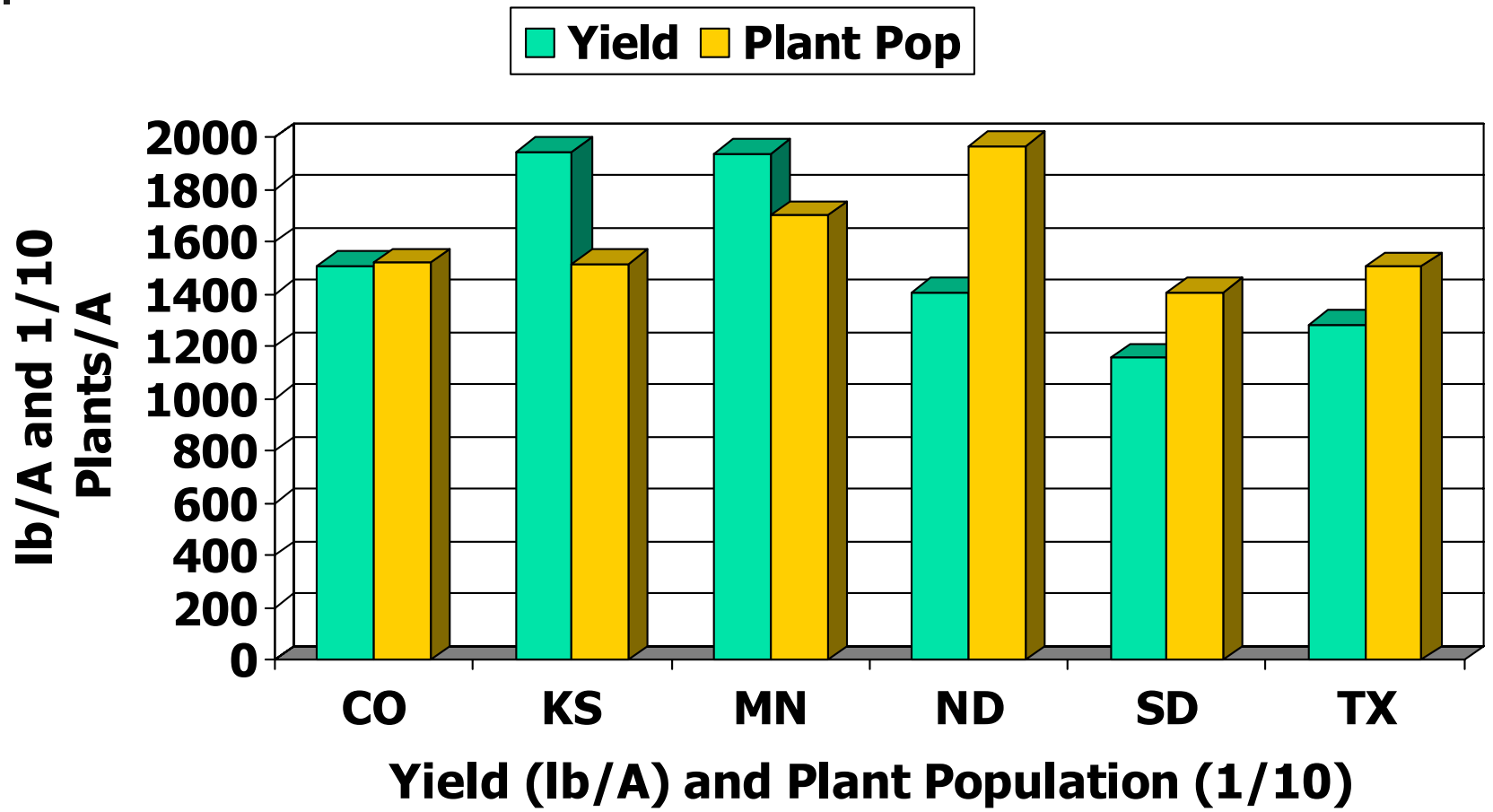


Sunflower Survey Yield and NAgSS estimate: 2007

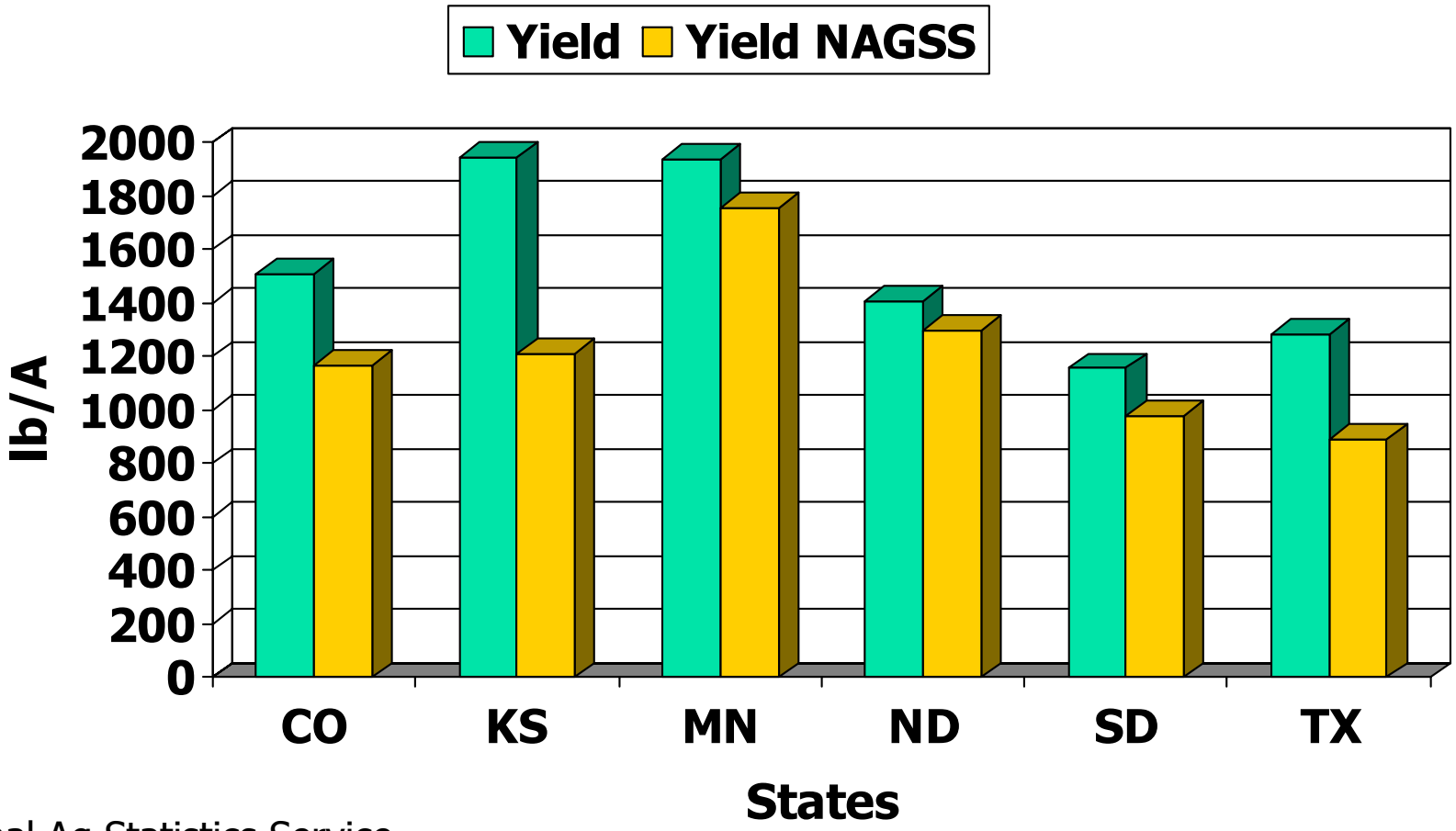


National Ag Statistics Service

Sunflower Yield and Plant Population: 2006

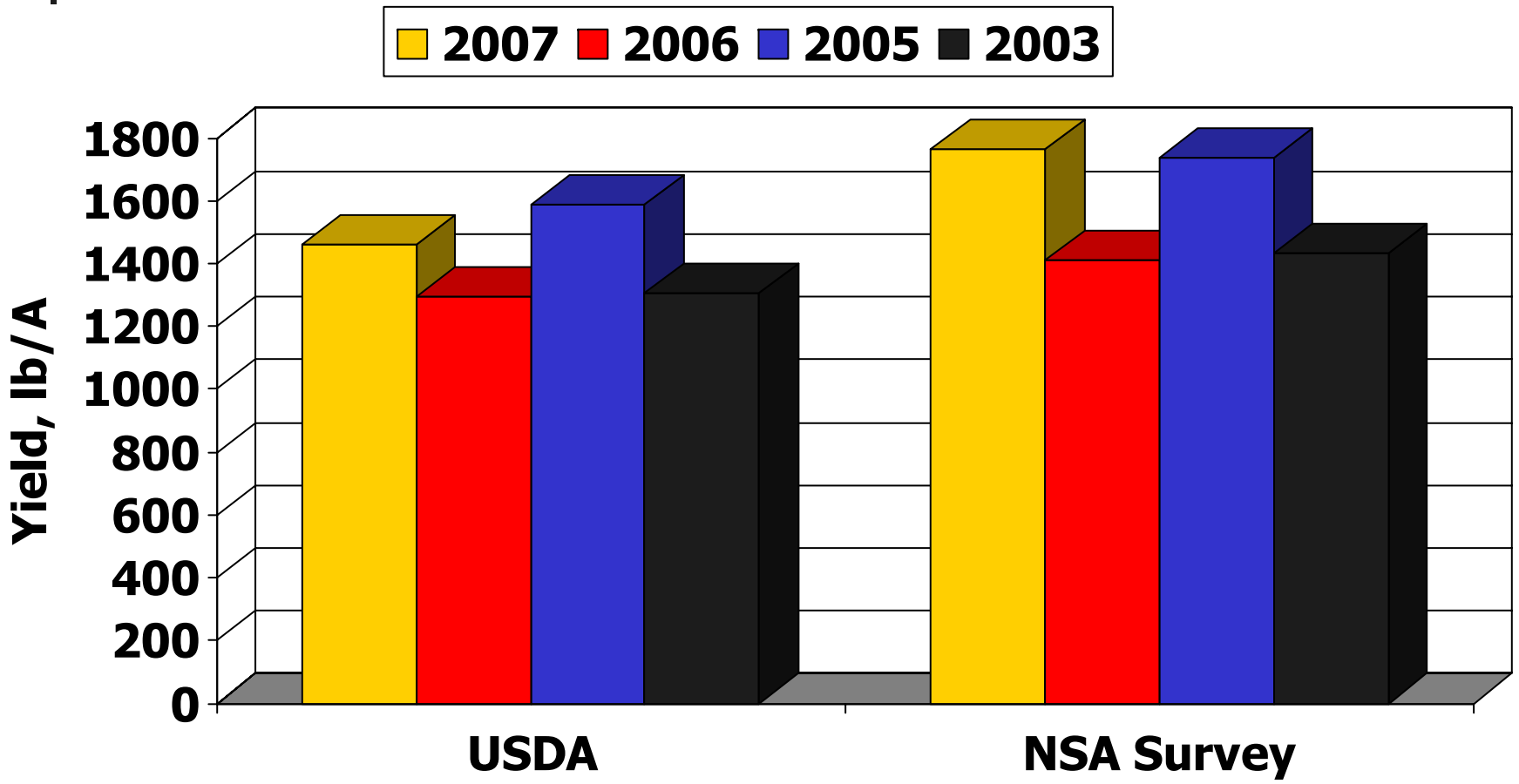


Sunflower Survey Yield and NAgSS estimate: 2006

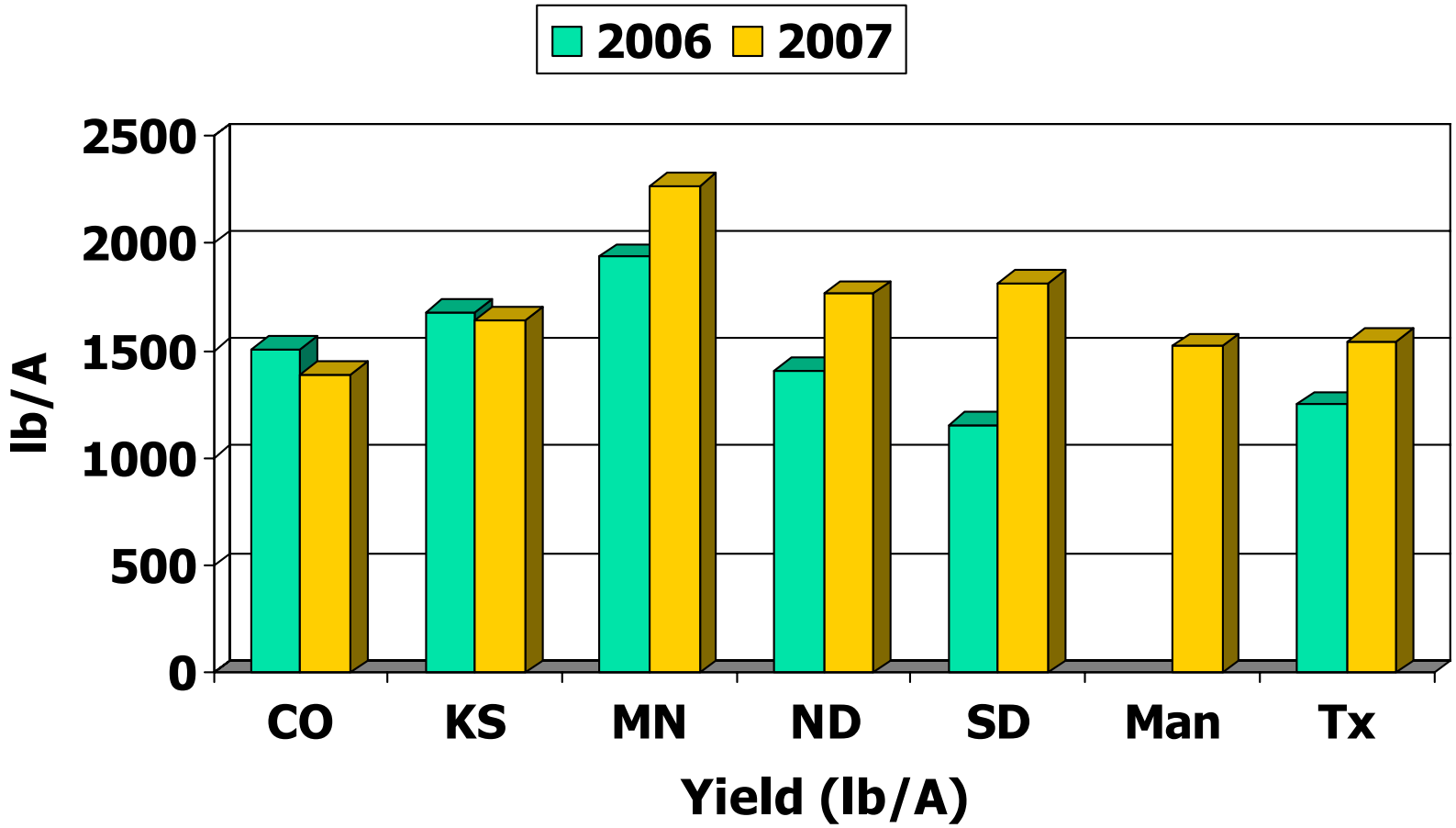


National Ag Statistics Service

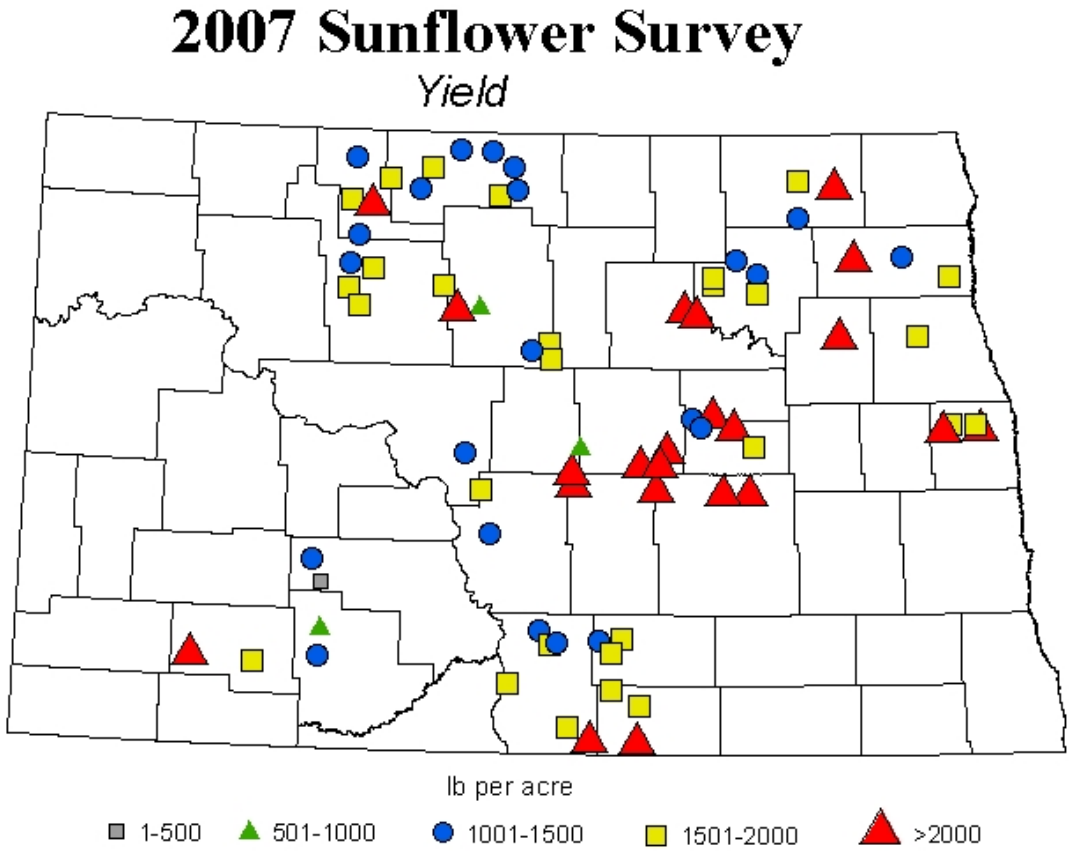
Yields, 2003-2007
In North Dakota



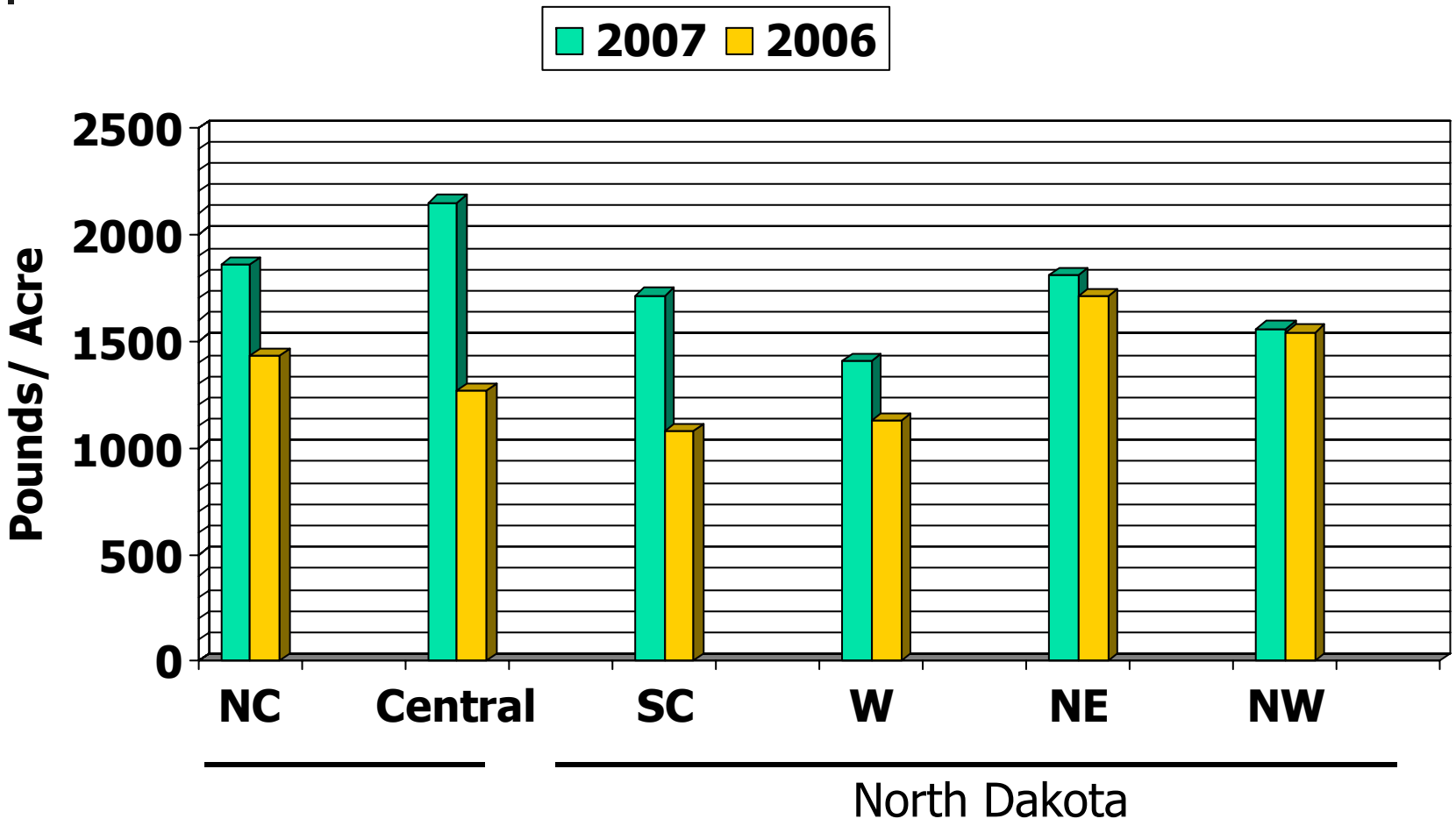
Sunflower Yield : Lbs/A
2006 vs: 2007



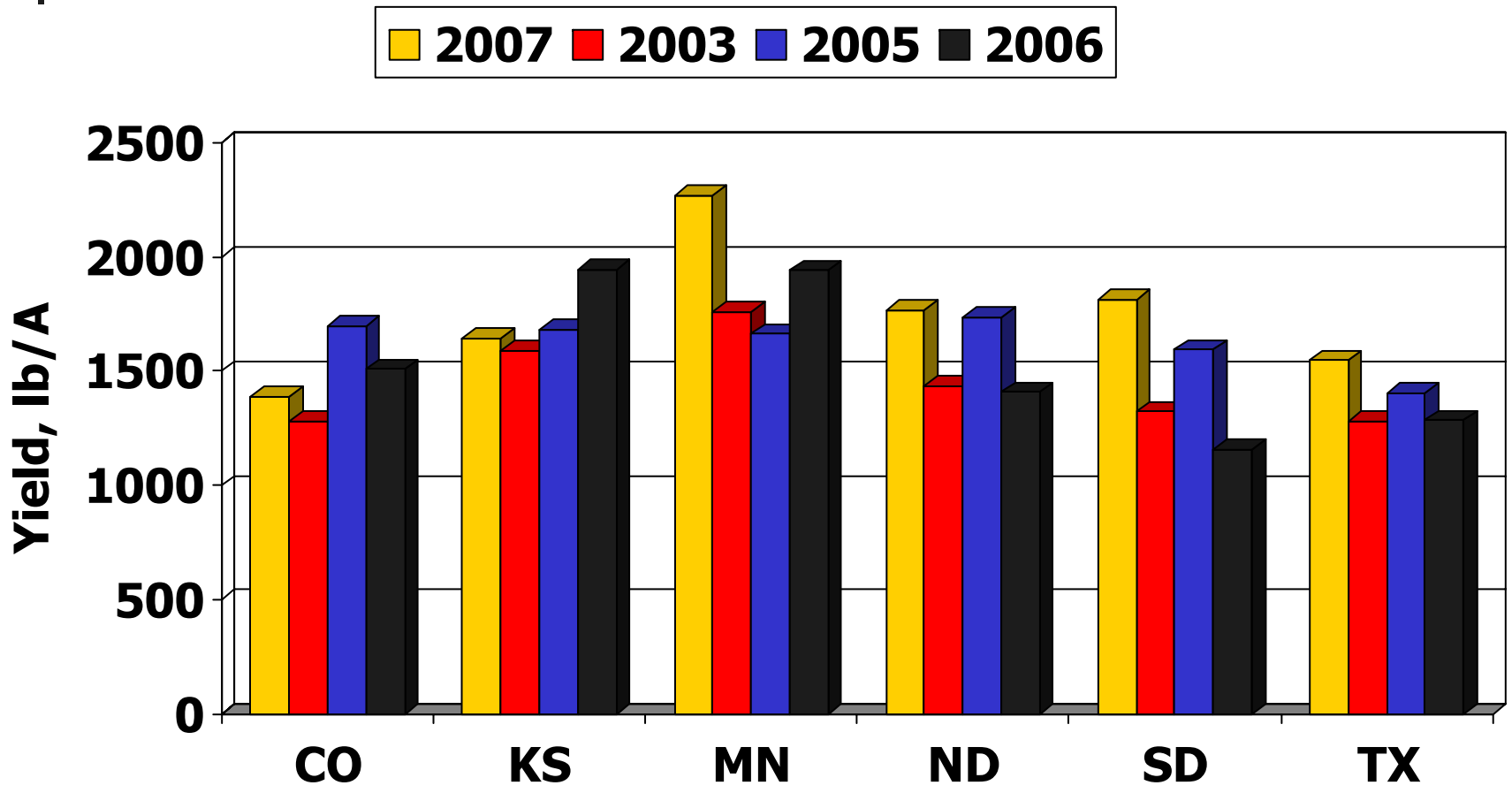
North Dakota 2007 Yield Estimates



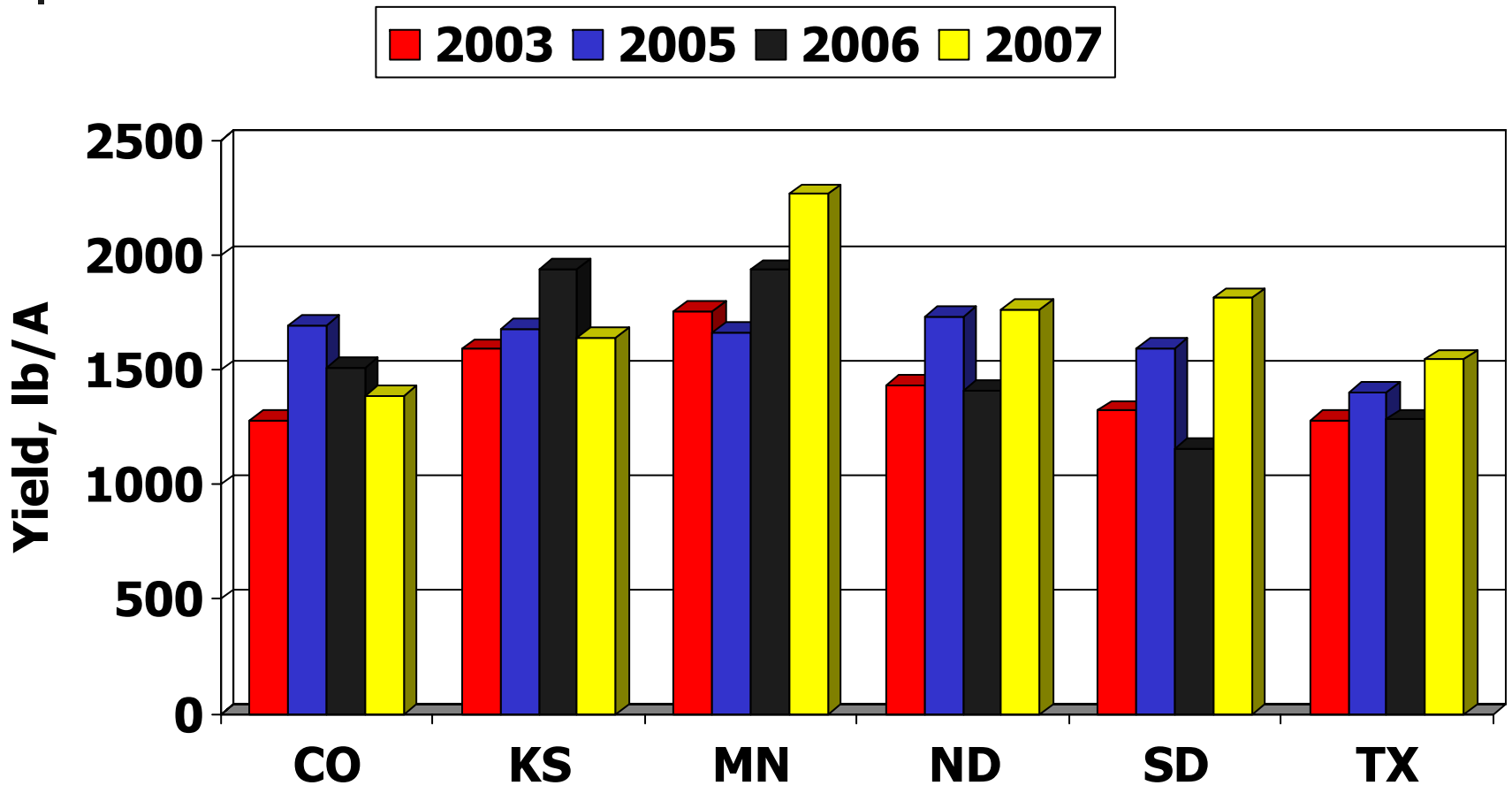
Sunflower Yields by Region in N.Dak. 2006 and 2007



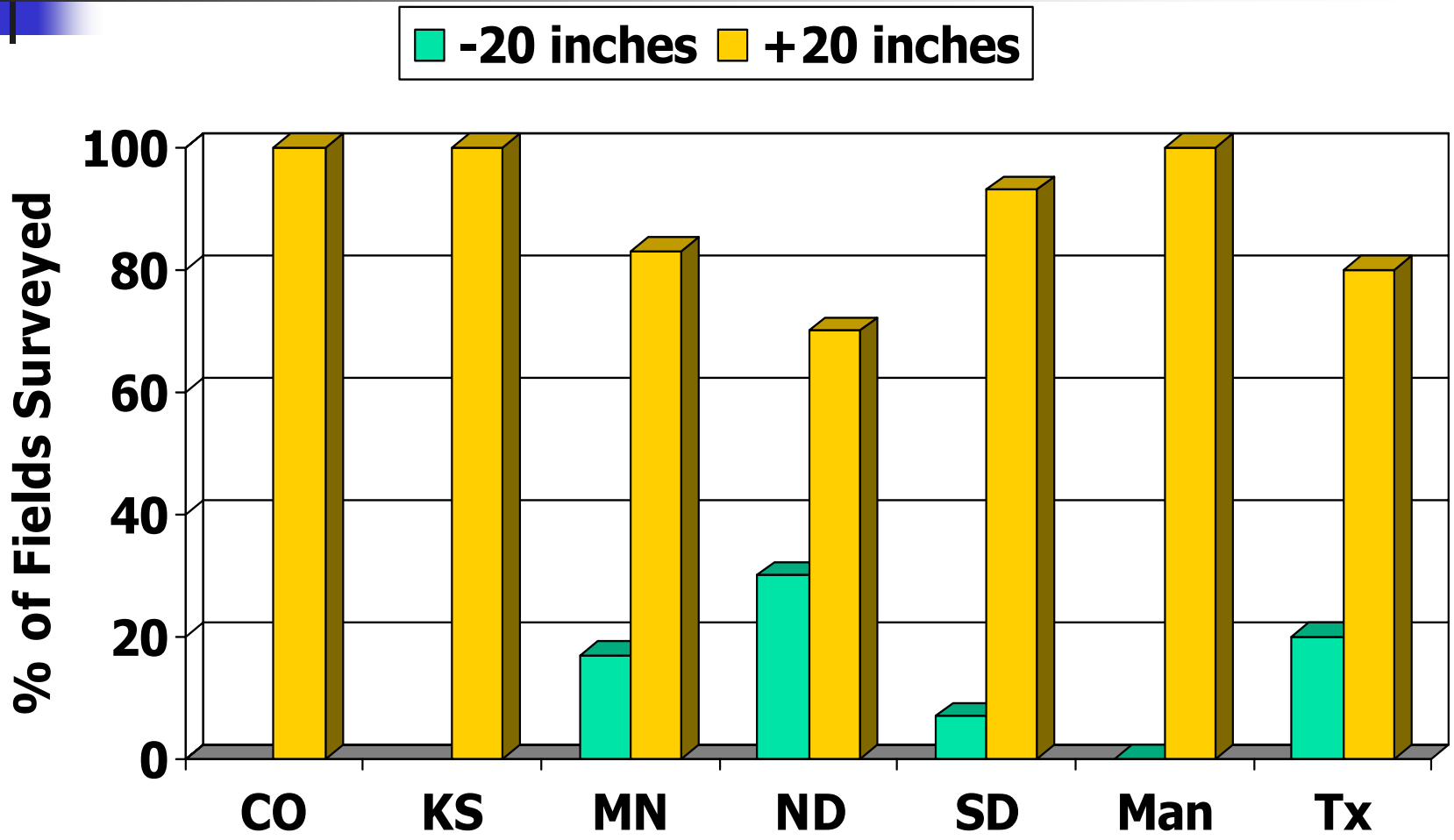
Yields, 2003-2007



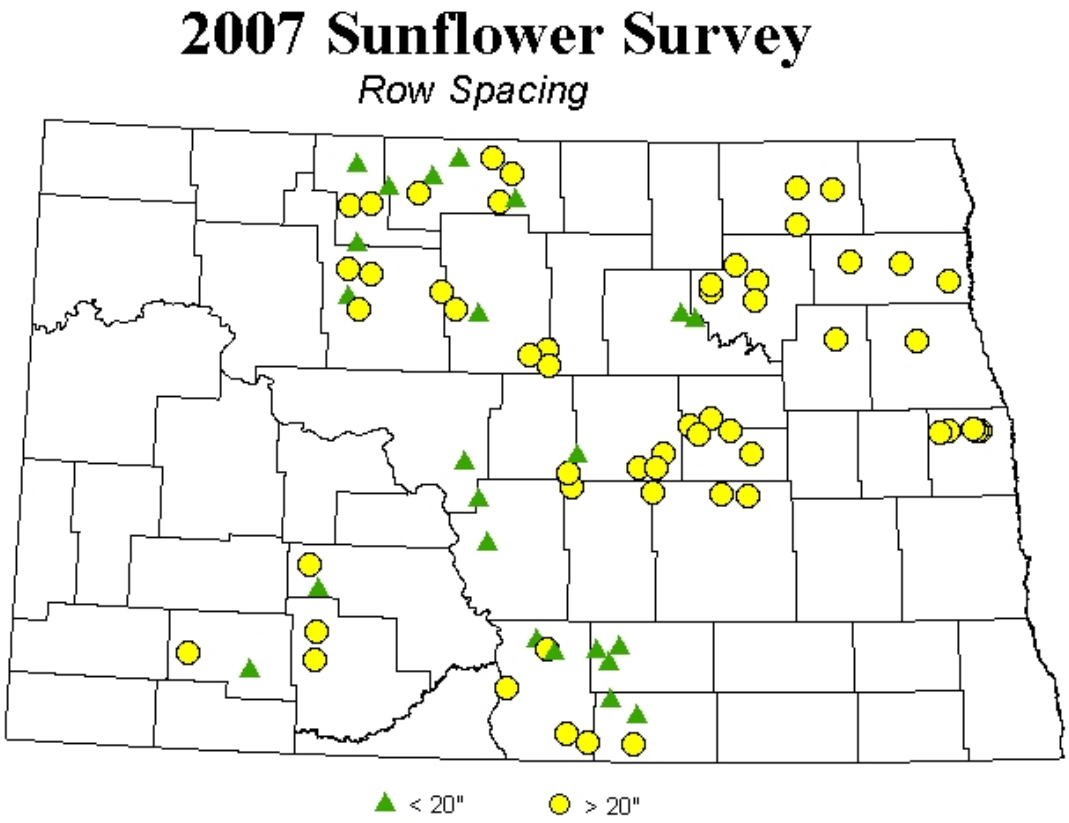
Yields, 2003-2007



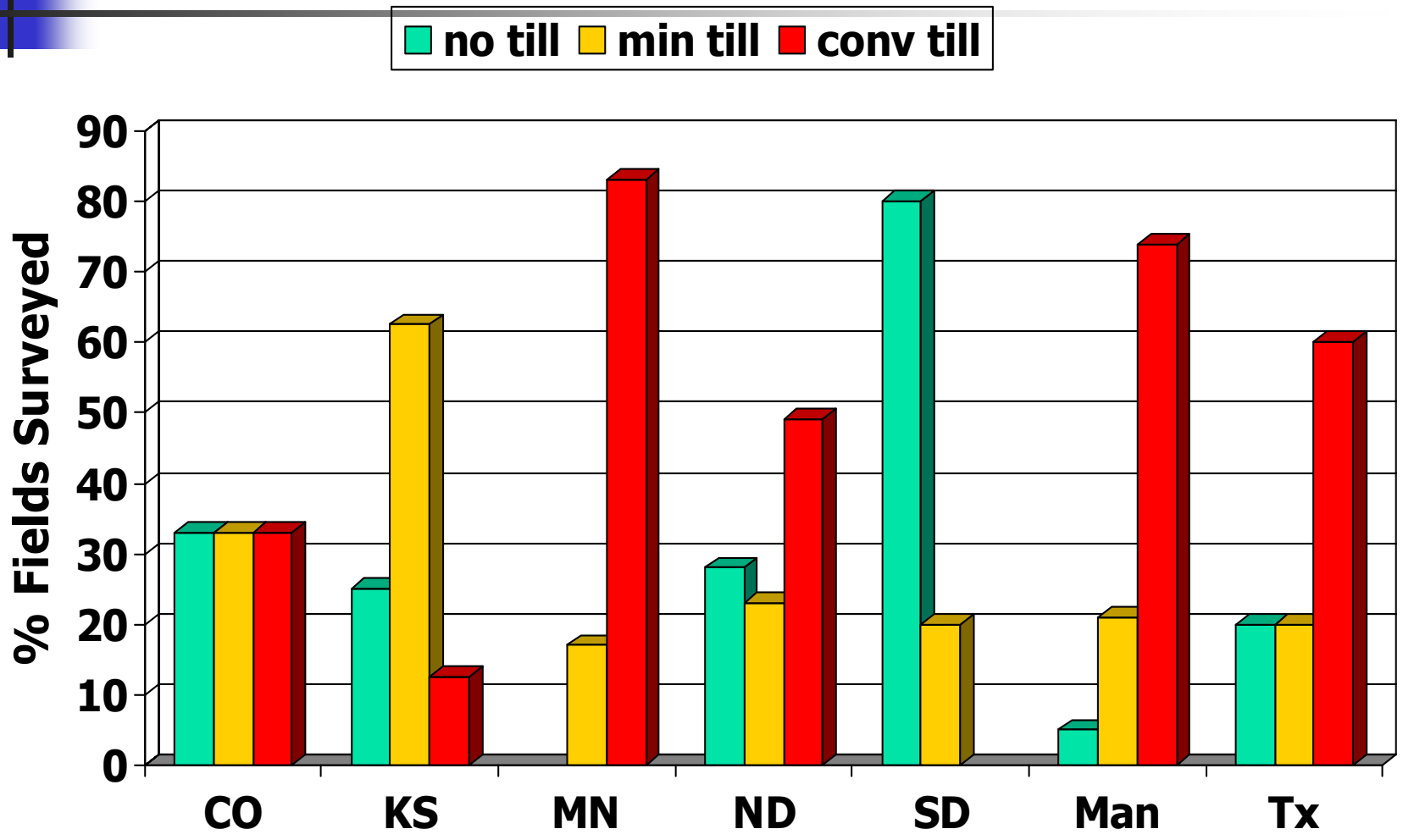
Row Spacing Sunflower-2007



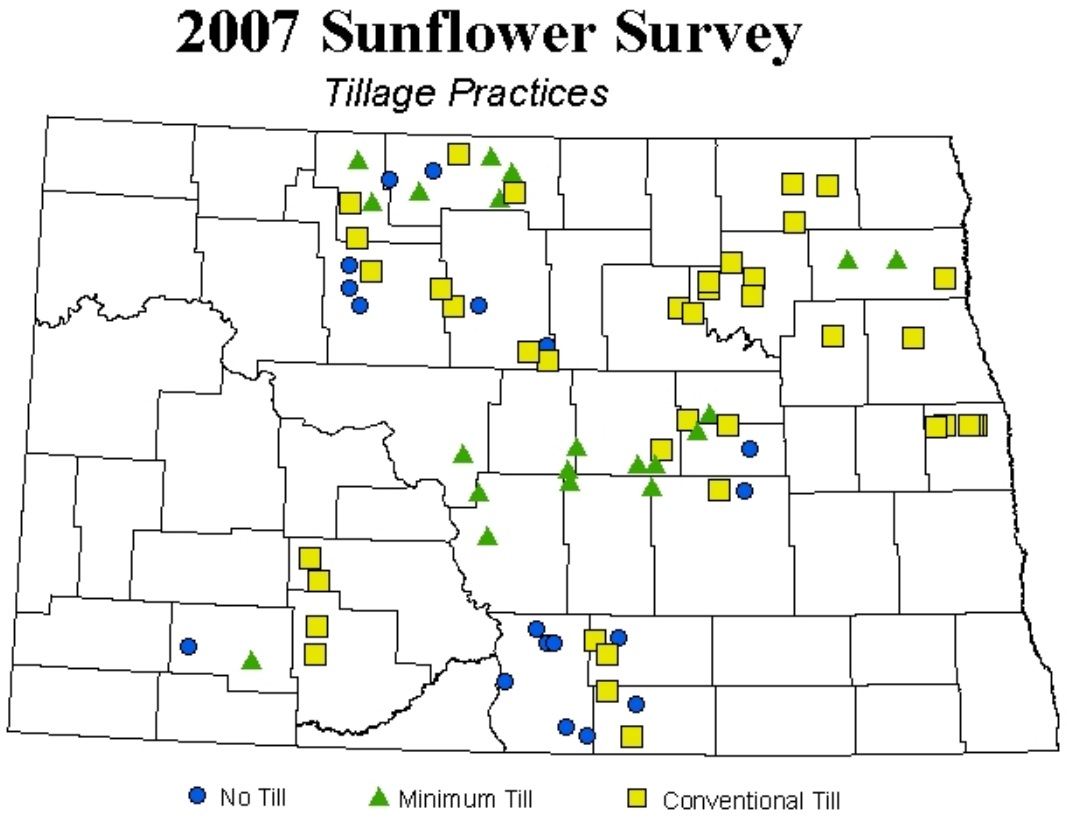
Row Spacing in North Dakota



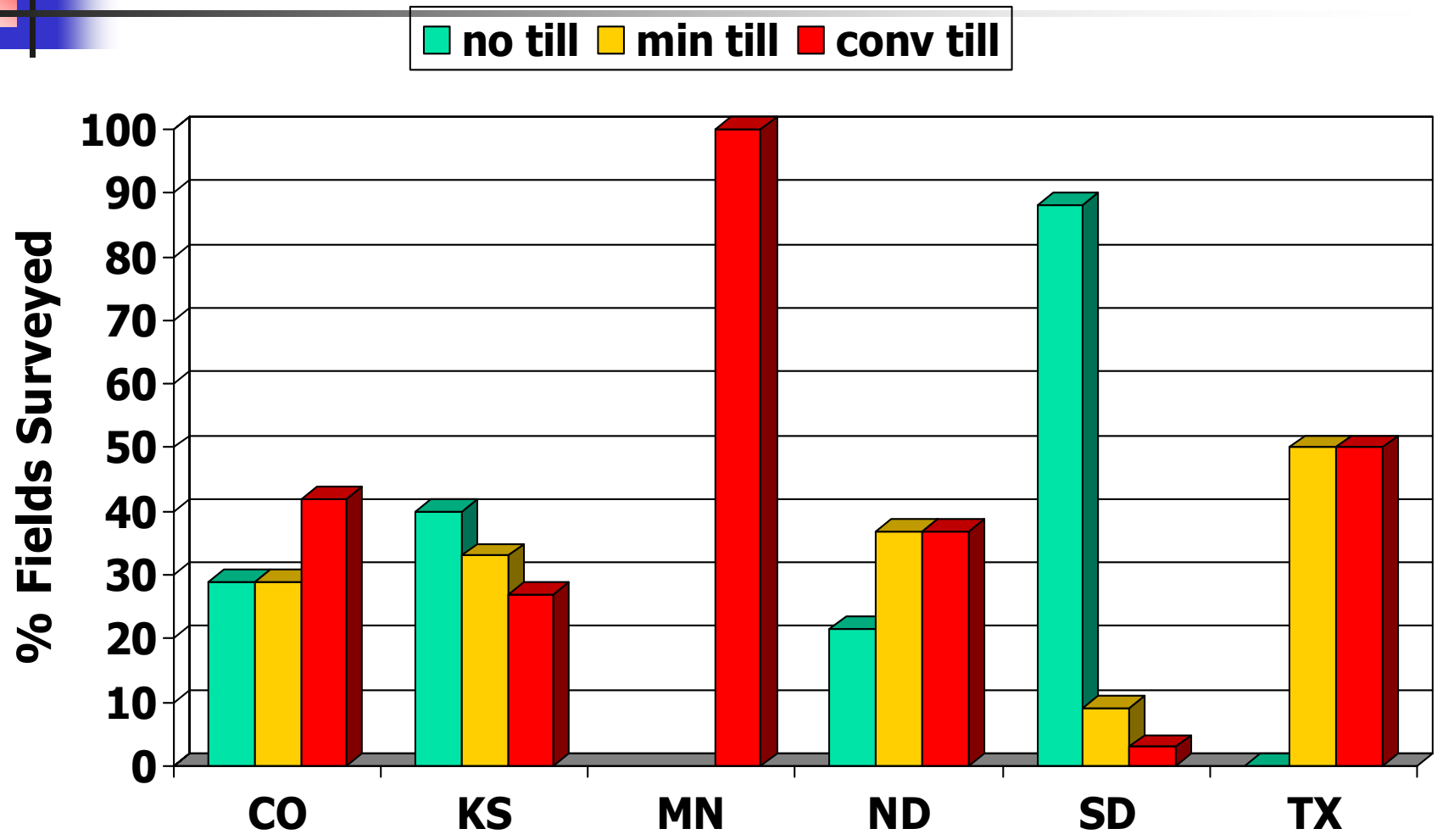
Tillage: 2007 Sunflower Survey



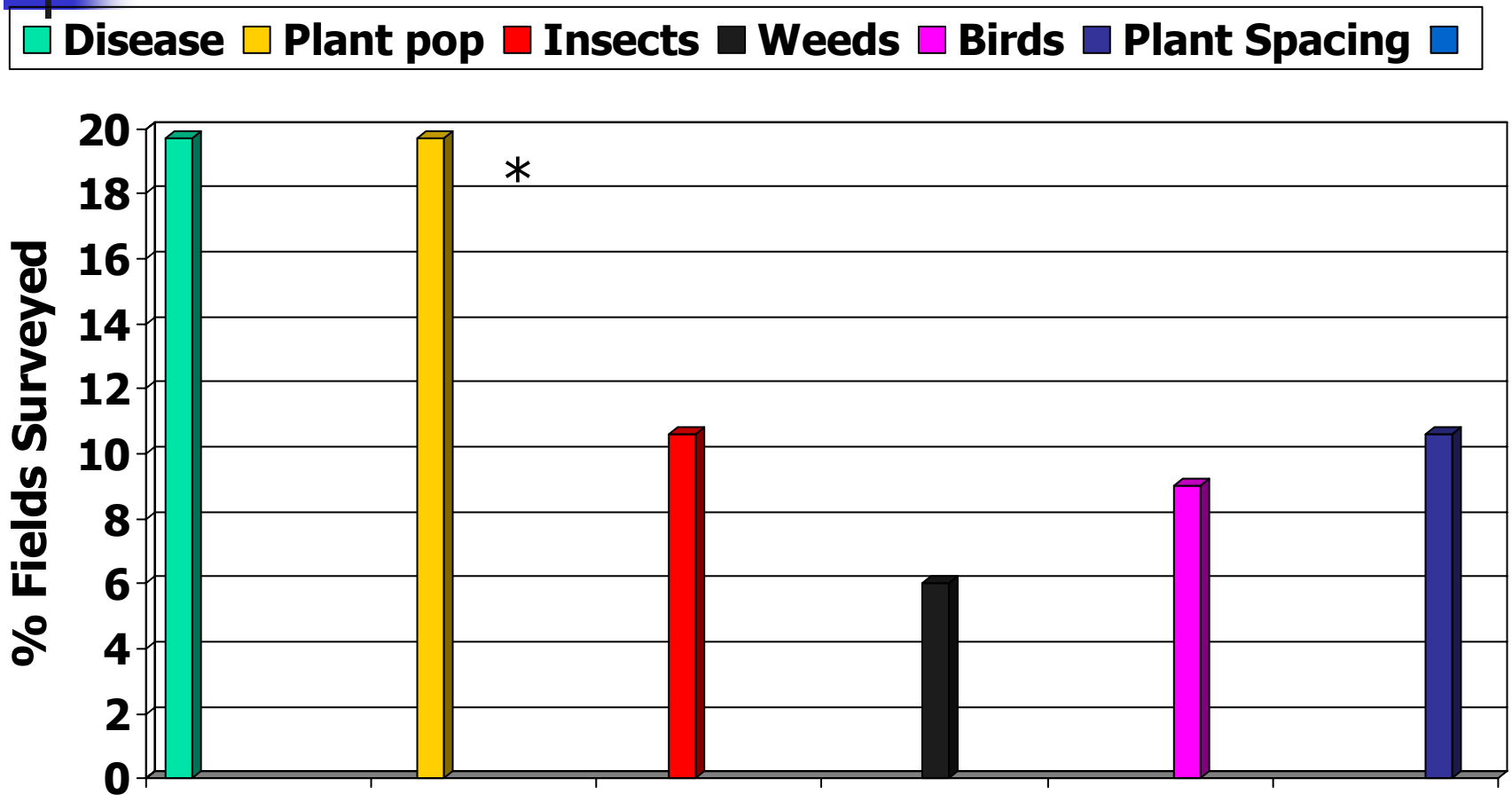
Tillage in Sunflower-ND



Tillage: 2006 Sunflower Survey

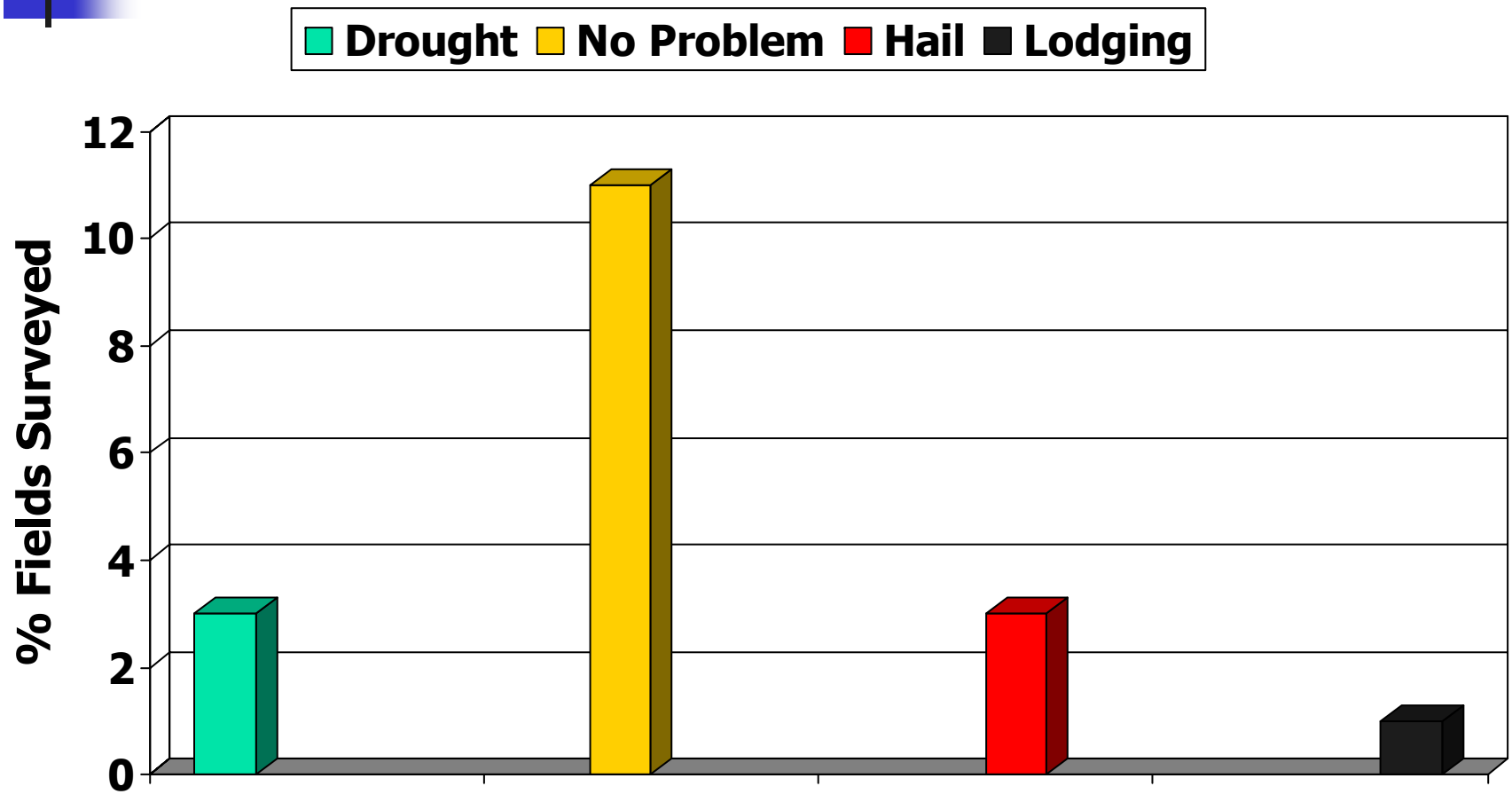


Number One Yield Limiting Factors-2007 in North Dakota

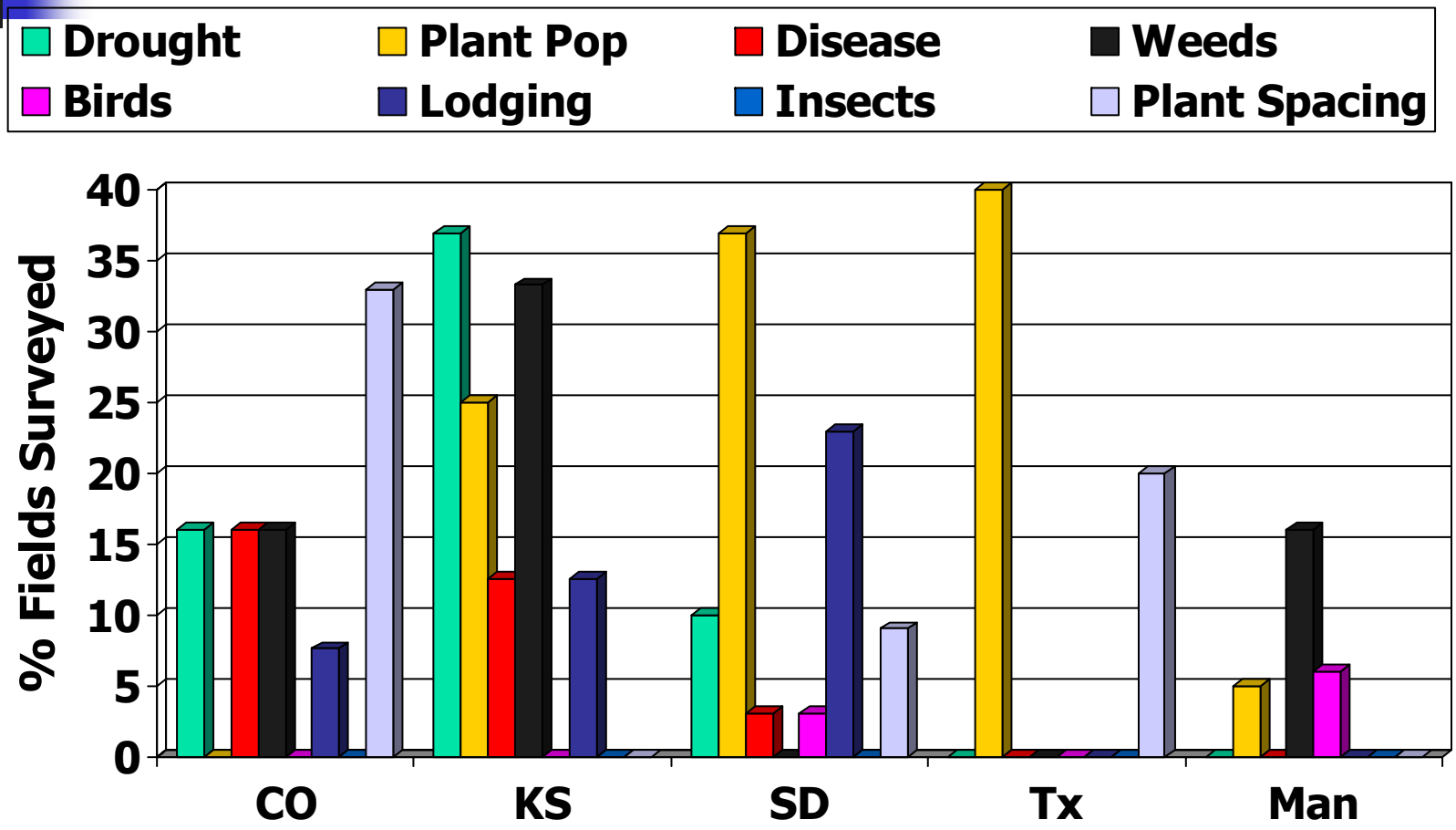


* Plant population for oil is higher than for confectionary sunflower

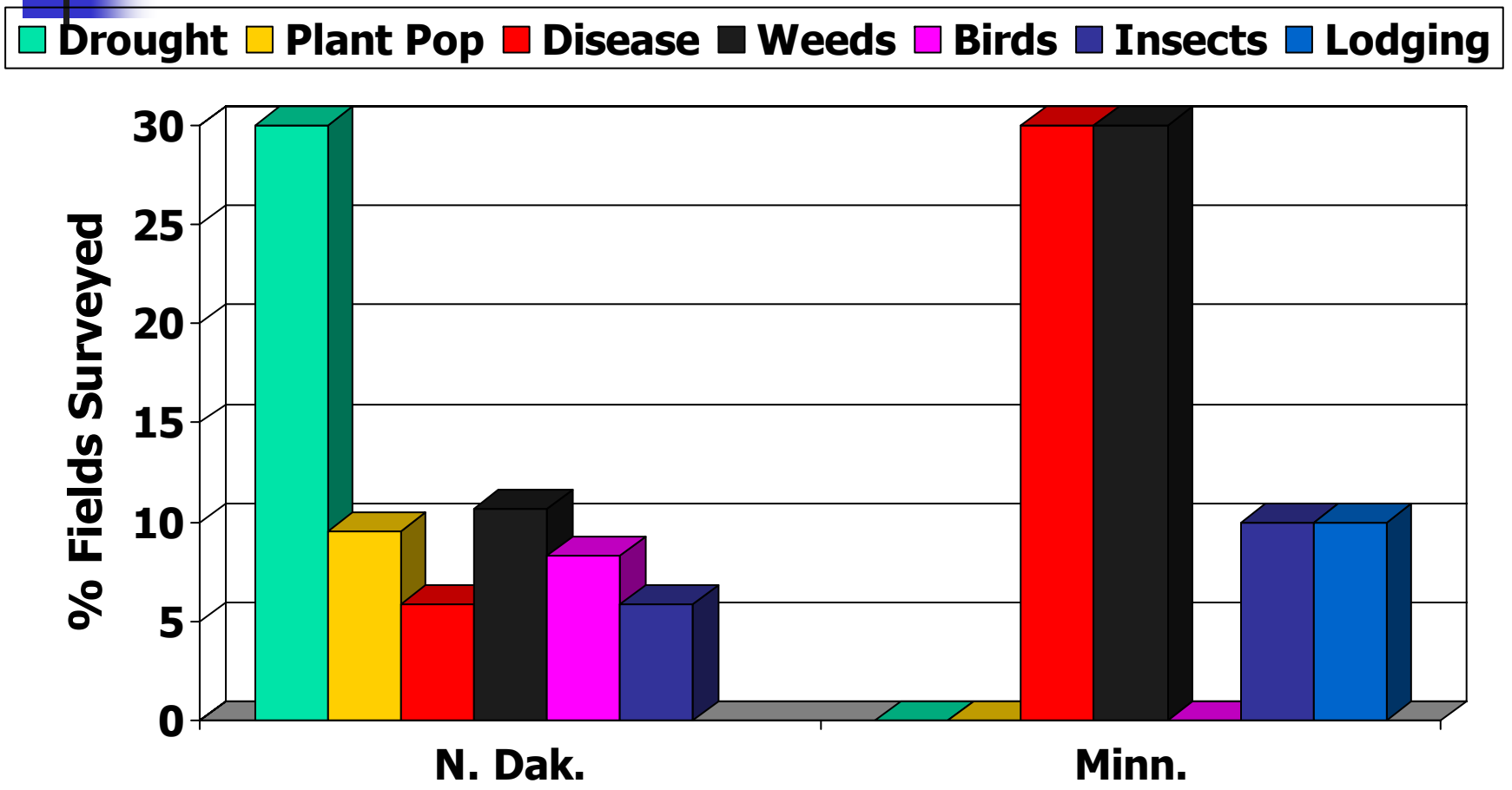
Number One Yield Limiting Factors-2007 in North Dakota



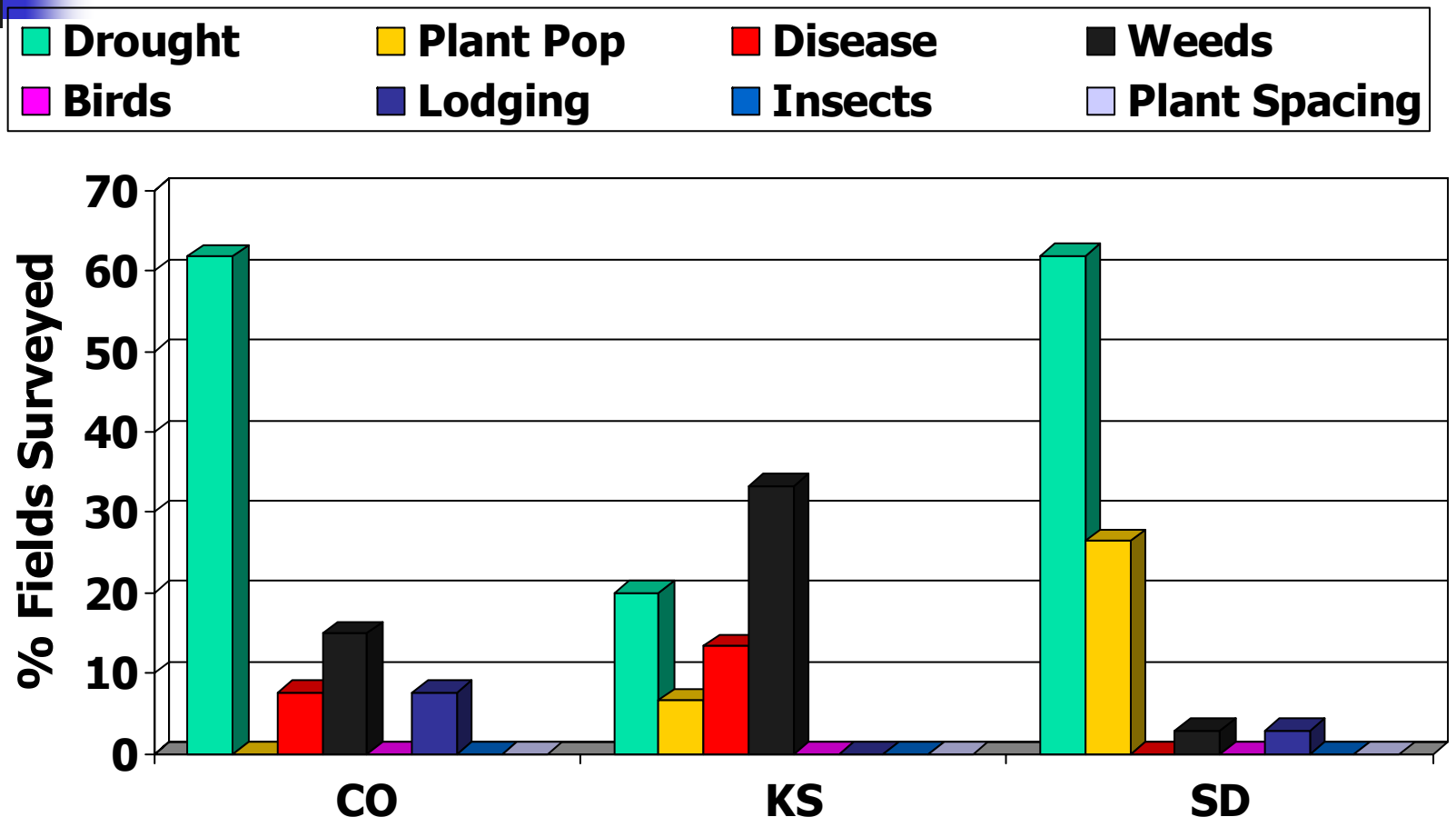
Number One Yield Limiting Factors-2007



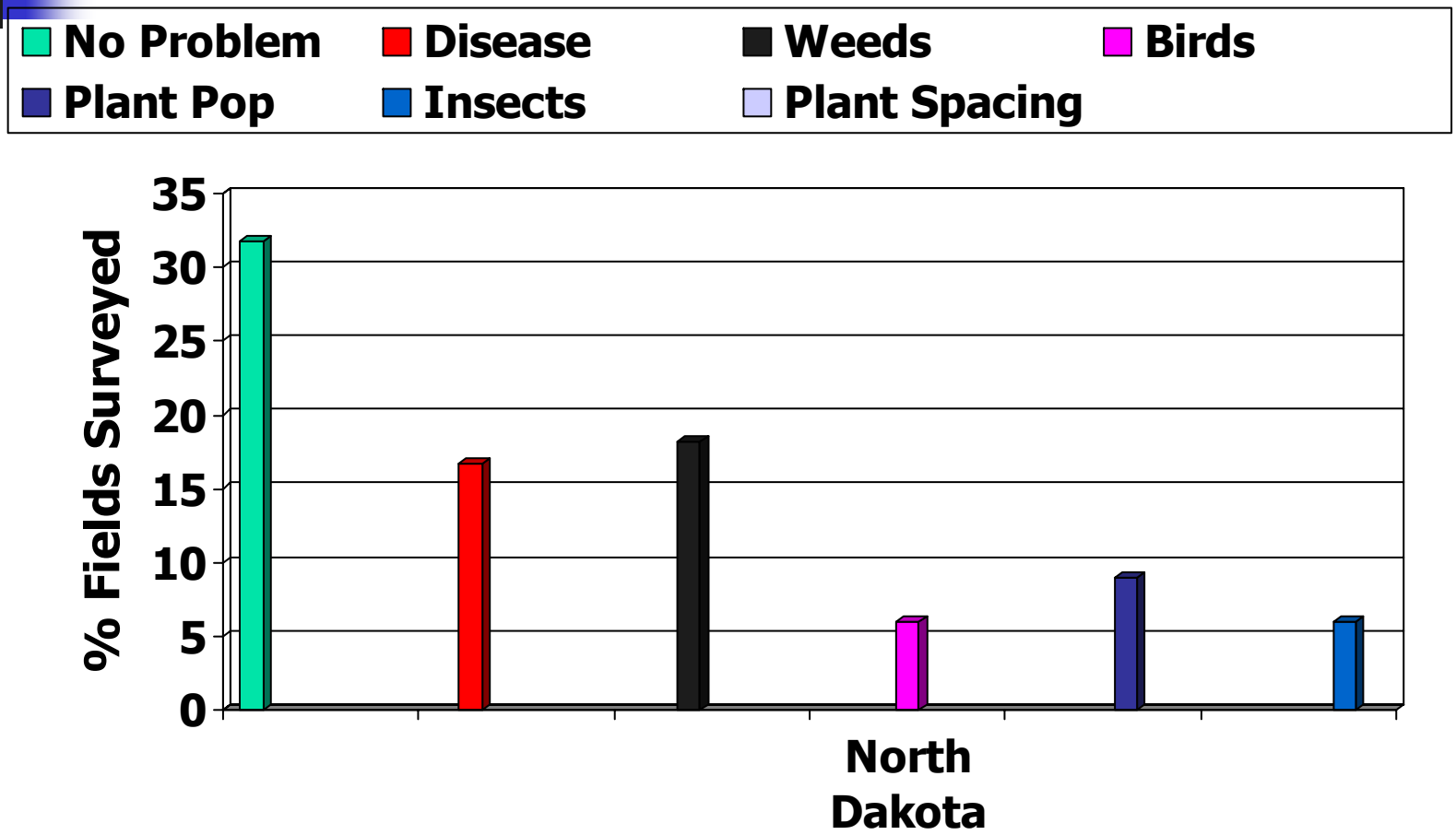
Number One Yield Limiting Factors-2006 in ND and MN



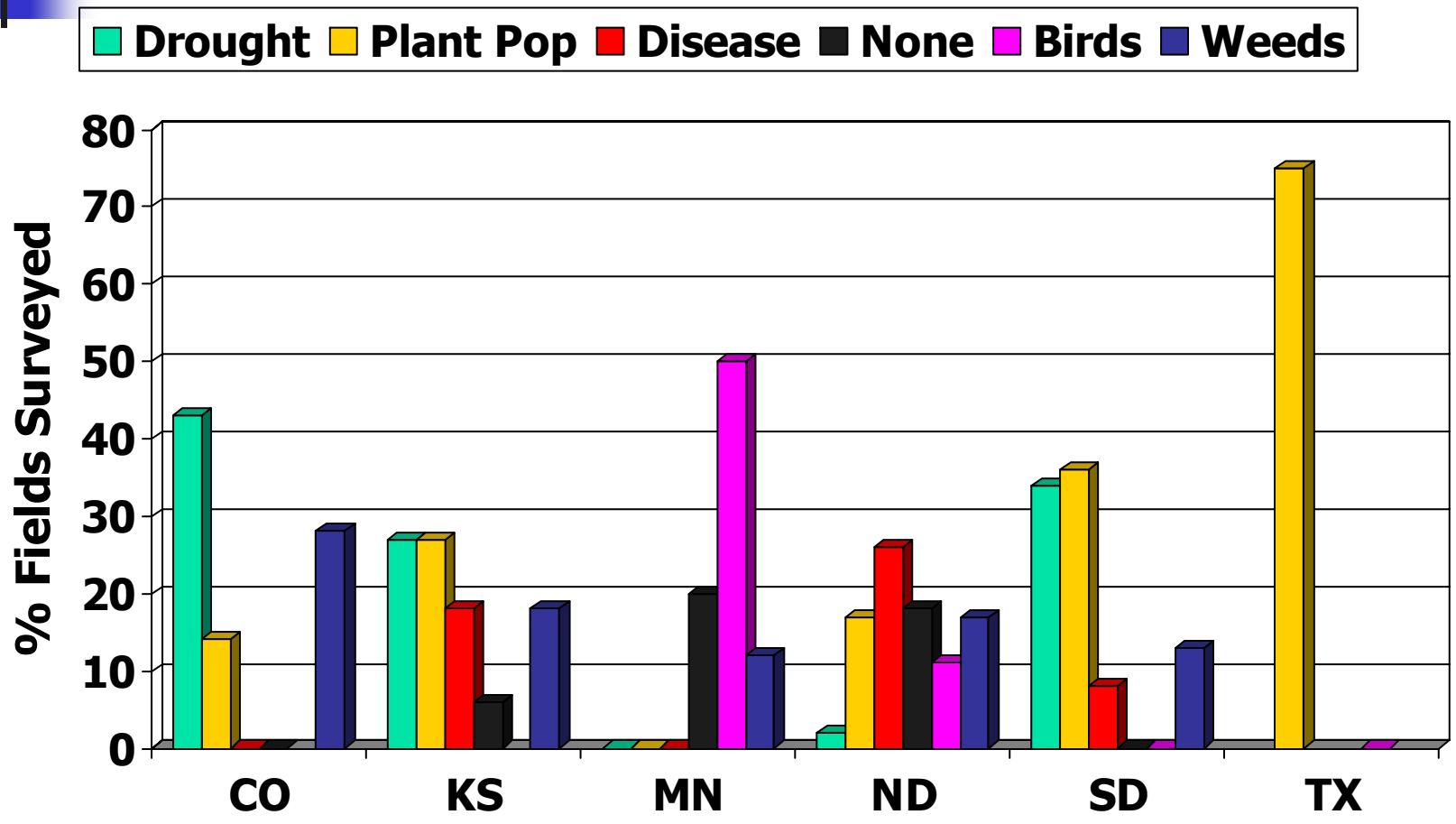
Number One Yield Limiting Factors-2006



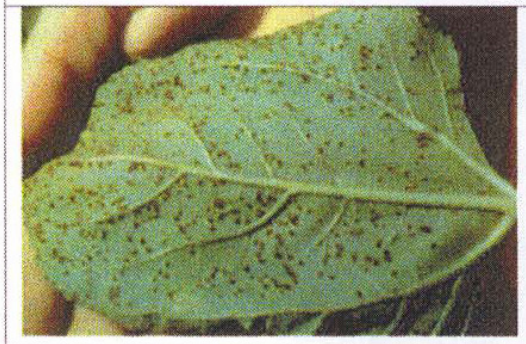
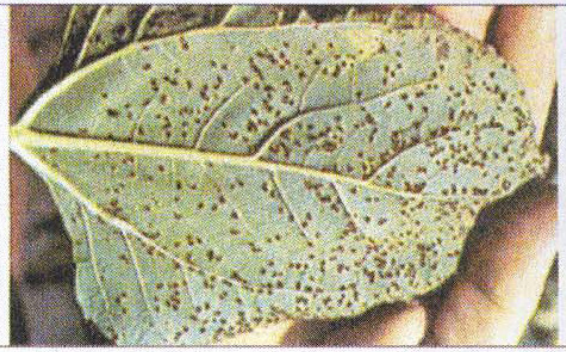
Number Two Yield Limiting Factors-2007



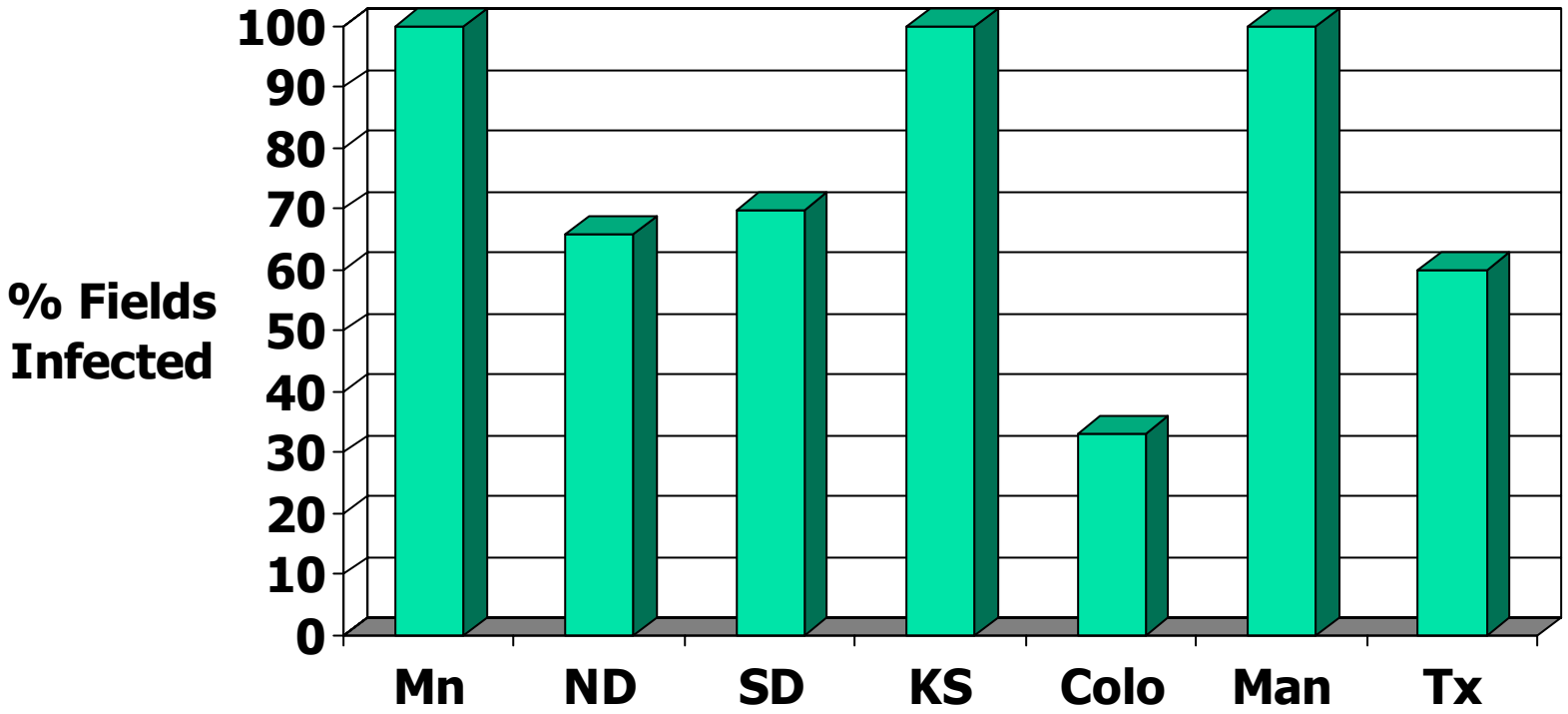
Number One Yield Limiting Factors-2005



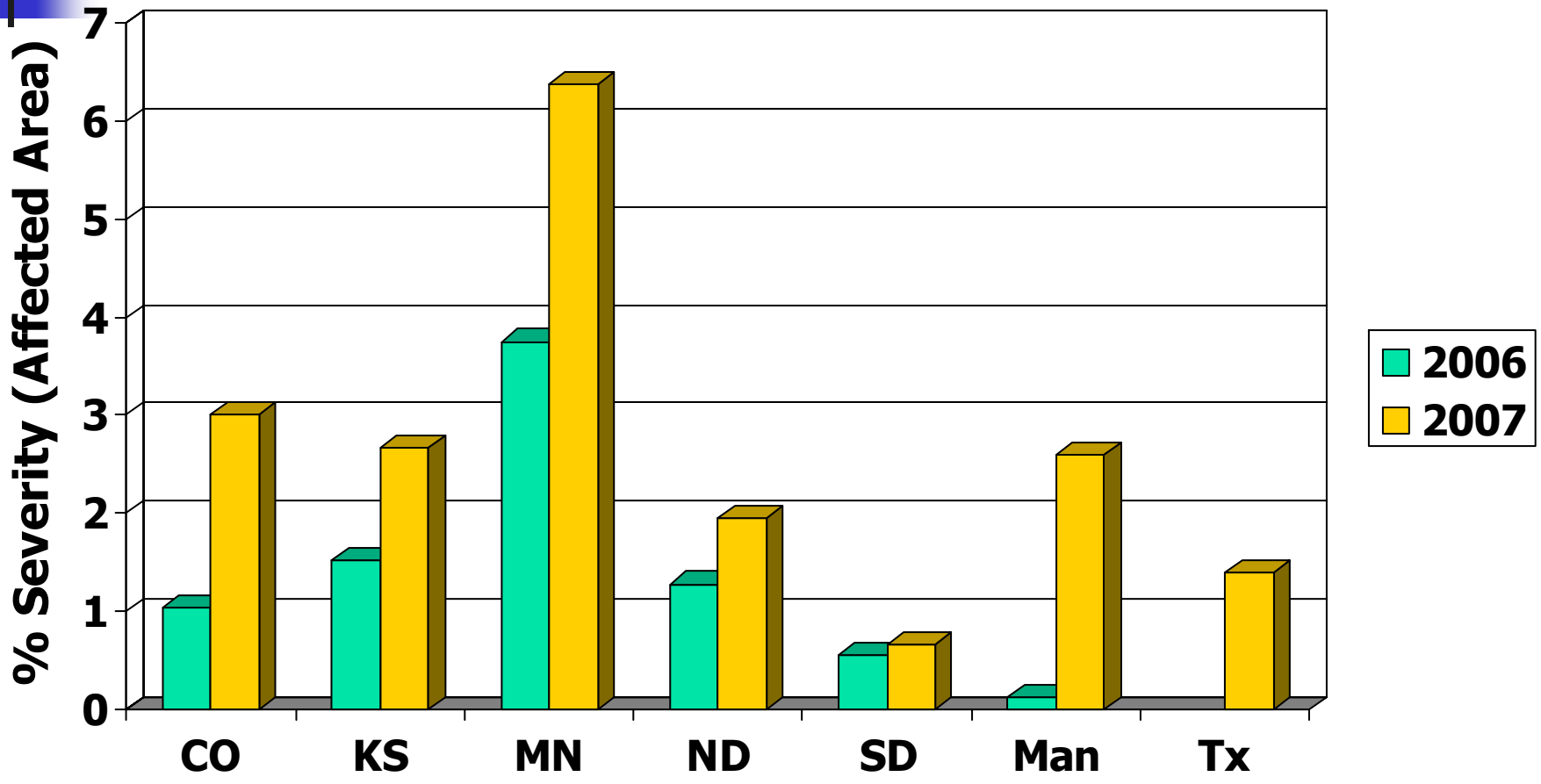
Red Rust

Red Rust		Description
		Rust is characterized by cinnamon-colored spots or pustules, which primarily occur on the underside of the leaves but also on the stems.

Red Rust Incidence in 2007

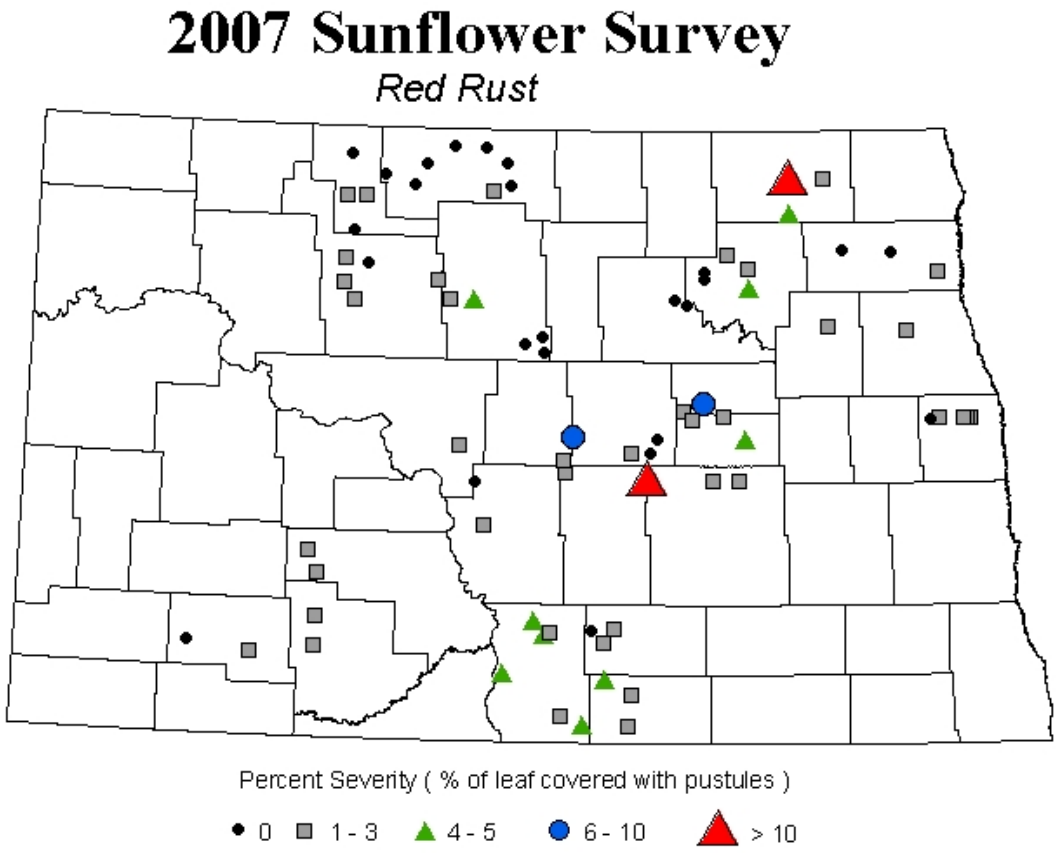


Red Rust in Sunflower 06-07

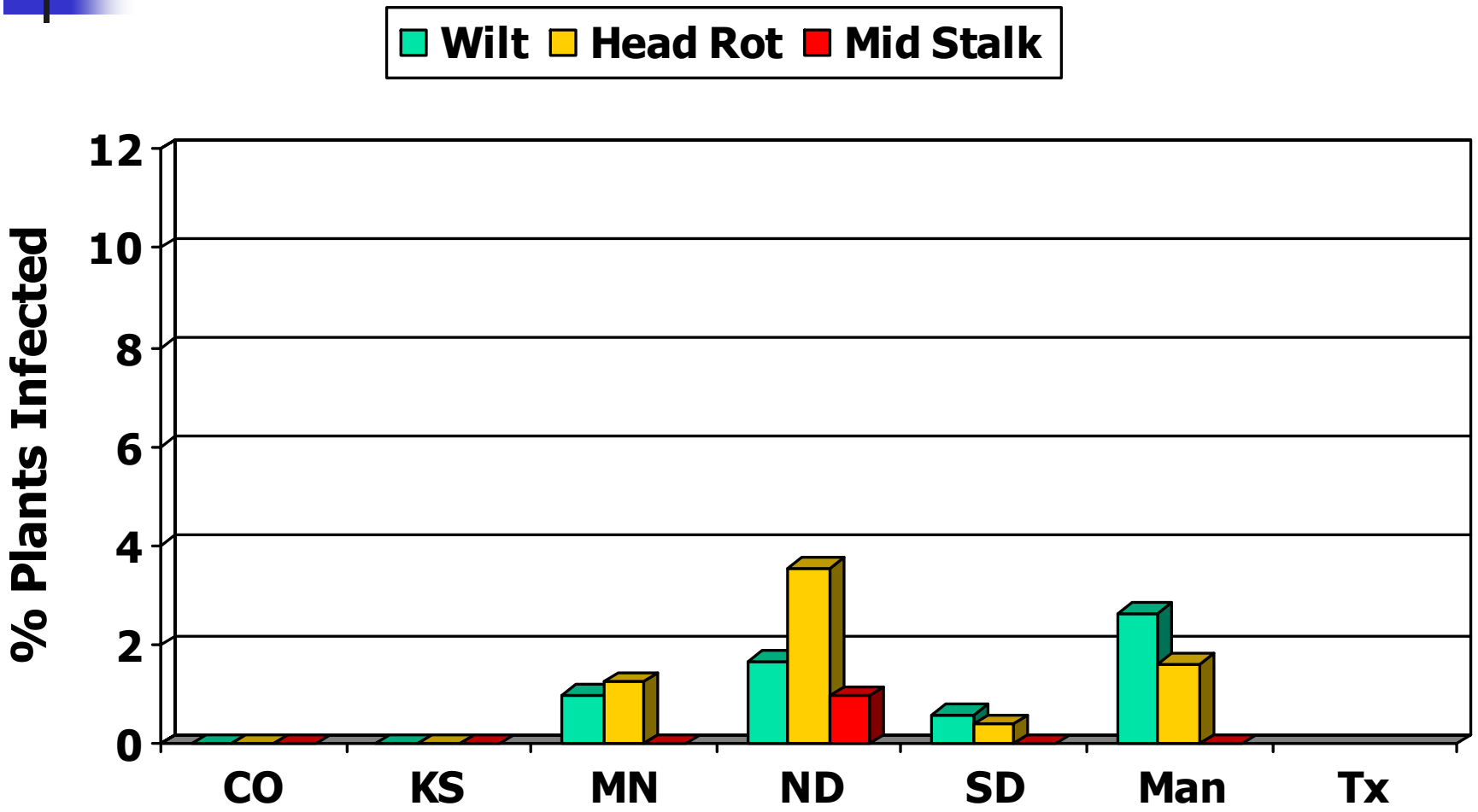


Rust Severity Estimated for Fields Where Incidence Reported

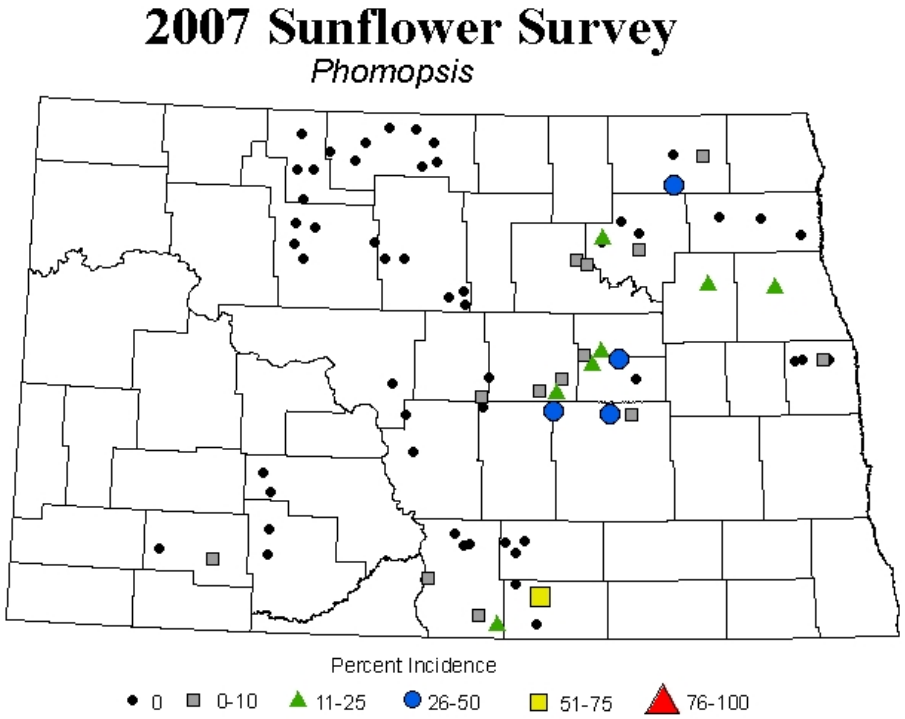
Sunflower Red Rust in ND



Sclerotinia in Sunflower in 2007

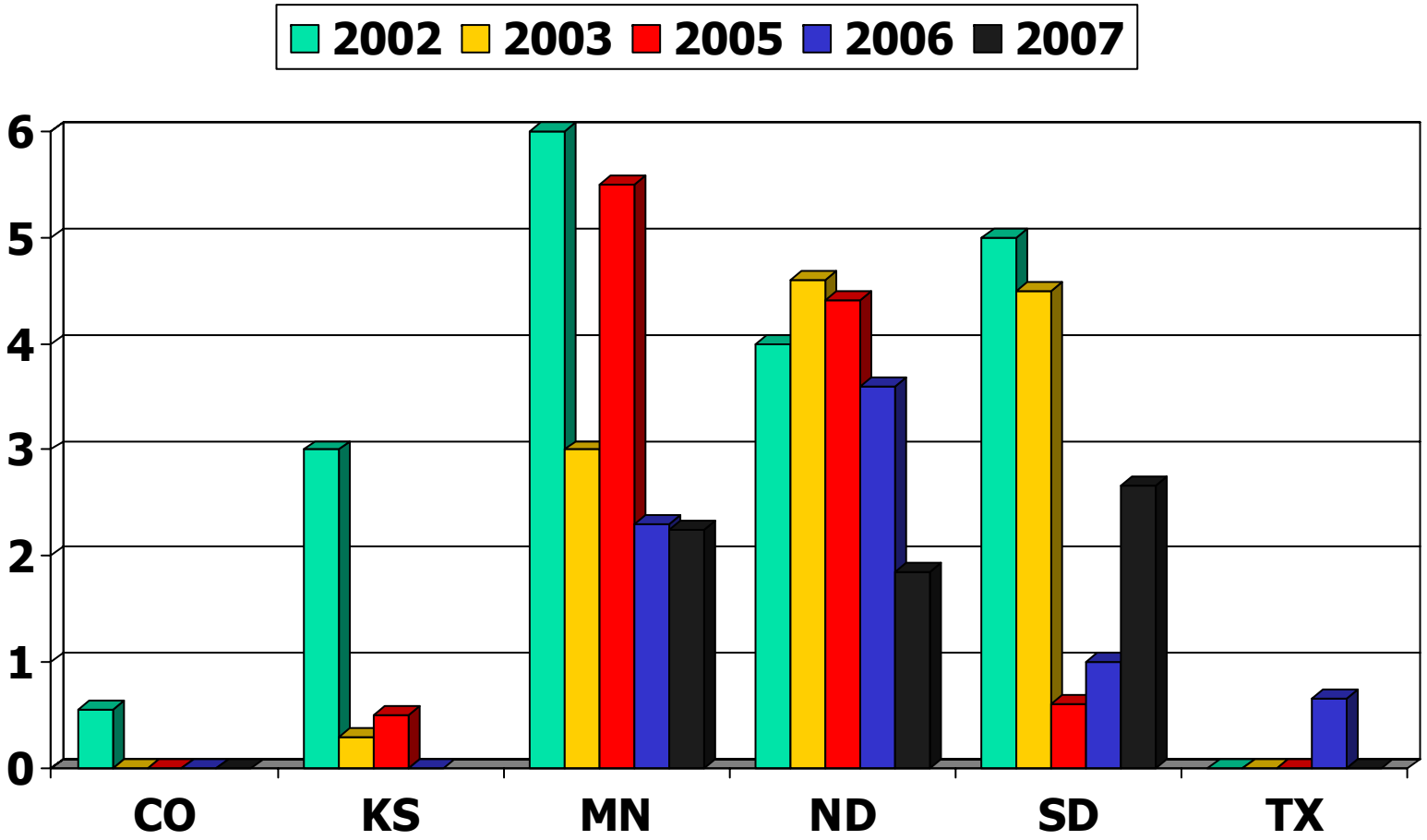


Phomopsis in ND

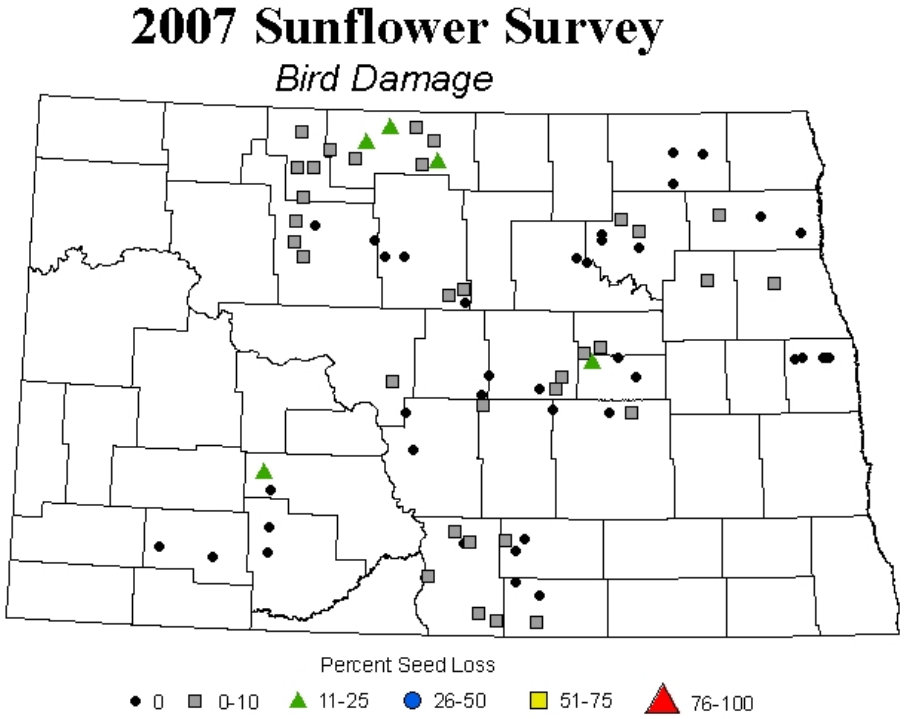


Bird Damage at time of survey

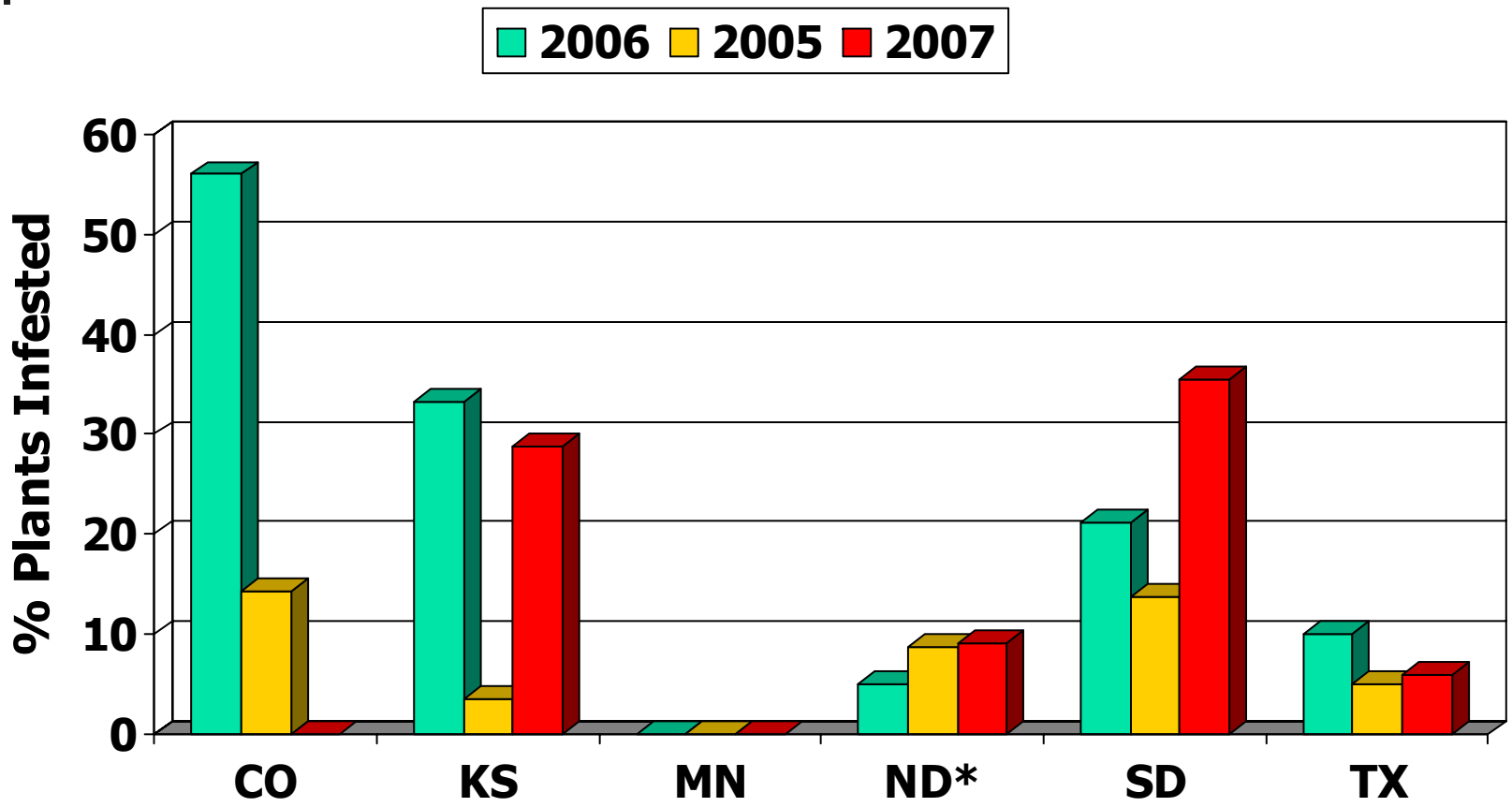
%Bird Damage



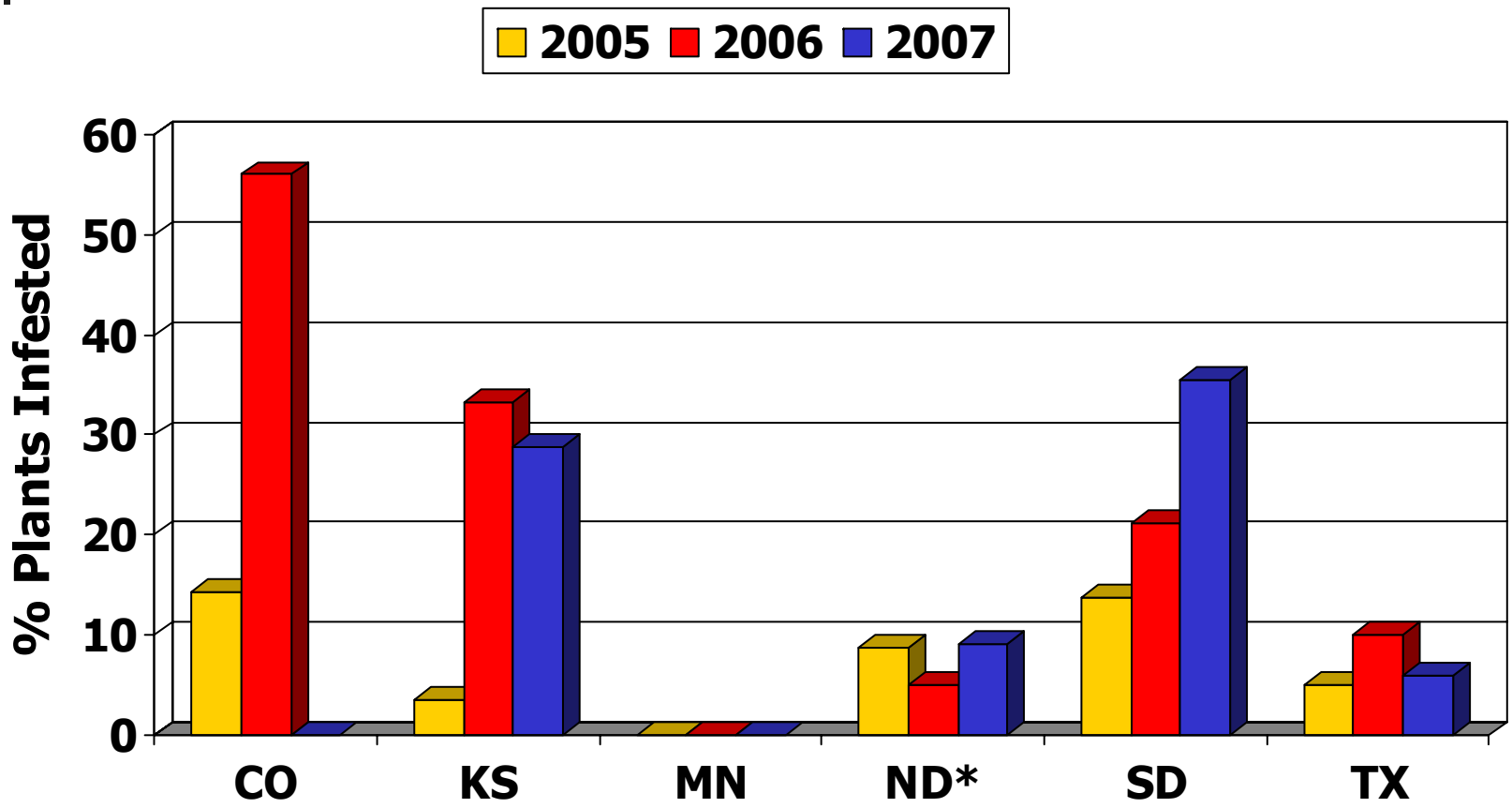
Bird Damage in ND



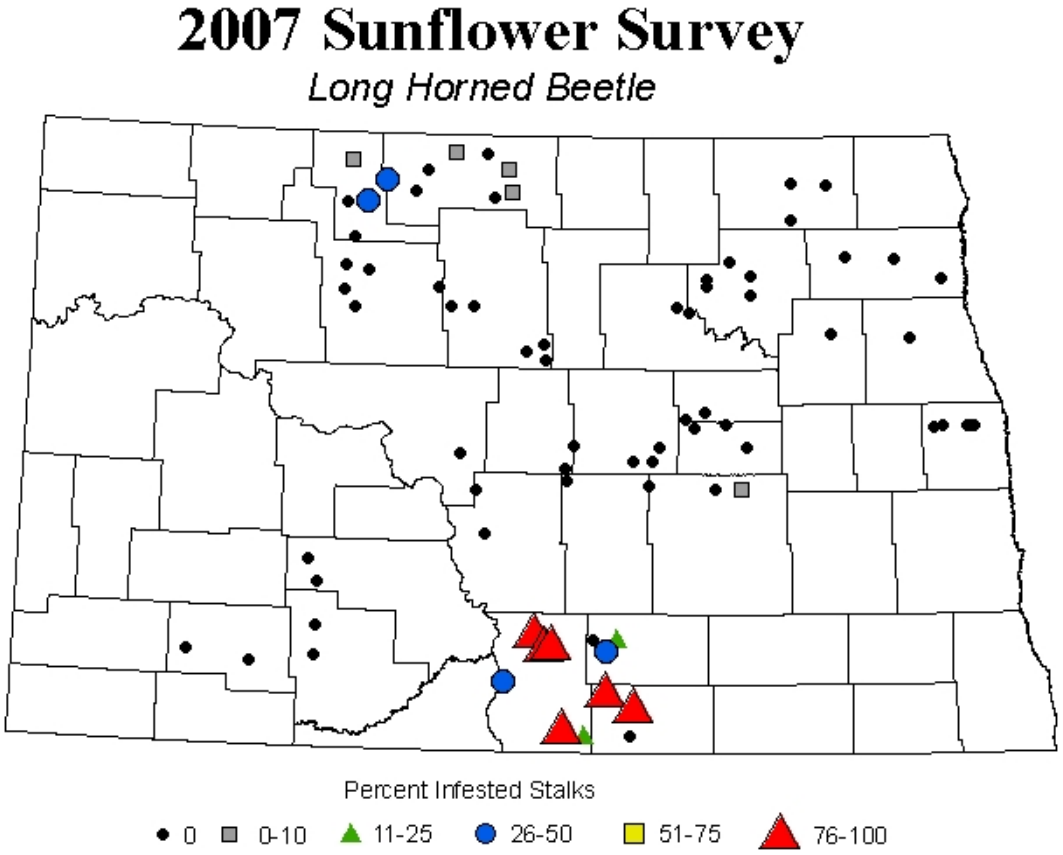
Insect: Longhorned Beetle



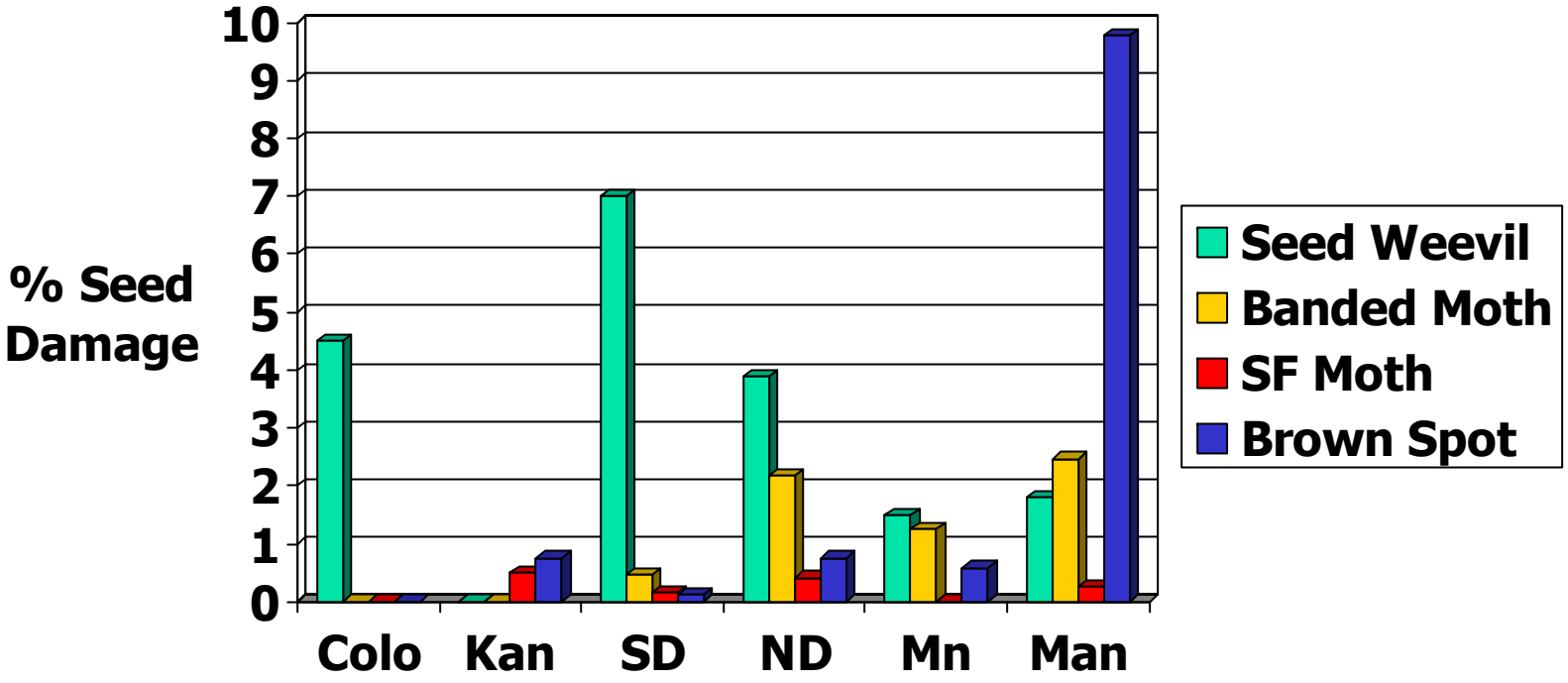
Insect: Longhorned Beetle



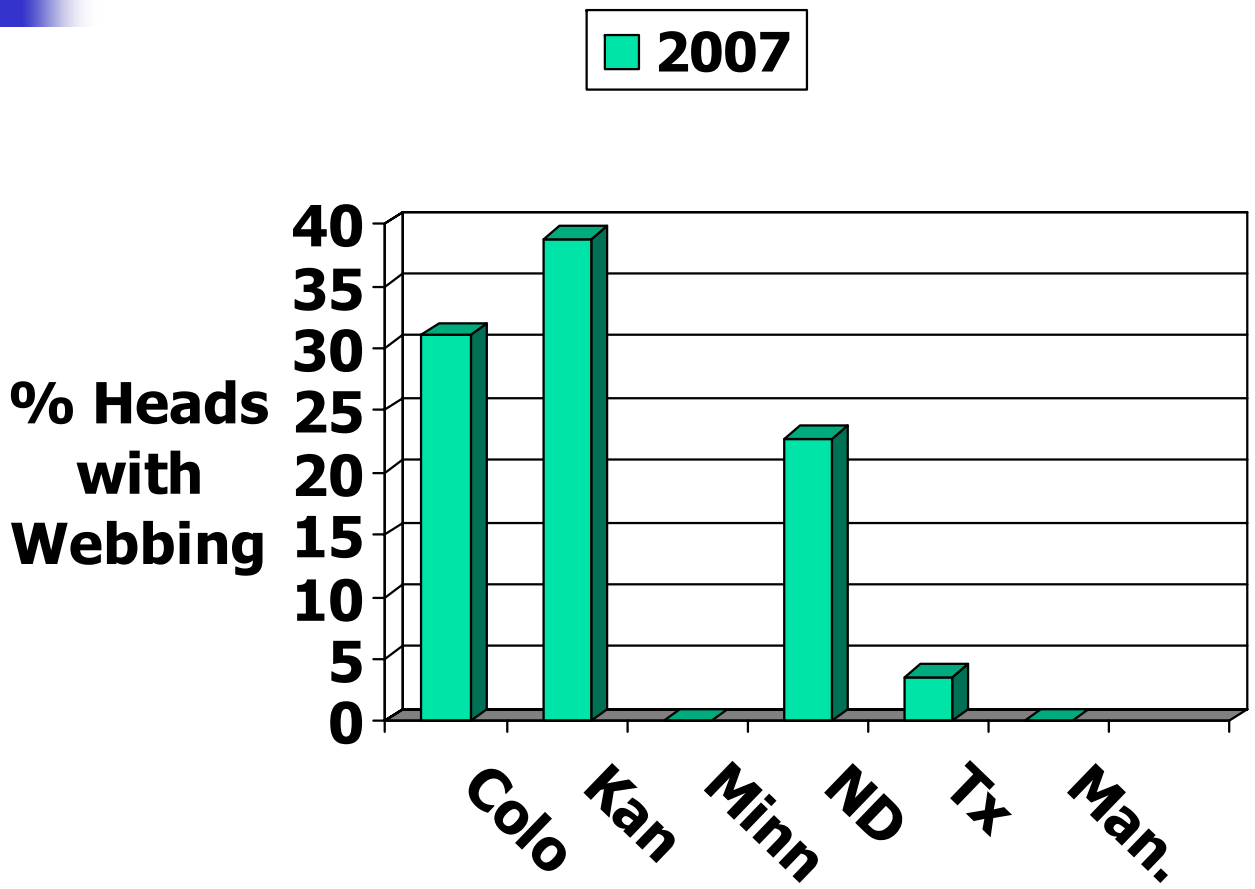
Long Horned Beetle in ND



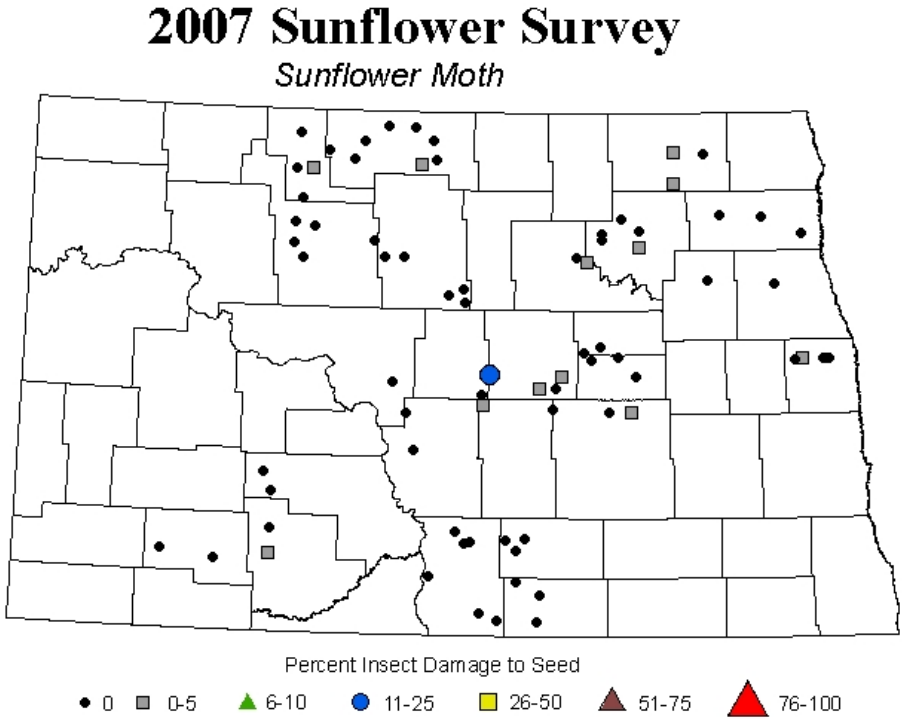
Insect Seed Damage 2007



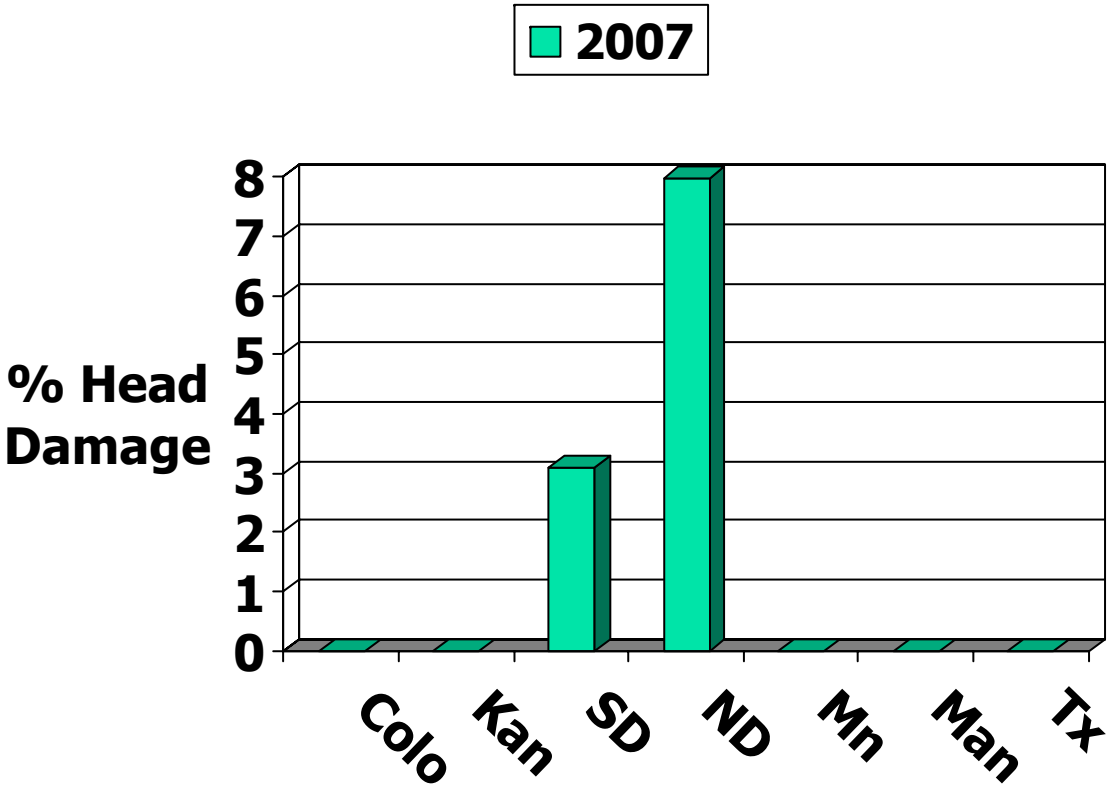
Webbing in Sunflower Heads



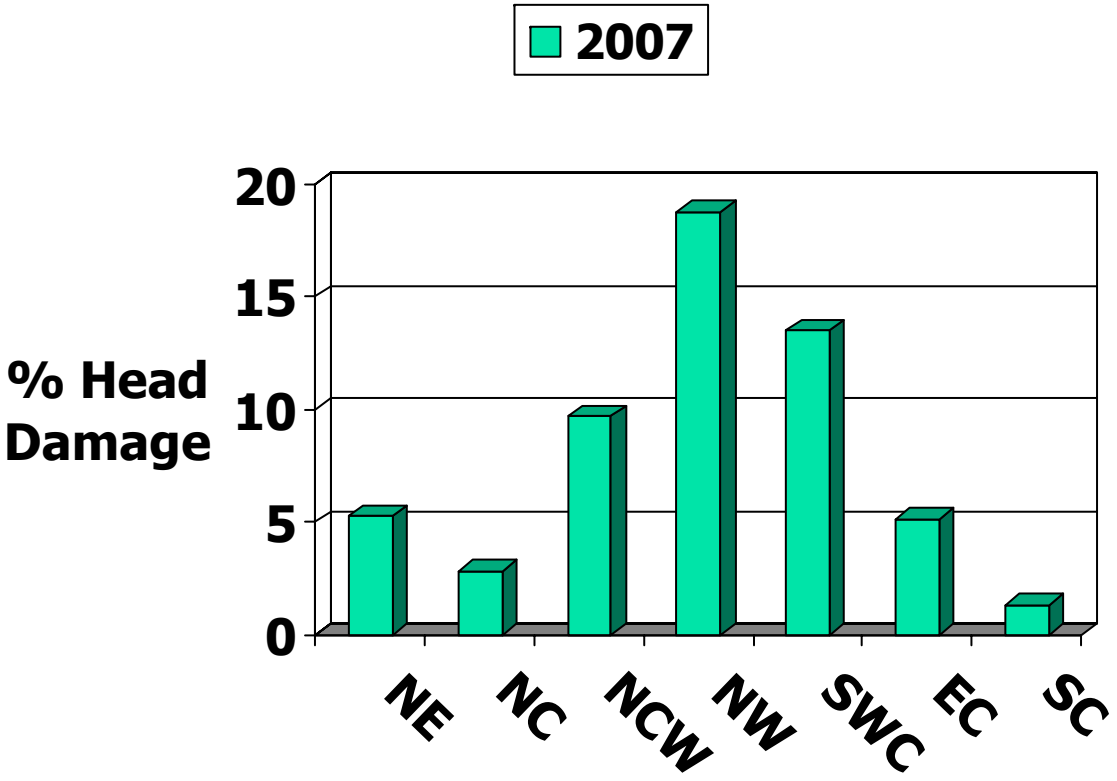
Sunflower Moth in ND



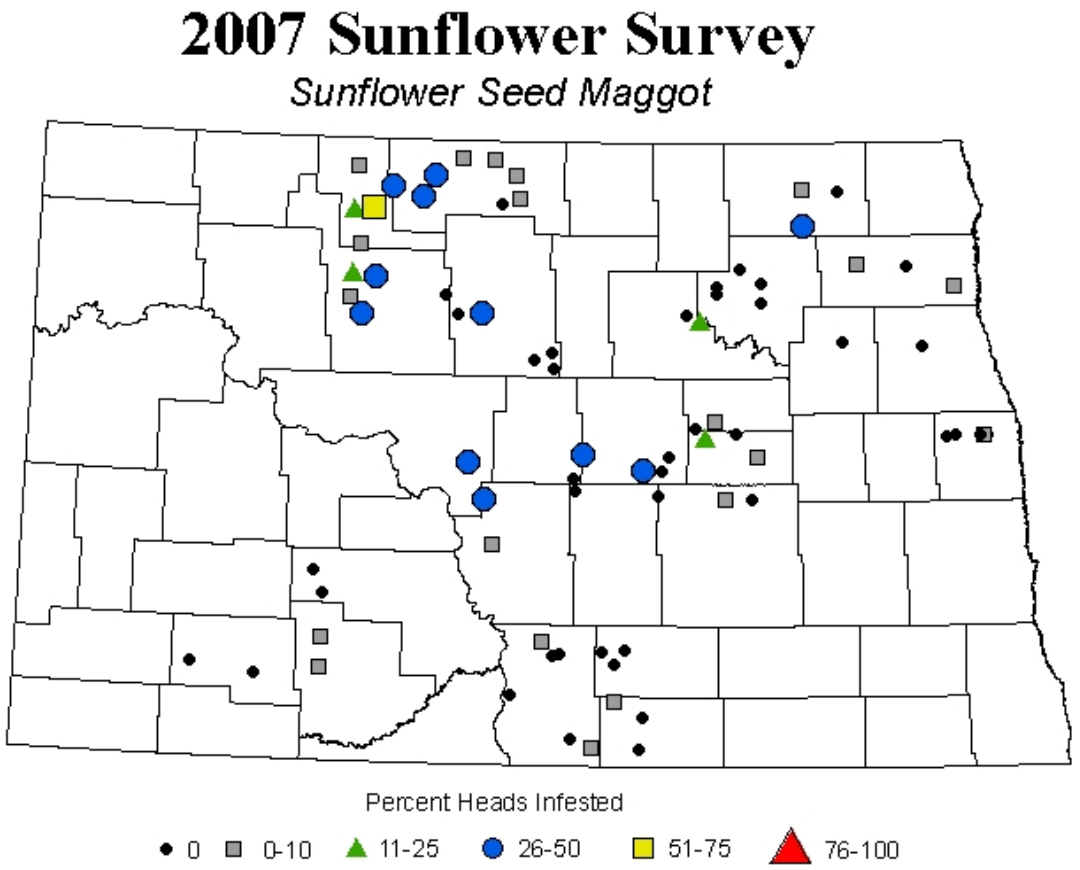
Sunflower Seed Maggot 2007



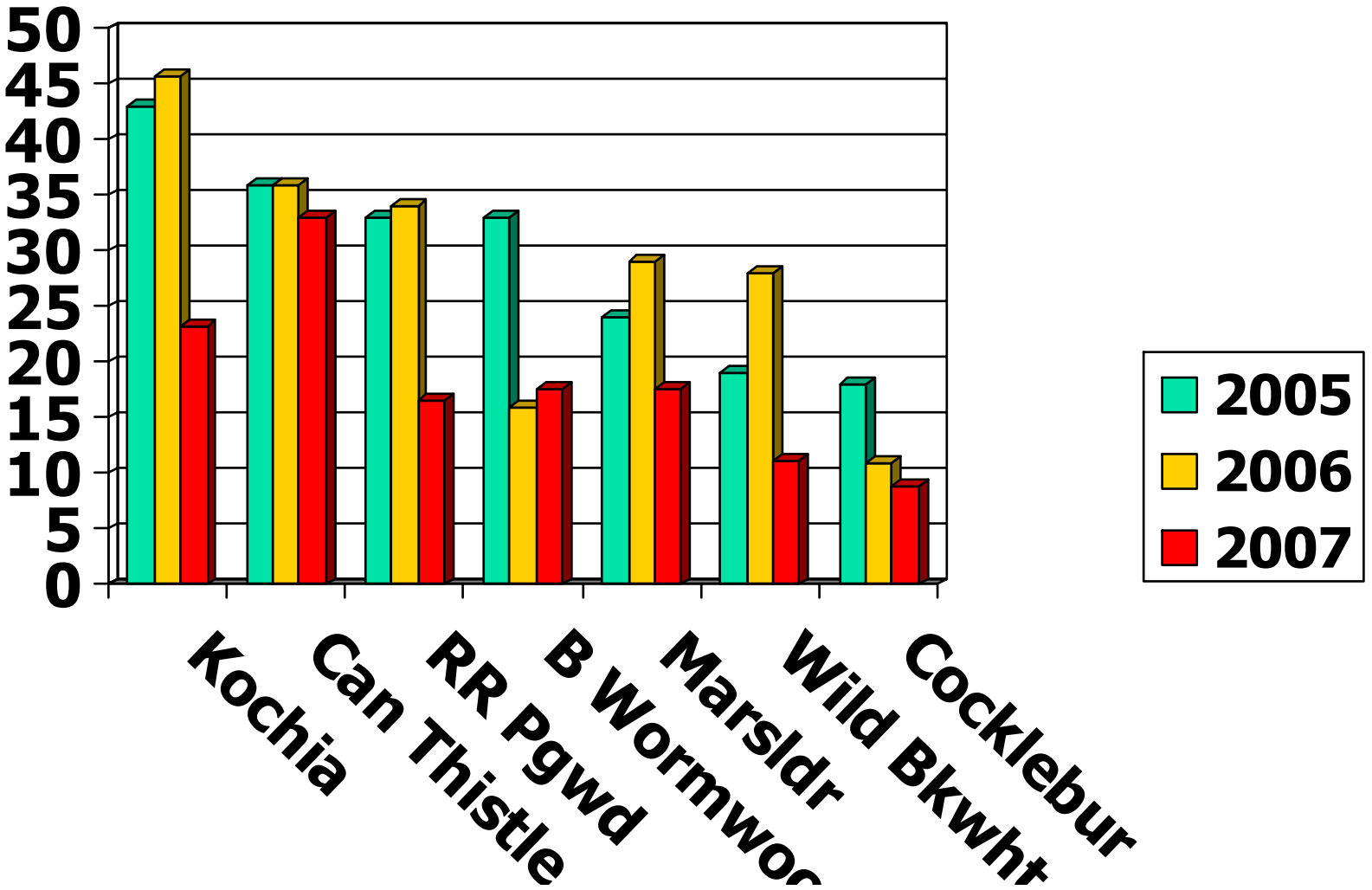
Sunflower Seed Maggot in North Dakota



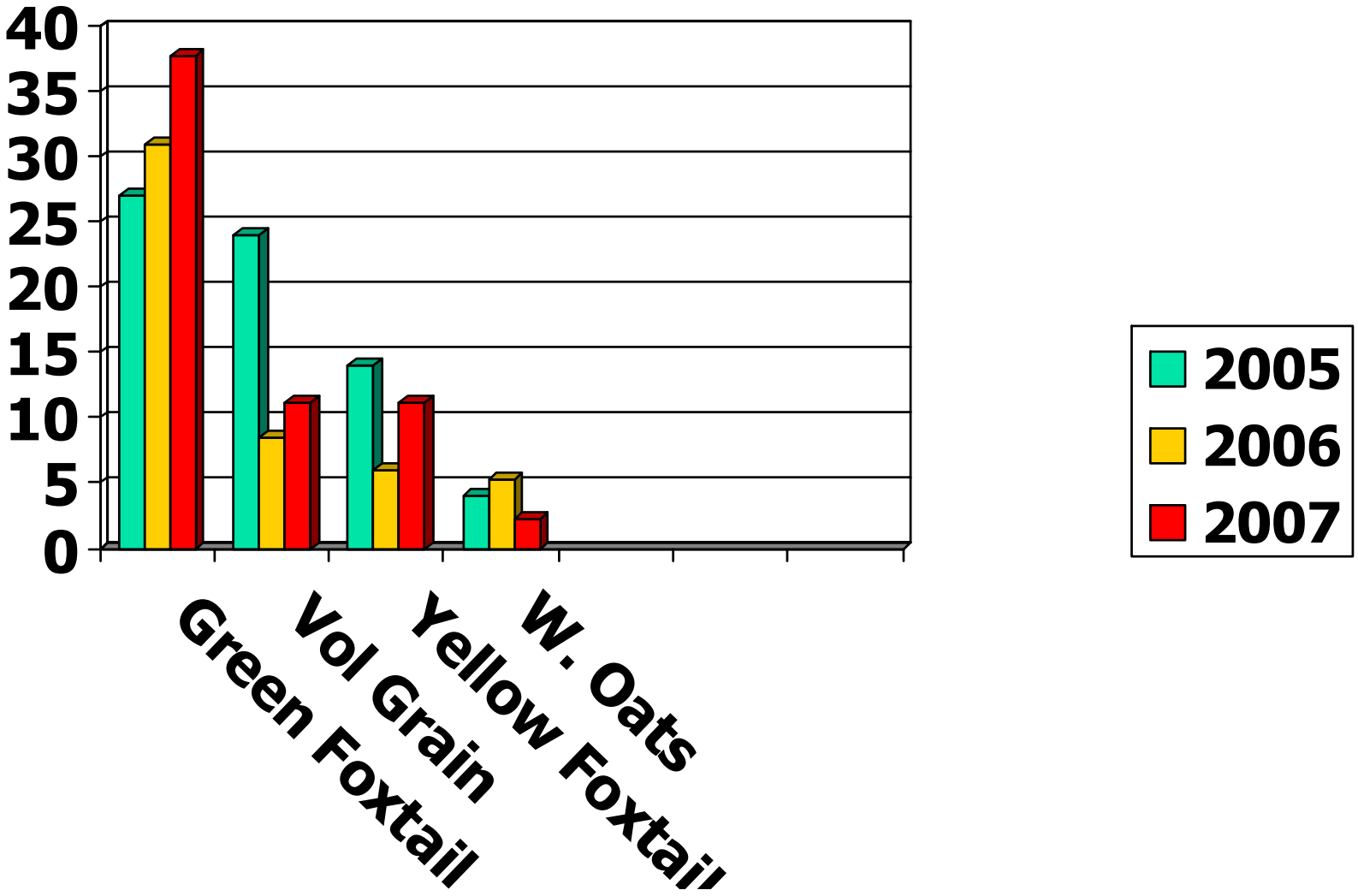
SF Seed Maggot in ND



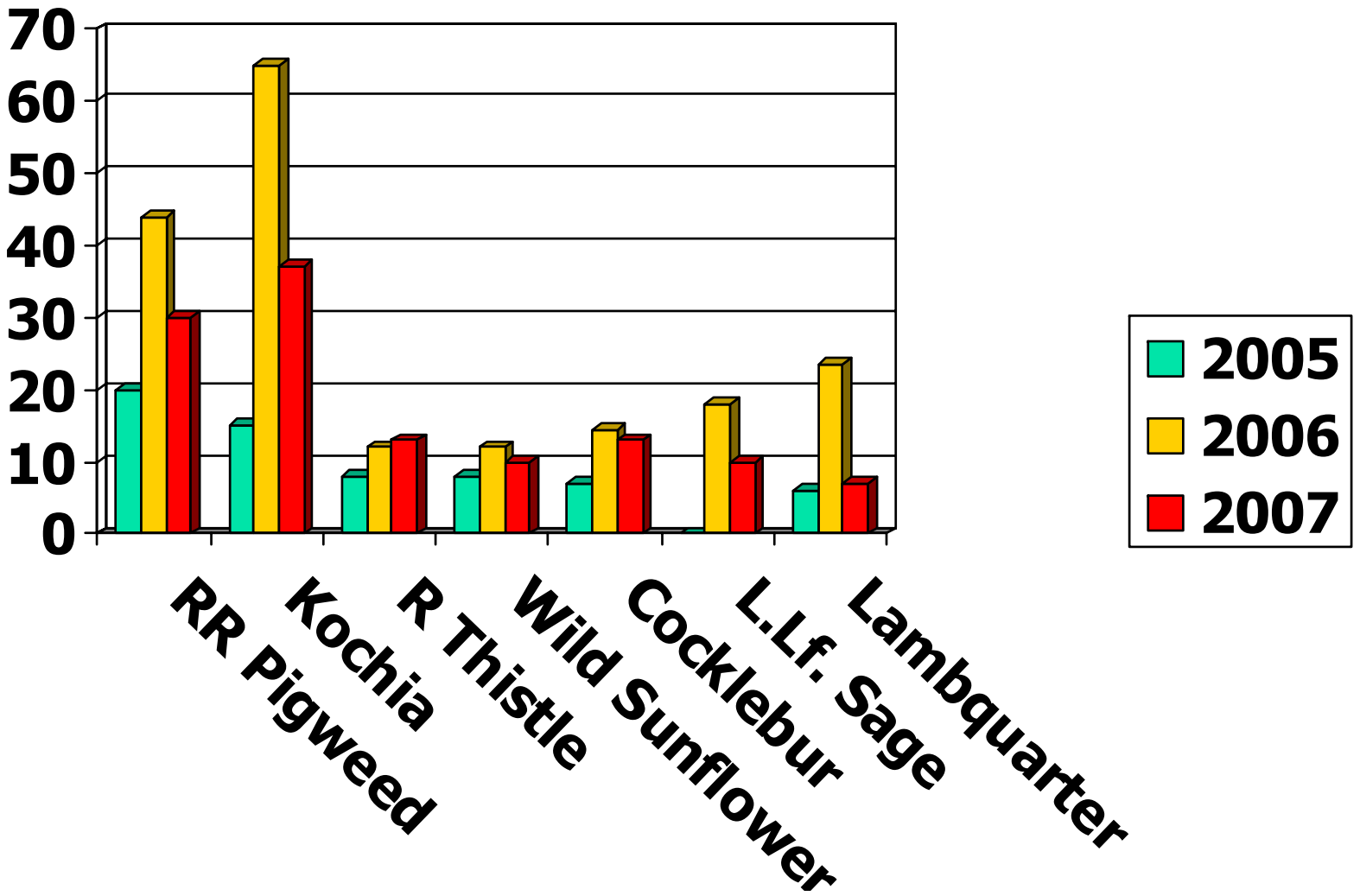
Incidence of Broadleaf Weeds ND/MN 2005, 2006 & 2007



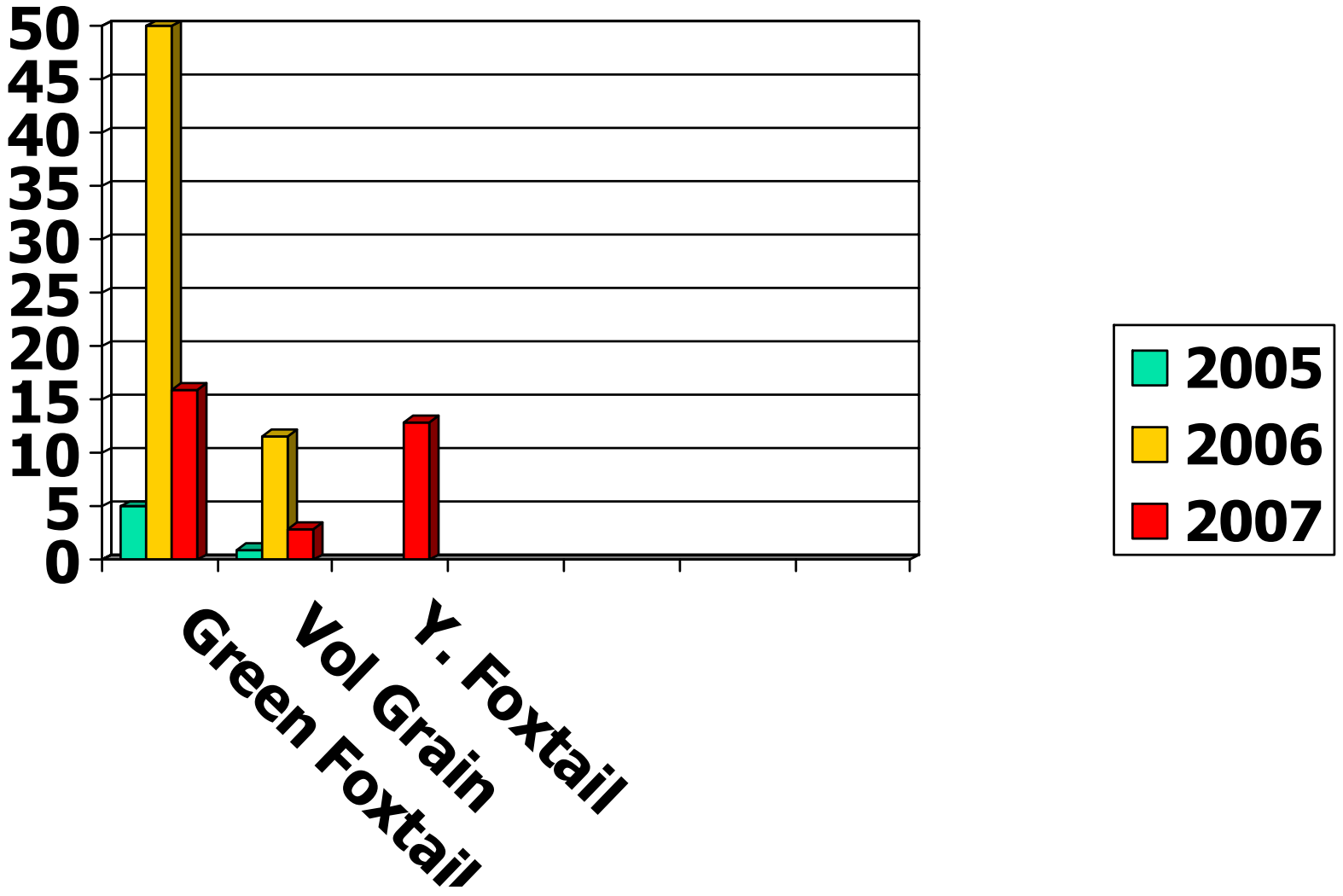
Incidence of Grassy Weeds In Sunflower: ND/MN 2005, 2006 & 2007



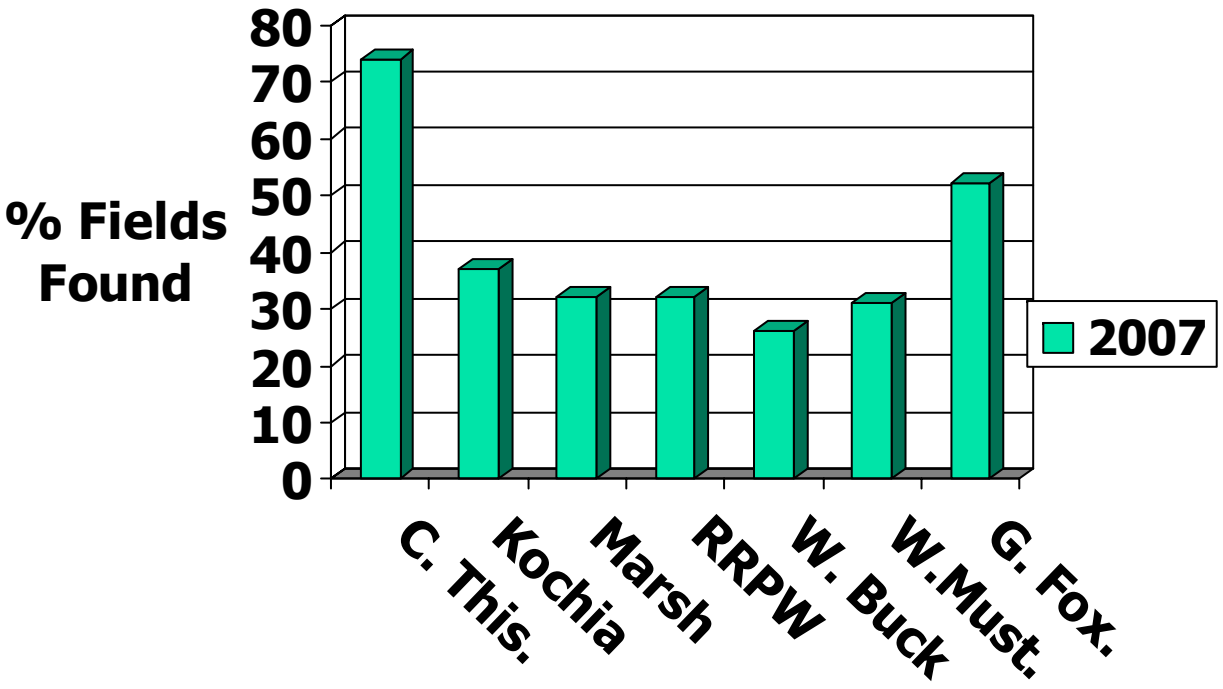
Incidence of Broadleaf Weeds South Dakota 2005, 2006 & 2007



Incidence of Grassy Weeds South Dakota 2005, 2006 & 2007



Weeds in Manitoba 2007

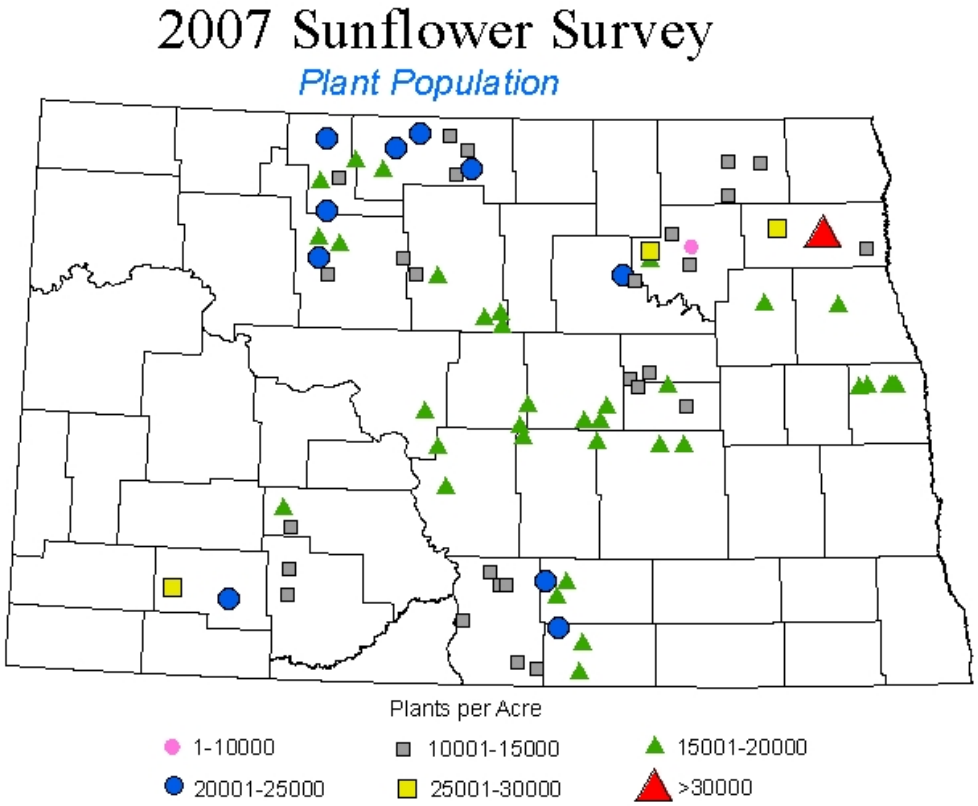


Maps of 2007 Sunflower Survey

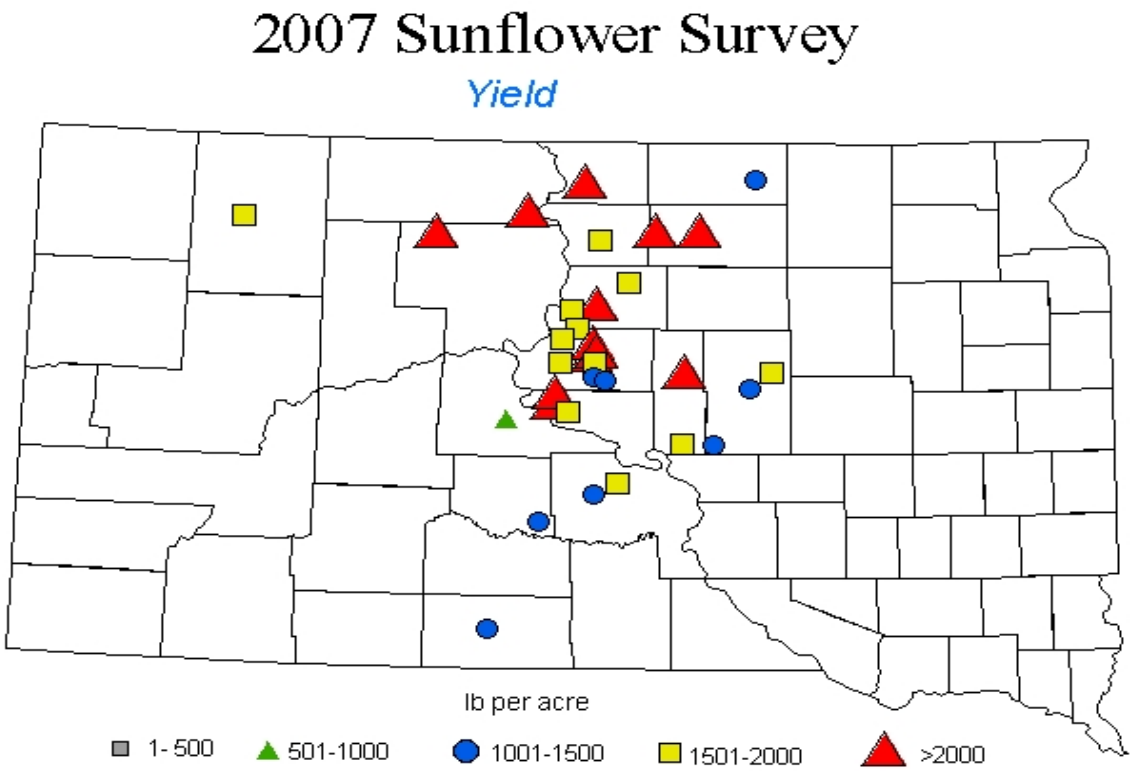
- North Dakota
- South Dakota
- Minnesota
- Kansas
- Colorado
- Website of all Maps in Sunflower Survey:

http://www.ag.ndsu.nodak.edu/aginfo/ndipm/index.htm

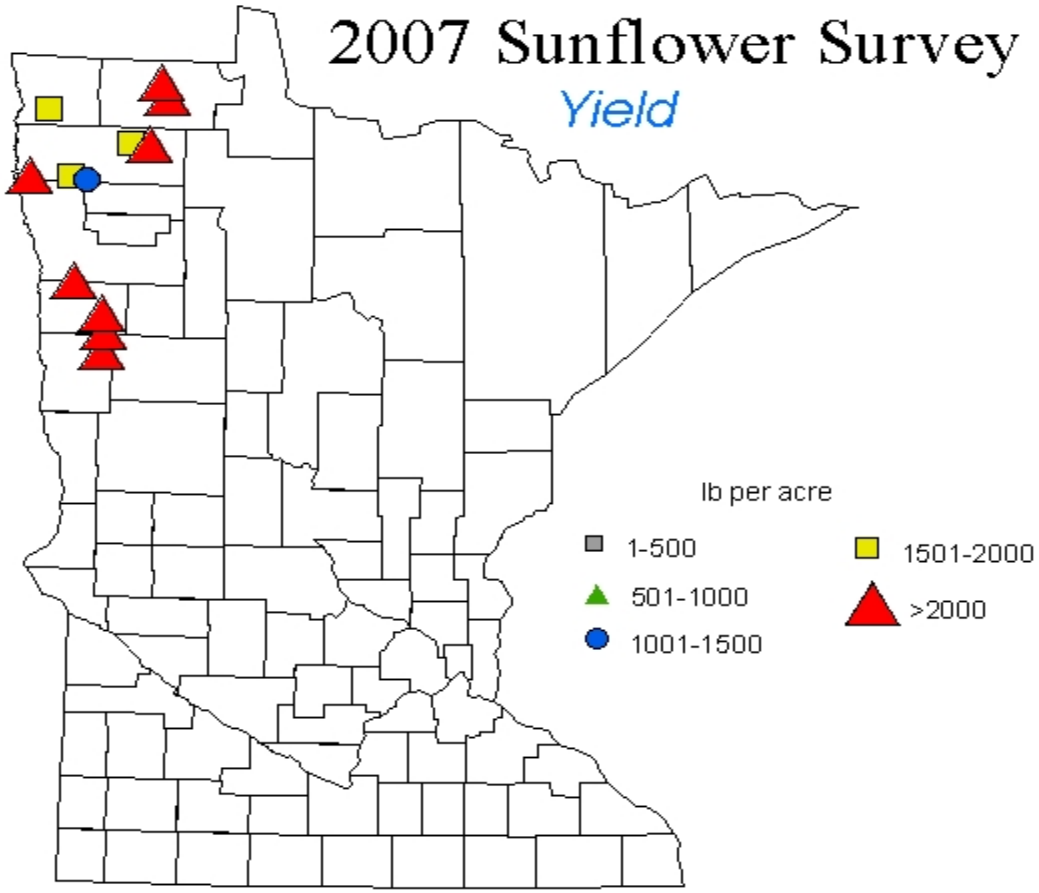
Plant Populations-North Dakota



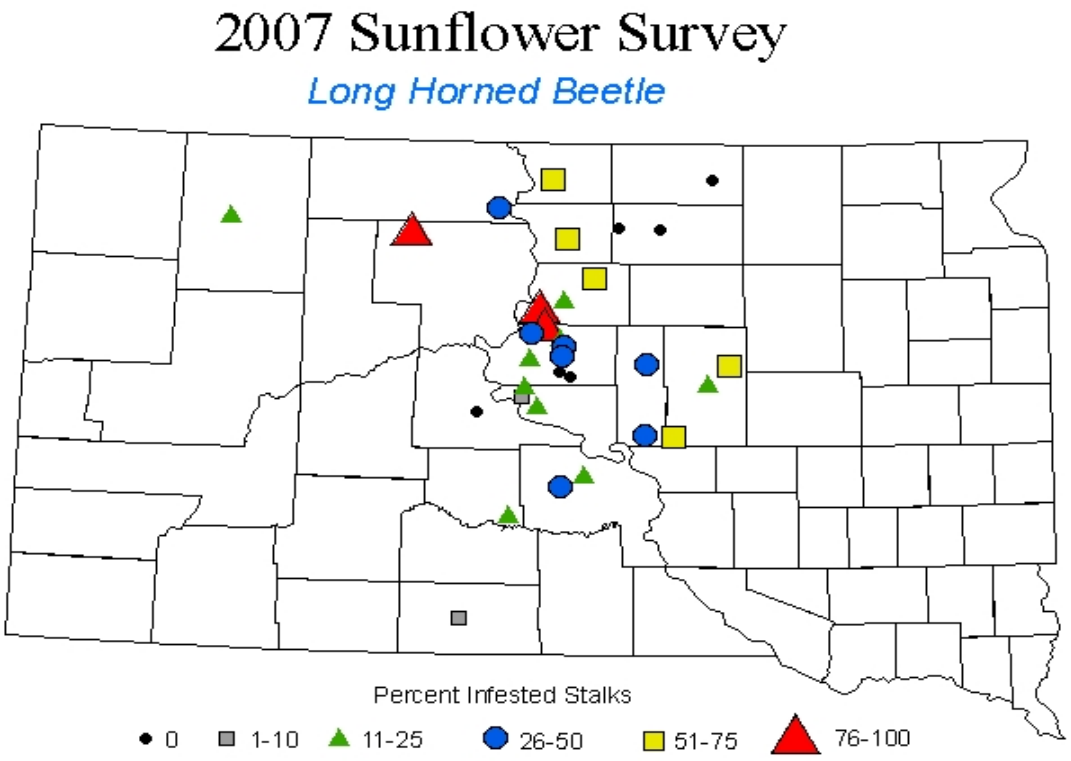
South Dakota



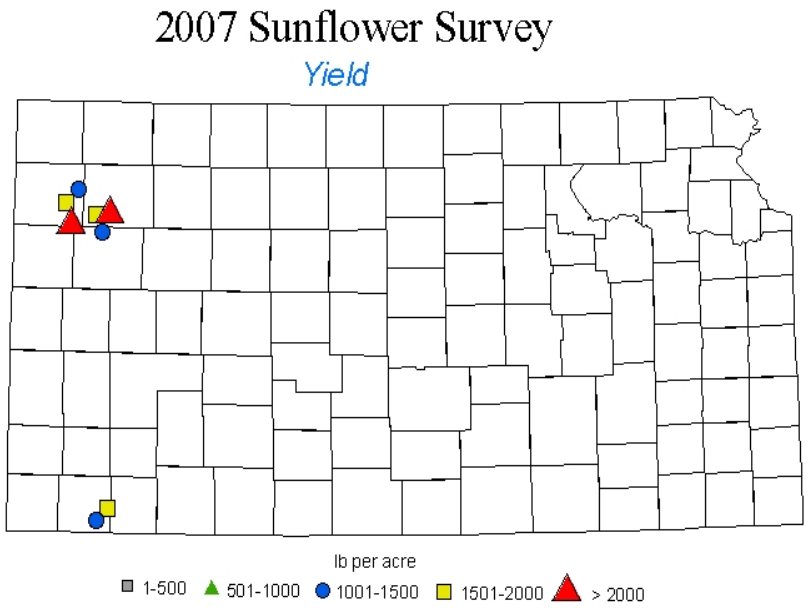
Minnesota

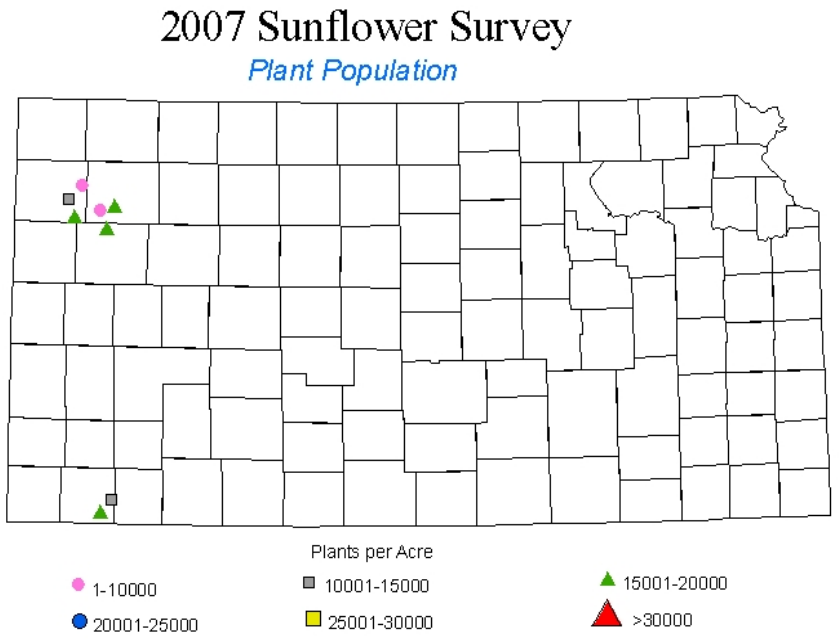

2007 Sunflower Survey
Yield
lb per acre
1-500
501-1000
1001-1500
1501-2000
>2000

South Dakota

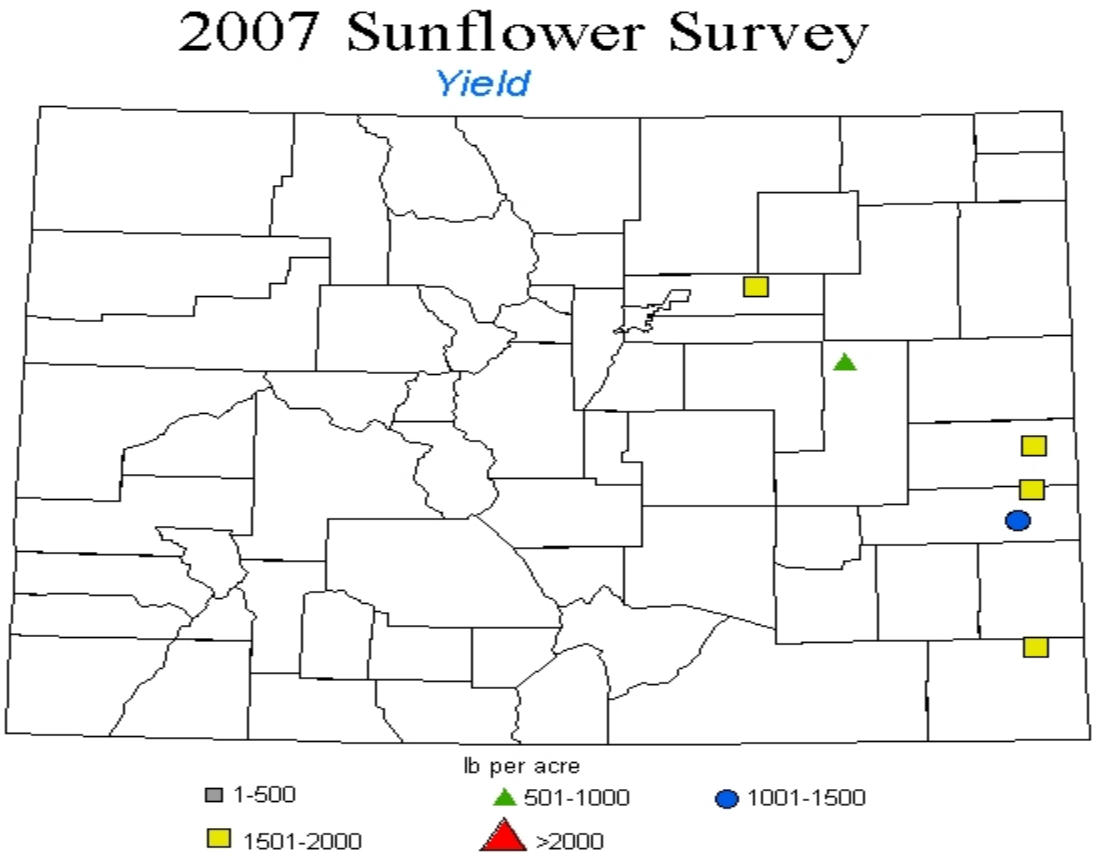


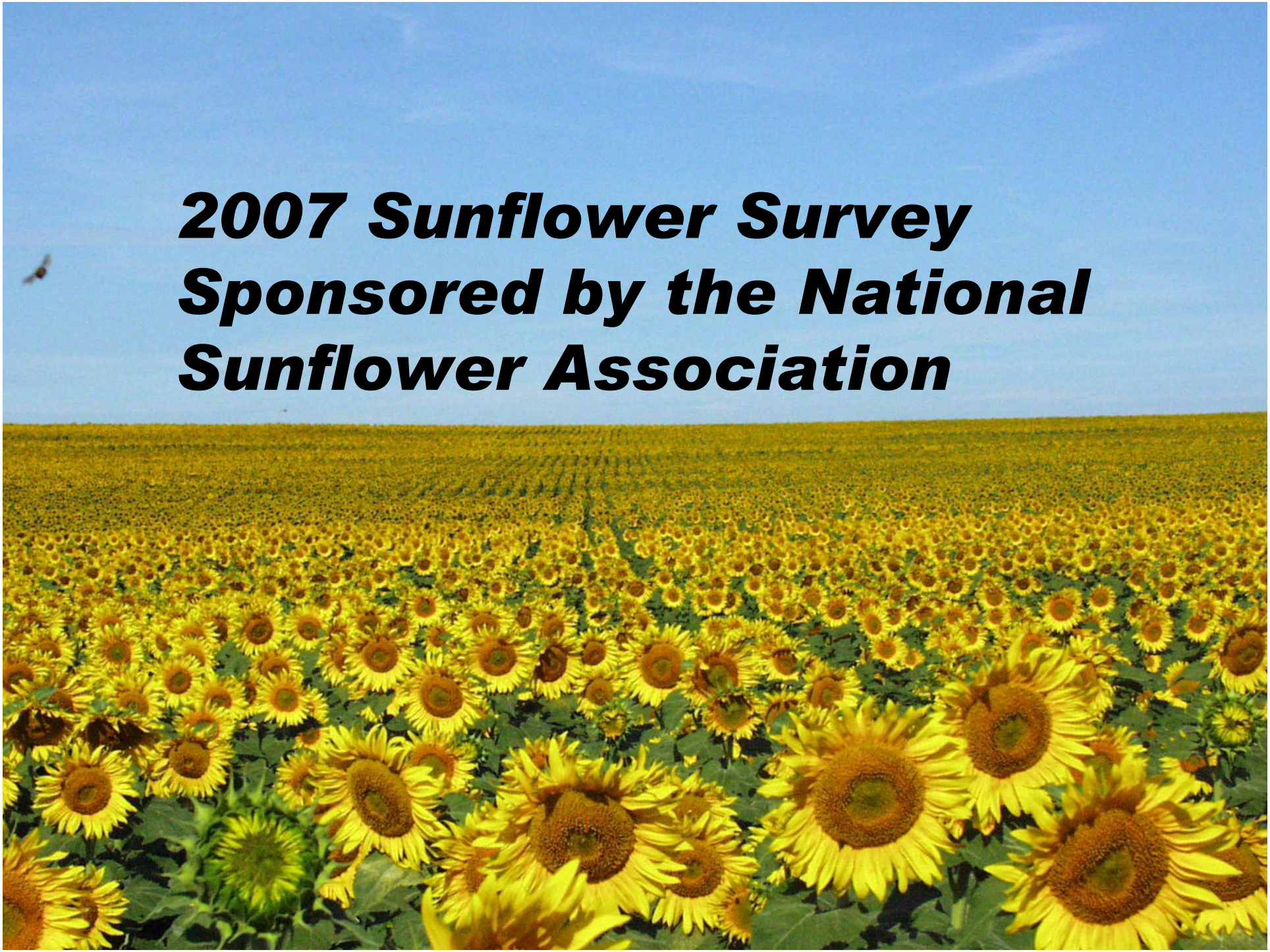
Kansas


2007 Sunflower Survey
Yield
lb per acre
1-500
501-1000
1001-1500
1501-2000
> 2000

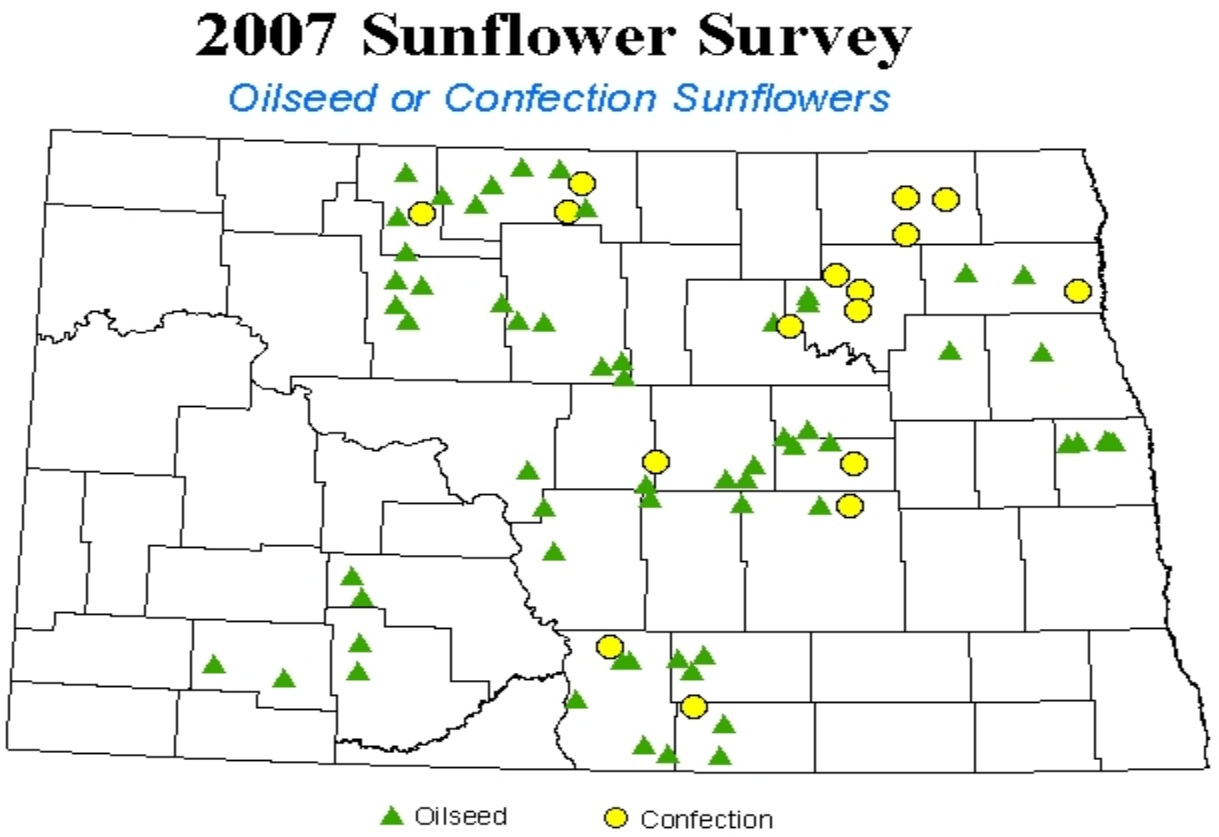

2007 Sunflower Survey
Plant Population
Plants per Acre
1-10000
10001-15000
15001-20000
20001-25000
25001-30000
>30000

Colorado

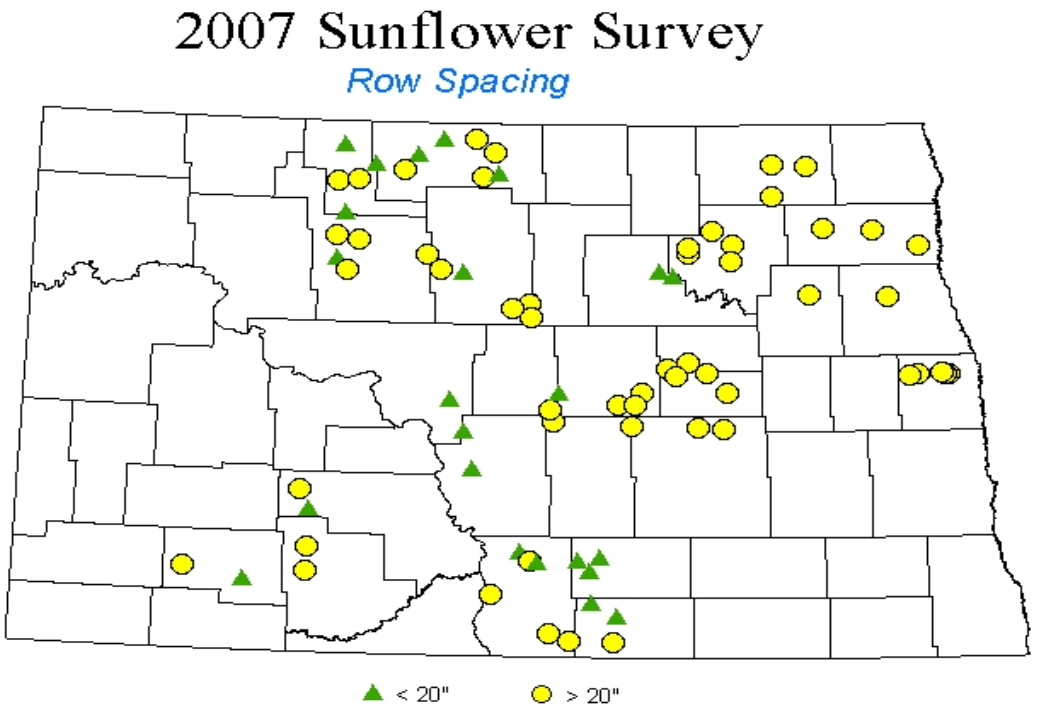

2007 Sunflower Survey
Yield
lb per acre
1-500
501-1000
1001-1500
1501-2000
>2000


2007 Sunflower Survey
Sponsored by the National
Sunflower Association

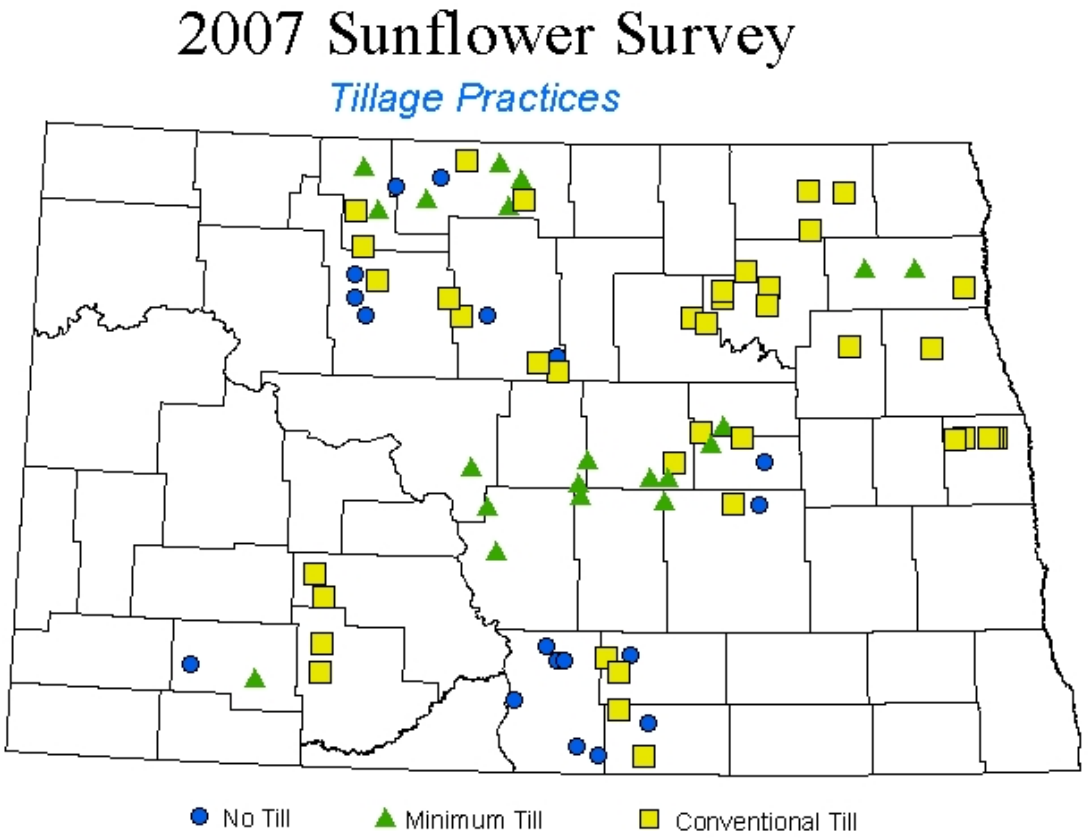
NDak. Oilseed and Confection



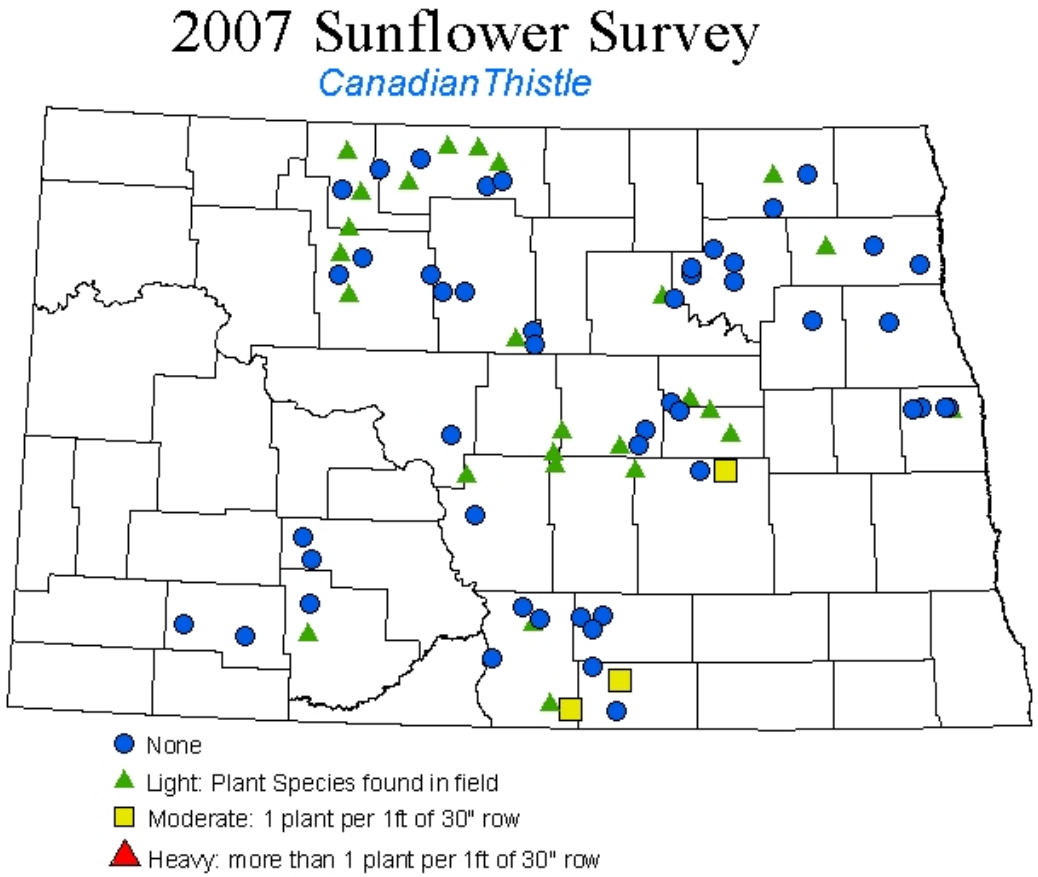
Row Spacing- North Dakota



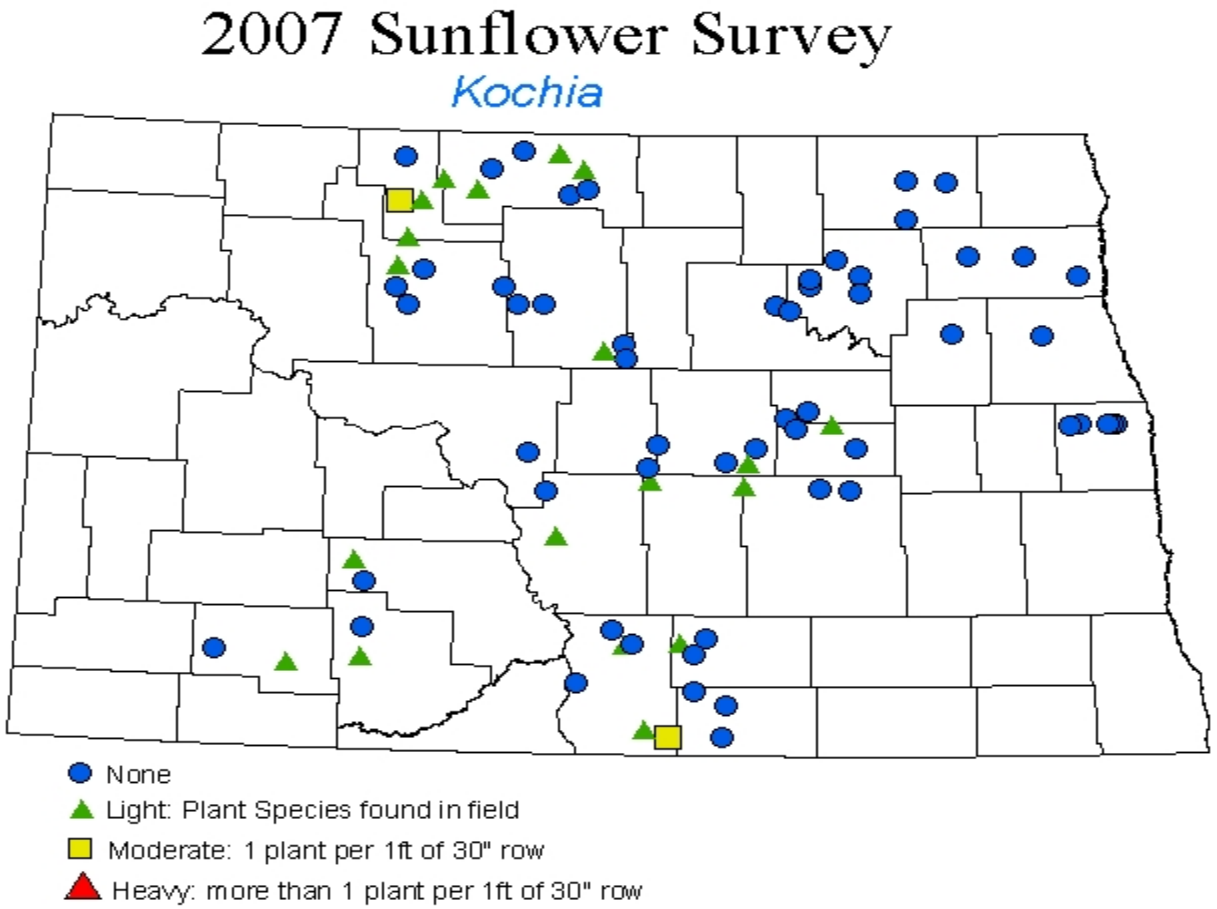
Tillage Practices-North Dakota



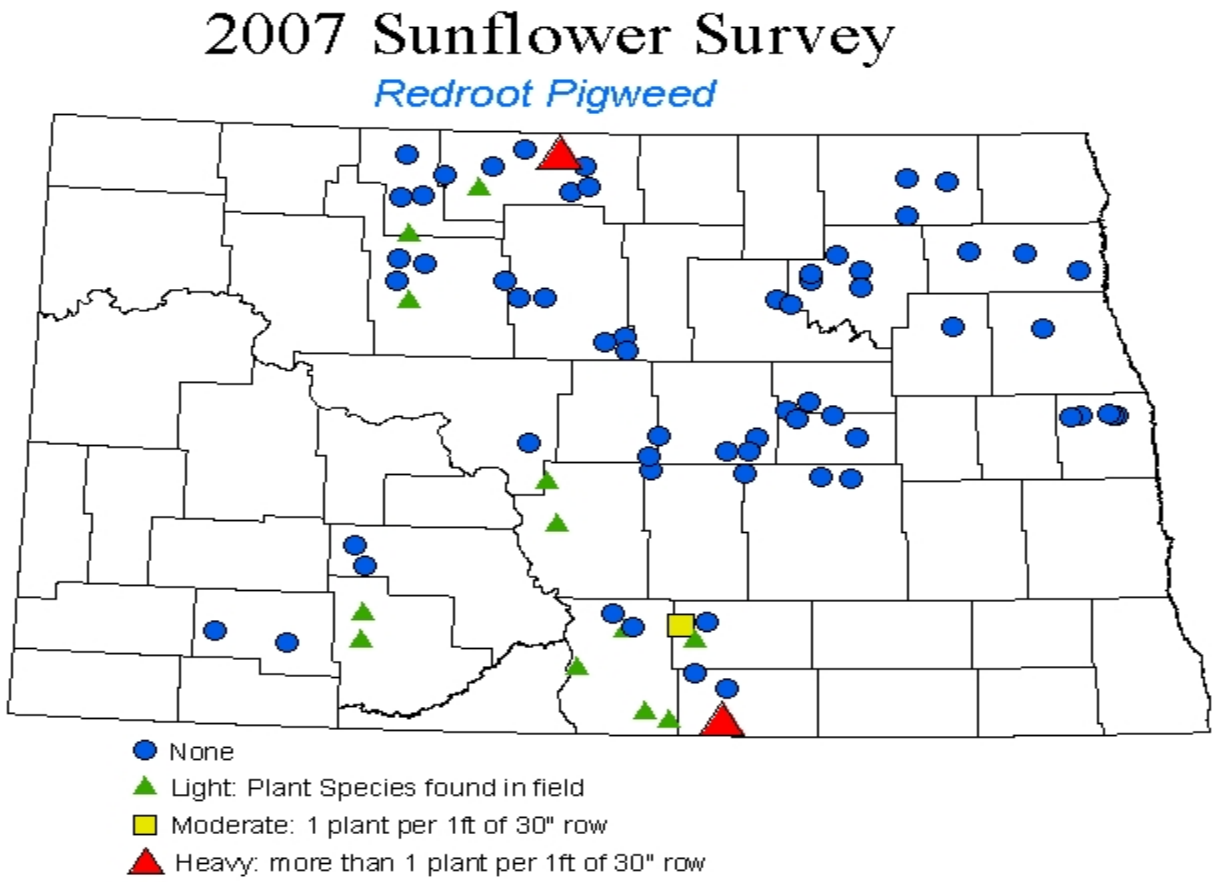
North Dakota



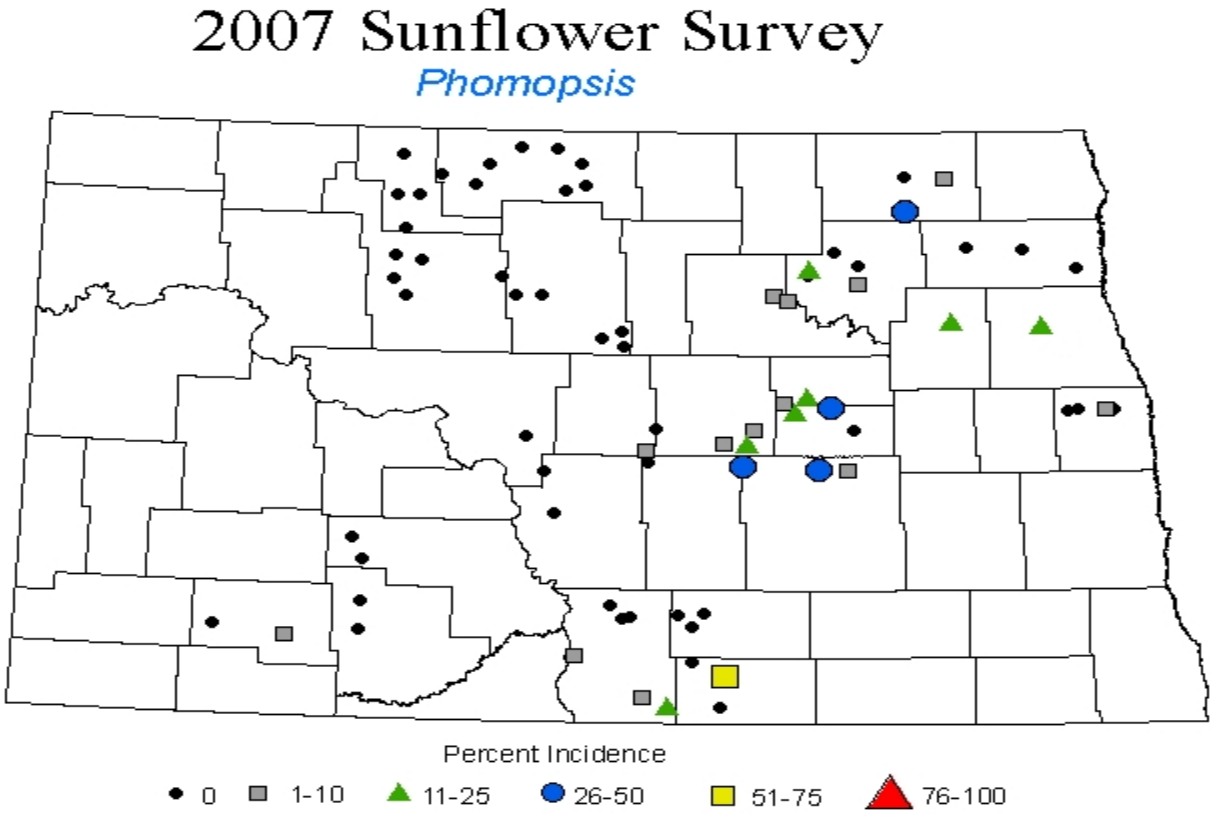
North Dakota



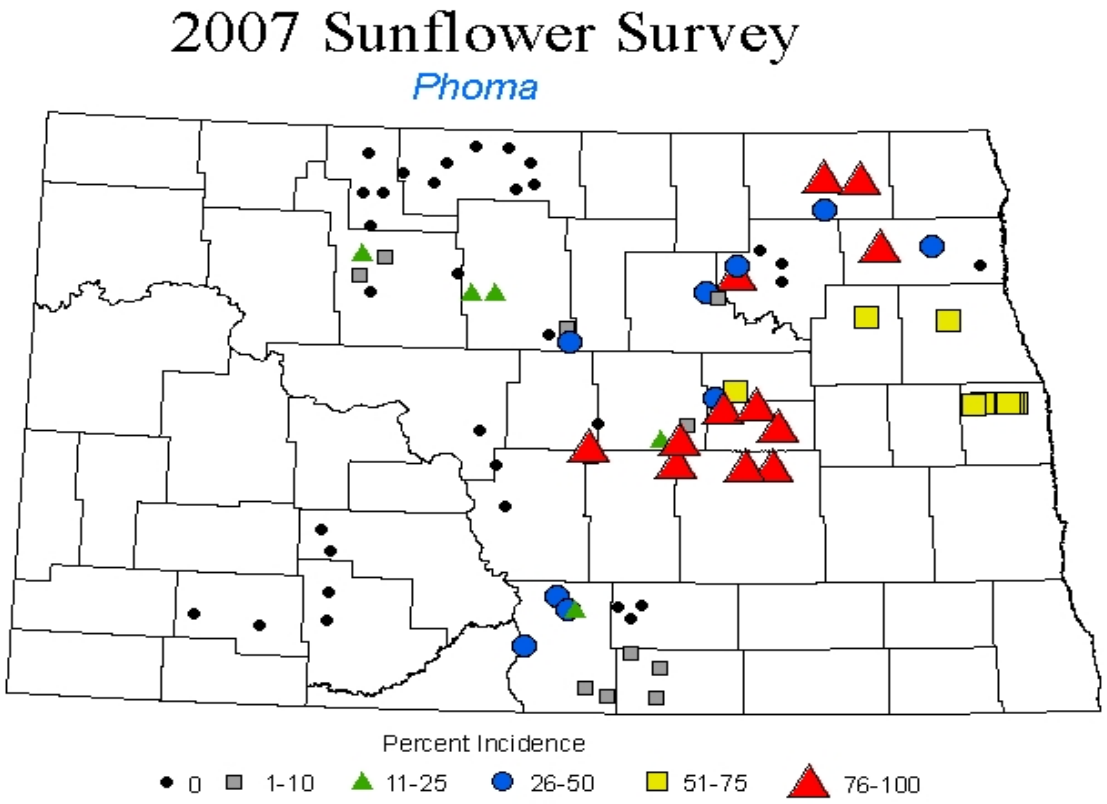
North Dakota



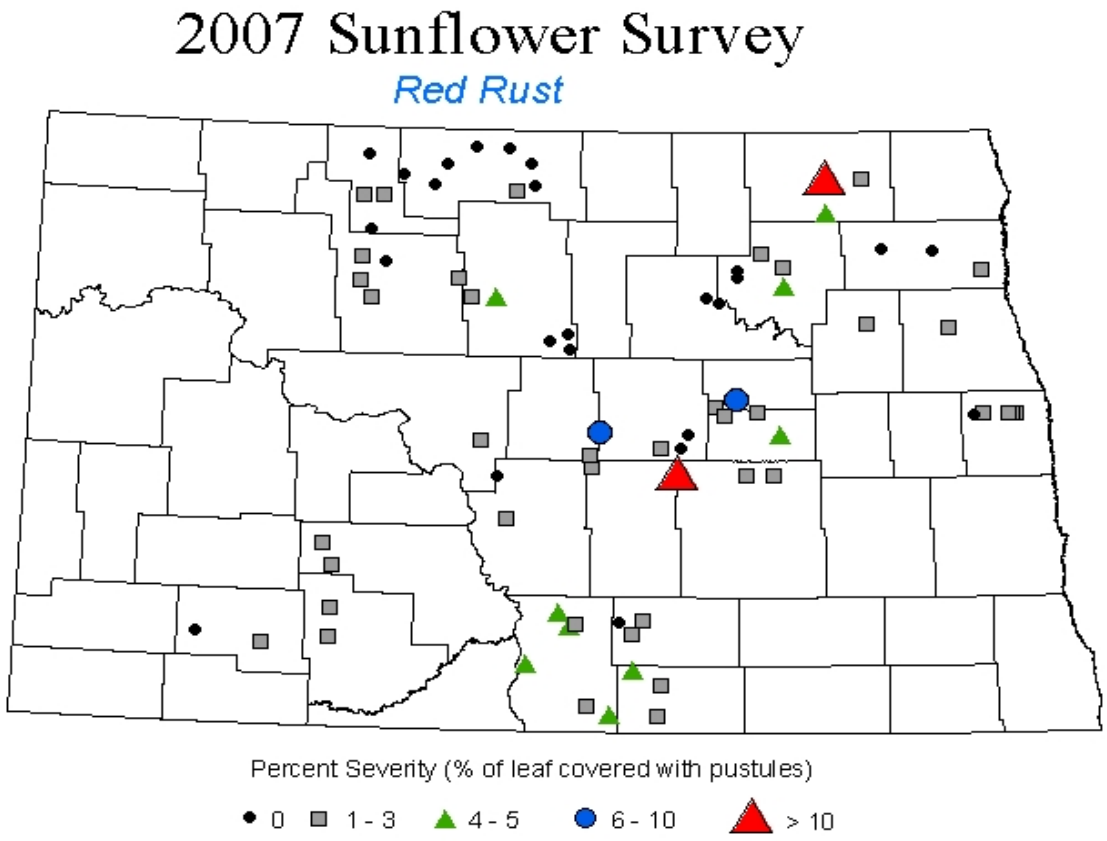
North Dakota



North Dakota



North Dakota



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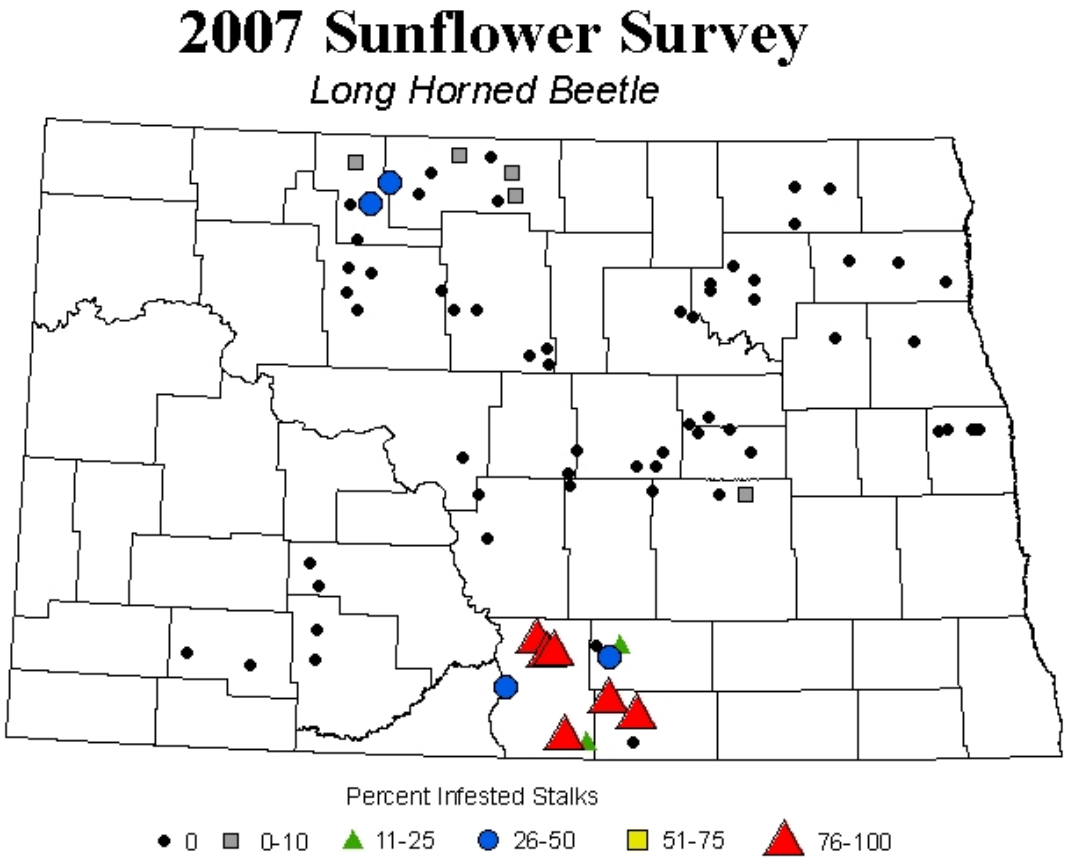

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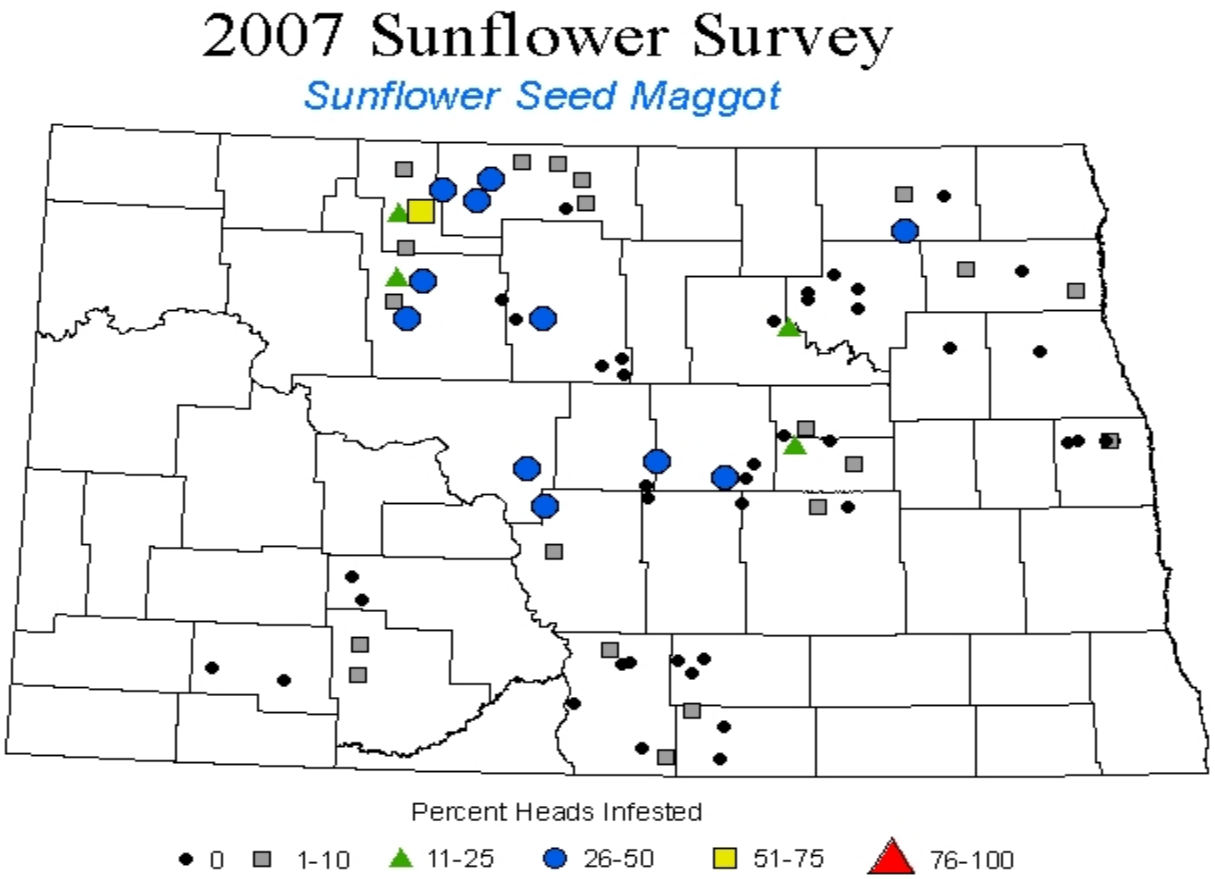
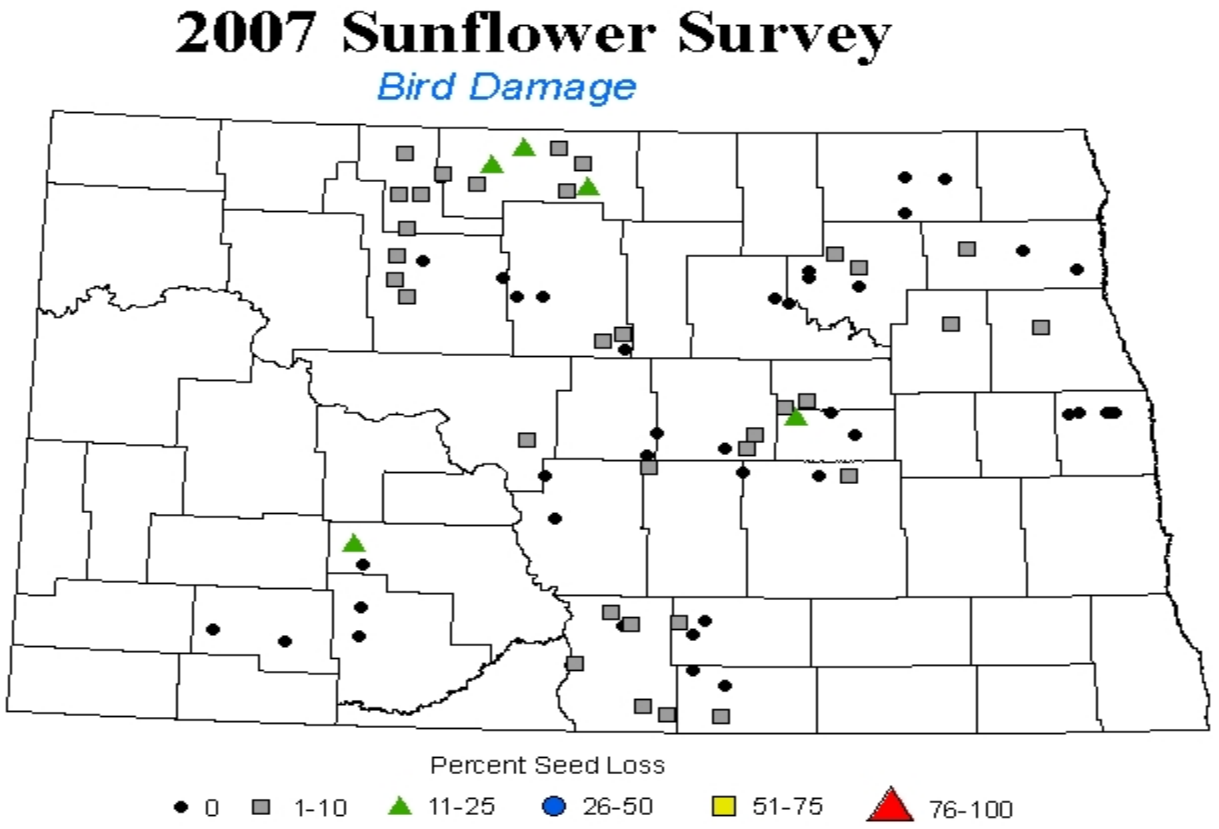
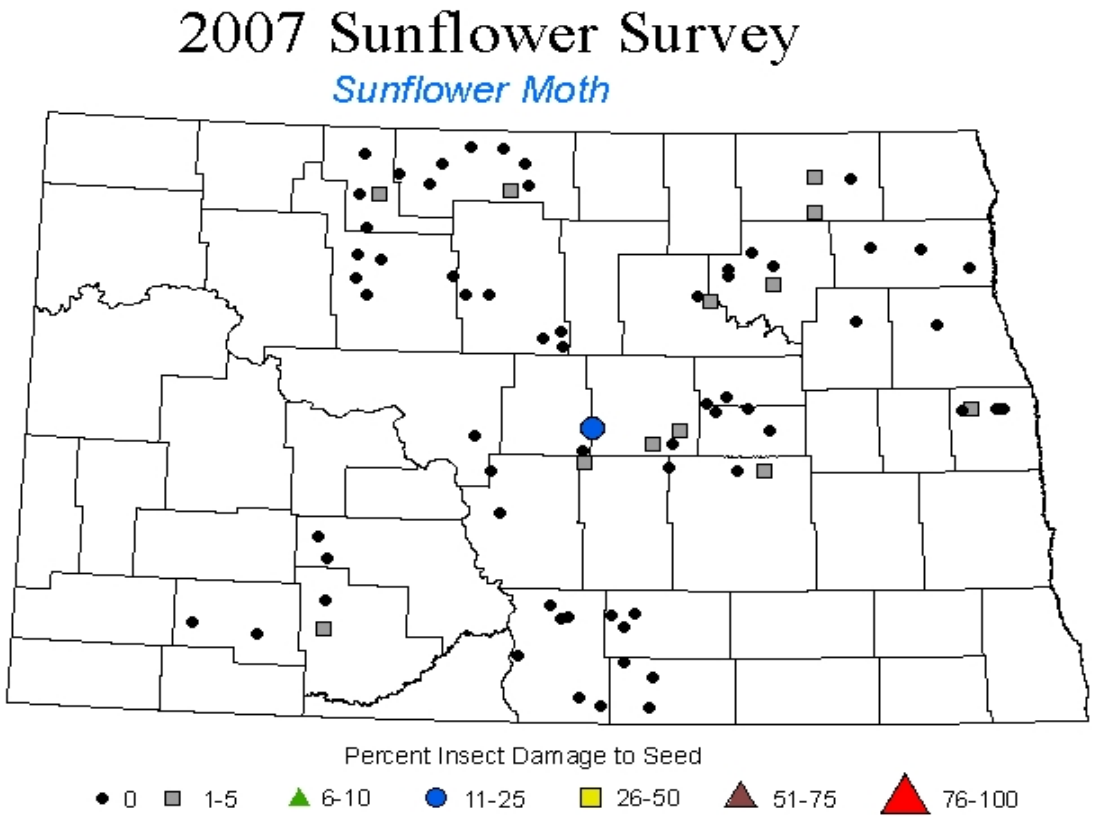


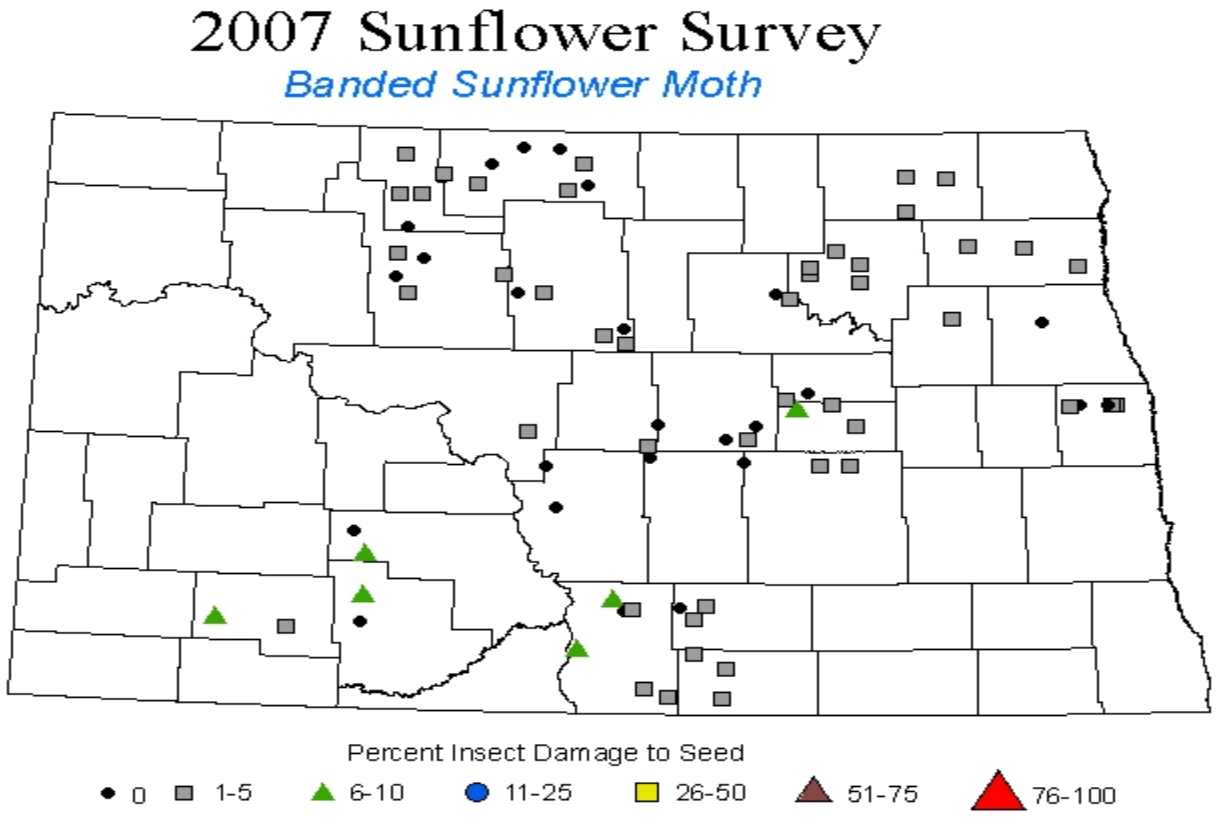
North Dakota



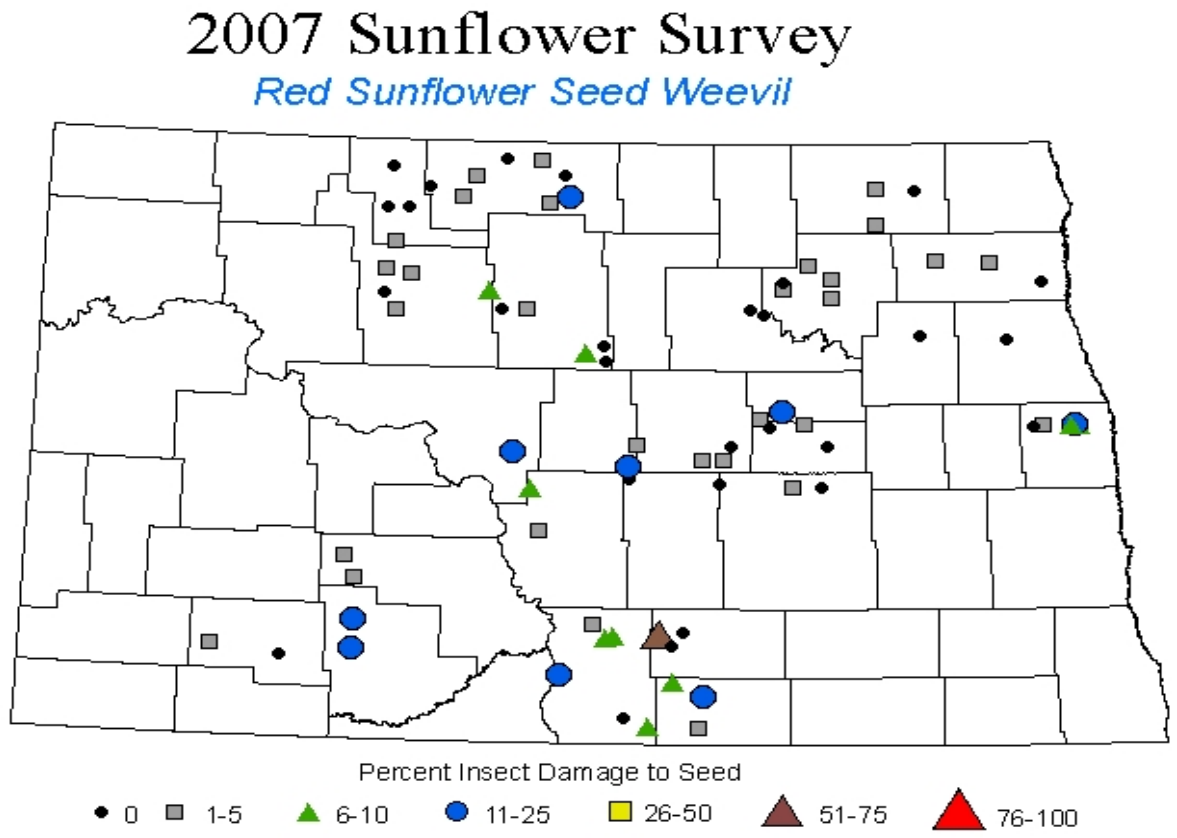
North Dakota



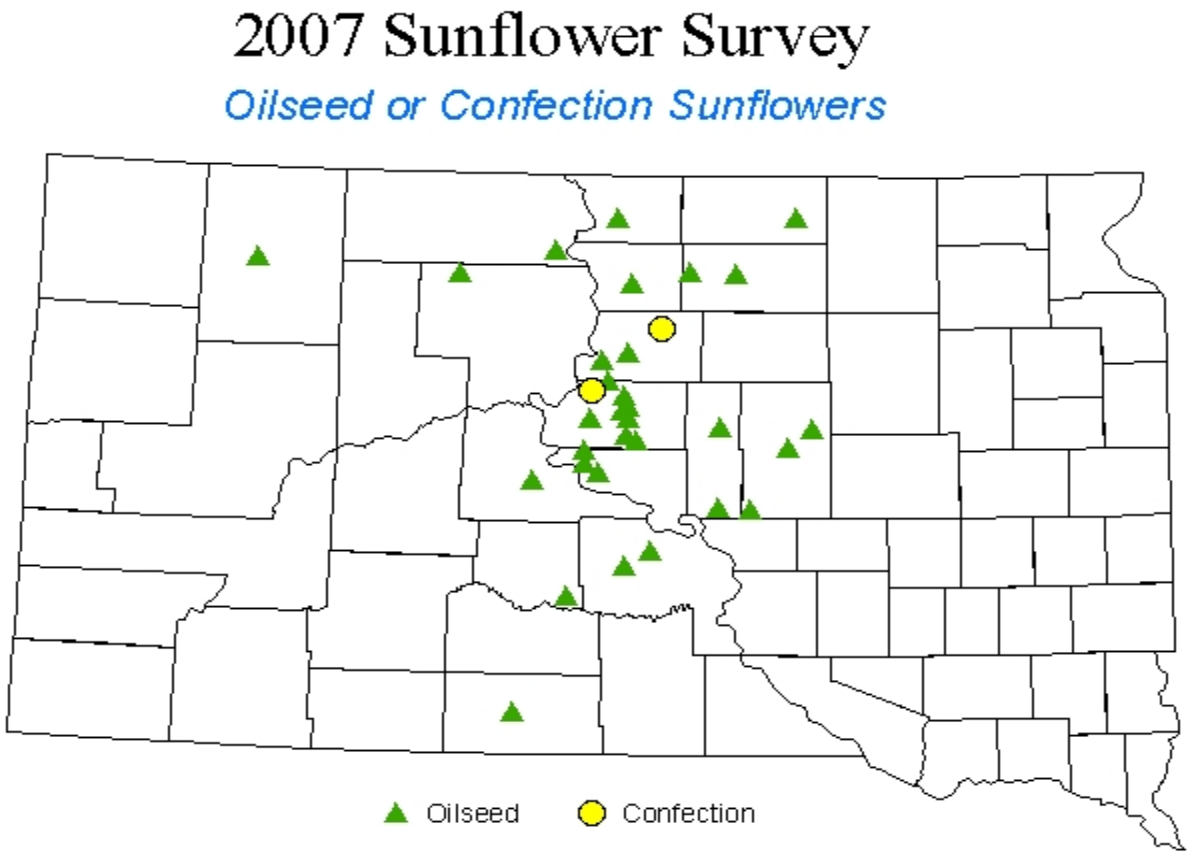
North Dakota



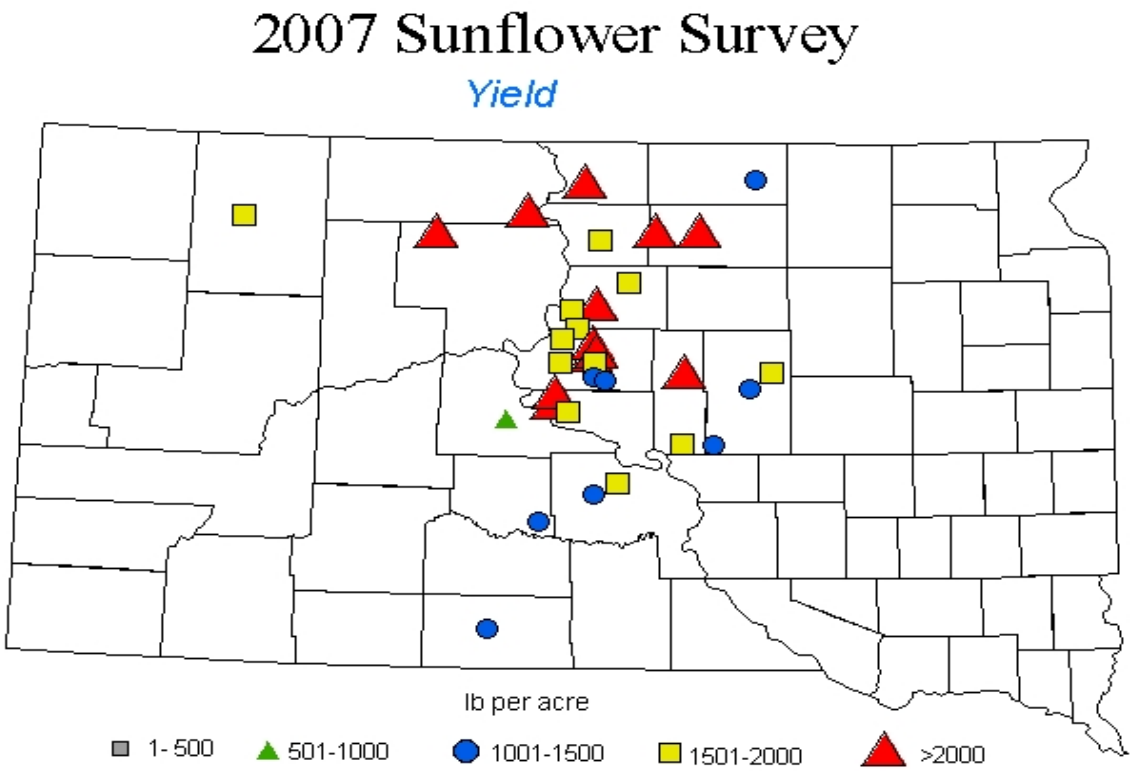
North Dakota



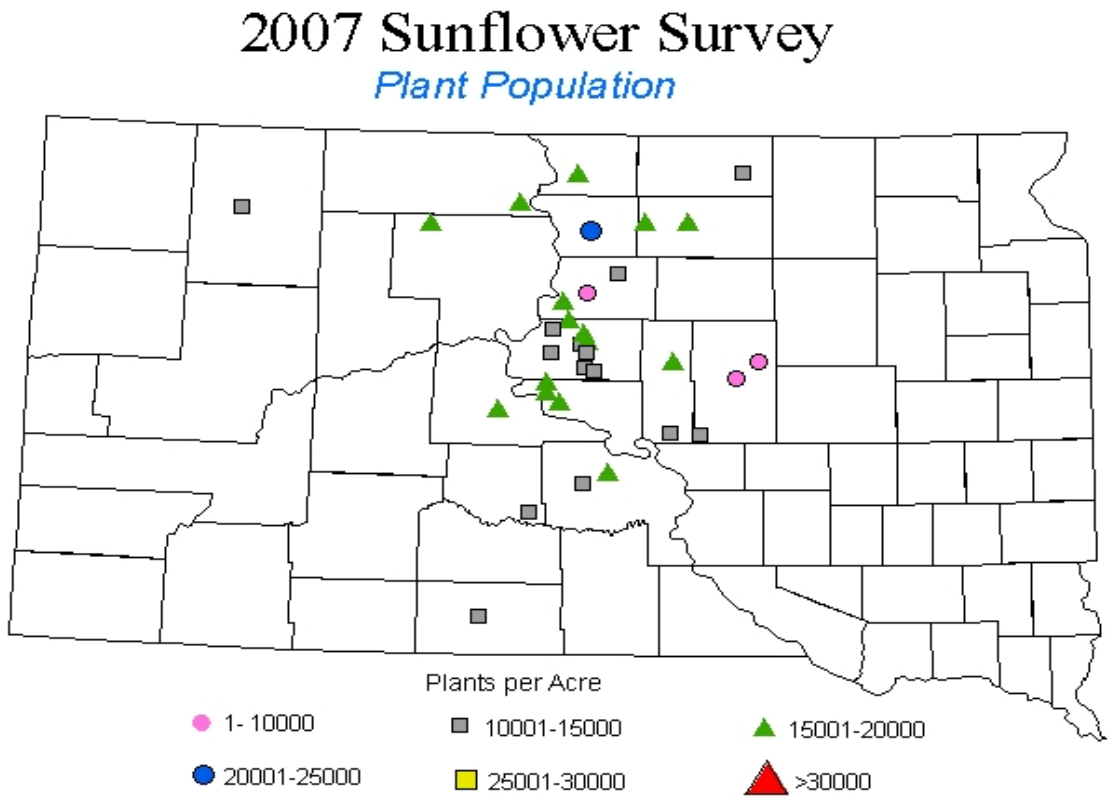
South Dakota



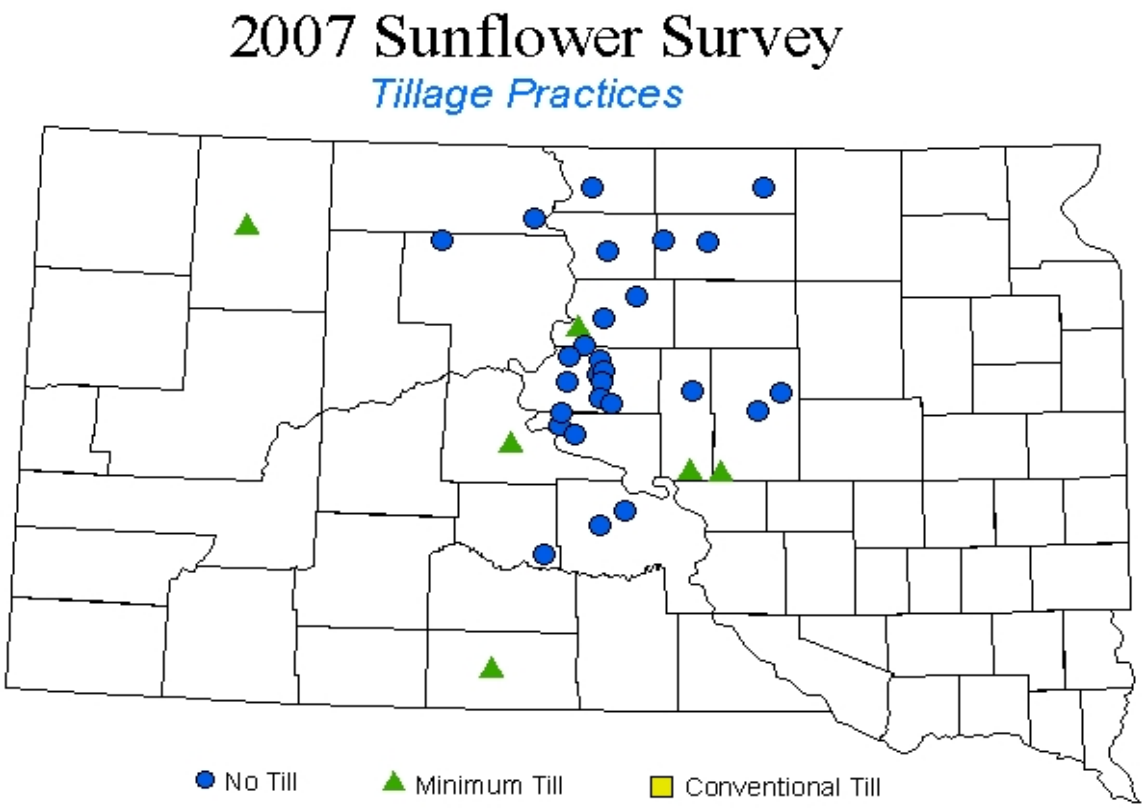
South Dakota



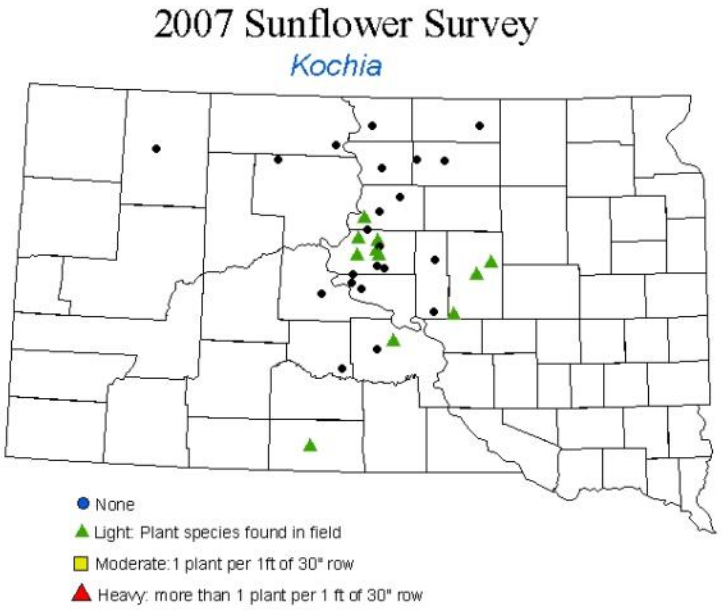
South Dakota

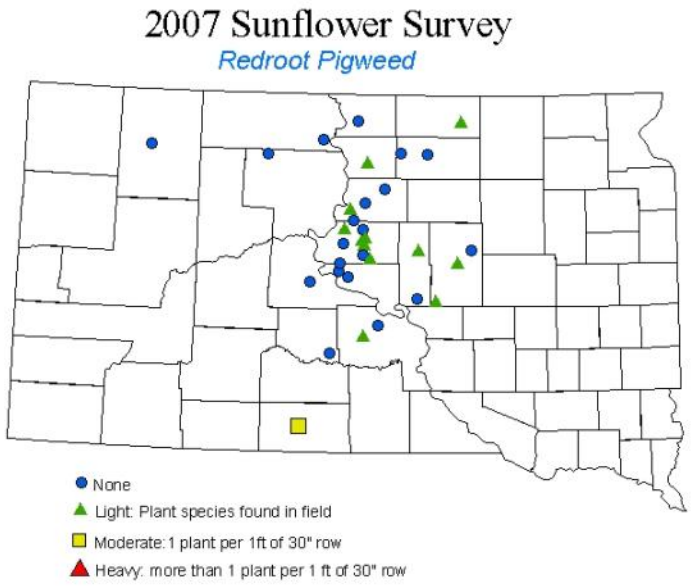


South Dakota

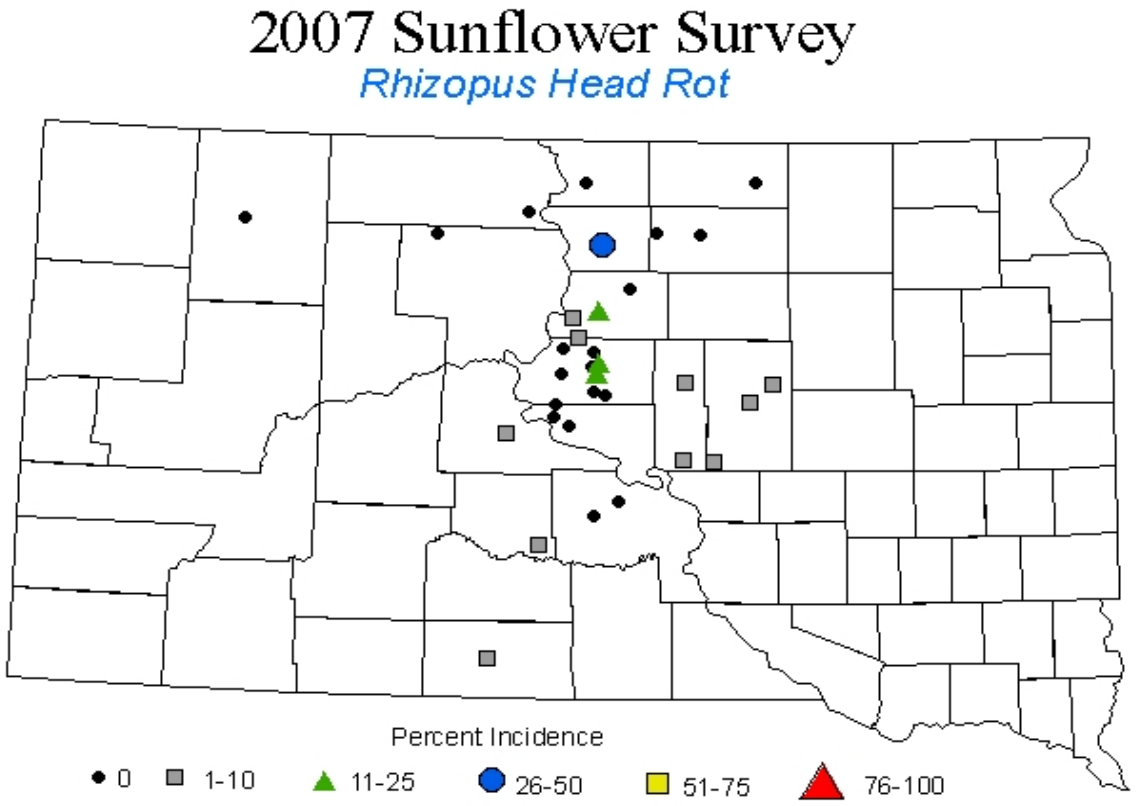


South Dakota

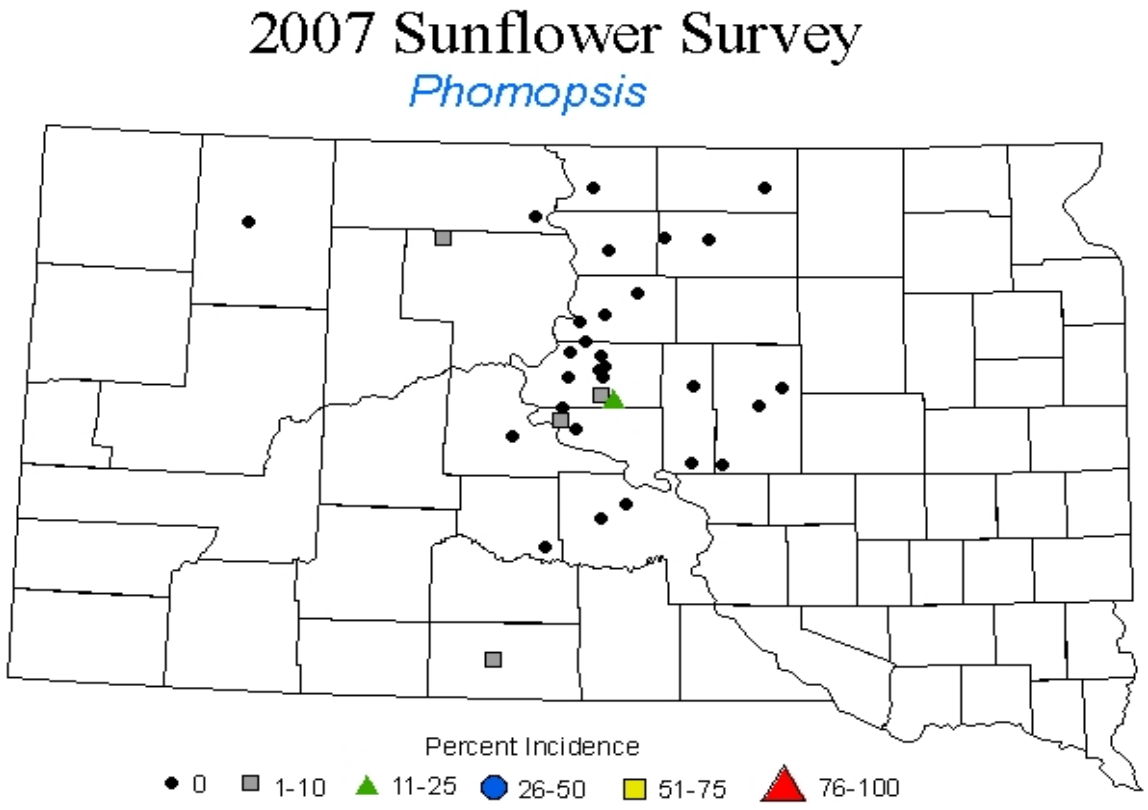




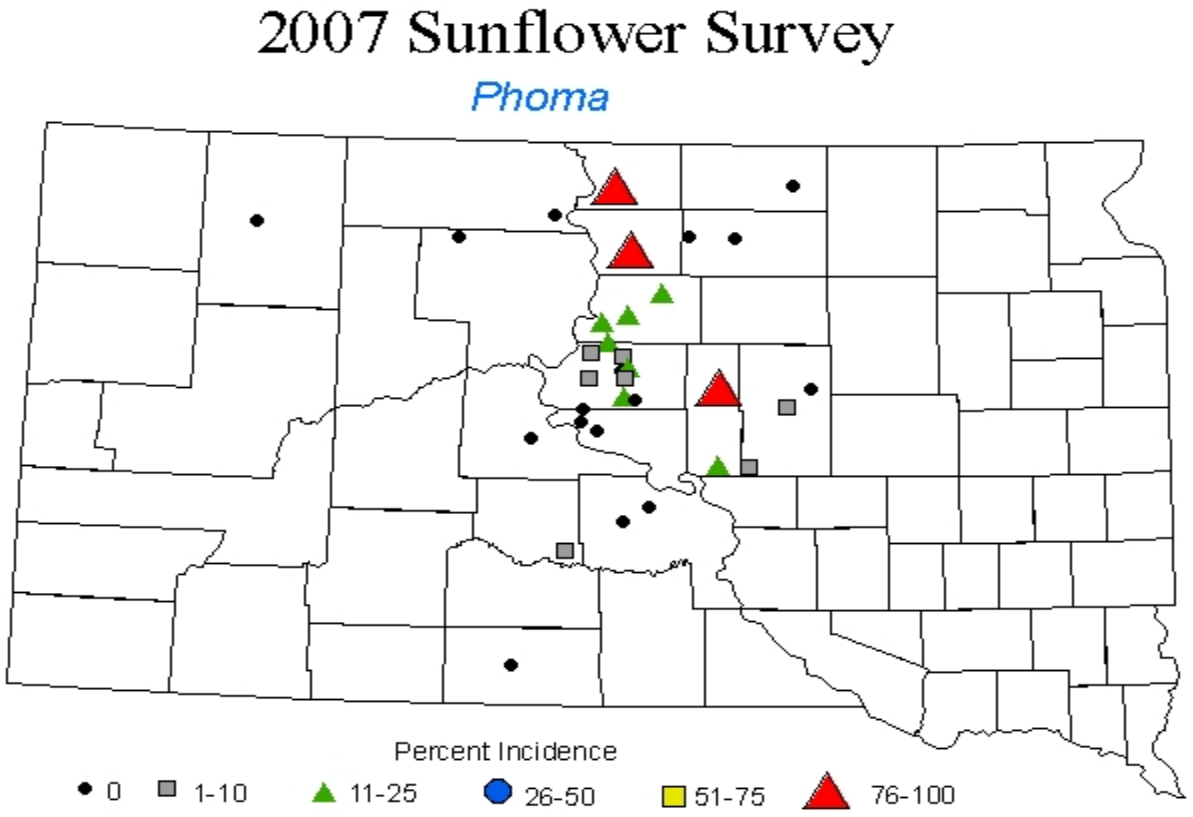
South Dakota



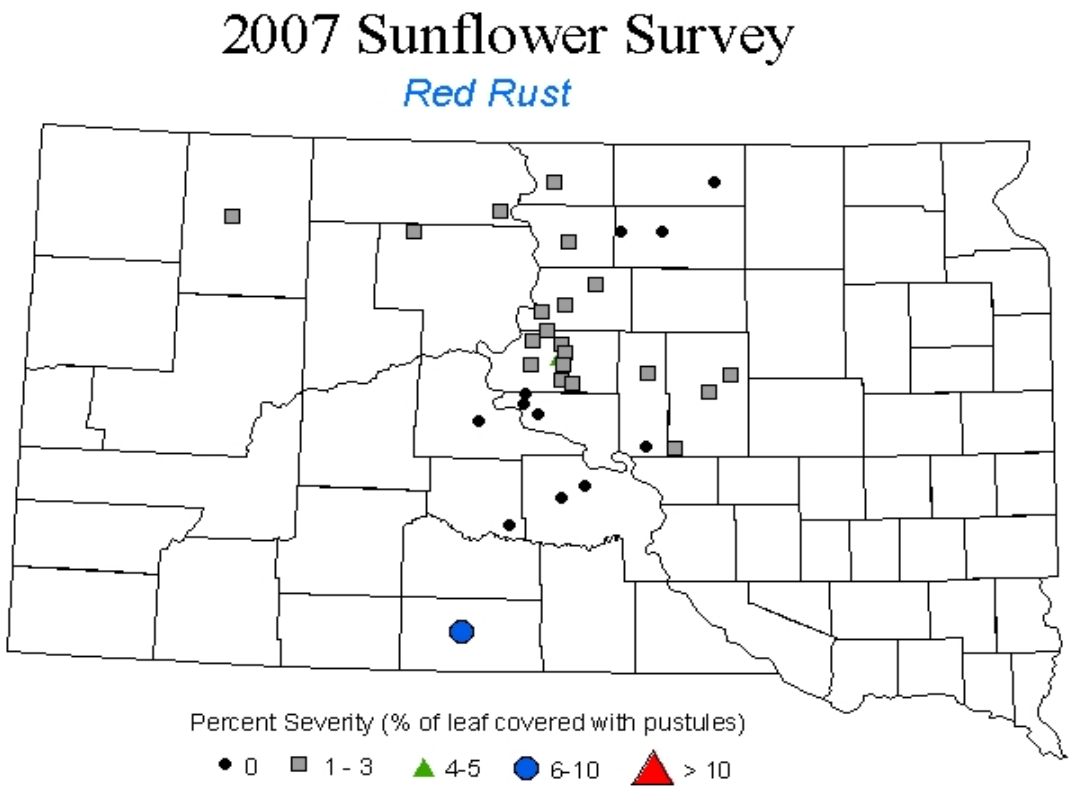
South Dakota



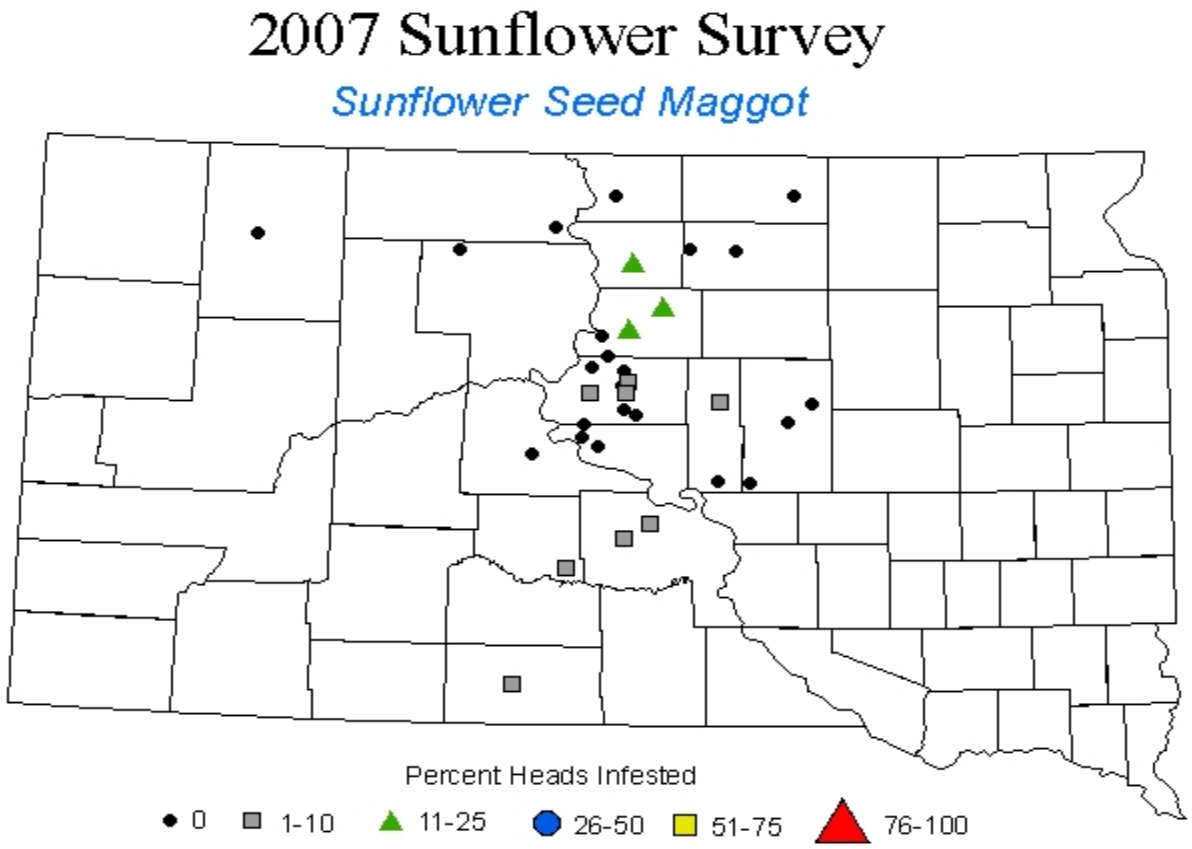
South Dakota



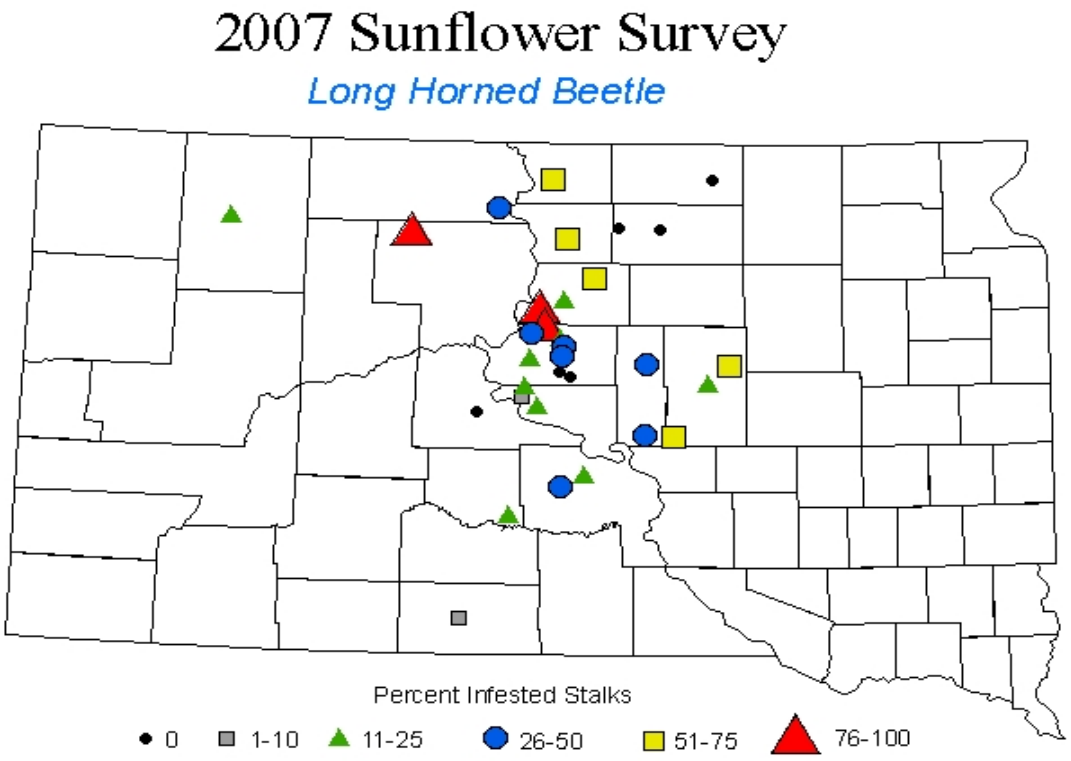
South Dakota



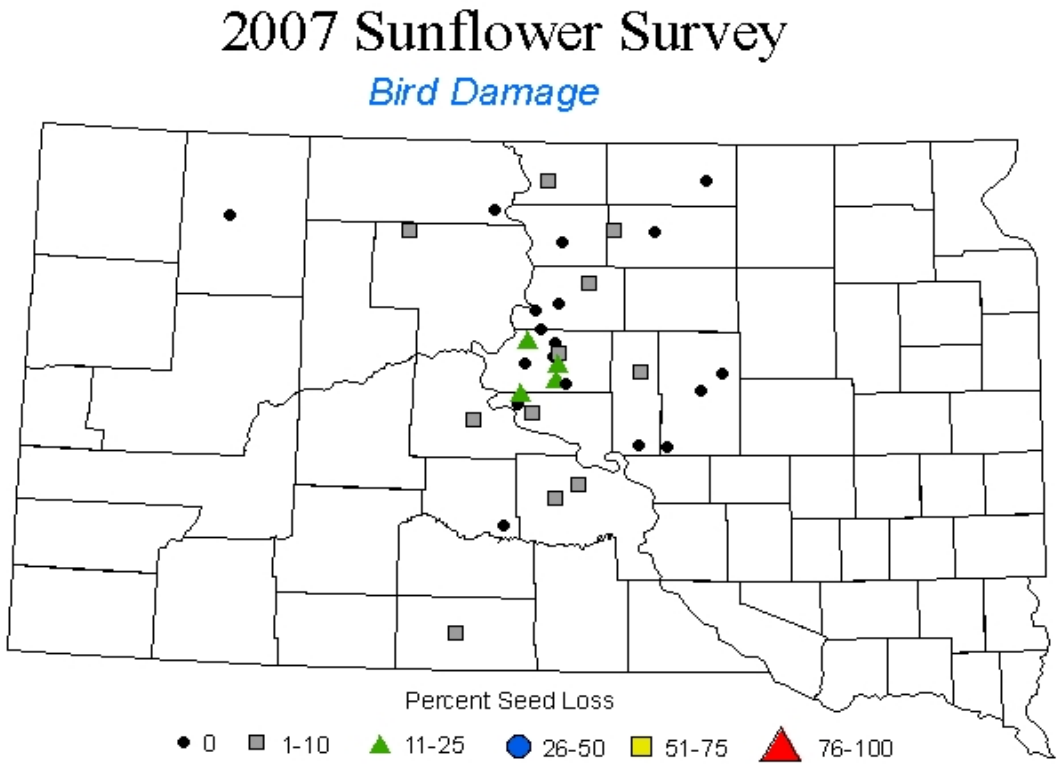
South Dakota



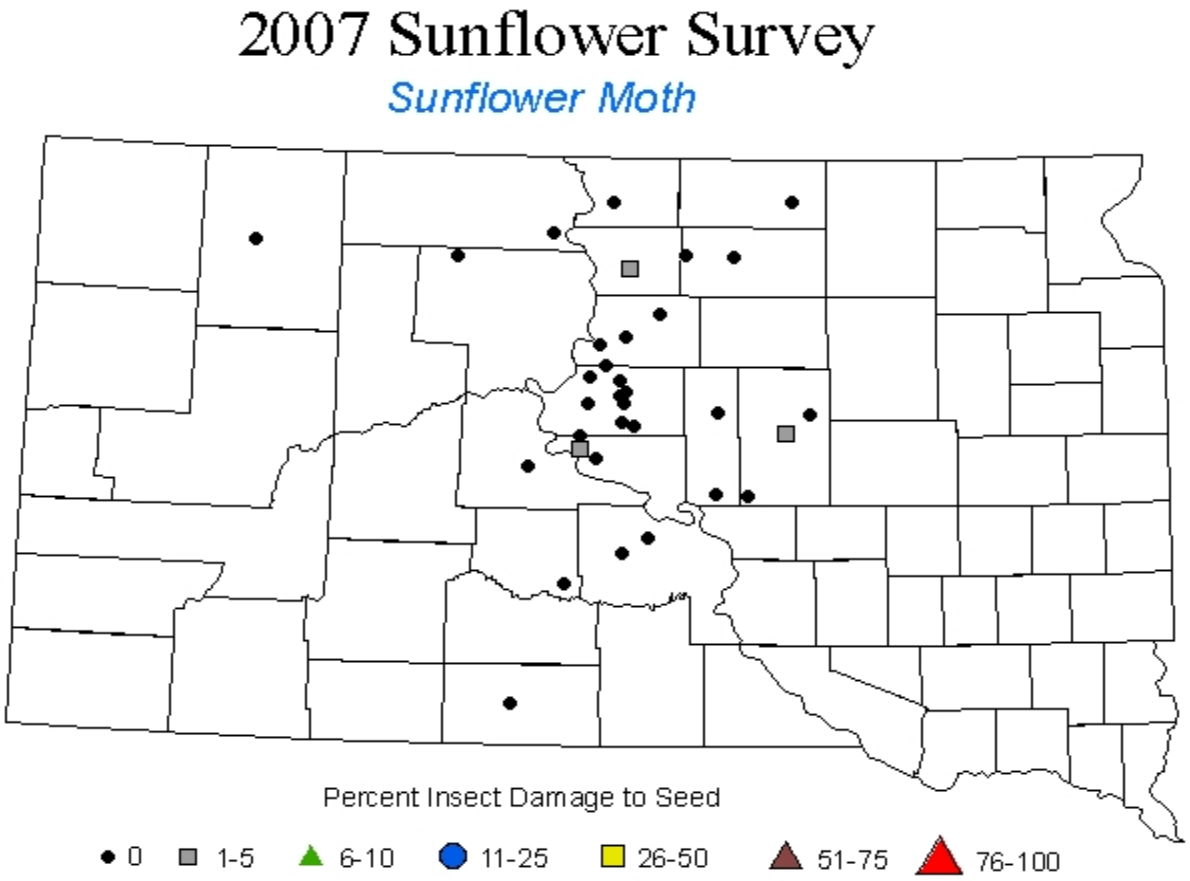
South Dakota



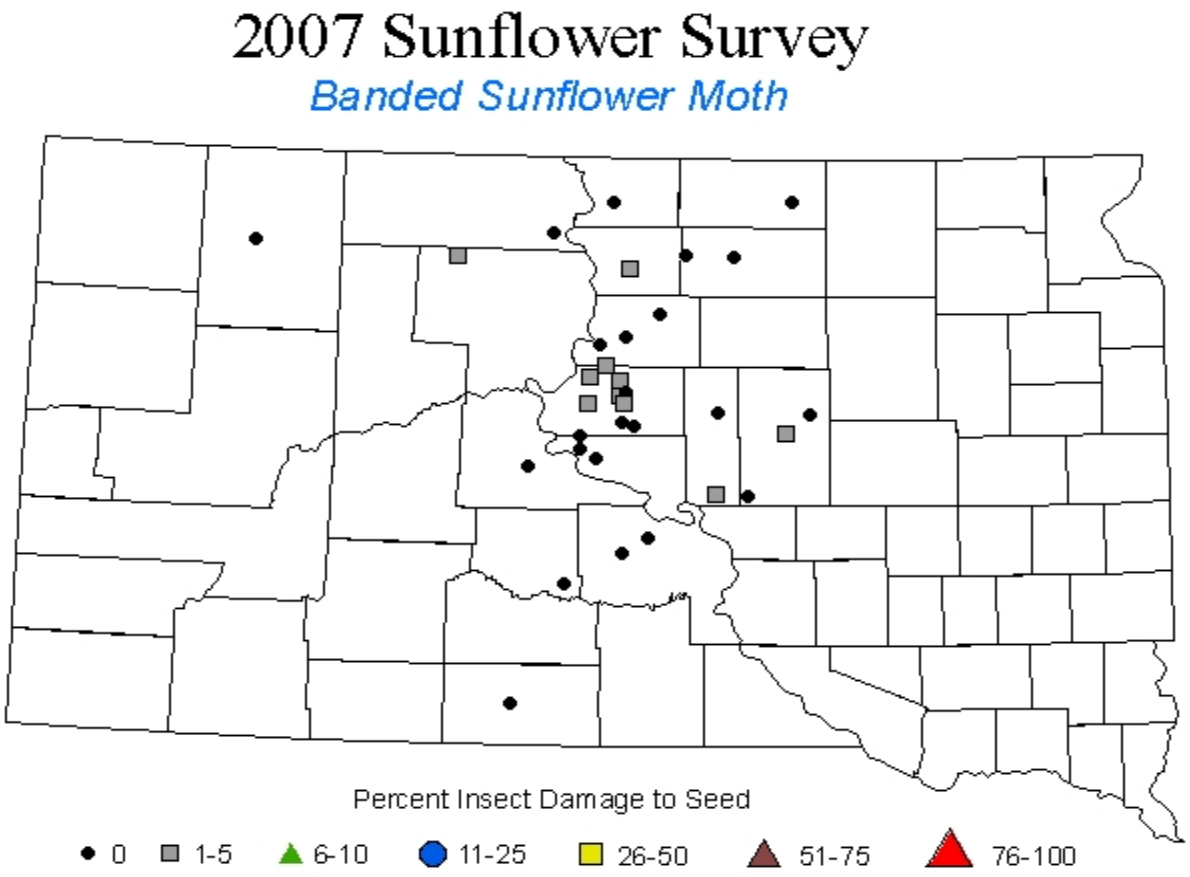
South Dakota



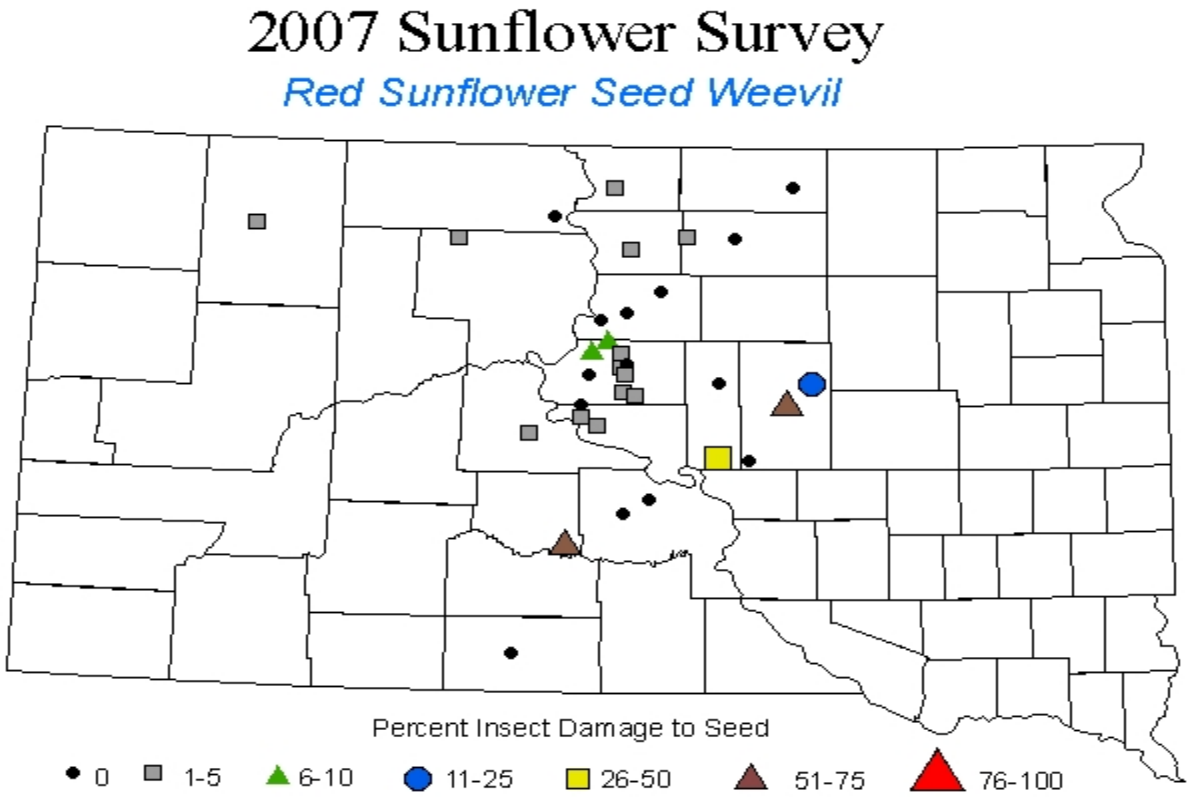
South Dakota



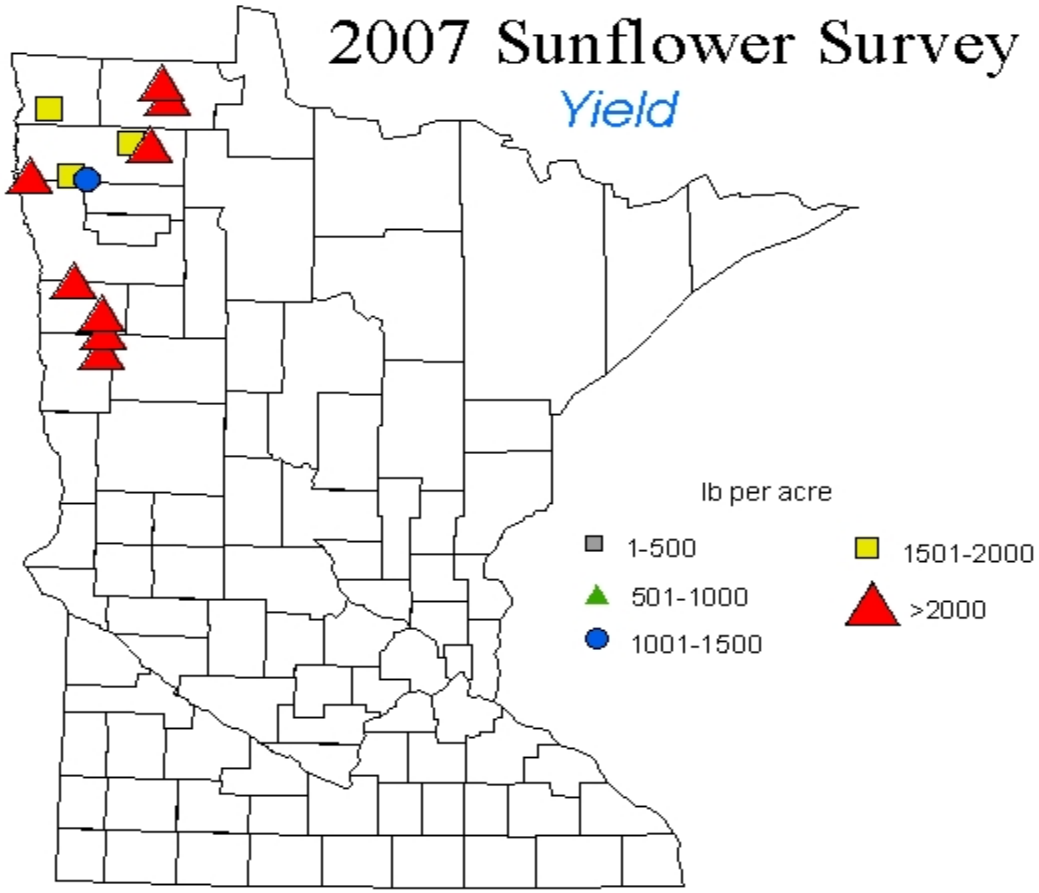
South Dakota



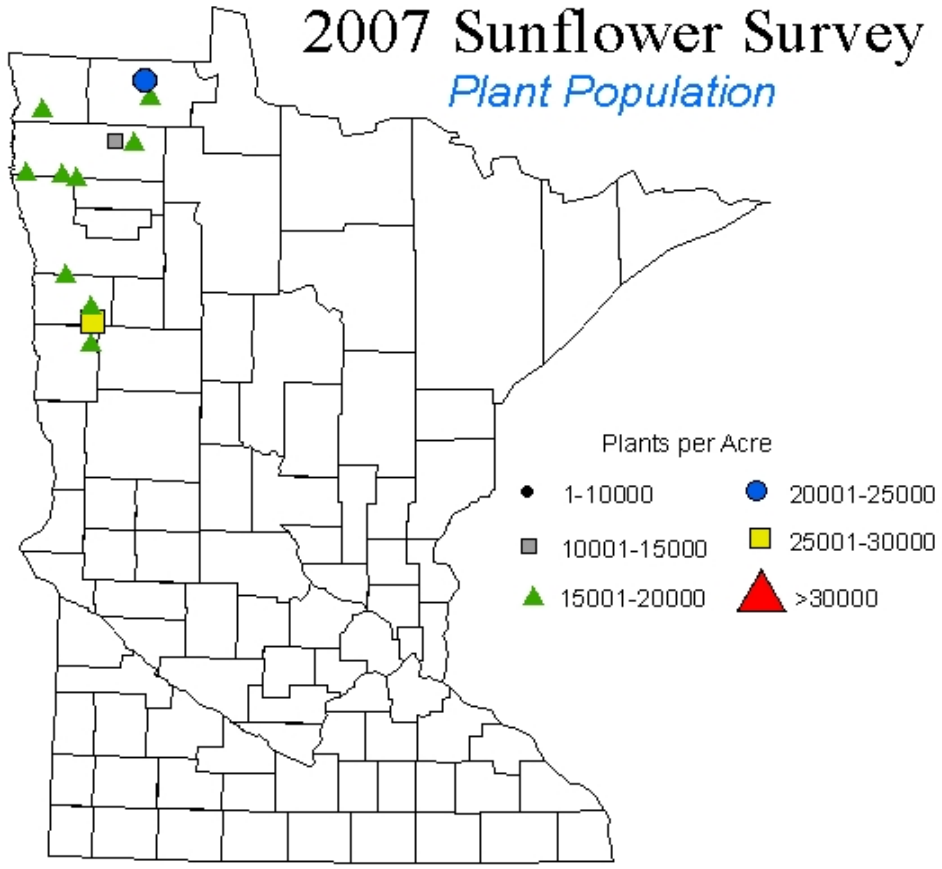
South Dakota



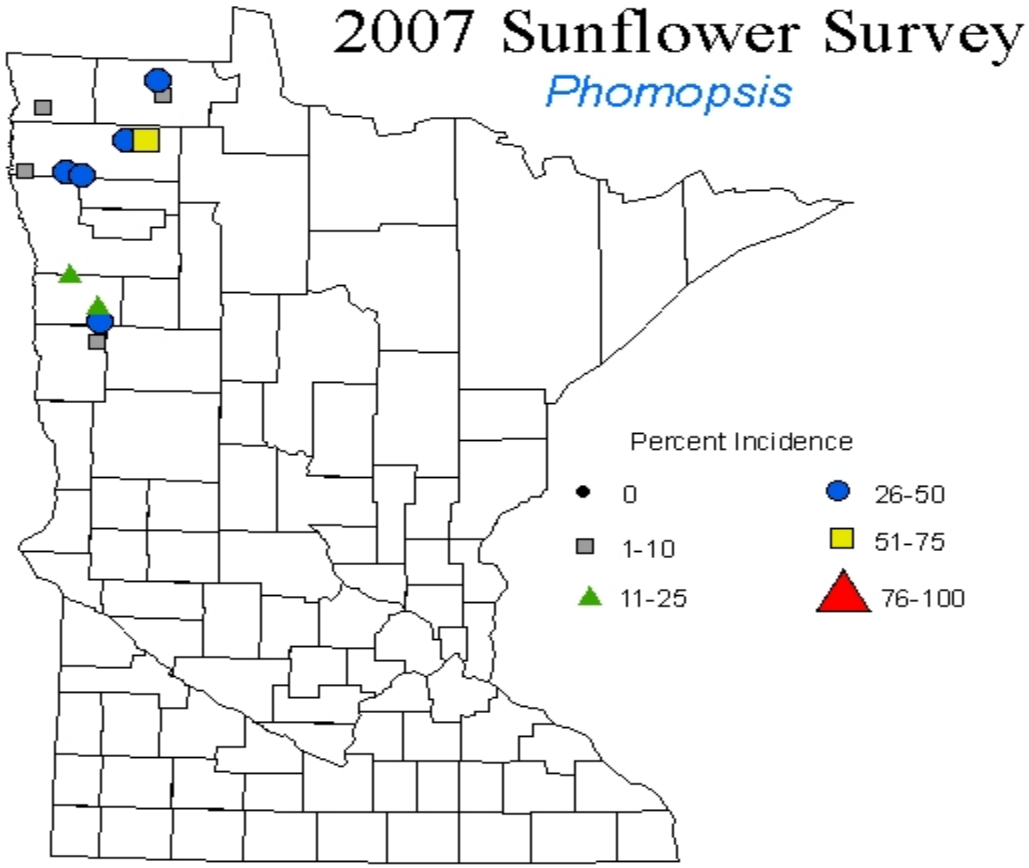
Minnesota


2007 Sunflower Survey
Yield
lb per acre
1-500
501-1000
1001-1500
1501-2000
>2000

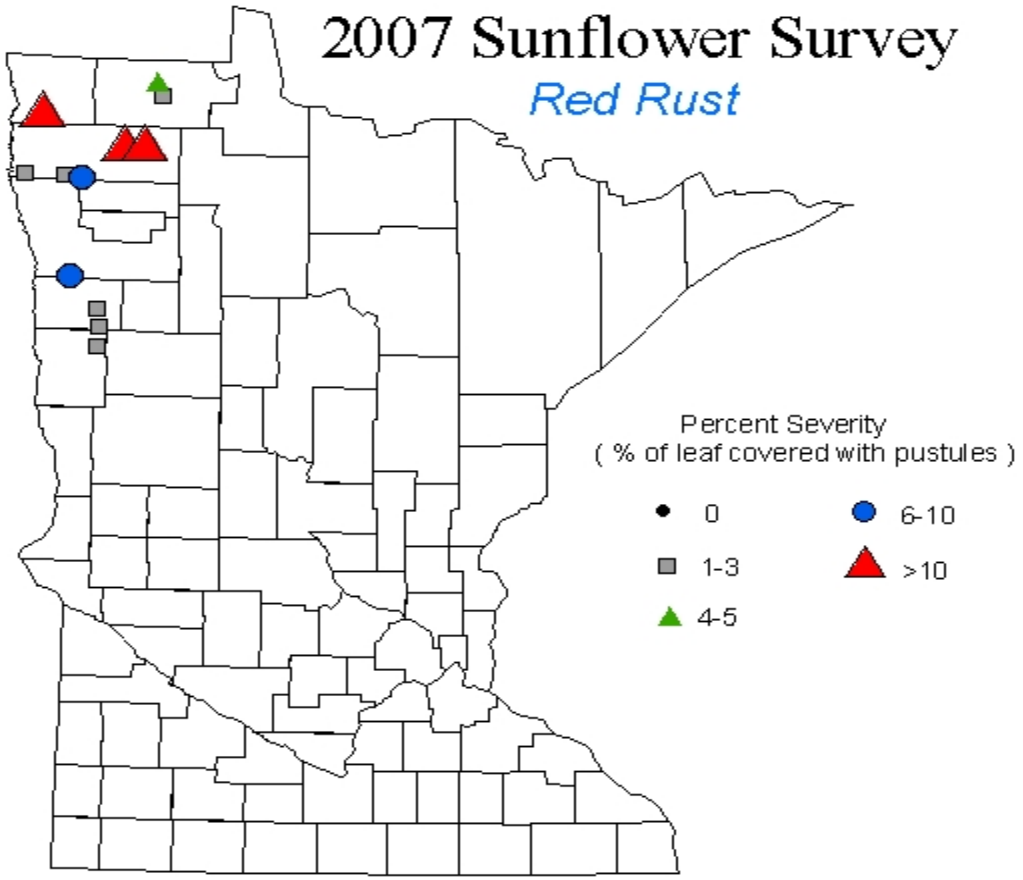
Minnesota


2007 Sunflower Survey
Plant Population
Plants per Acre
1-10000
10001-15000
15001-20000
20001-25000
25001-30000
>30000

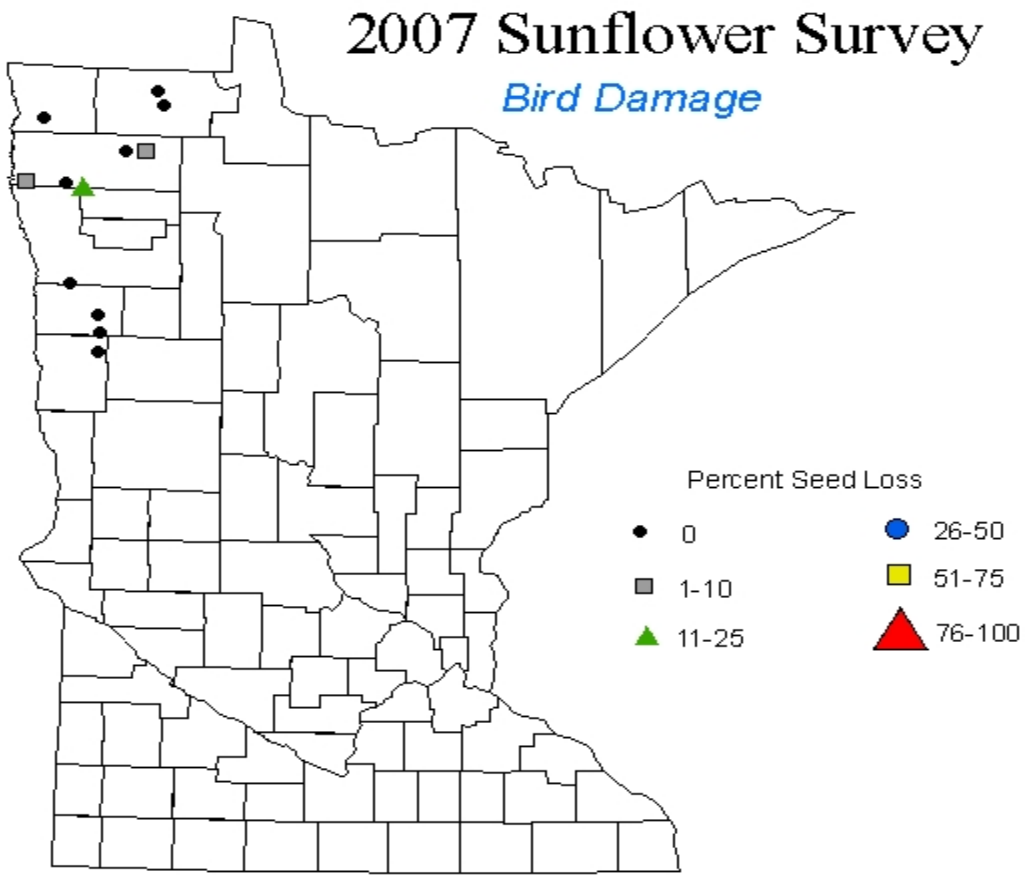
Minnesota


2007 Sunflower Survey
Phomopsis
Percent Incidence
0
1-10
11-25
26-50
51-75
76-100

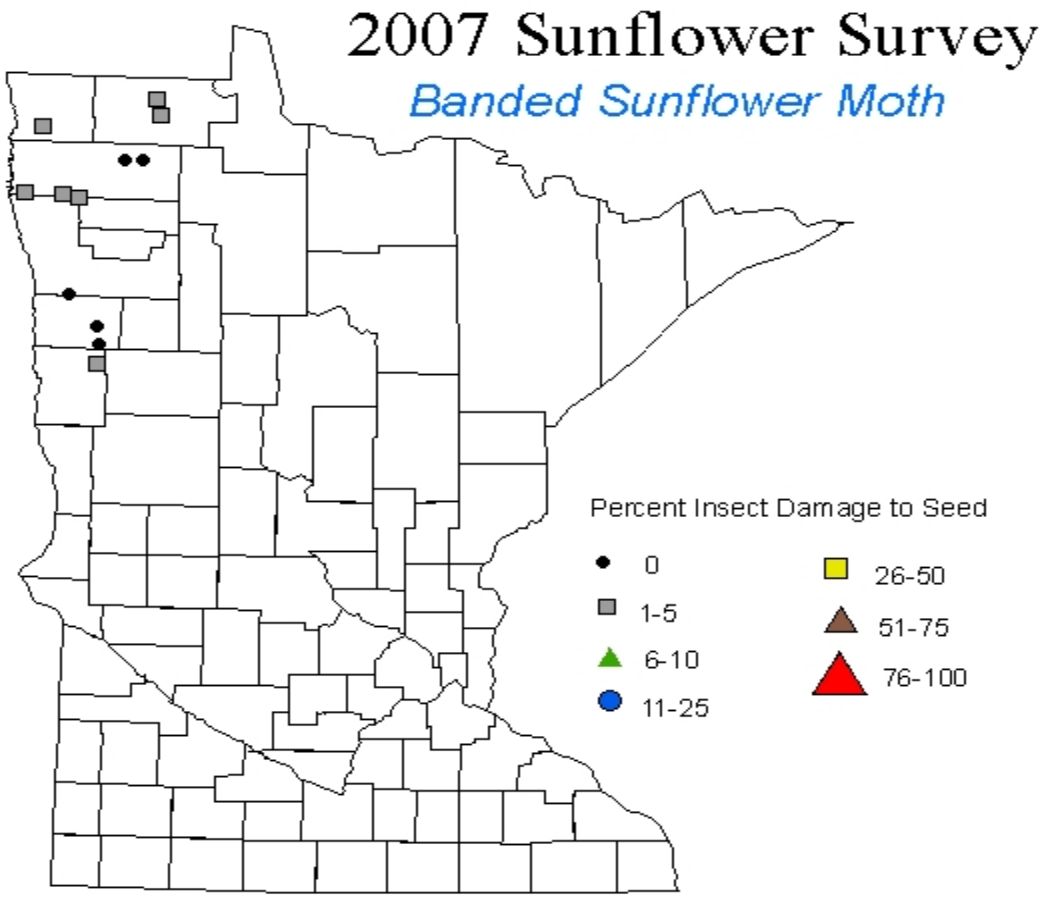
Minnesota


2007 Sunflower Survey
Red Rust
Percent Severity
(% of leaf covered with pustules)
0
1-3
4-5
6-10
>10

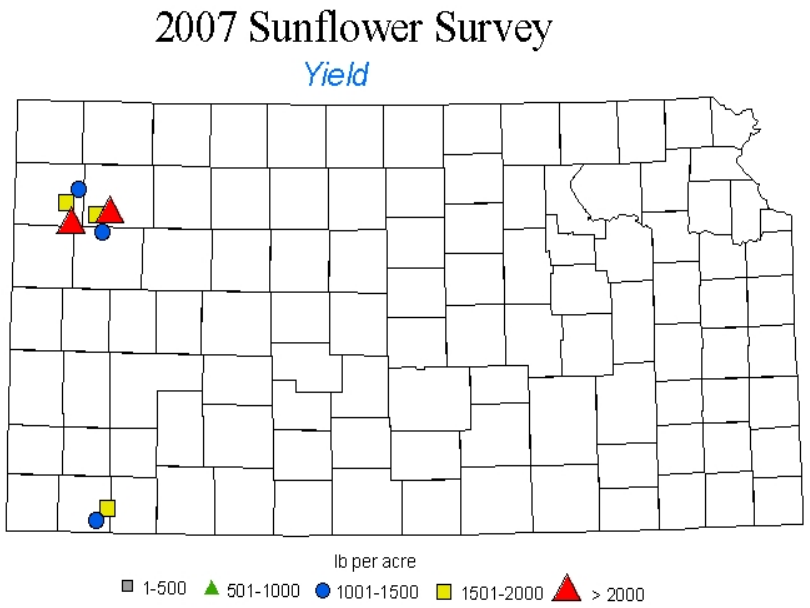
Minnesota

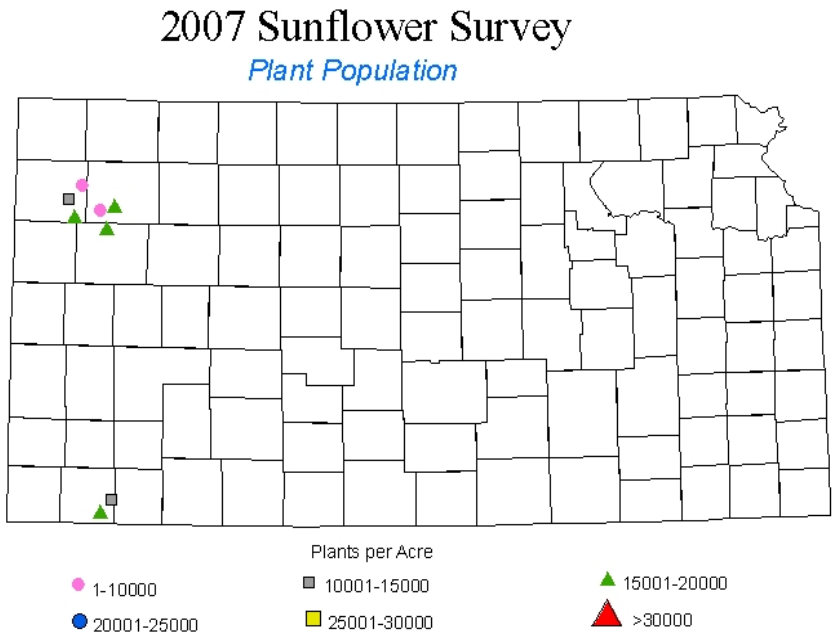

2007 Sunflower Survey
Bird Damage
Percent Seed Loss
0
1-10
11-25
26-50
51-75
76-100

Minnesota

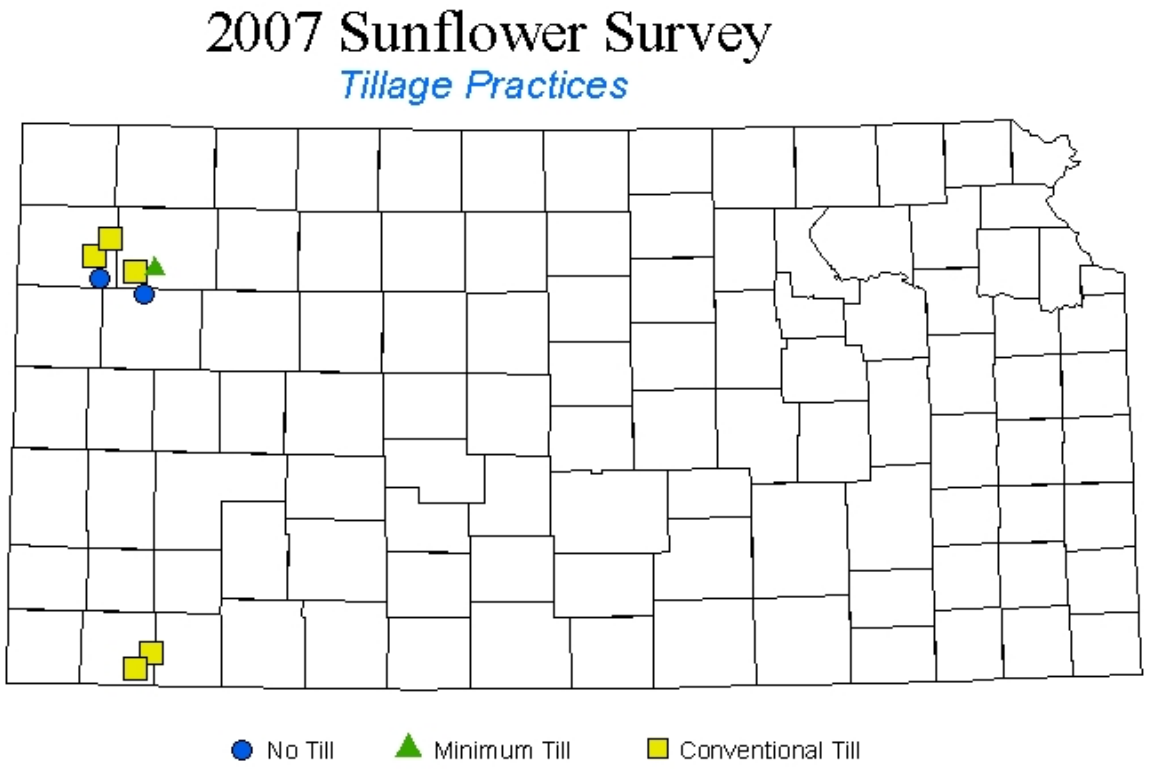

2007 Sunflower Survey
Banded Sunflower Moth
Percent Insect Damage to Seed
0
1-5
6-10
11-25
26-50
51-75
76-100

Kansas

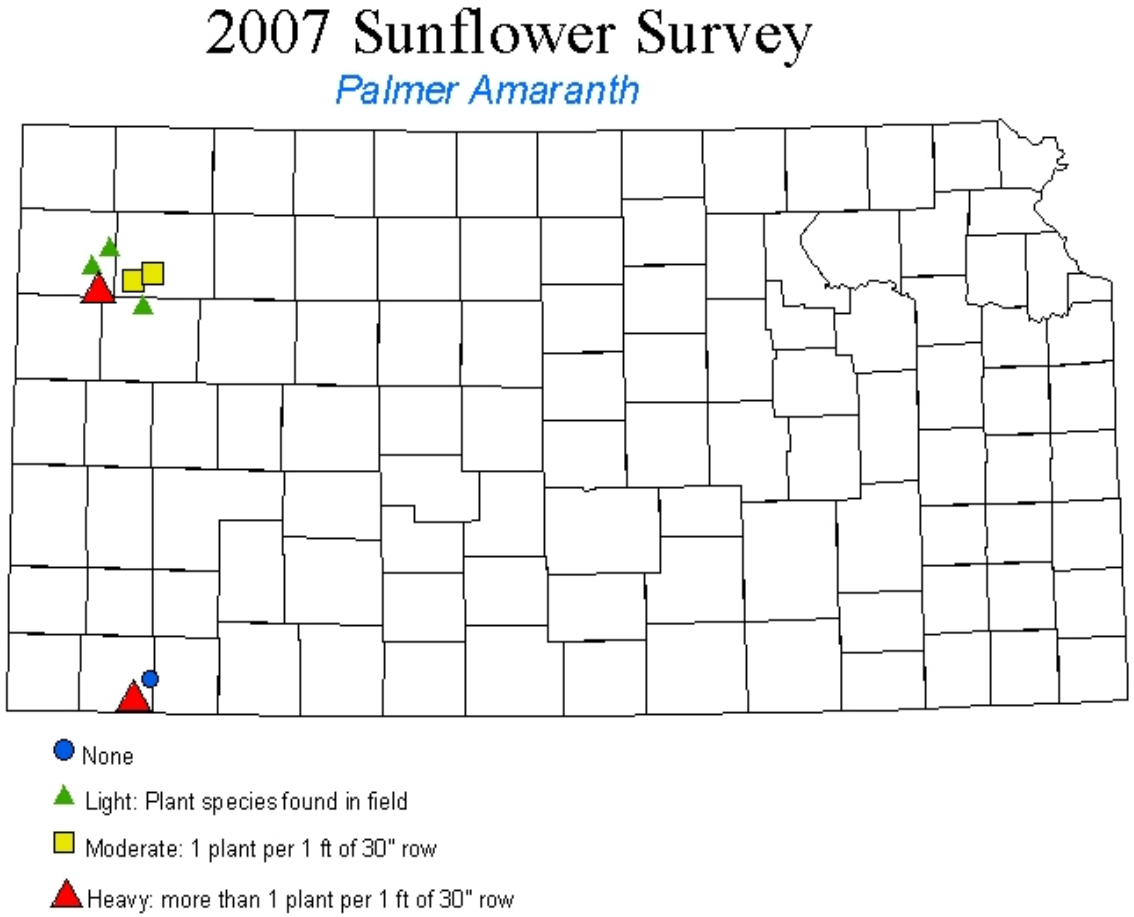

2007 Sunflower Survey
Yield
lb per acre
1-500
501-1000
1001-1500
1501-2000
> 2000


2007 Sunflower Survey
Plant Population
Plants per Acre
1-10000
10001-15000
15001-20000
20001-25000
25001-30000
>30000

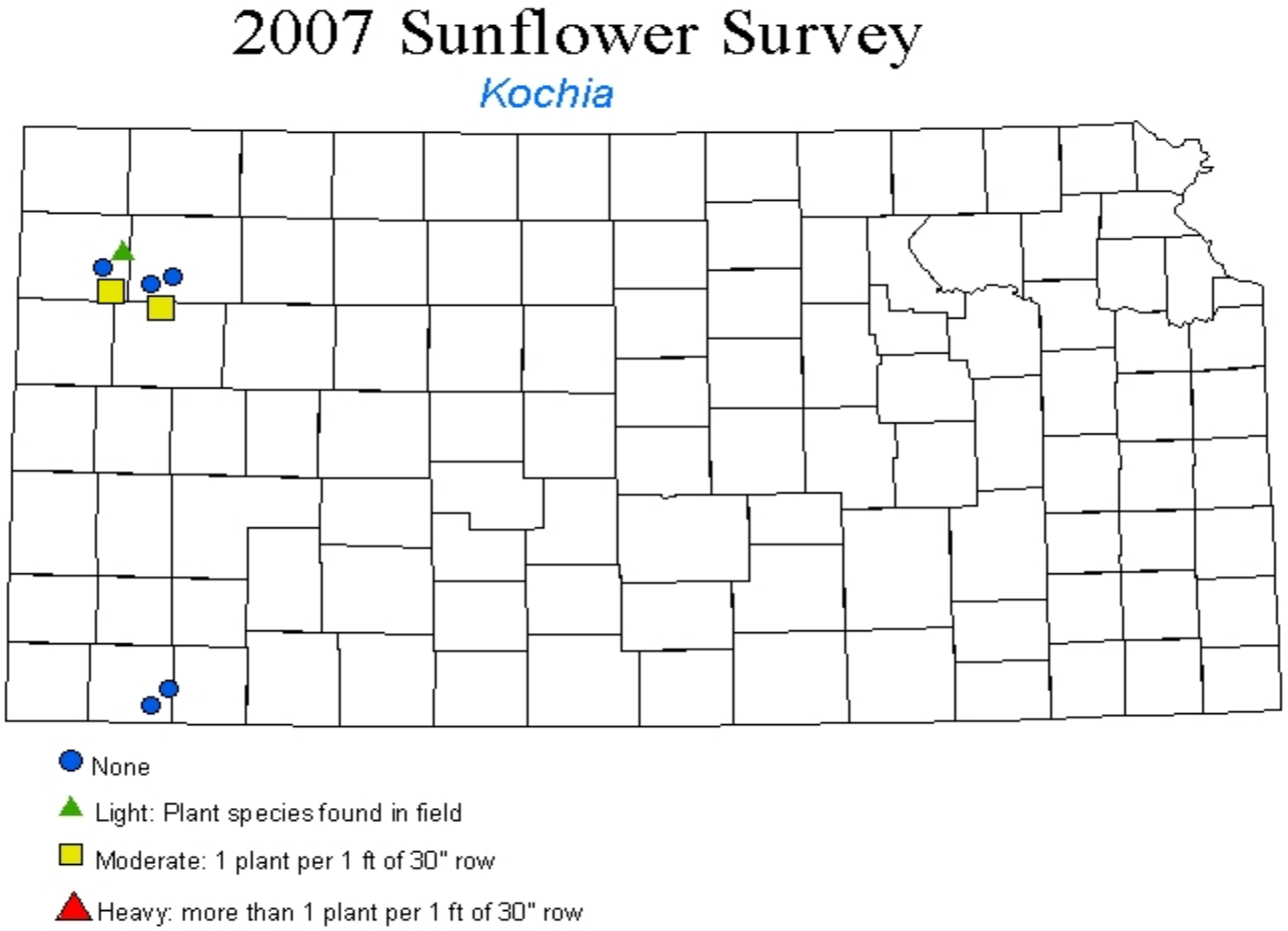
Kansas


2007 Sunflower Survey
Tillage Practices
No Till
Minimum Till
Conventional Till

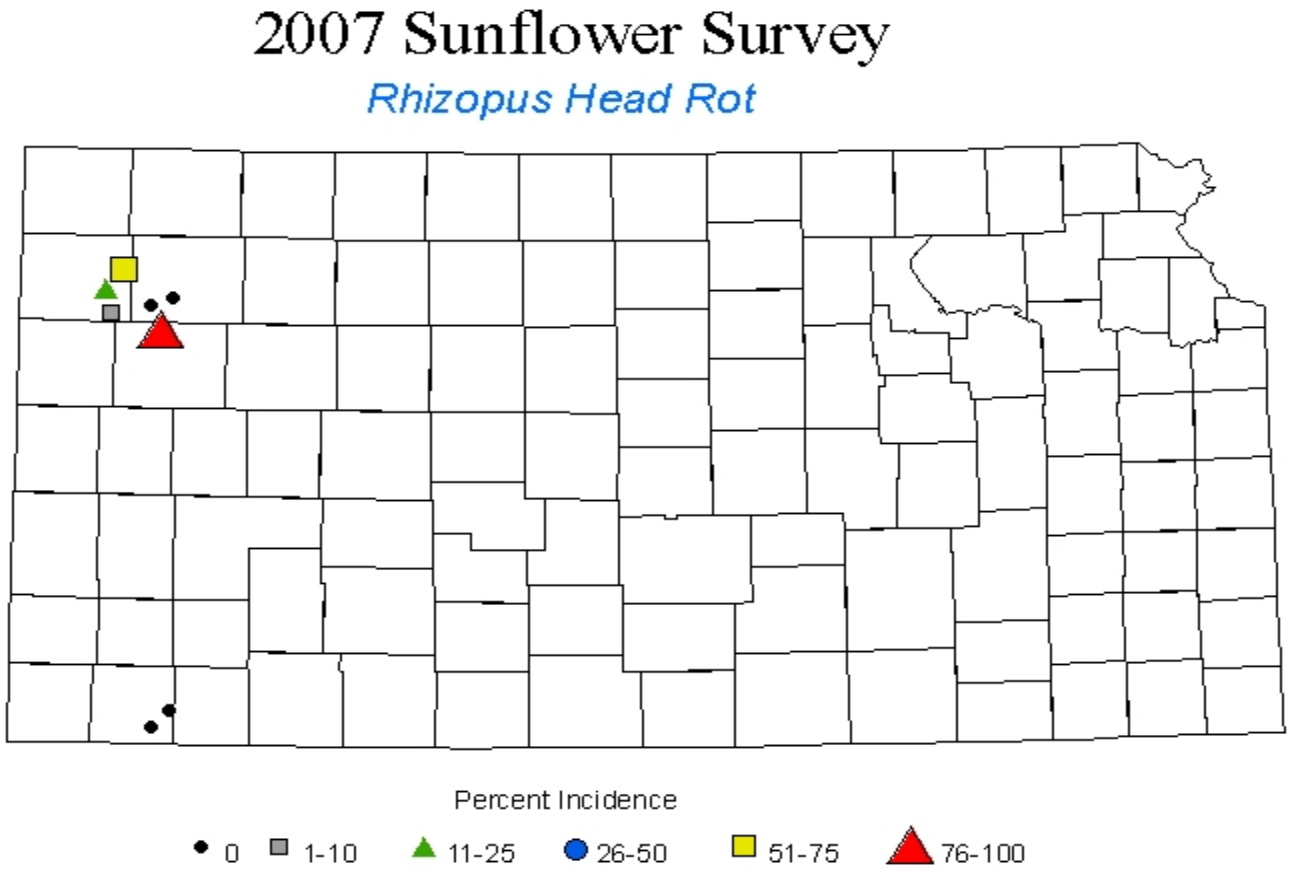
Kansas


2007 Sunflower Survey
Palmer Amaranth
None
Light: Plant species found in field
Moderate: 1 plant per 1 ft of 30" row
Heavy: more than 1 plant per 1 ft of 30" row

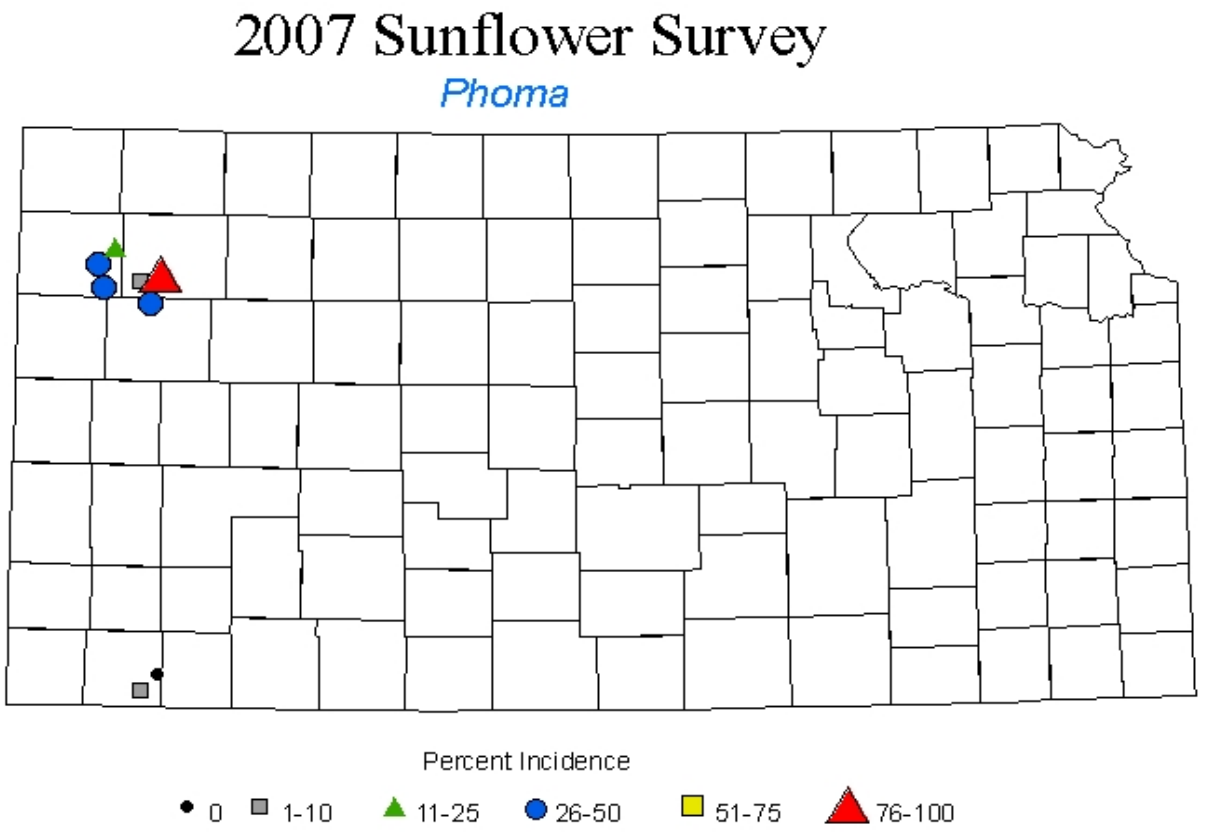
Kansas


2007 Sunflower Survey
Kochia
None
Light: Plant species found in field
Moderate: 1 plant per 1 ft of 30" row
Heavy: more than 1 plant per 1 ft of 30" row

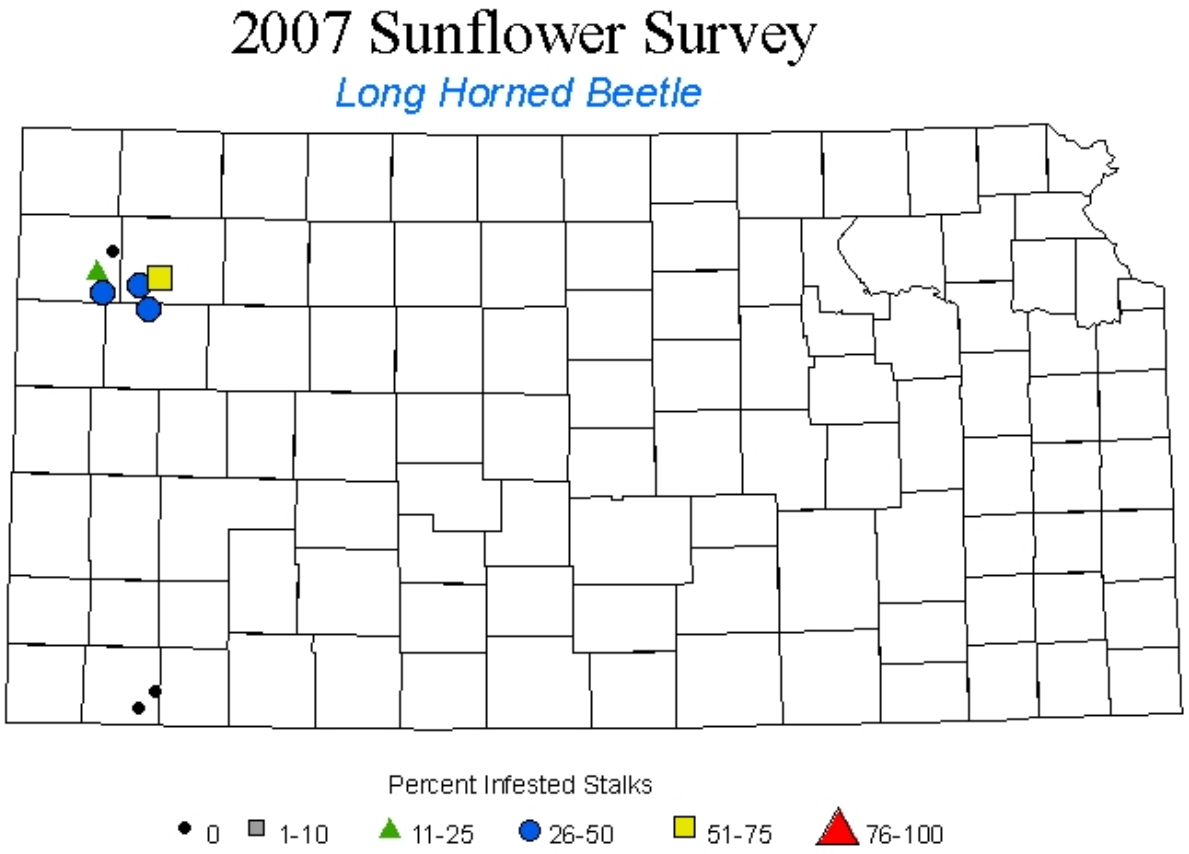
Kansas


2007 Sunflower Survey
Rhizopus Head Rot
Percent Incidence
0
1-10
11-25
26-50
51-75
76-100

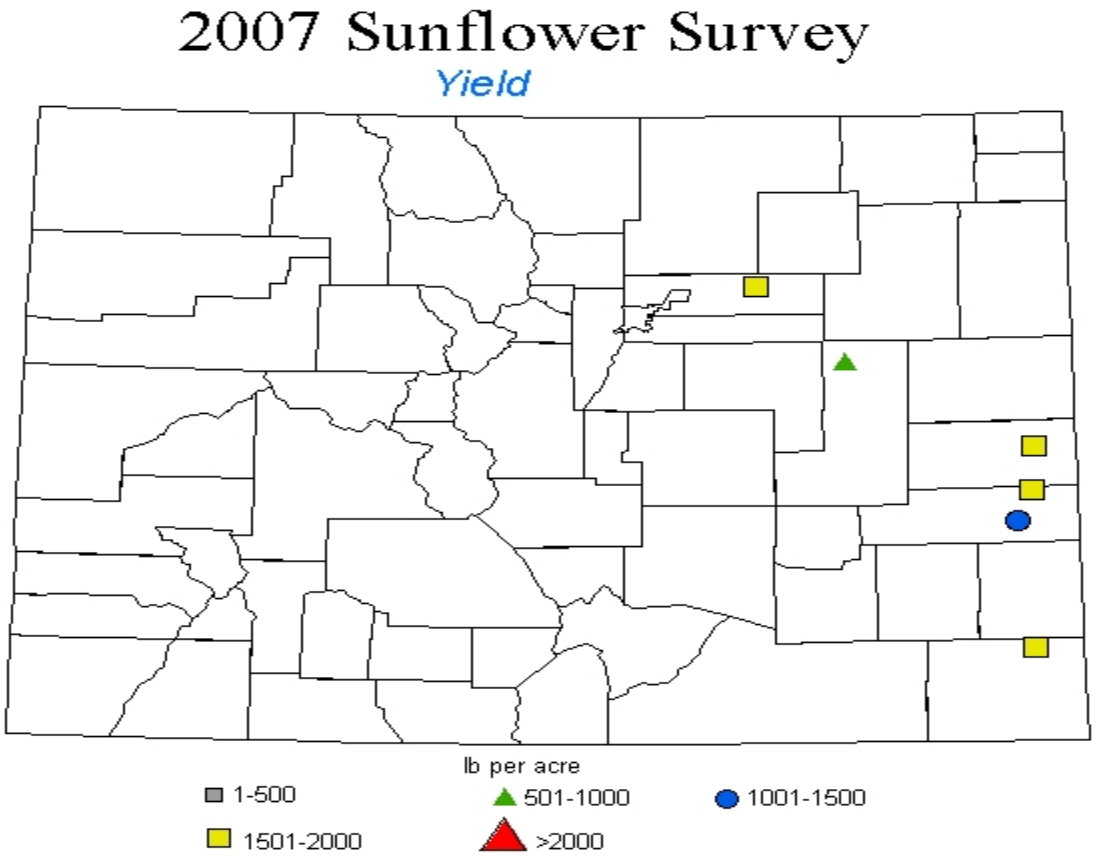
Kansas


2007 Sunflower Survey
Phoma
Percent Incidence
0
1-10
11-25
26-50
51-75
76-100

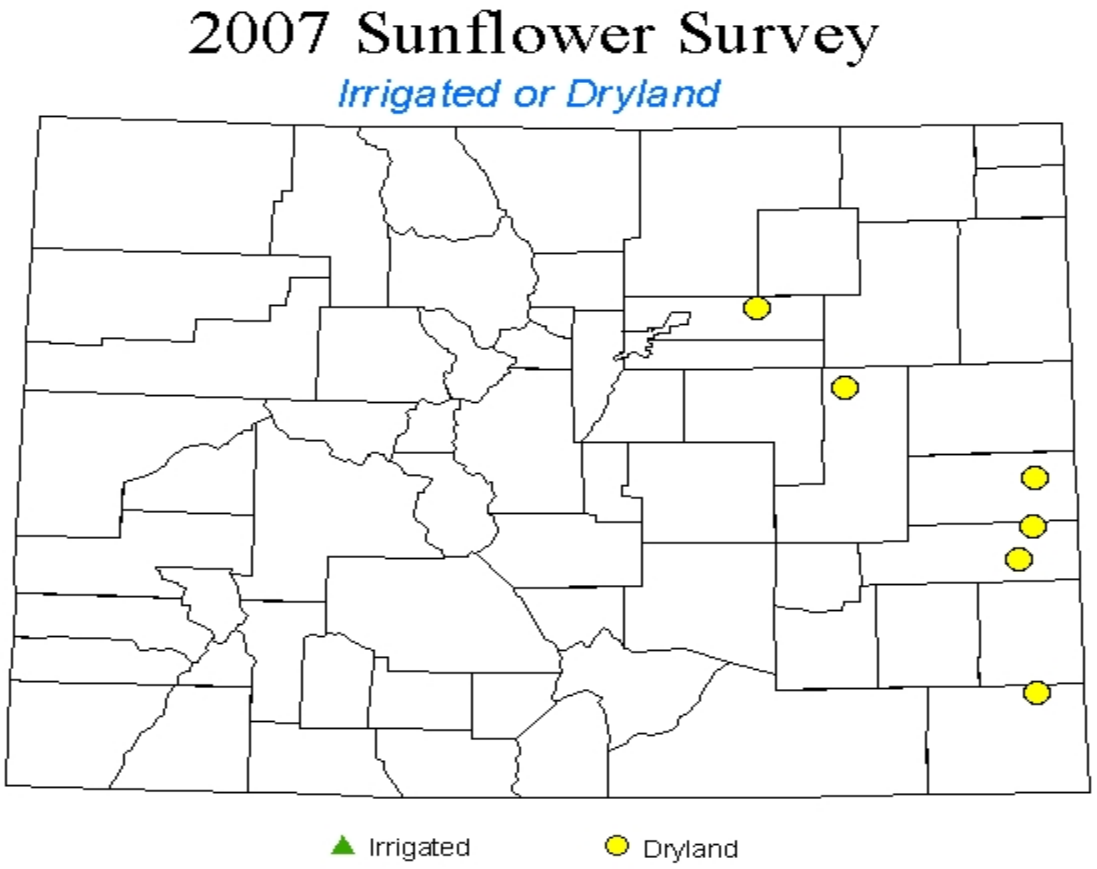
Kansas


2007 Sunflower Survey
Long Horned Beetle
Percent Infested Stalks
0
1-10
11-25
26-50
51-75
76-100

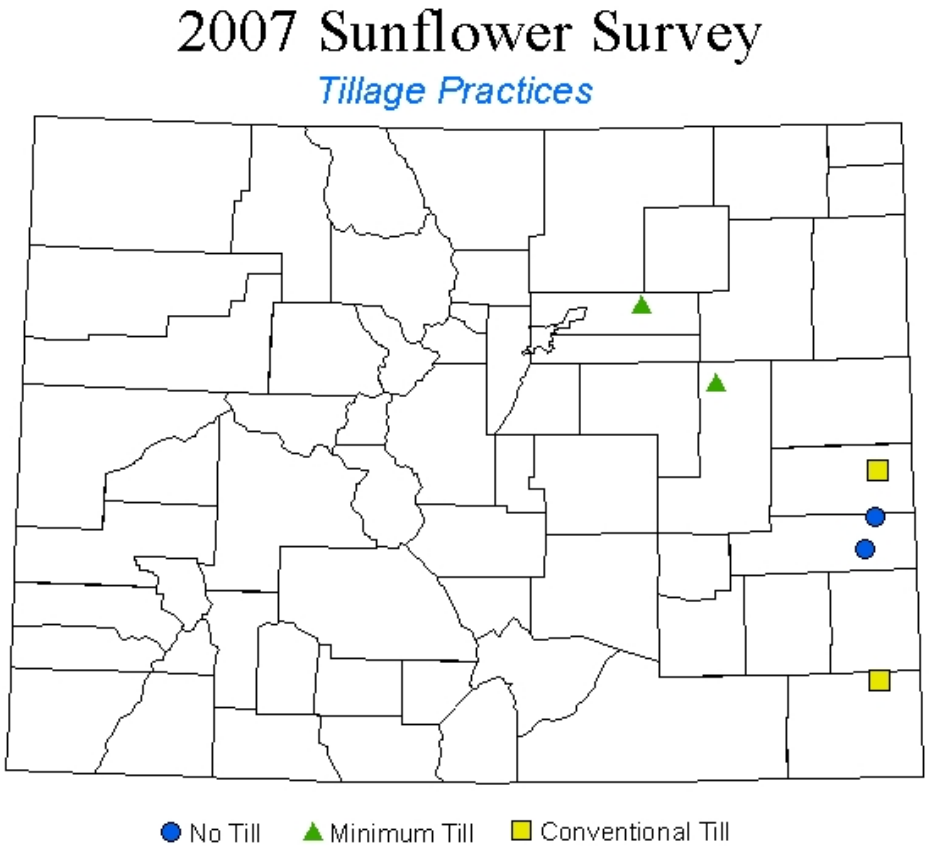
Colorado


2007 Sunflower Survey
Yield
lb per acre
1-500
501-1000
1001-1500
1501-2000
>2000

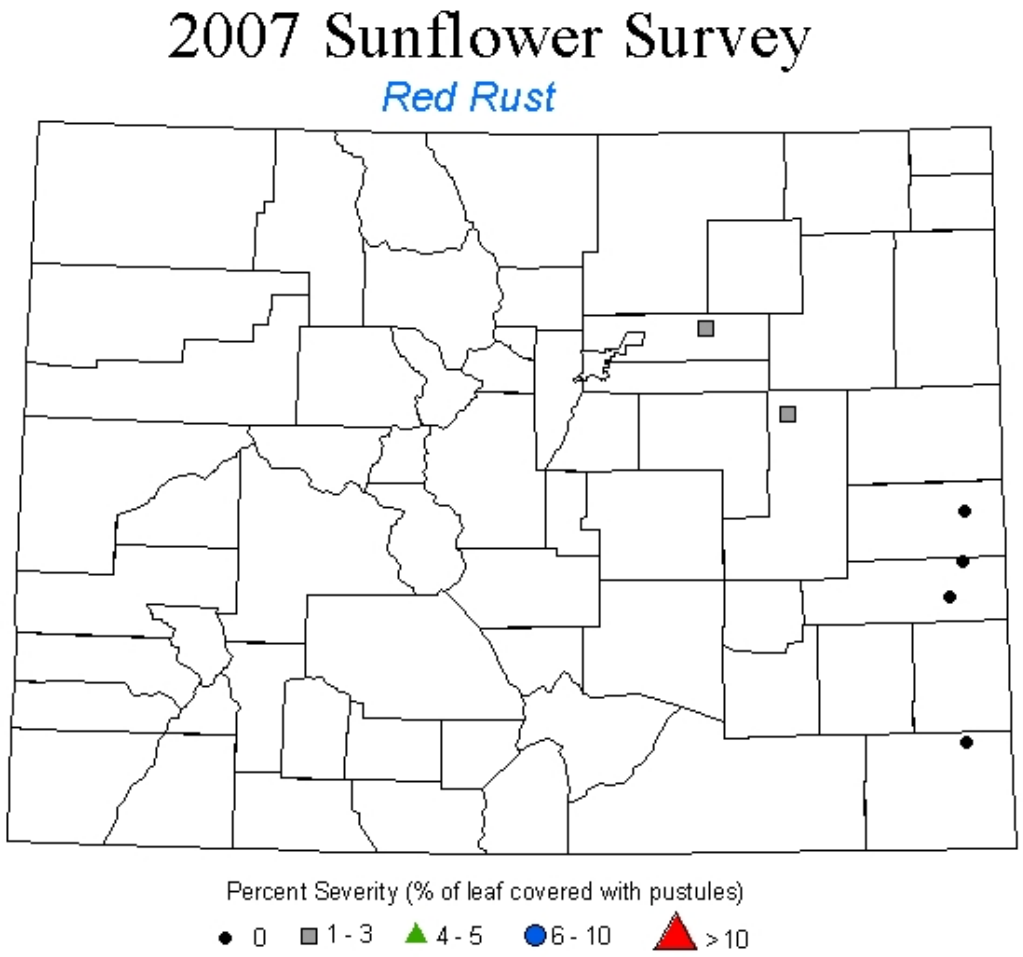
Colorado


2007 Sunflower Survey
Irrigated or Dryland
Irrigated
Dryland

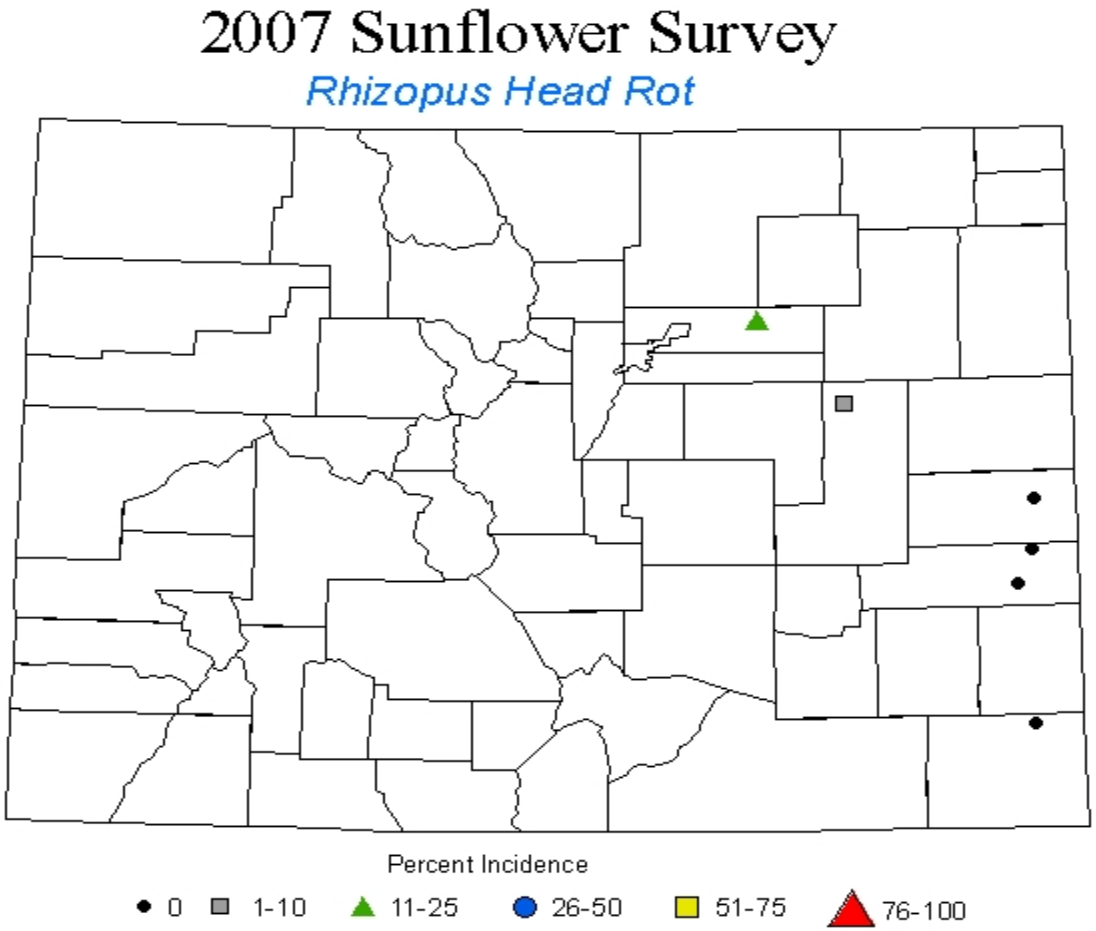
Colorado


2007 Sunflower Survey
Tillage Practices
No Till
Minimum Till
Conventional Till

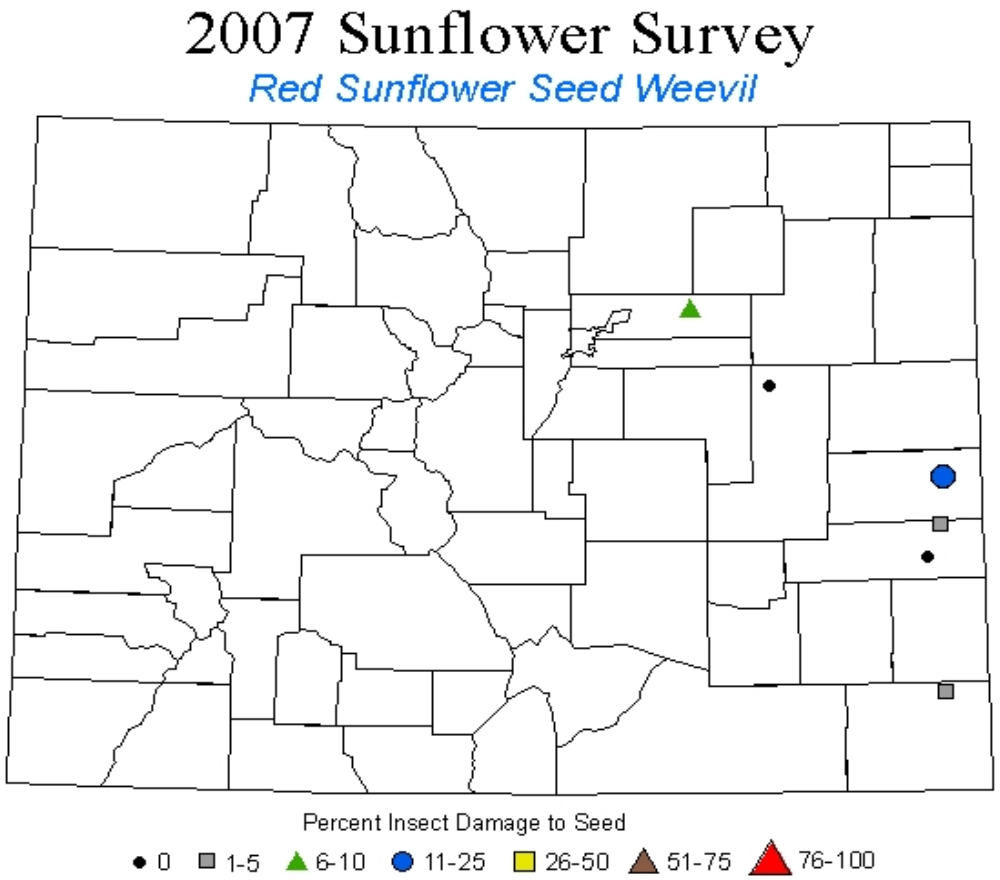
Colorado

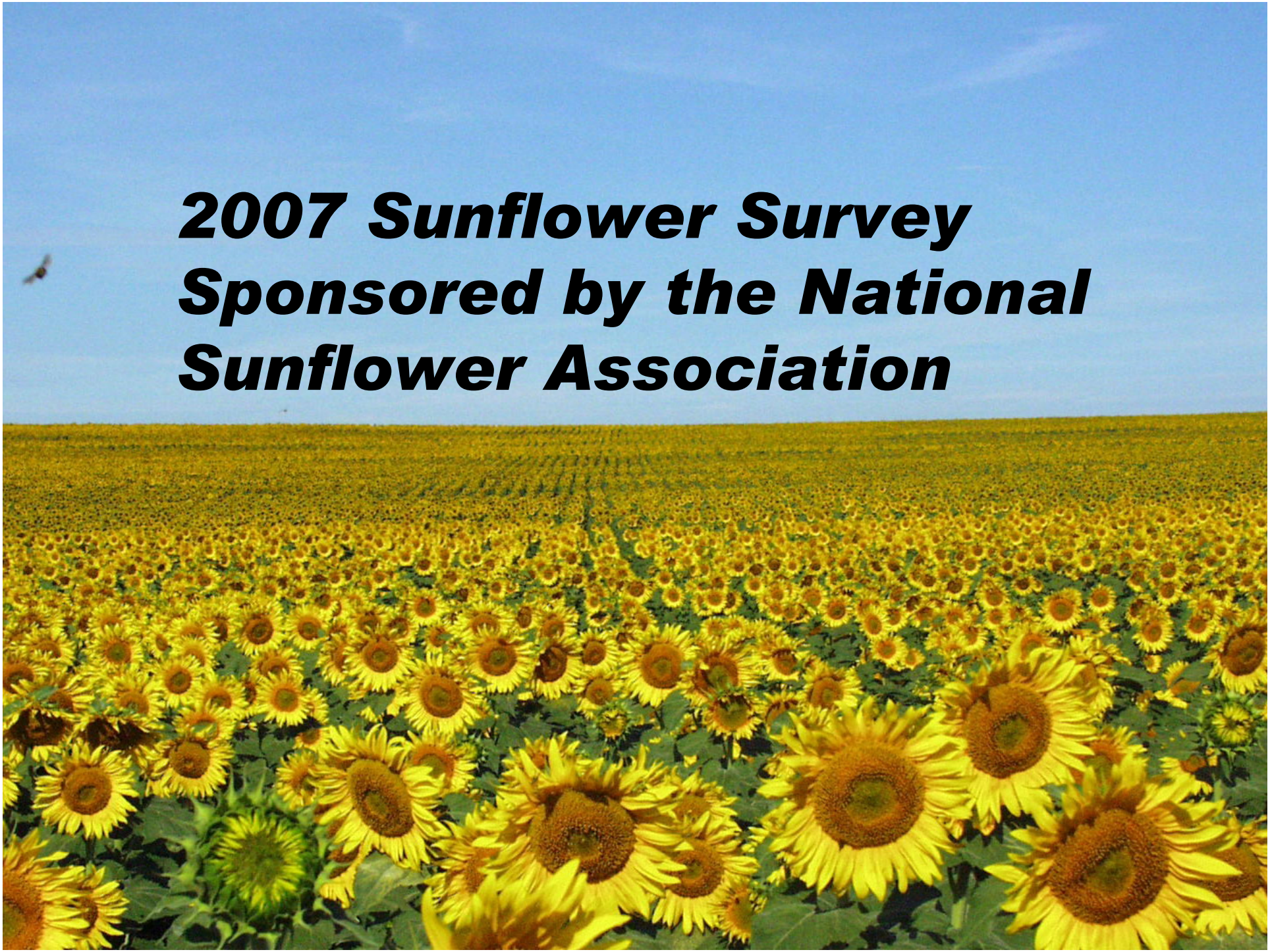

2007 Sunflower Survey
Red Rust
Percent Severity (% of leaf covered with pustules)
0
1 - 3
4 - 5
6 - 10
> 10

Colorado


2007 Sunflower Survey
Rhizopus Head Rot
Percent Incidence
0
1-10
11-25
26-50
51-75
76-100

Colorado


2007 Sunflower Survey
Red Sunflower Seed Weevil
Percent Insect Damage to Seed
0
1-5
6-10
11-25
26-50
51-75
76-100


2007 Sunflower Survey
Sponsored by the National
Sunflower Association