

Insect Update and Forecast January 2013

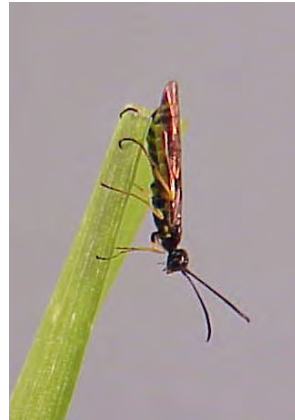
Scott Meers
Alberta Agriculture and Rural Development

Alberta Insect Pest
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Insect Surveys 2012

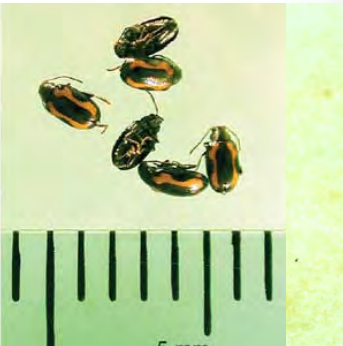


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Insect Surveys 2012 – Others



Acknowledgements

- ▶ Agriculture Fieldmen
- ▶ Applied Research Associations
- ▶ Viterra, Cargill, P&H, UFA, Agritrend, CPS, Federated Coop, Sturgeon Valley Fertilizer, Bayer, BASF, Monsanto, Canola Council, Alberta Pulse Growers, Potato Growers of Alberta
- ▶ Private Consultants, Producers
- ▶ Agriculture Canada, Lakeland College
- ▶ AARD technicians
- ▶ Shelley Barkley



Bertha Armyworm



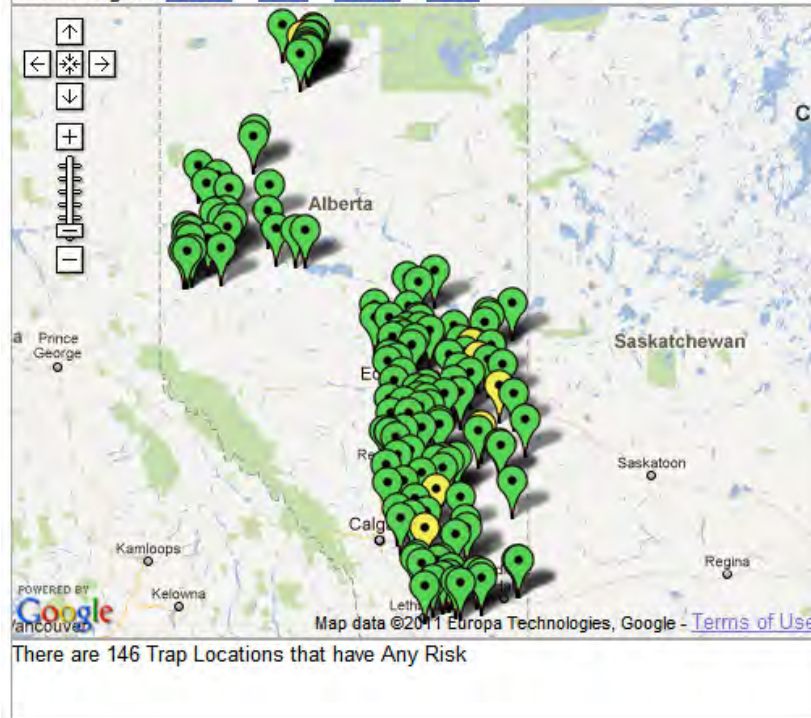
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Bertha Armyworm Survey Results (forecast)

Choose Region: [Alberta](#) [North](#) [Central](#) [South](#)



Any Risk Trap Locations

Show Locations with :
Any Risk

[Print](#)

Athabasca Location #1	Low [5]
Athabasca Location #2	Low [9]
Athabasca Location #3	Low [66]
Barrhead Location #1	Low [10]
Barrhead Location #2	Low [11]
Beaver Location #1	Low [37]
Beaver Location #2	Low [37]
Beaver Location #3	Low [119]
Beaver Location #4	Low [85]

2011 Survey

Legend

Cumulative Number of
Moths/Trap

From	To
0	300
300	900
900	1200
1200	1500+

Larval Infestation Risk Level

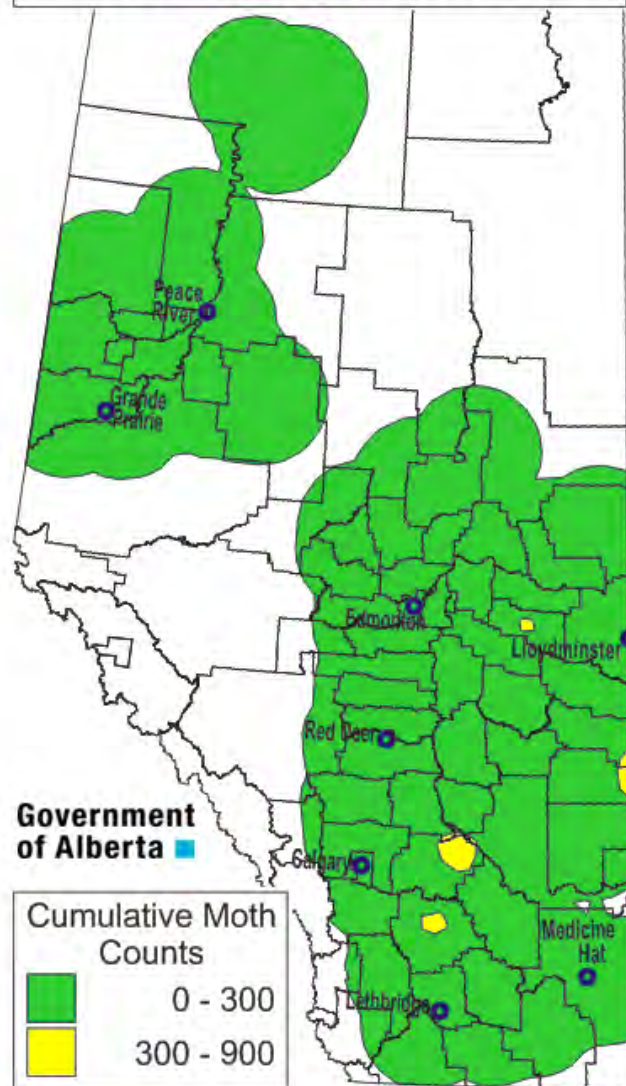
- Low** - Infestations are unlikely to be widespread, but fields should be inspected for signs of insects or damage.
- Uncertain** - Infestations may not be widespread, but fields that were particularly attractive to egg-laying females could be infested. Check your fields.
- Moderate** - Canola fields should be sampled regularly for larvae and for evidence of damage.
- High** - Canola fields should be sampled frequently for larvae and for evidence of damage.

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Bertha Armyworm 2011



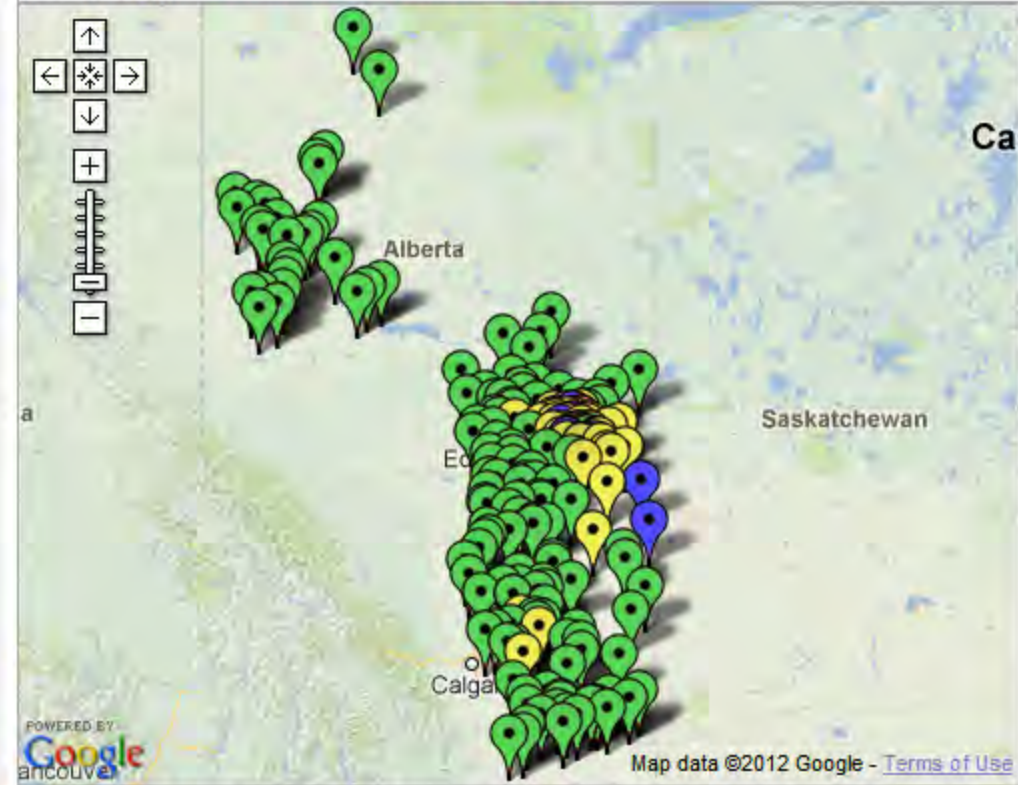
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Bertha Armyworm Survey Results (forecast)

Choose Region: [Alberta](#) [North](#) [Central](#) [South](#)



There are 196 Trap Locations that have Any Risk

Any Risk Trap Locations

Show Locations with :

Any Risk

Print

[Athabasca Location #1](#)

Low [17]

[Athabasca Location #2](#)

Low [92]

[Athabasca Location #3](#)

Low [273]

[Athabasca Location #4](#)

Low [197]

[Barrhead Location #1](#)

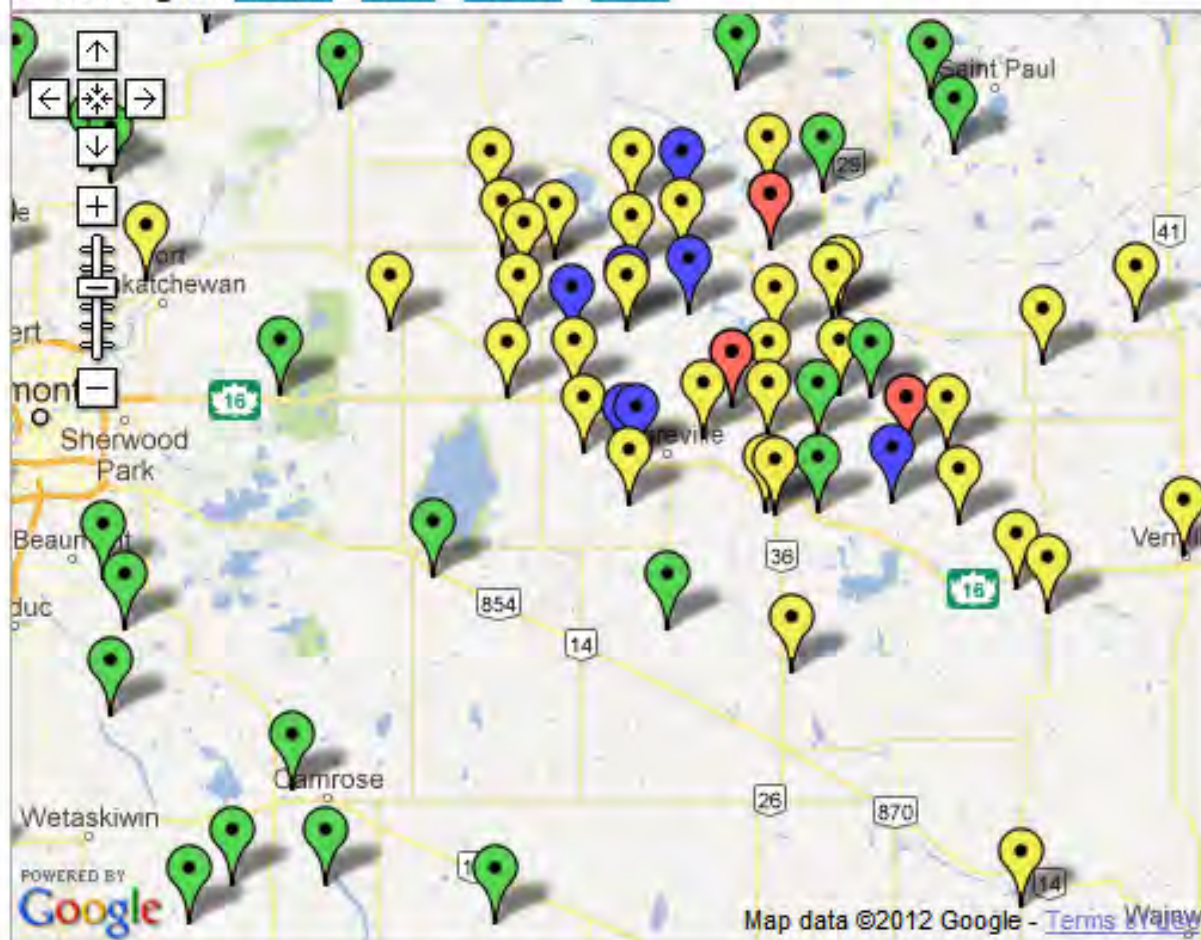
Low [22]

[Barrhead Location #2](#)

Low [9]

Bertha Armyworm Survey Results [\(forecast\)](#)

Choose Region: [Alberta](#) [North](#) [Central](#) [South](#)



There are [196 Trap Locations](#) that have Any Risk

Any Risk Trap Locations

Show Locations with :

Any Risk

Print

[Athabasca Location #1](#)

Low [17]

[Athabasca Location #2](#)

Low [92]

[Athabasca Location #3](#)

Low [273]

[Athabasca Location #4](#)

Low [197]

[Barrhead Location #1](#)

Low [22]

[Barrhead Location #2](#)

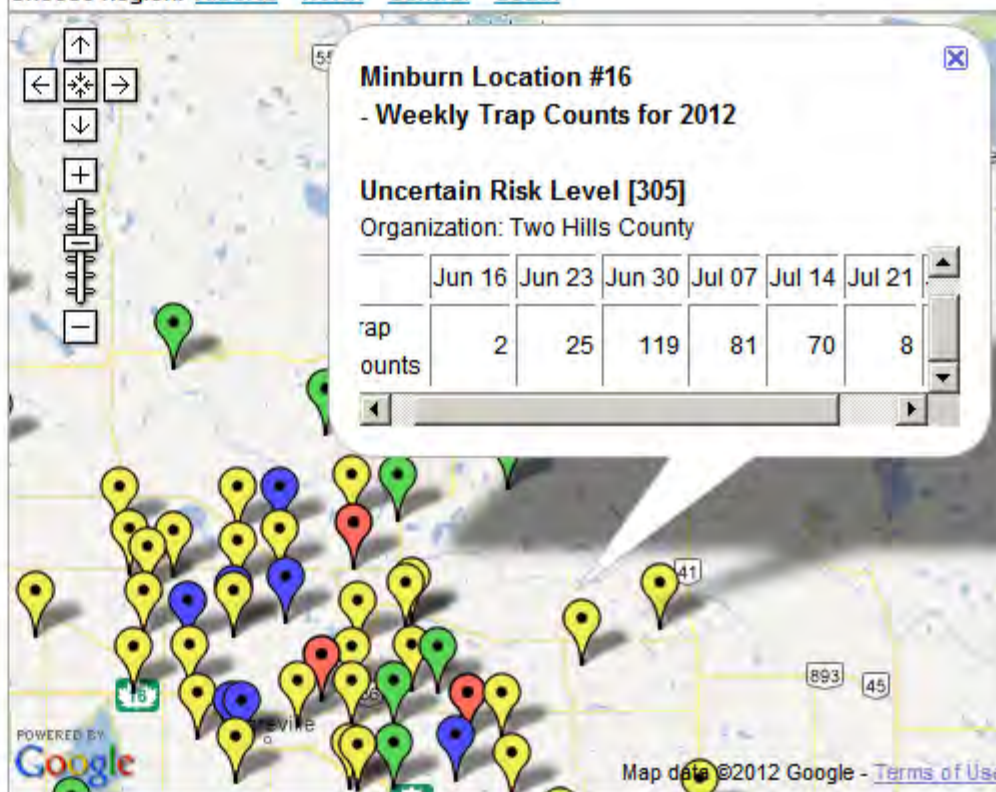
Low [9]

Legend

Cumulative Number

Larval Infestation Risk Level

Bertha Armyworm Survey Results [\(forecast\)](#)

 Choose Region: [Alberta](#) [North](#) [Central](#) [South](#)

 There are [196 Trap Locations](#) that have Any Risk

Legend

Any Risk Trap Locations

Show Locations with :

Any Risk

 **Print**
[Athabasca Location #1](#)

Low [17]

[Athabasca Location #2](#)

Low [92]

[Athabasca Location #3](#)

Low [273]

[Athabasca Location #4](#)

Low [197]

[Barrhead Location #1](#)

Low [22]

[Barrhead Location #2](#)

Low [9]

~200,000 acres sprayed

Bertha Armyworm on Corn



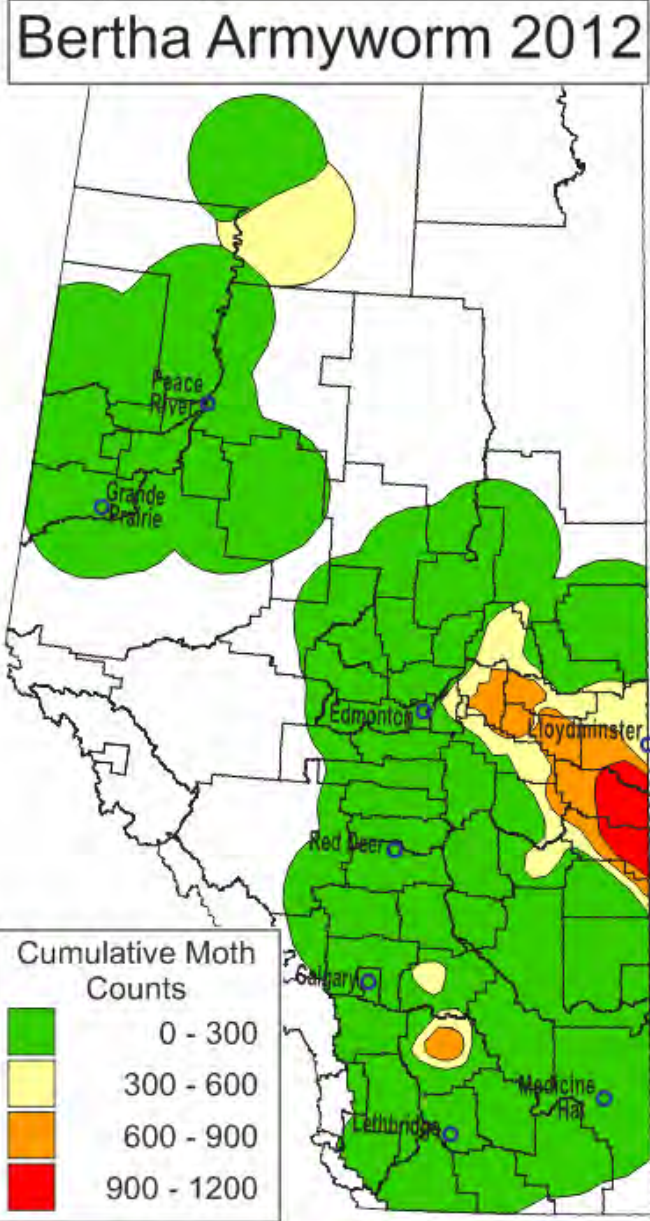
Why Corn???



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Diamondback Moth



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Diamondback Moth Trap



Photo Property of Manitoba Agriculture and Food
Soils and Crops Branch

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Diamondback Moth Survey Results [\(about\)](#)

Choose Region: [Alberta](#) [North](#) [Central](#) [South](#)



There are 27 Trap Locations that have Any Trap Counts

Any Trap Counts Trap Locations	
Show:	Any Trap Counts
Print	
Forty Mile Location #1	No [5]
Grande Prairie Location #1	High [231]
Grande Prairie Location #2	No [3]
Grande Prairie Location #3	Elevated [28]
Grande Prairie Location #4	Elevated [64]
Grande Prairie Location #5	No [0]

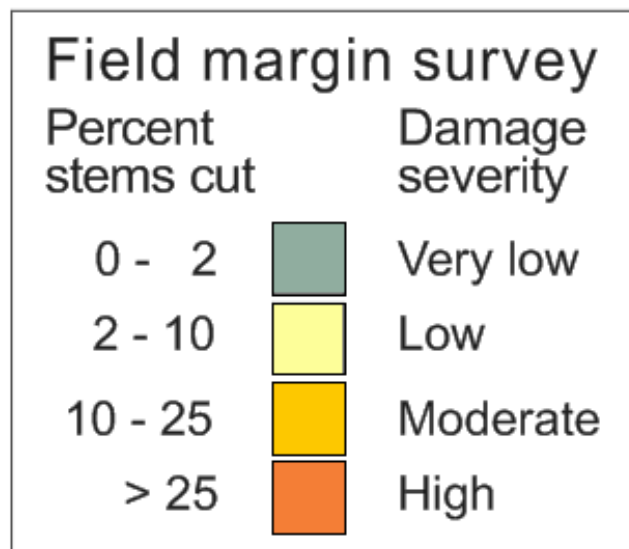
Wheat Stem Sawfly

- ▶ Dry years – especially a dry August favors population increases
- ▶ Parasitism and solid stem wheat are major population drivers



Wheat Stem Sawfly Survey - 2011

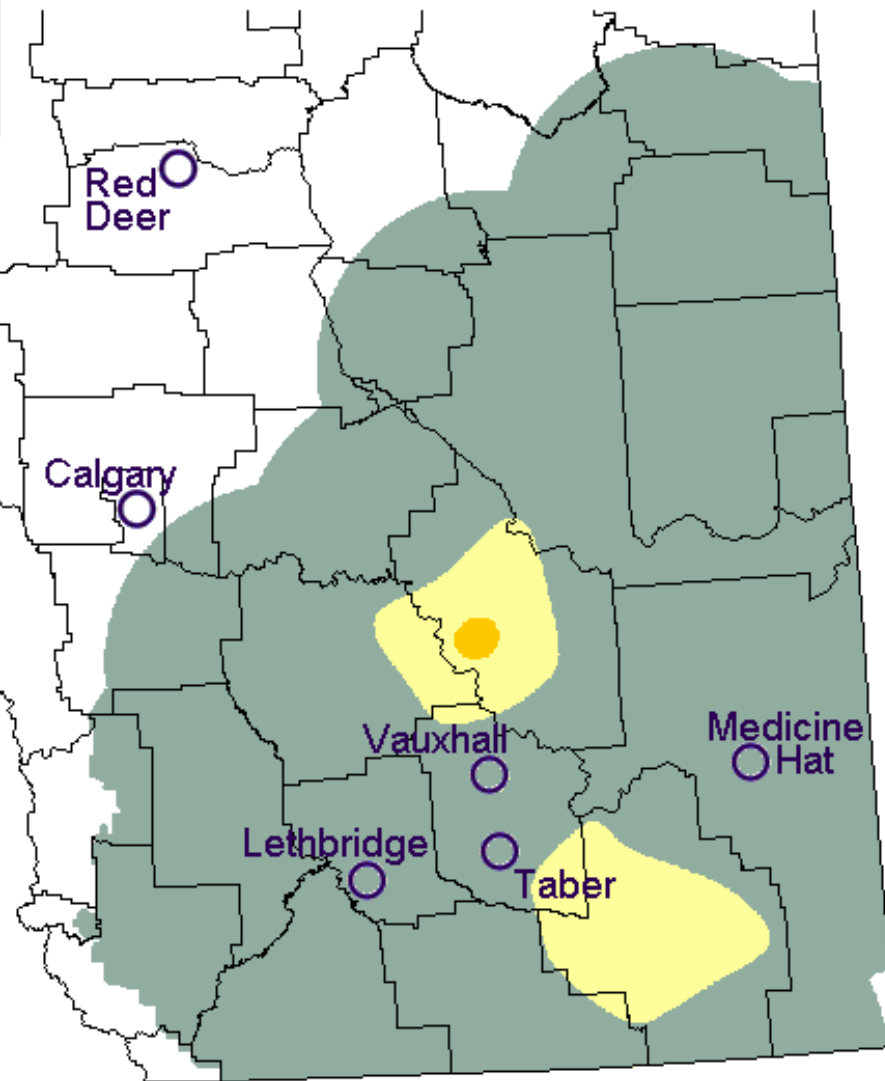
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Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada





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Wheat Stem Sawfly Survey - 2012

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Field margin survey			
Percent stems cut		Damage severity	
0 - 2		Very low	
2 - 10		Low	
10 - 25		Moderate	
> 25		High	



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

71 fields in 17 municipalities
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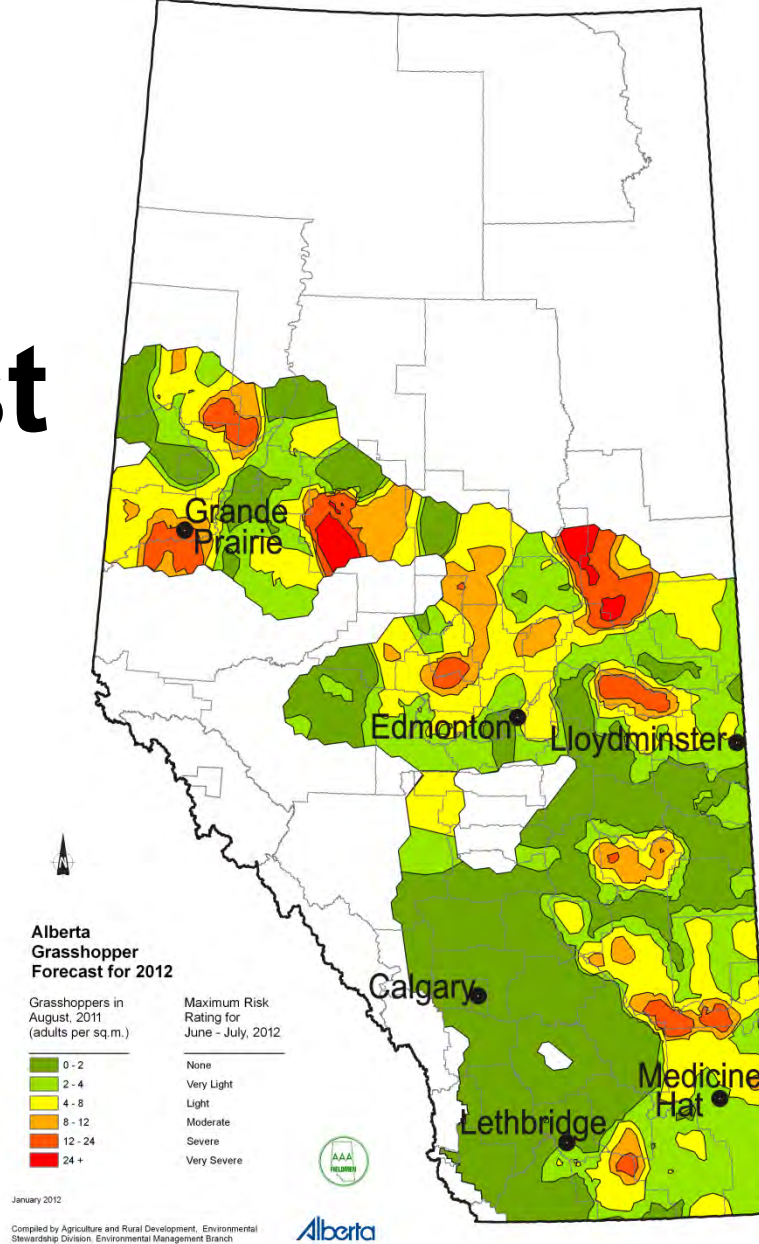


Grasshopper survey

- ▶ Agricultural Fieldmen – >2000 survey sites
- ▶ Peace has pockets of high populations
- ▶ Risk is variable depending where you are
- ▶ Grasshopper populations are very weather dependant



2012 Forecast

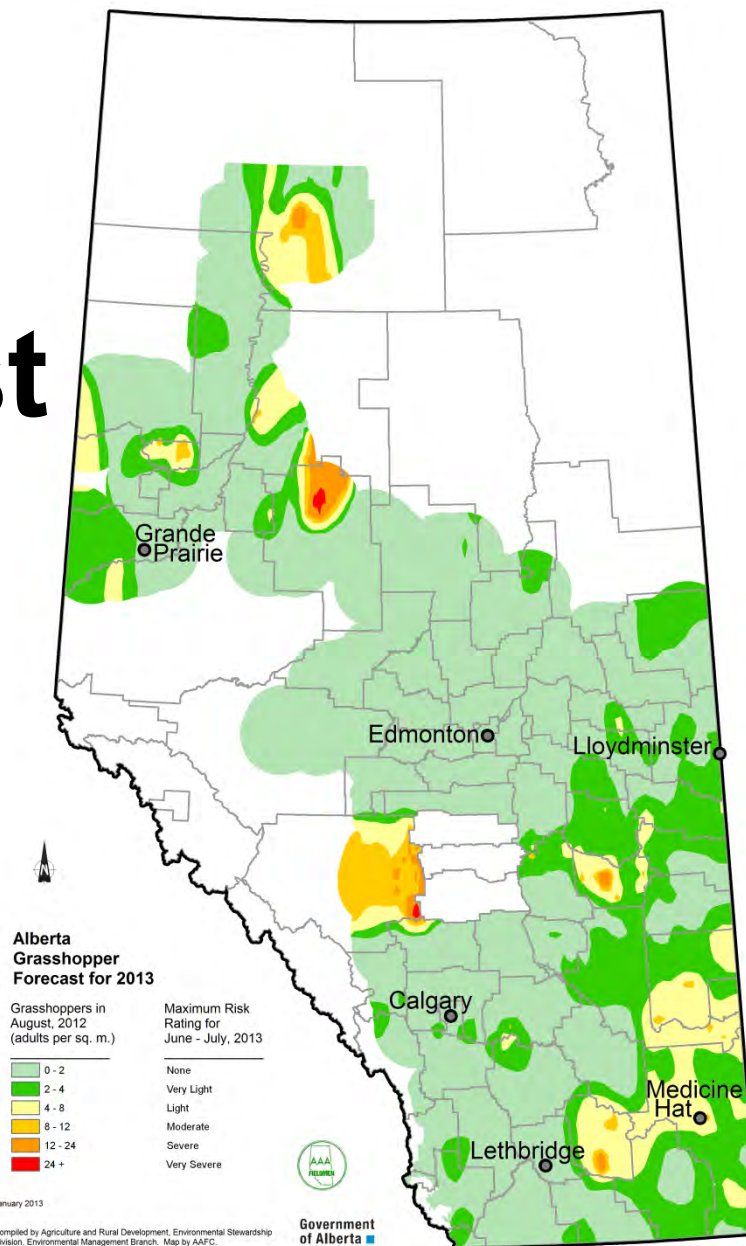


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2013 Forecast

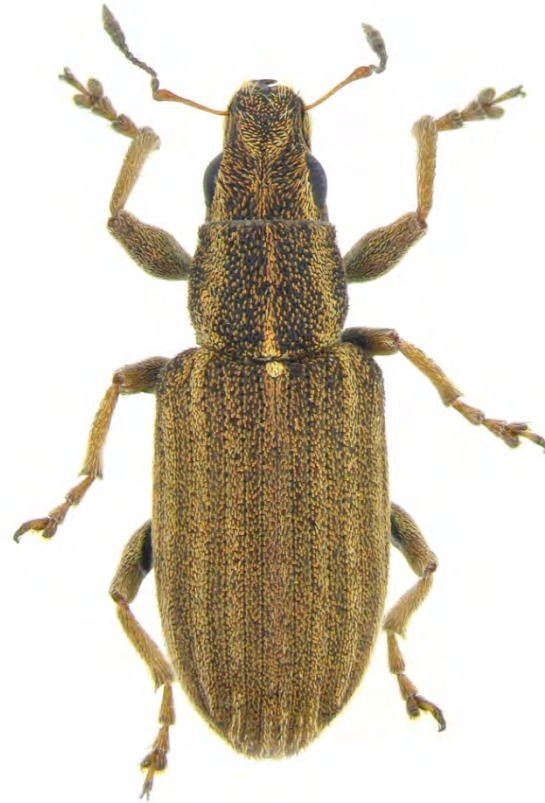


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Pea Leaf Weevil



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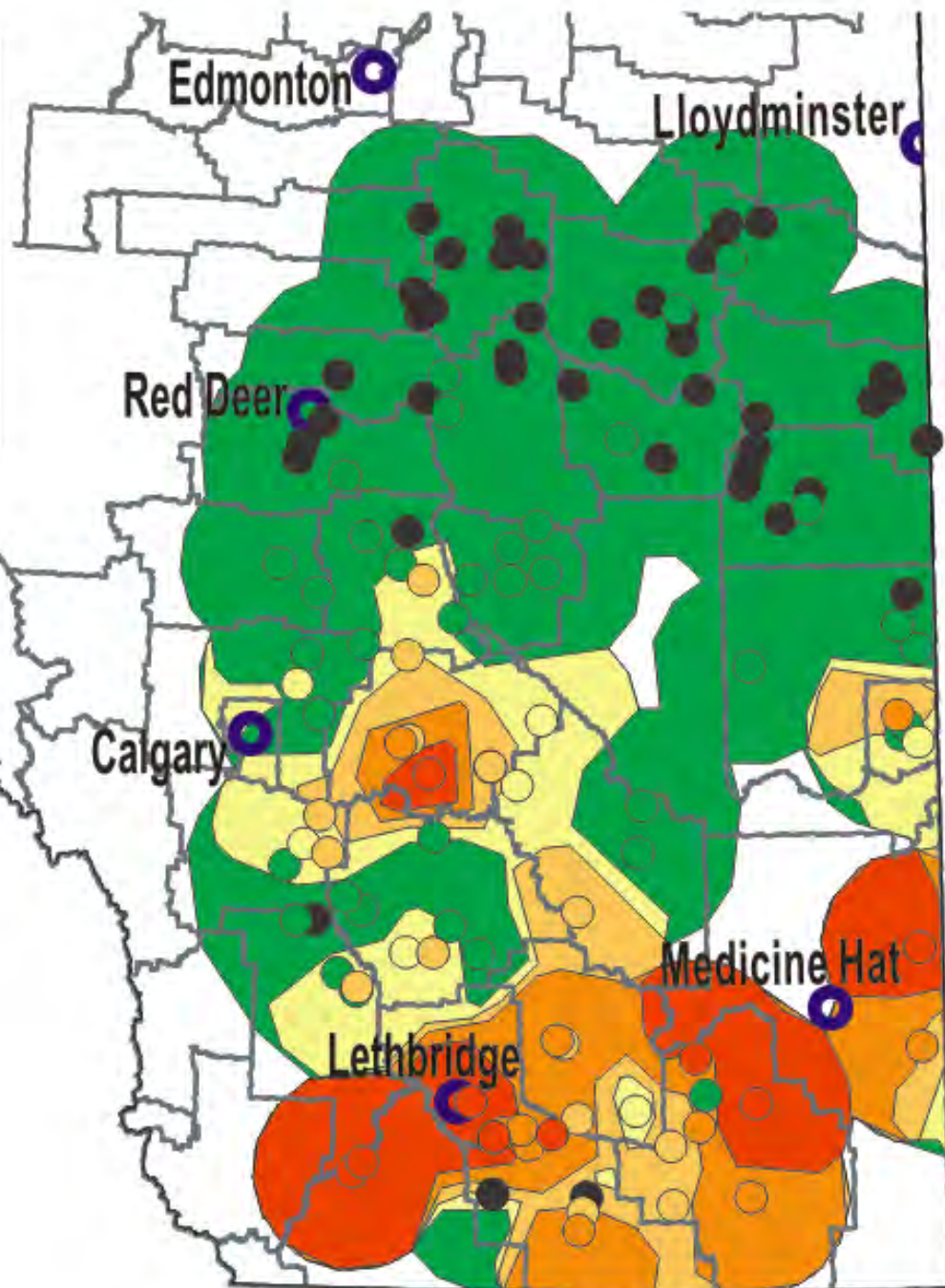
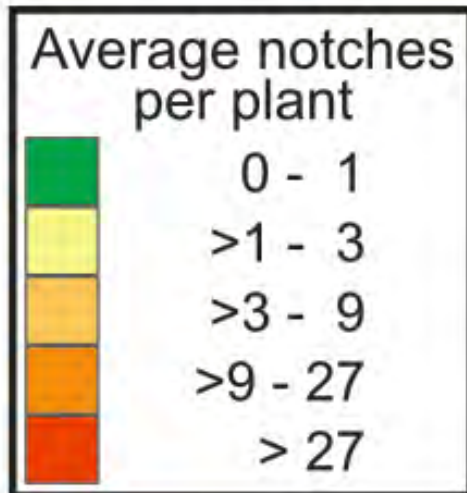
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Pea Leaf Weevil

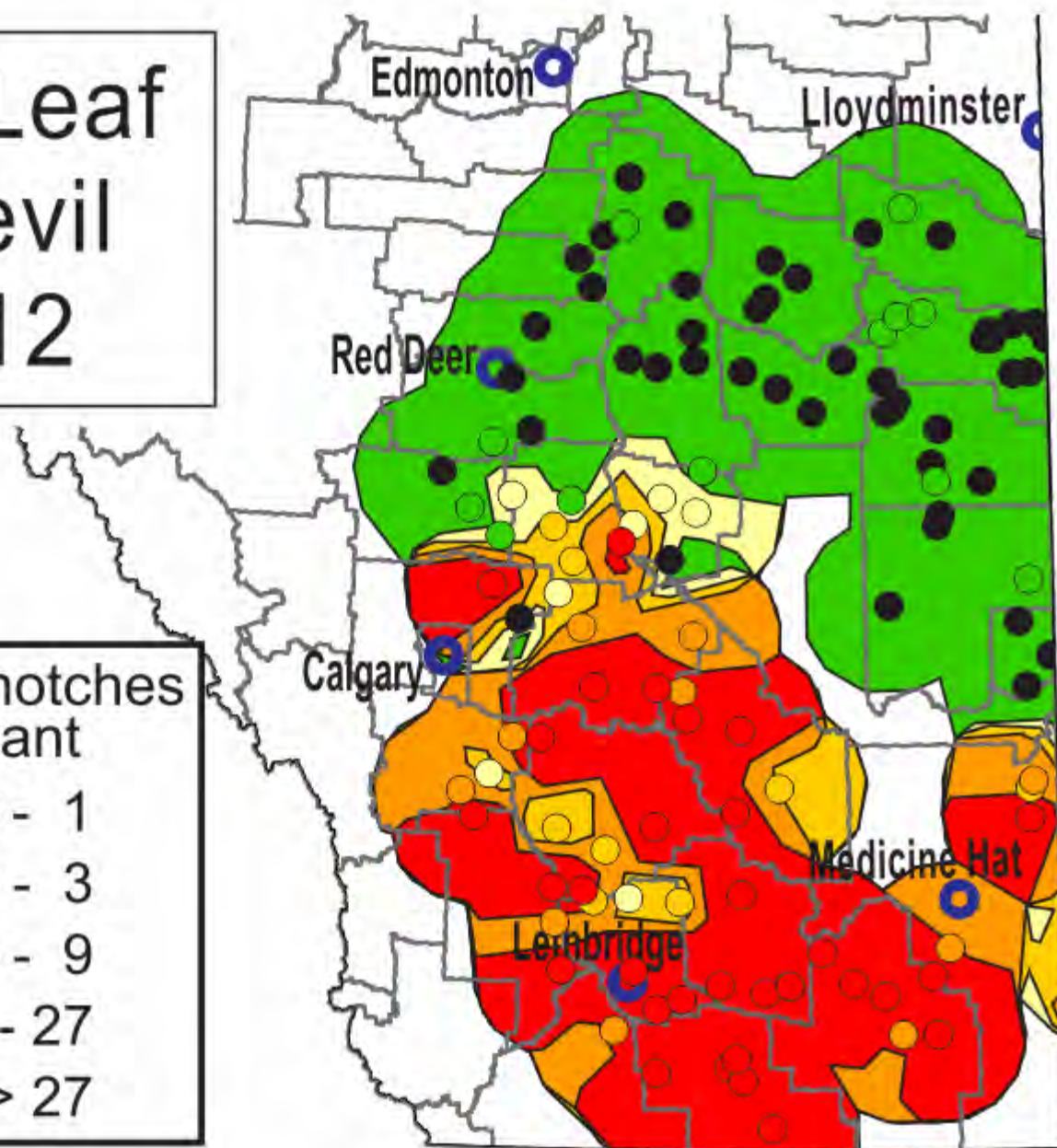
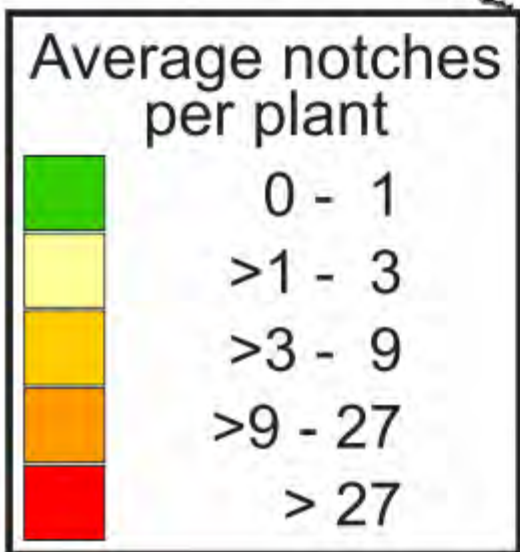


Pea Leaf Weevil 2011

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Pea Leaf Weevil 2012



Cabbage Seed Pod Weevil



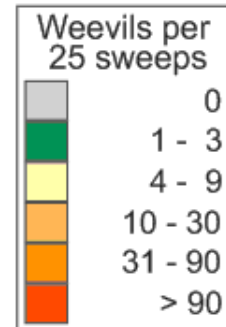
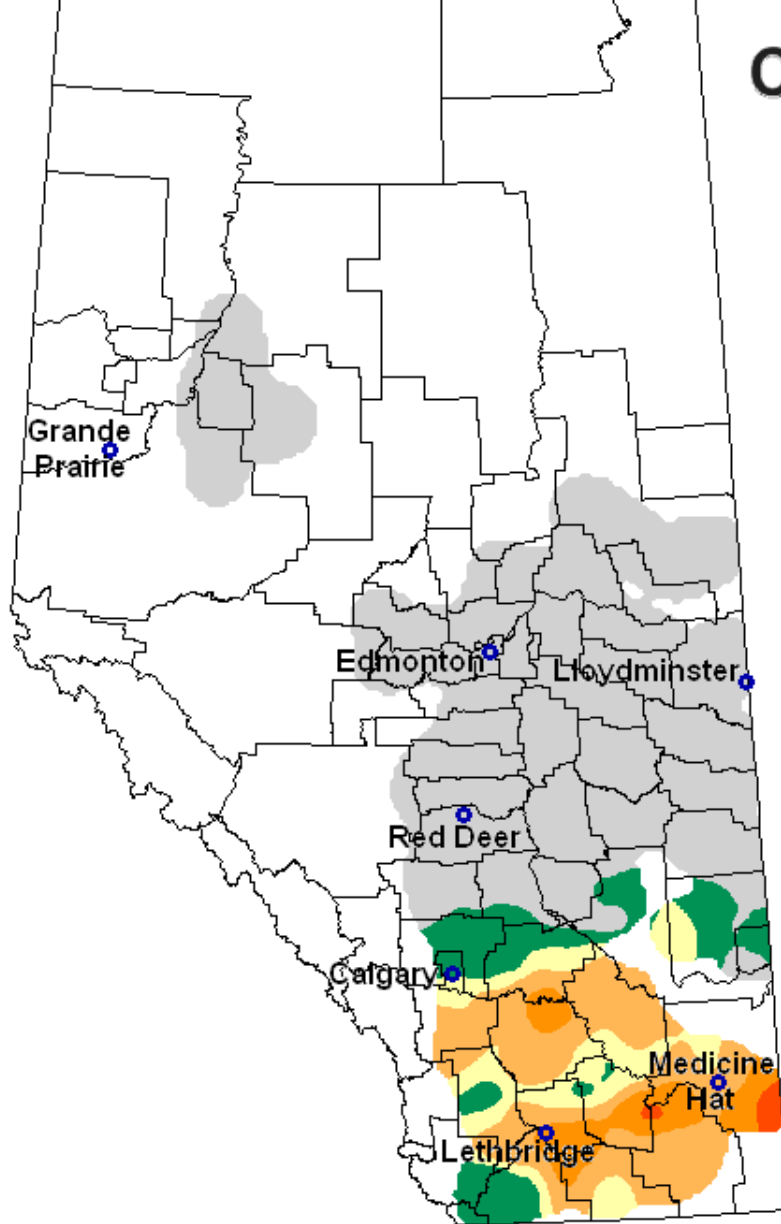
Cabbage Seed Pod Weevil

- ▶ Increased in 2012
- ▶ Still a problem south of Hiway 1*
- ▶ **A perennial pest in Southern Alberta**



Cabbage Seedpod Weevil

2011 Survey



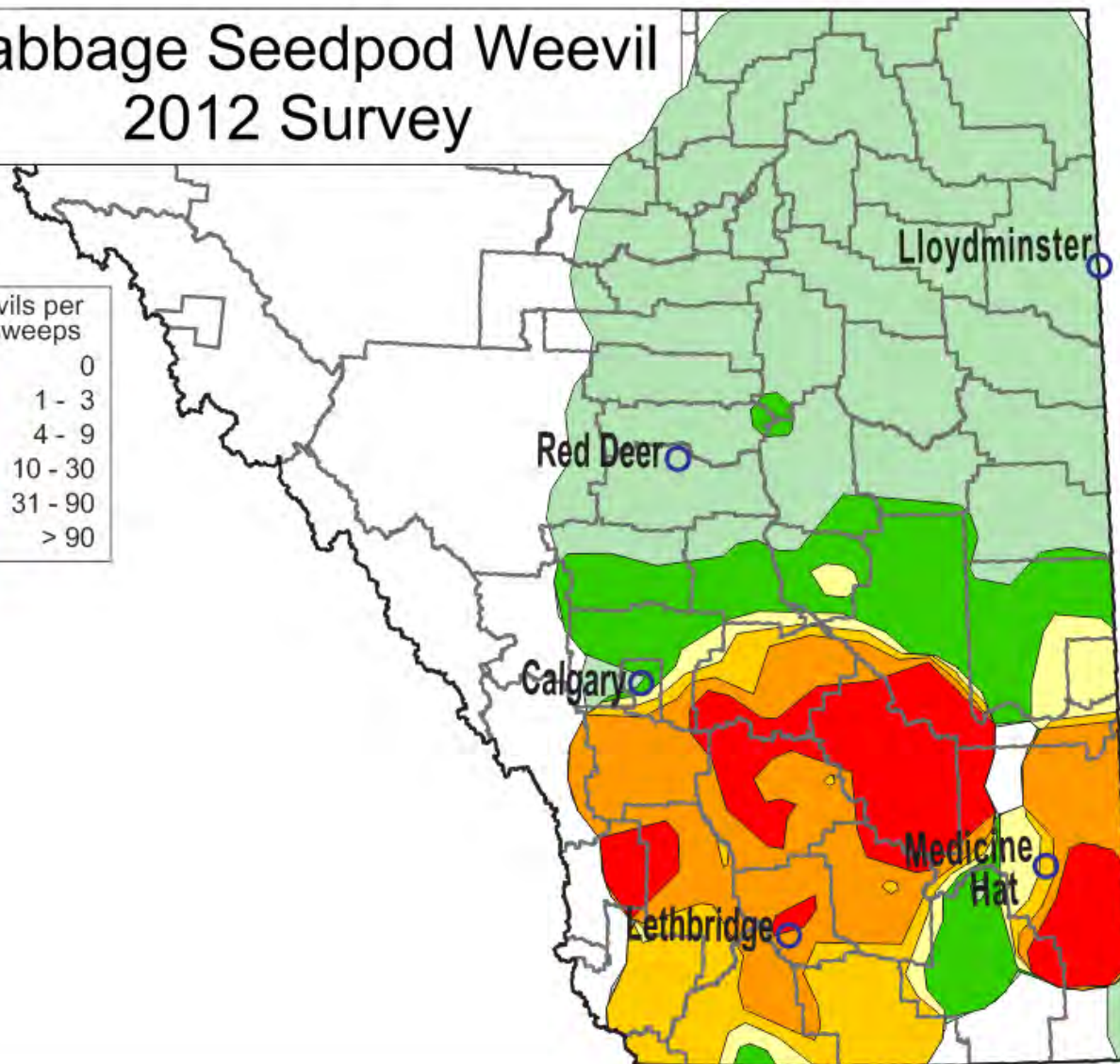
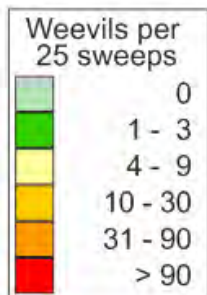
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Cabbage Seedpod Weevil 2012 Survey



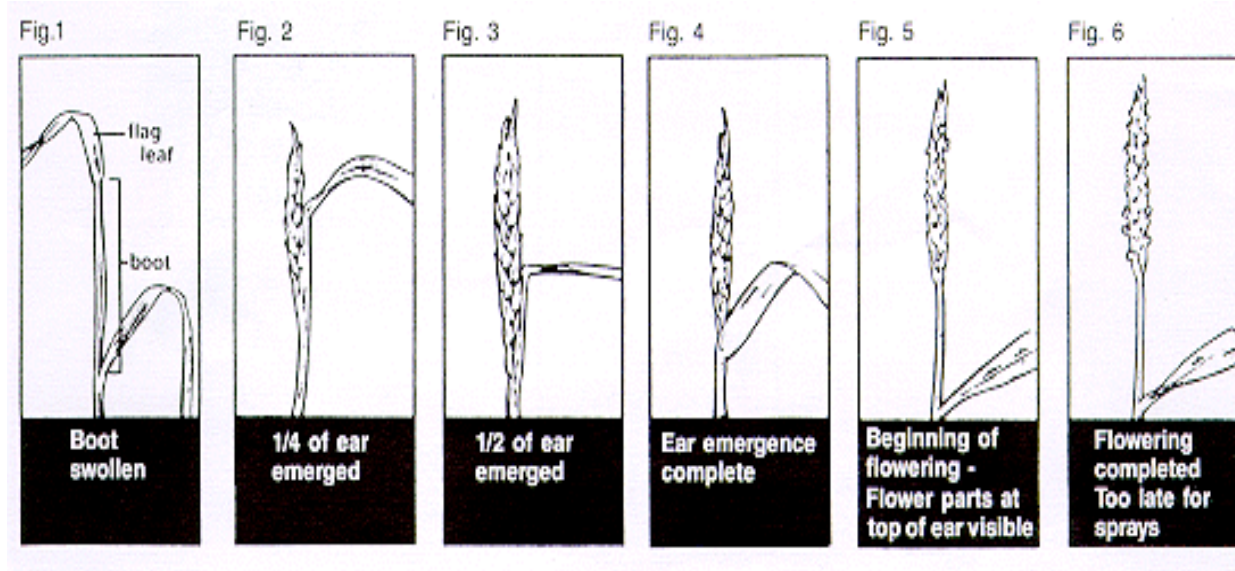
Wheat Midge

- ▶ AKA – Orange Wheat Blossom Midge
- ▶ Increase this year
- ▶ Problem sites in southern Alberta
- ▶ Found throughout irrigated area but generally at low levels.
- ▶ 298 samples–60 Counties
 - Confirmed in Peace region
 - Survey expanded



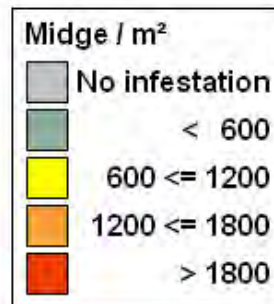
Crop Susceptibility

- ▶ Emergence of the head from the boot
- ▶ Remains susceptible to anthesis
- ▶ Susceptibility drops dramatically at the onset of anthesis

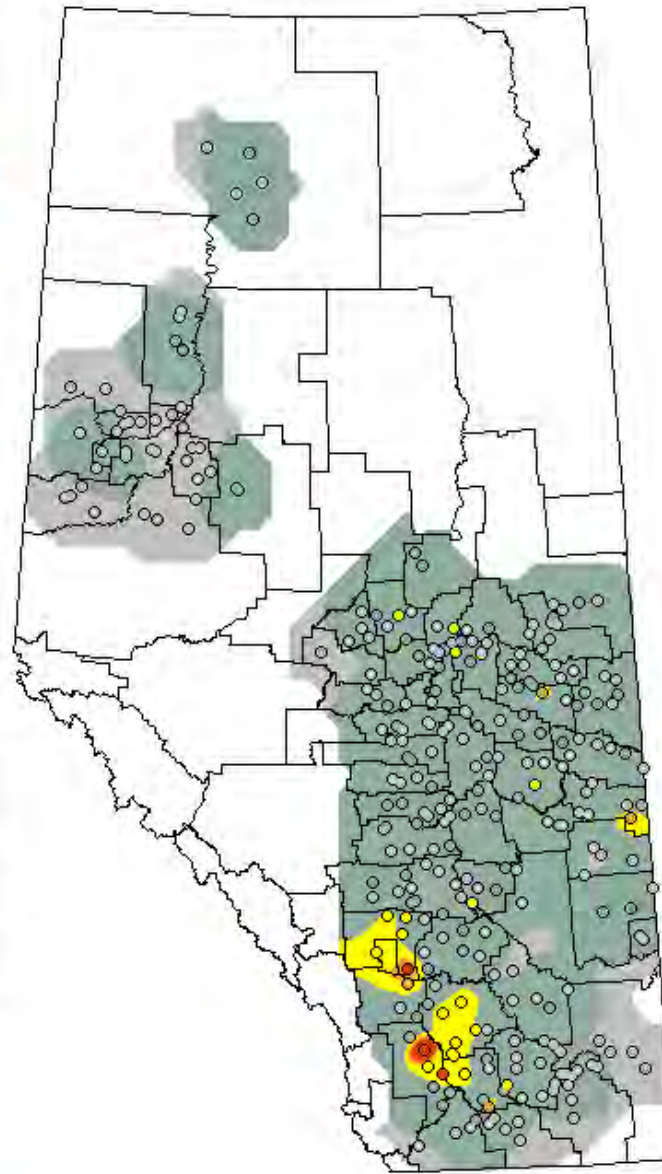


Wheat Midge Forecast 2012

Dot color
indicates
viable



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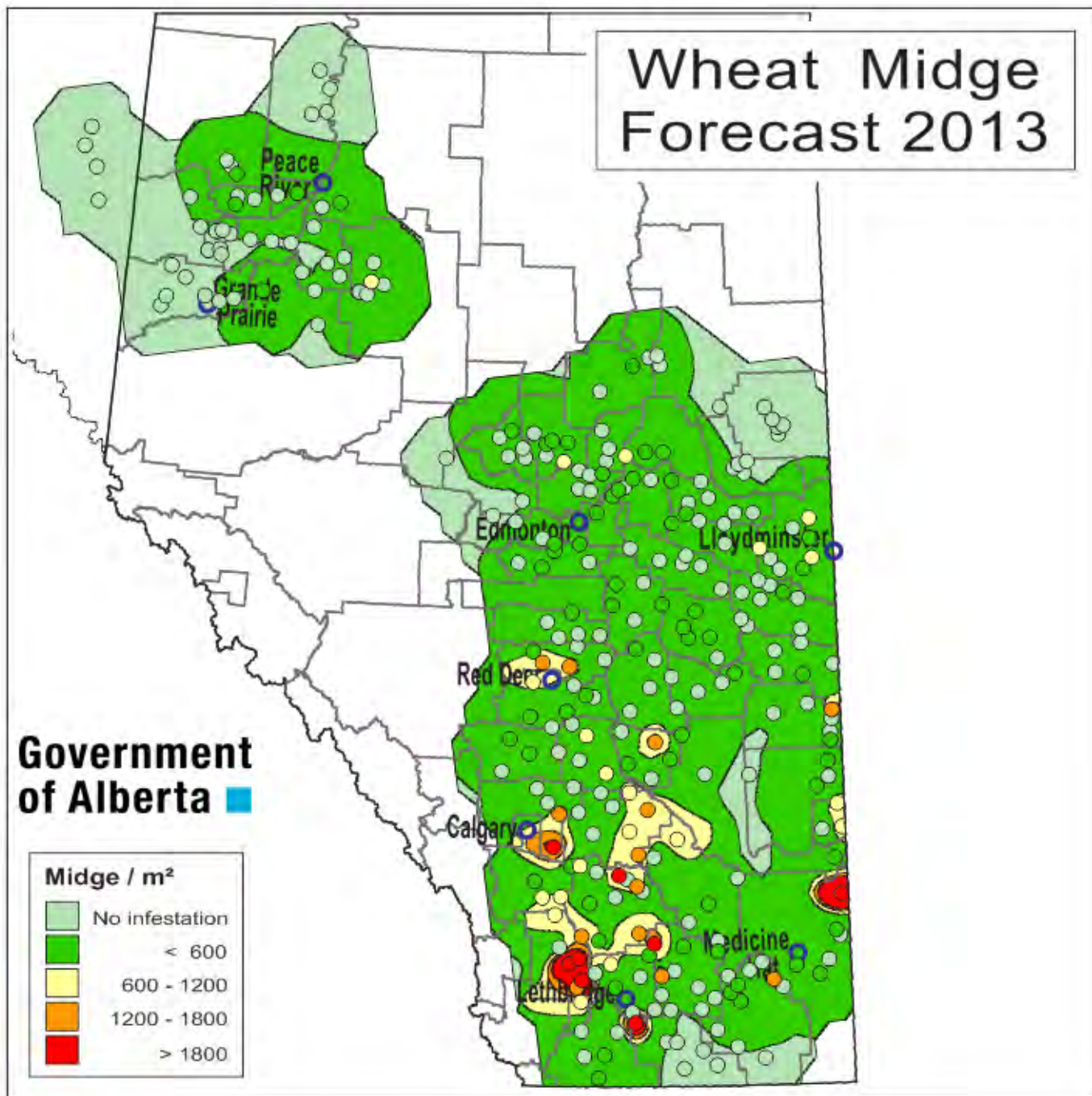


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Wheat Midge Forecast 2013



Crucifer Flea Beetle



Two Stripped Flea Beetle



Zebra Caterpillar



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Checkered Cabbage-White Butterfly



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Imported cabbage worm



Cereal leaf beetle

- ▶ Eurasian pest
- ▶ First found in Michigan in 1962
- ▶ Generalist graminaceous feeder
- ▶ Prefers oats, wheat and barley
- ▶ CFIA Quarantinable pest
 - Lifted in 2008



Cereal Leaf Beetle

- ▶ Discovered in Alberta July 2005
- ▶ Has established – so has parasitoid
- ▶ Limited damage in 2007 – Lethbridge Area
- ▶ Scattered locations across S Alta and into Saskatchewan in 2008
- ▶ 2008 Moderate damage in winter wheat near Lethbridge
- ▶ 2009 Some higher numbers. Found in Manitoba
- ▶ 2010 – 2 fields in Taber county treated
- ▶ 2011 discovered near Edmonton
- ▶ Several fields in south Alberta near threshold



CLB Larval Feeding Damage



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Cutworm Tracking

- ▶ On Roping the Web
 - ▶ Will rely on agrologist input
 - ▶ Web based (cell phone friendly) input page
 - ▶ Color coded by species
 - ▶ Google map
 - ▶ Mapped to center of a 2x2 township area
- ▶ THE IDEA IS TO CREATE A VISUAL WARNING SYSTEM



Cutworm Survey Results [\(about\)](#)

Choose Region: [Alberta](#) [North](#) [Central](#) [South](#)



There are 18 Surveyed Locations that have Any Species

Any Species Surveyed Locations

Show:

Any Species

Print

[Cardston Location #1](#)

Canola, Red Backed

[Cardston Location #2](#)

Canola, Red Backed

[Lethbridge Location #1](#)

Other: sugar beet, Red Backed

[M.D. of Rocky View Location #1](#)

Canola, Red Backed

[M.D. of Willow Creek Location #1](#)

Canola, Red Backed

[M.D. of Willow Creek Location #2](#)

Canola, Red Backed

Legend

- Red Backed
- Army
- Dingy
- Pale Western
- Other

Cutworms

- ▶ Major research program underway
 - Canola industry funded
 - Triprovincial
- ▶ Need to know the species
- ▶ Field collected specimens are critical
 - 310-2777 (Alberta Pest Surveillance System)
 - Website



Potato Aphids

- ▶ Trial Year
- ▶ Mapped aphid reports on a 7 day rolling basis
- ▶ Agrologist reporting via email
- ▶ Spreadsheet
- ▶ Reported to the section
- ▶ Joint Project with Potato Growers of Alberta






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Agriculture and Rural Development

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 Wheat Midge
 Bertha Armyworm
 Cabbage Seedpod Weevil
 Diamondback Moth
 Grasshopper
 Pea Leaf Weevil
 Wheat Stem Sawfly

Alberta Pest Surveillance System
310-2777
bugs.r.us@gov.ab.ca

Pest Information

- [Arthropods of Cereal Crops in Canadian Grasslands](#)
- [Natural Enemies of Field Crop Insect Pests in Alberta](#)
- [Physical Control of Pests](#)
- [Field Scouting](#)
- [Economic Thresholds for Insects Attacking Cereals and Corn](#)
- [Economic Thresholds for Insects Attacking Oilseeds](#)
- [Pesticide Selector](#)

How to build a bertha trap


Links

- [Frequently Asked Questions](#)
- [Canola Council](#)

For more information about the content of this document, contact [Shelley Barkley](#).
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Phone the Ag-Info Centre, toll-free in Alberta at 310-FARM (3276), for agricultural information.

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Insect Information

- ▶ <http://www.agric.gov.ab.ca>
 - Maps tab – top right hand corner
- ▶ www.agriculture.alberta.ca/bugs-pest
 - Links to related information
- ▶ In season Call of the Land with Caitlynn Reesor
 - Also available as podcasts
- ▶ Weekly email updates
- ▶ Ag Info Centre
 - 310-FARM (310-3276)
 - Harry, Mark, Neil



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