

Insect Update and Forecast January 2014

Scott Meers
Alberta Agriculture and Rural Development

Part 2

Alberta Insect Pest
Monitoring Network



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Insect Surveys 2013

- ▶ 7 Insects with an annual survey
 - Bertha Armyworm, Diamondback Moth, Cabbage Seedpod Weevil, Wheat Stem Sawfly, Wheat Midge, Pea Leaf Weevil, Grasshoppers
- ▶ Several smaller surveys
 - Western Bean Cutworm, Lygus, Leafhoppers, Cutworms
- ▶ Cereal leaf beetle – U of A



Acknowledgements

- ▶ Agriculture Fieldmen
- ▶ Applied Research Associations
- ▶ Company Agrologists
- ▶ Private Consultants
- ▶ Agriculture Canada
- ▶ AARD technicians
- ▶ Shelley Barkley



Survey Sign-Up

- ▶ 4 (and maybe 5 surveys)
 - PLW, CSPW, WM, WSS, (Alfalfa)
- ▶ Currently random
- ▶ Move to move to preapproved/preselected
- ▶ Sign up
 - Name, county, email, home township, phone
- ▶ ONLY FOR INSECT SURVEYS!!!!!!



Cutworms

- ▶ Early – Army cutworm
- ▶ Later mixture of species
 - Dingy, red back, pale western, others





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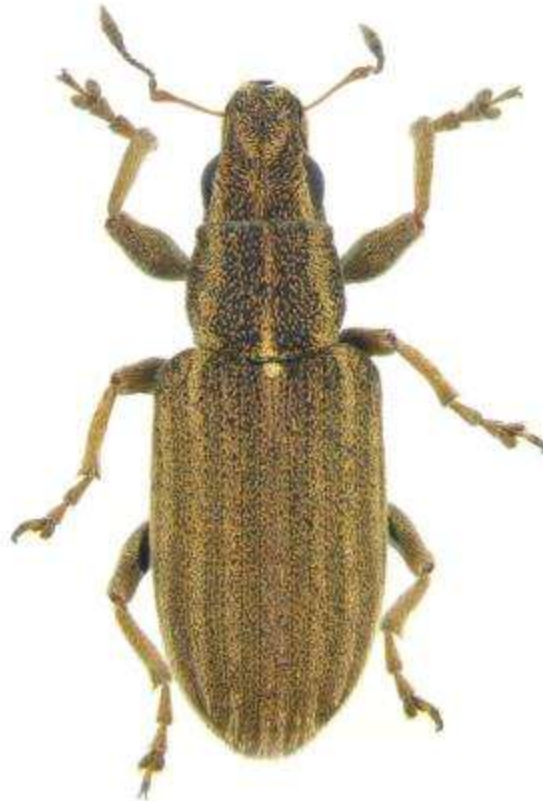
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Cutworm Tracking

- ▶ On Roping the Web
 - ▶ Relies 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



Pea Leaf Weevil



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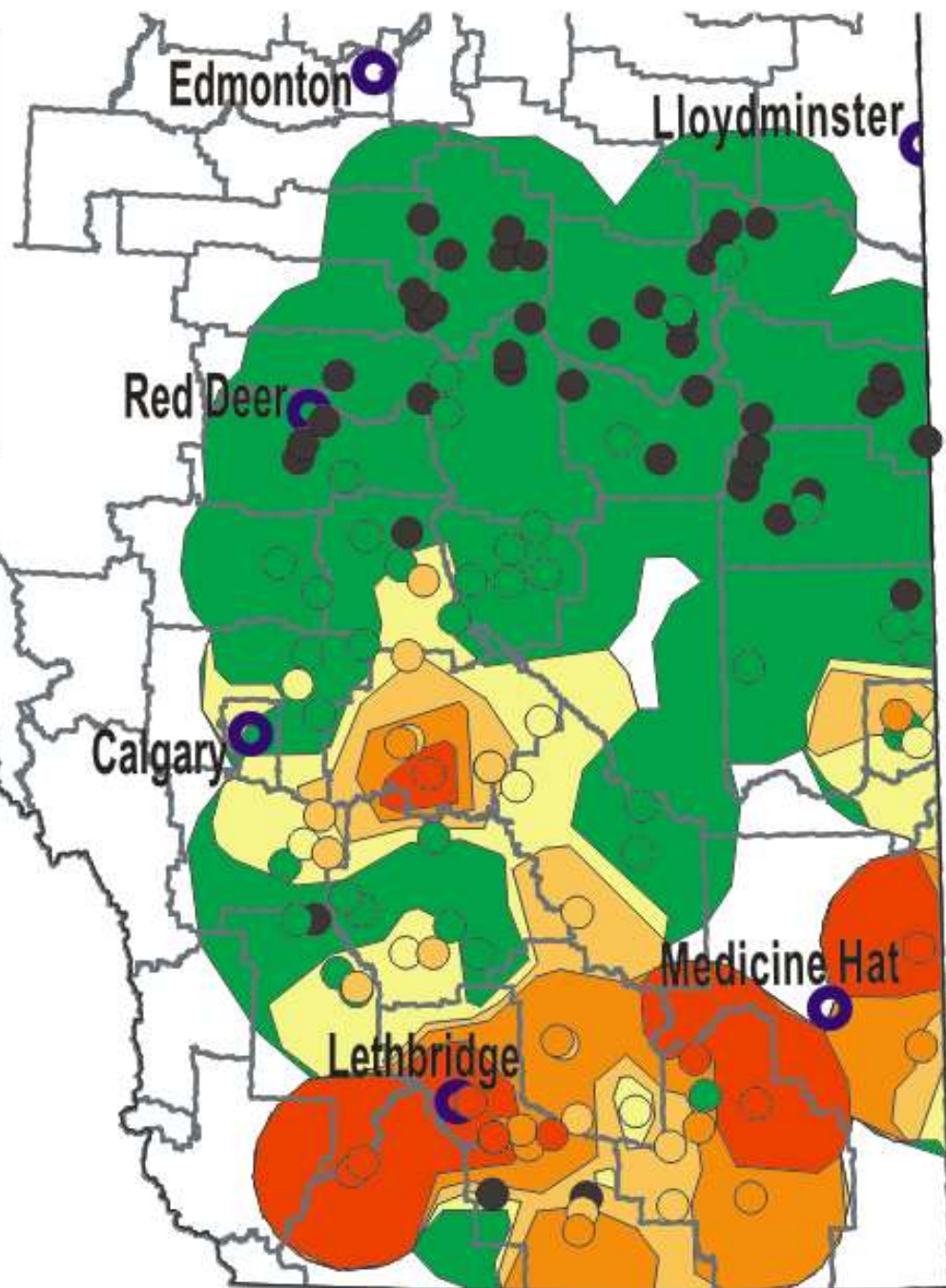
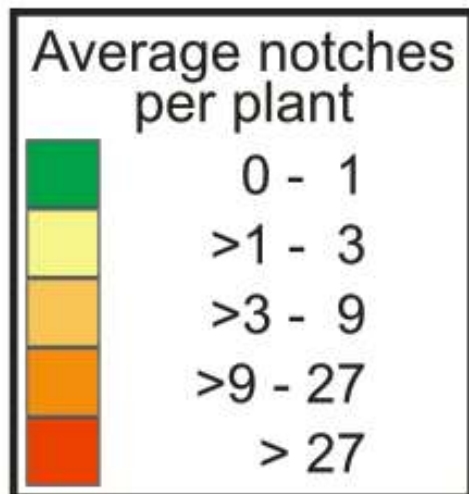
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Pea Leaf Weevil

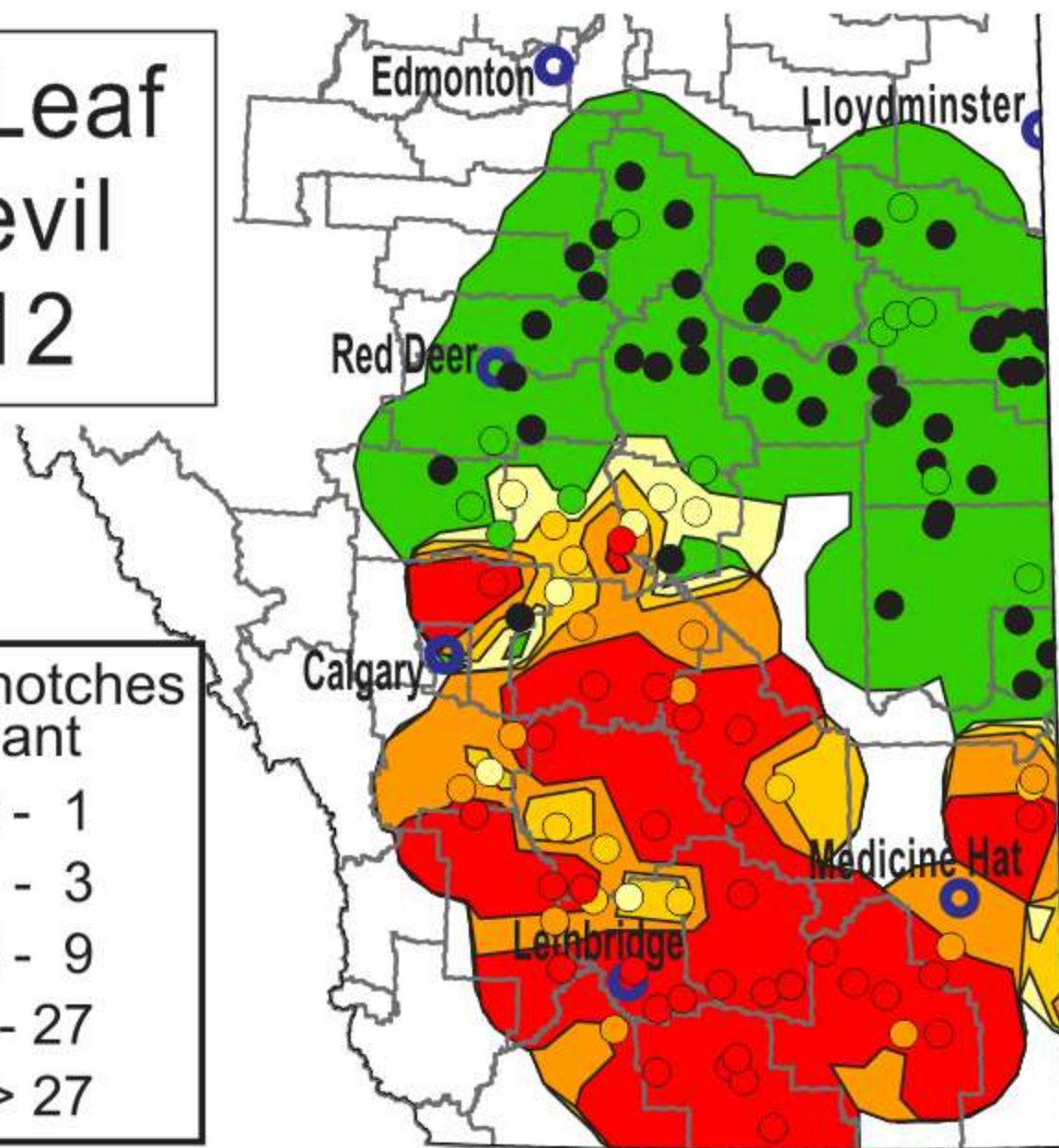
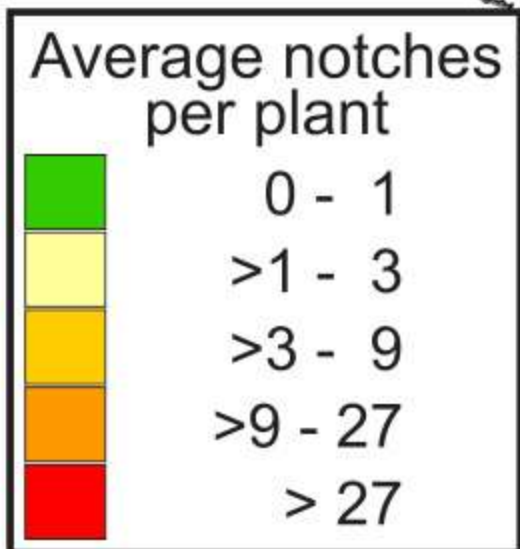


Pea Leaf Weevil 2011

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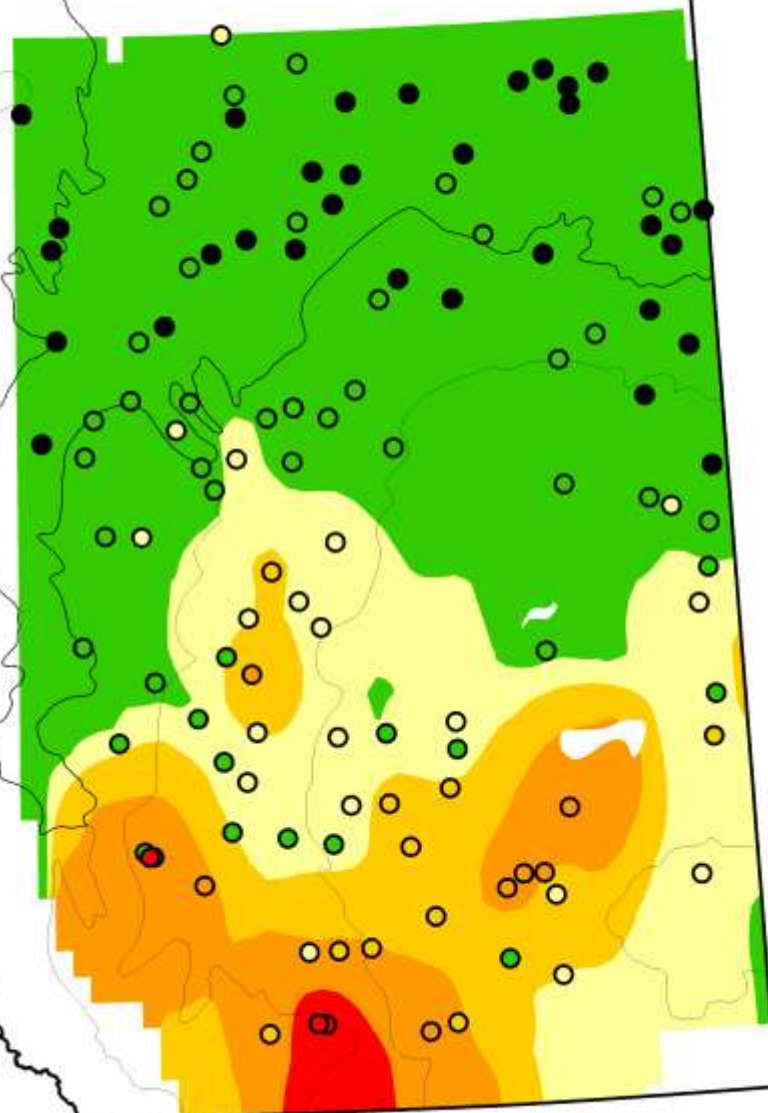
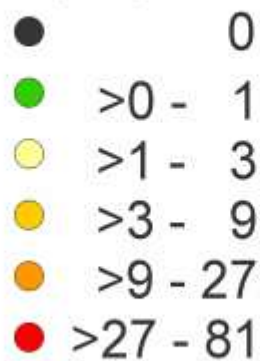
Pea Leaf Weevil 2012



Pea Leaf Weevil 2013

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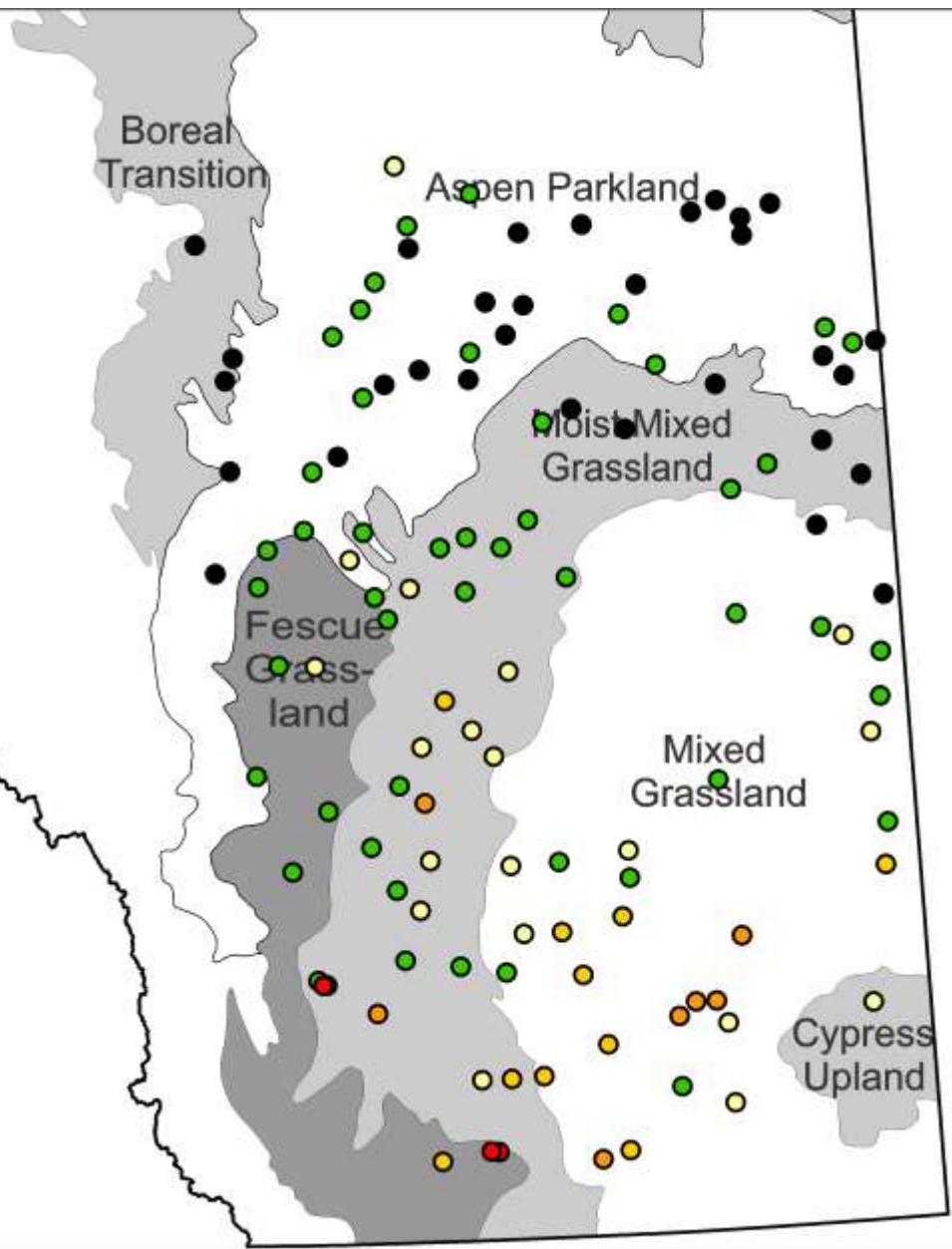
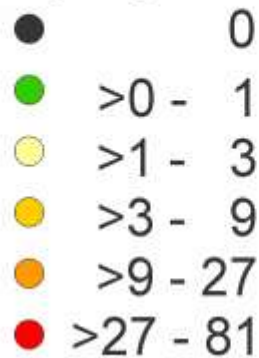
Average notches
per plant



Pea Leaf Weevil 2013

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Average notches
per plant



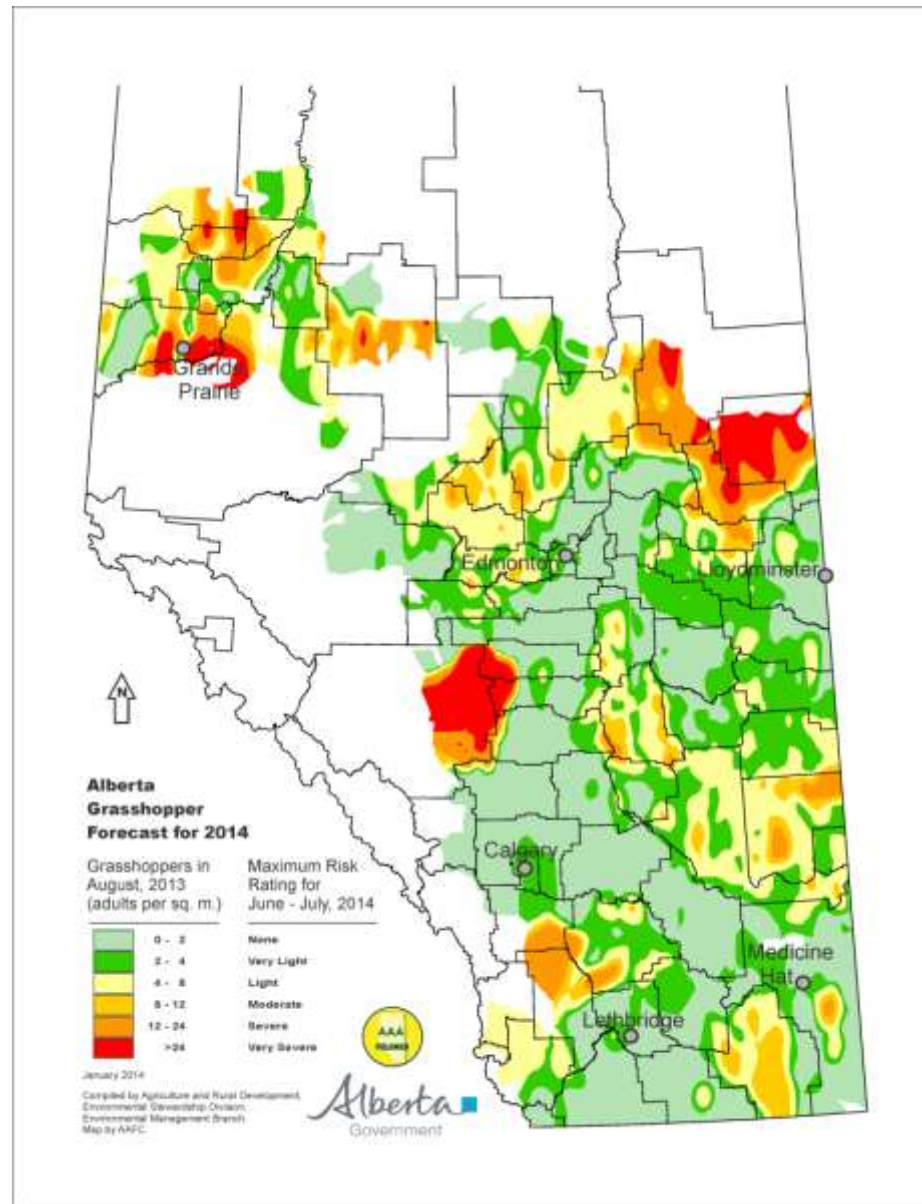
Diamondback Moth



Grasshopper survey

- ▶ Agricultural Fieldmen – 1600 survey sites
- ▶ Peace has pockets of high populations
- ▶ Some high populations in north-central Alberta
- ▶ South and central Alberta generally low



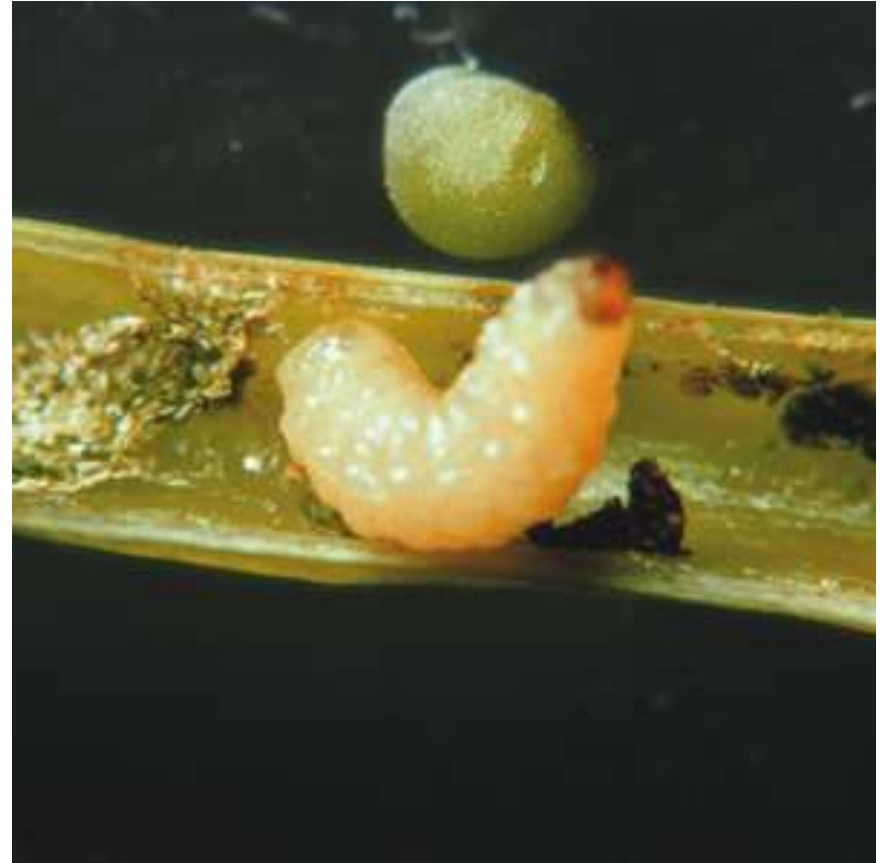


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Cabbage Seed Pod Weevil



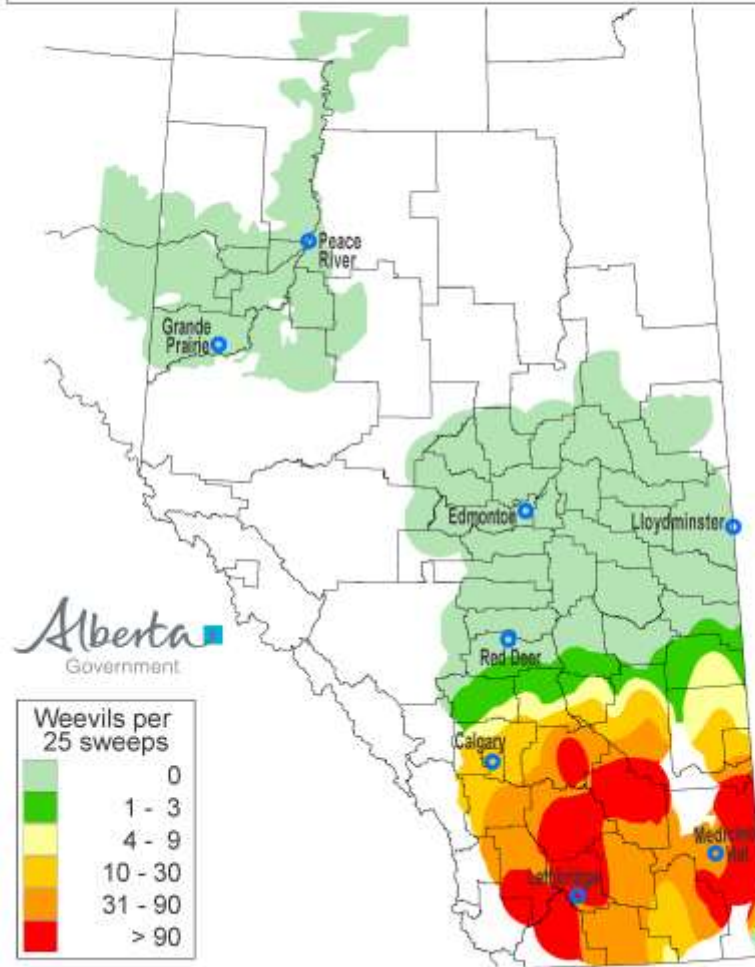
Cabbage Seed Pod Weevil

South of Hiway 1 & counties touching Hiway 1

- ▶ **A perennial pest in Southern Alberta**



Cabbage Seedpod Weevil 2013 Survey



Agrologist input CSPW

- ▶ Phone in results 310-2777
 - Alberta Pest Reporting System
- ▶ Phone in and leave a message
 - # sweeps, # weevils, Location, Surveyor
- ▶ Web based reporting system as well



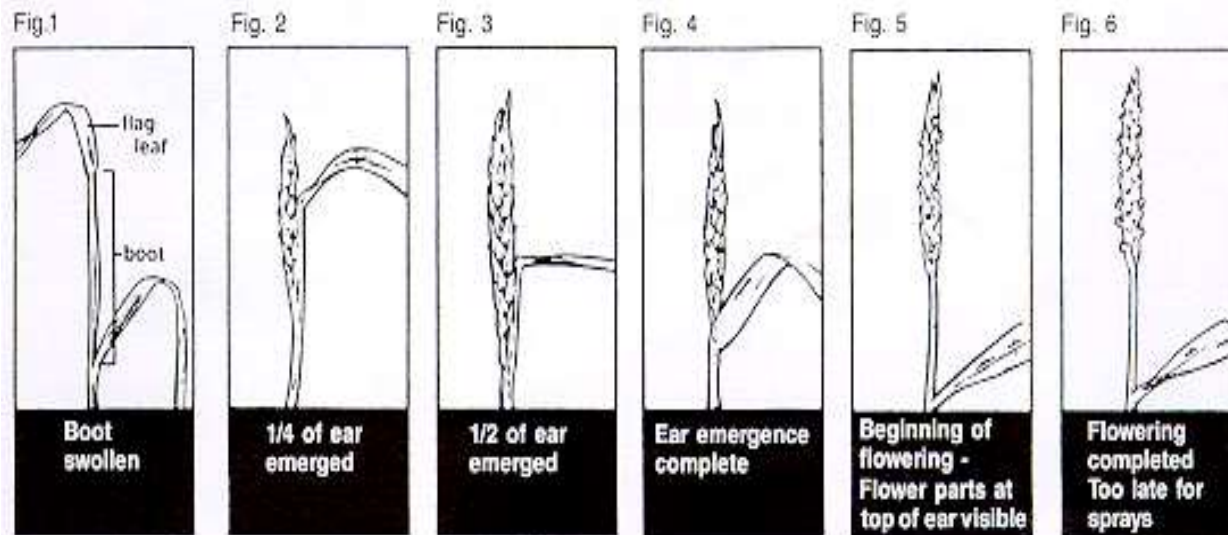
Wheat Midge

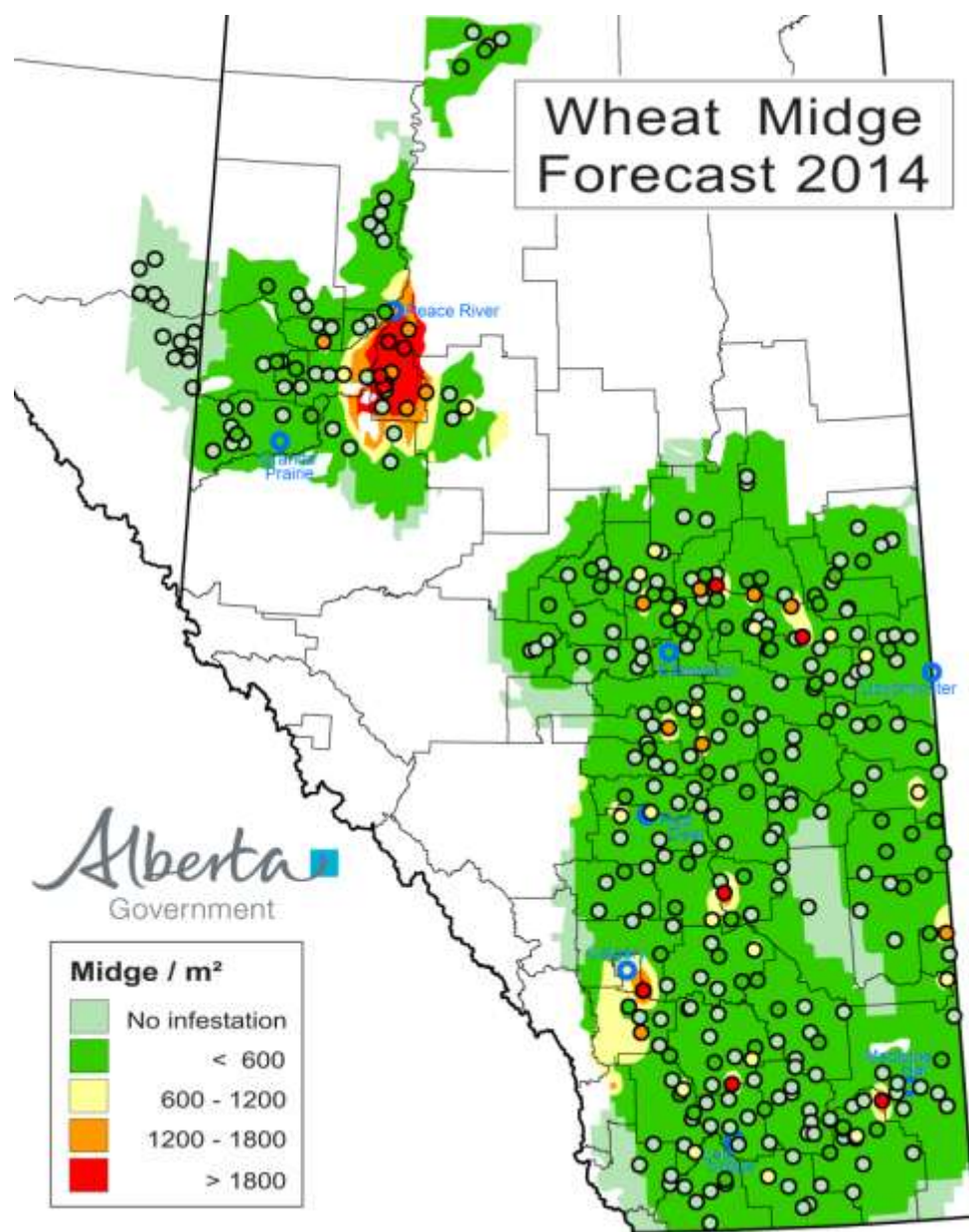
- ▶ Increase this year
- ▶ Found throughout irrigated area but generally at low levels.
- ▶ 298 samples in 60 Counties
 - Big problems in Peace region



Crop Susceptibility

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





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Parasitism

► Wasp

- *Macroglenes penetrans*
- higher levels in established areas, lower in new areas
- can greatly impact population

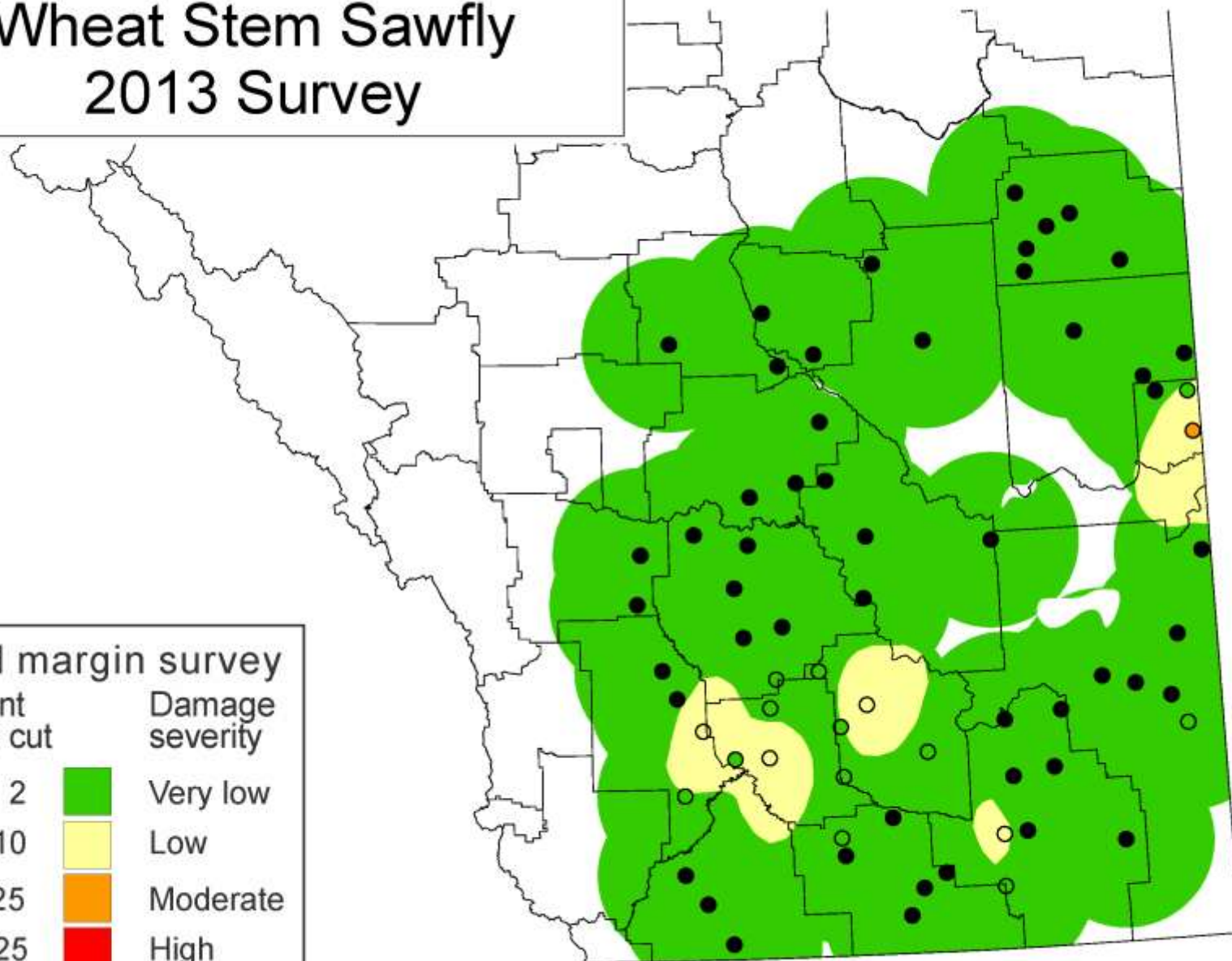
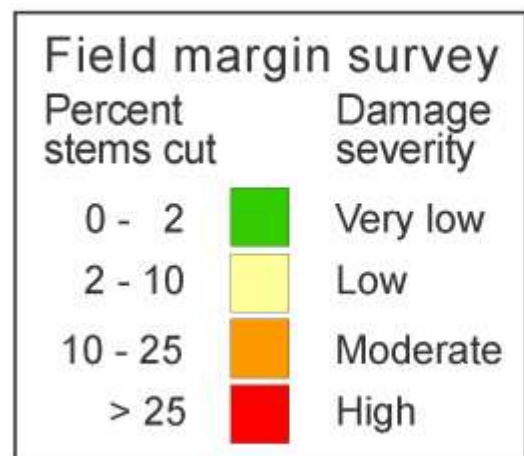


Wheat Stem Sawfly

- ▶ 75 fields in 18 municipalities
- ▶ Generally populations are low but there are still pockets of sawfly
- ▶ Dry years – especially a dry August favors population increases
- ▶ Parasitism and solid stem wheat are major population drivers



Wheat Stem Sawfly 2013 Survey



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





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CLB Larval Feeding Damage



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CLB larval parasitoid
Tetrastichus julis



Bertha Armyworm



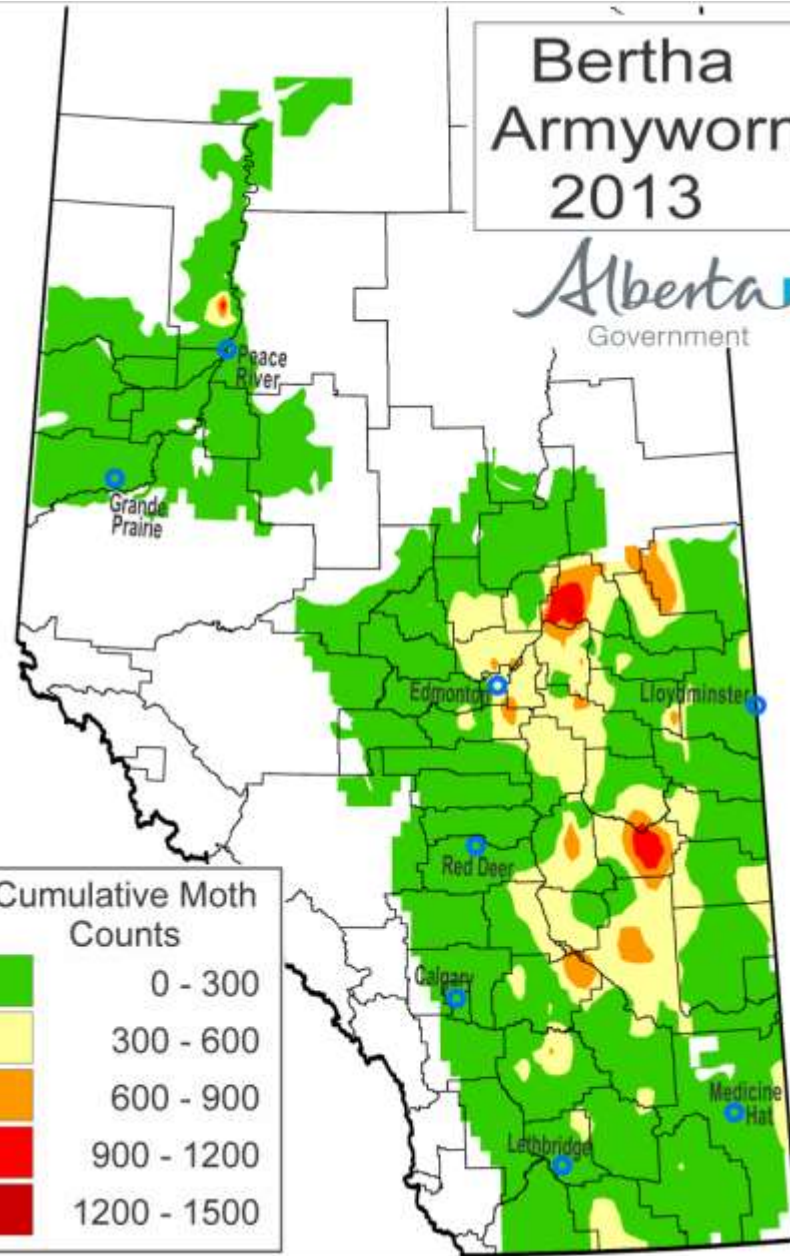
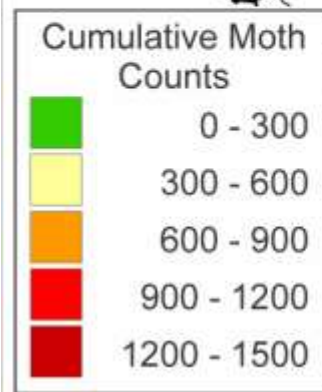
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Bertha Armyworm 2013

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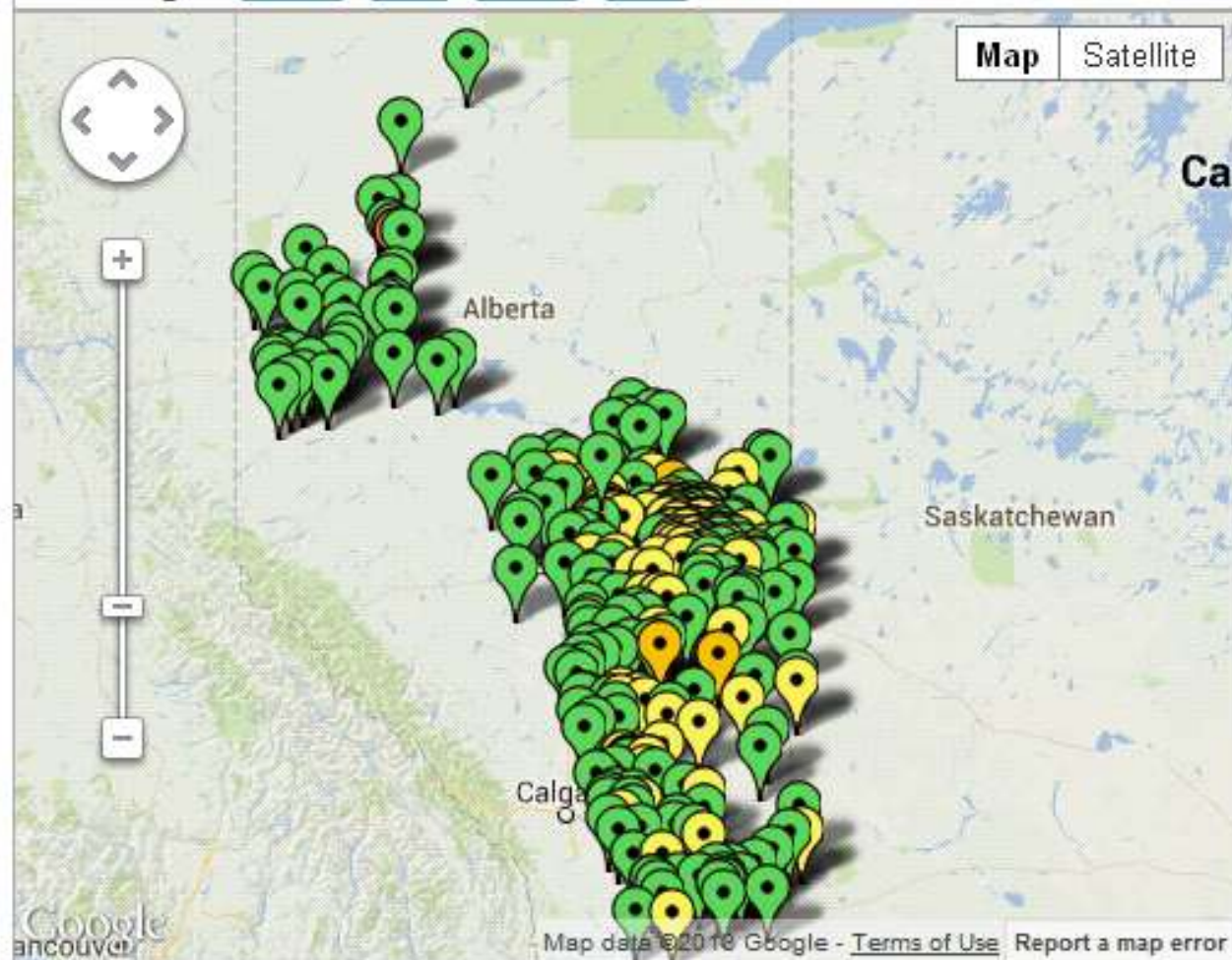
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Bertha Armyworm Survey Results (forecast)

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



There are [285 Trap Locations](#) that have Any Risk

Any Risk Trap Locations

Show Locations with :

Any Risk

Print

[Athabasca Location #1](#)

Low [23]

[Athabasca Location #2](#)

Low [144]

[Athabasca Location #3](#)

Low [149]

[Athabasca Location #4](#)

Low [250]

[Athabasca Location #5](#)

Low [14]

[Athabasca Location #6](#)

Low [118]

Legend

Cumulative Number

Larval Infestation Risk Level

Potato Psyllid



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Alfalfa Weevil



Bumble Flower Beetle



Tim Willms
Via Twitter

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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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Wheat Midge



Bertha Armyworm



Cabbage Seedpod Weevil



Diamondback Moth



Grasshopper



Pea Leaf Weevil



Wheat Stem Sawfly

Links

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

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



For more information about the content of this document, contact [Shelley Barkley](#).

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SHARE



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