



PRAIRIE PEST
MONITORING NETWORK

Two-striped Grasshopper
Meghan Vankosky, AAFC

Distribution and Risk Maps for Insect Pests based on 2023 Surveys

Presented by Meghan Vankosky
Agriculture and Agri-Food Canada, Saskatoon

With funding and support from*:



*List limited to current direct funders

Prairie Insect Monitoring Team

Data provided through partnership with:

- Alberta Agriculture and Irrigation
- Saskatchewan Ministry of Agriculture
- Manitoba Agriculture
- Western Grains Research Foundation
- Saskatchewan Canola Development Commission
- Saskatchewan Pulse Growers
- Manitoba Canola Growers Association
- Alberta Grains
- Saskatchewan Wheat Development Commission
- Prairie Oat Growers Association
- Manitoba Crop Alliance
- Manitoba Pulse and Soybean Growers
- Saskatchewan Flax Development Commission
- BC Grain Producers Association
- Saskatchewan Crop Insurance Corporation
- Canola Council of Canada
- Alberta Canola Producers Commission
- Association of Alberta Agricultural Fieldmen
- Farmers and agronomists from across the Prairies

Maps prepared by David Giffen, Ross Weiss, and Jon Williams (Agriculture and Agri-Food Canada – Saskatoon Research and Development Centre).

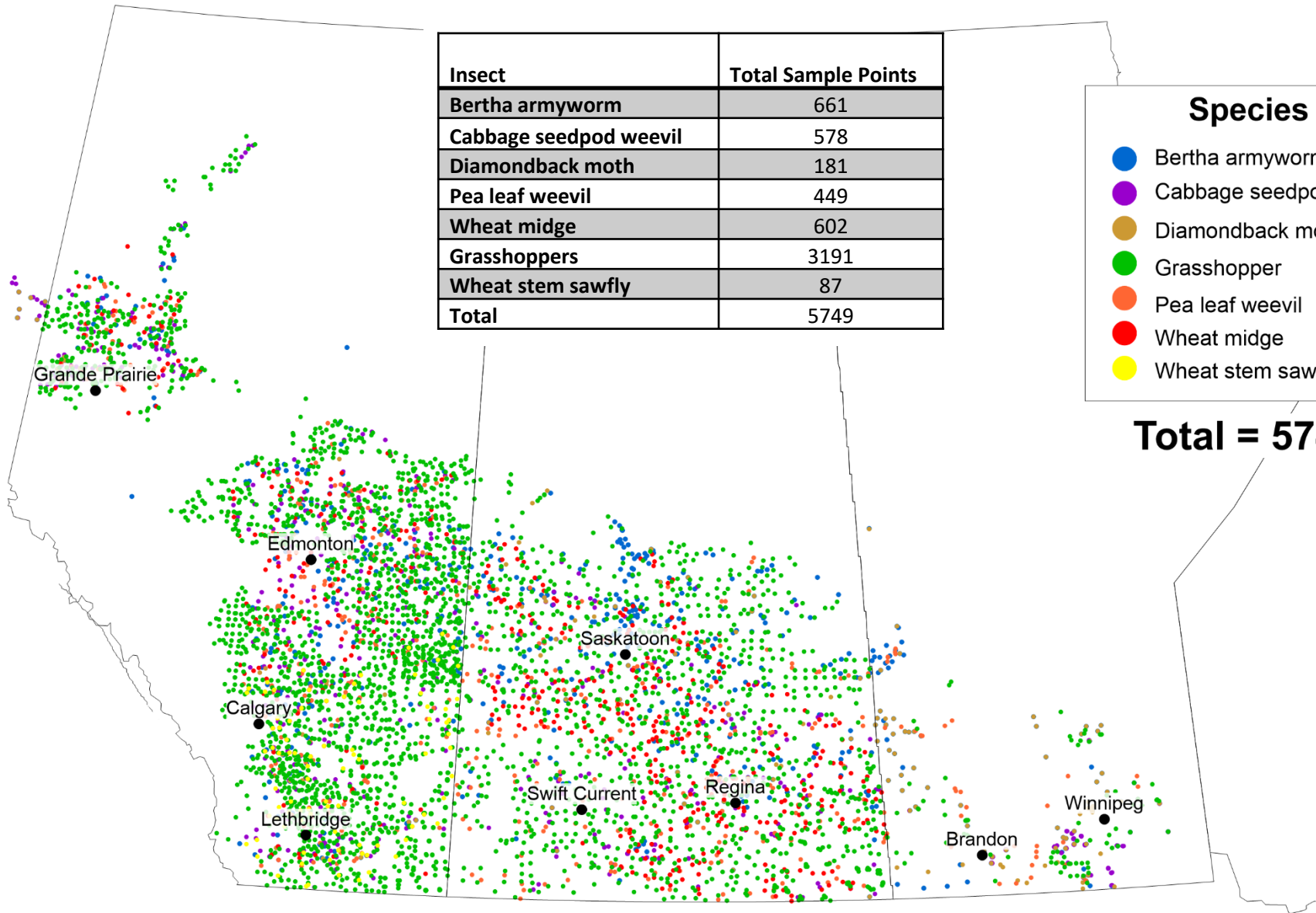


Insect Survey Stops 2023

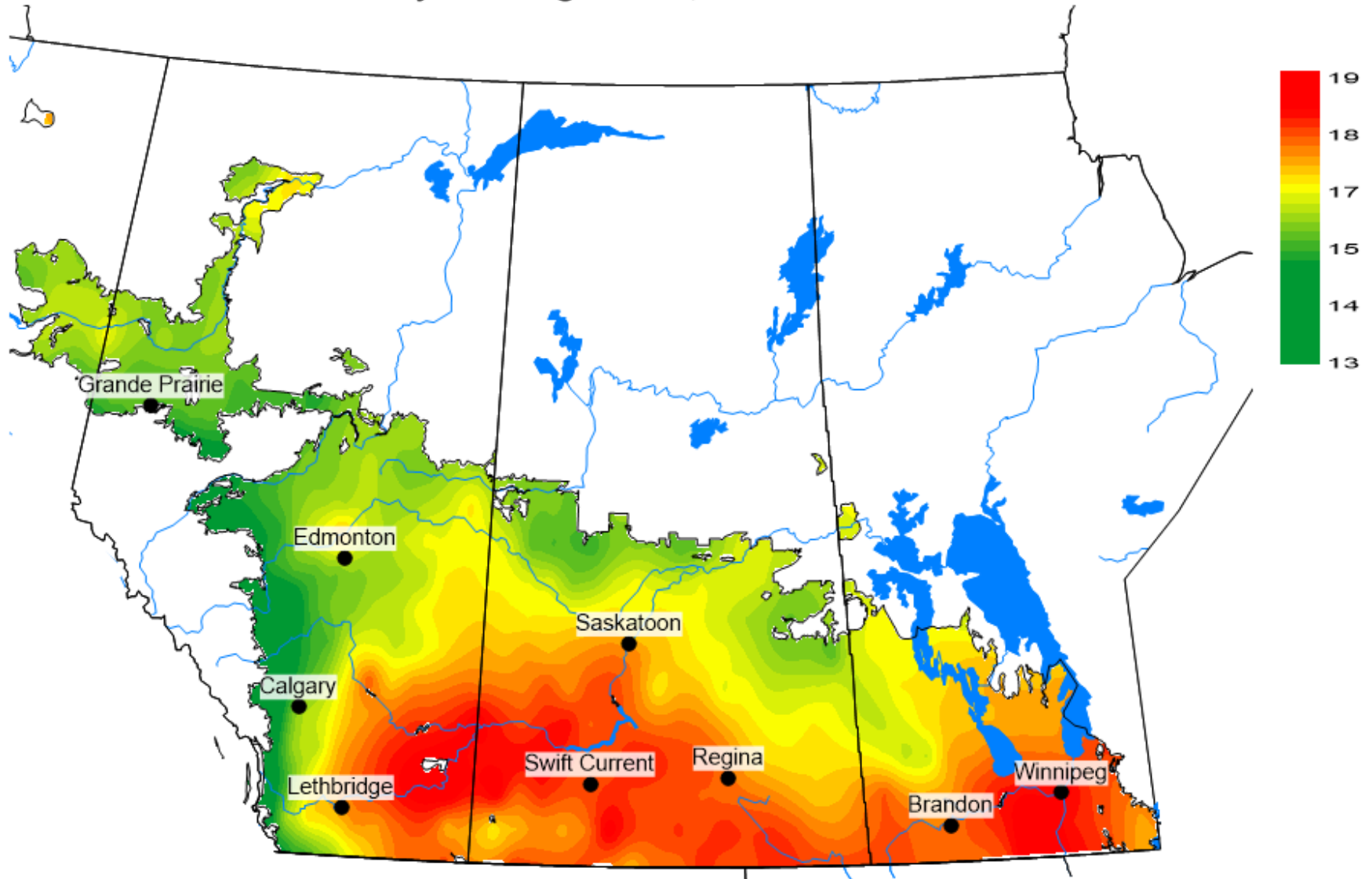
Insect	Total Sample Points
Bertha armyworm	661
Cabbage seedpod weevil	578
Diamondback moth	181
Pea leaf weevil	449
Wheat midge	602
Grasshoppers	3191
Wheat stem sawfly	87
Total	5749



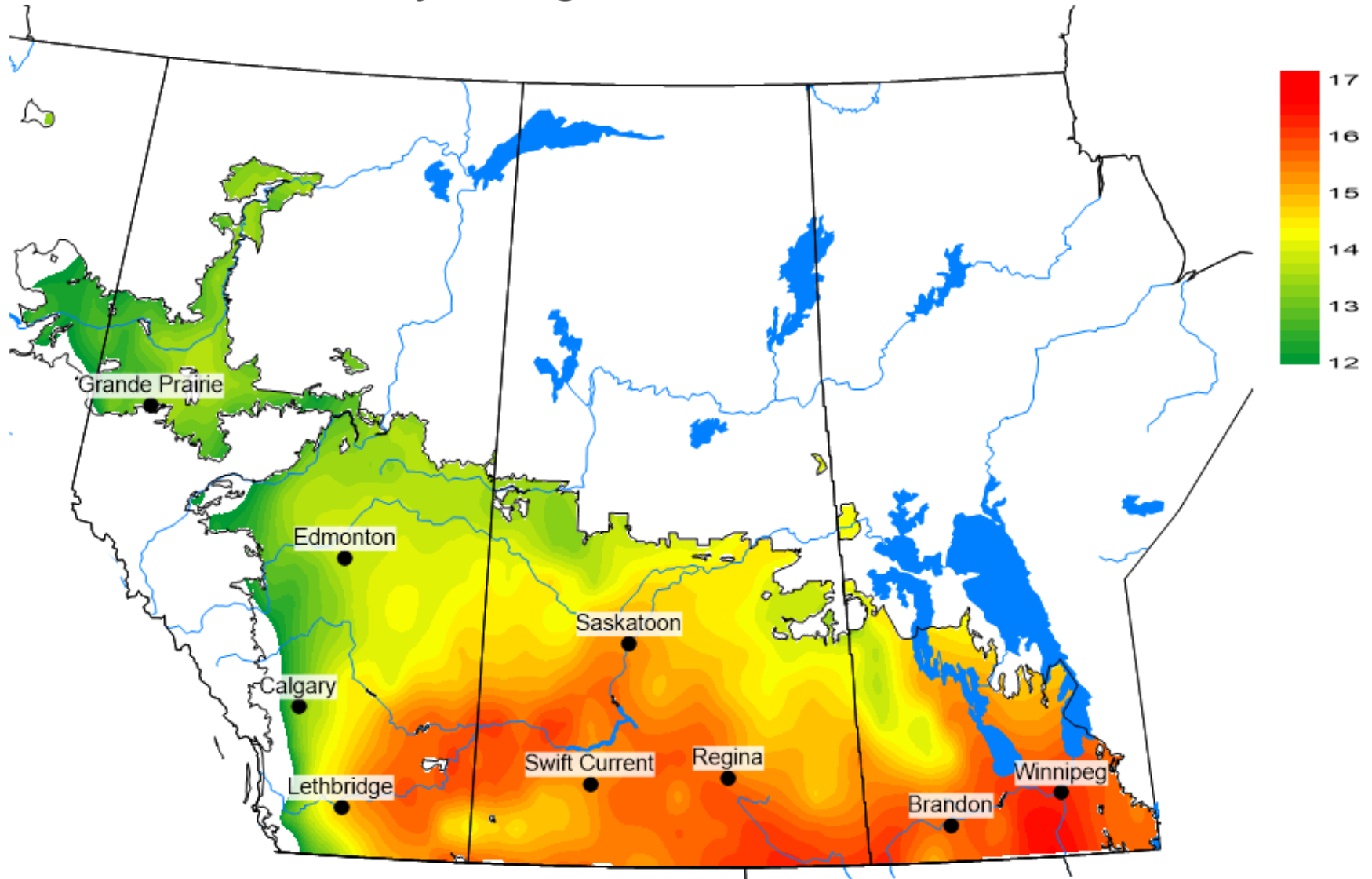
Total = 5749



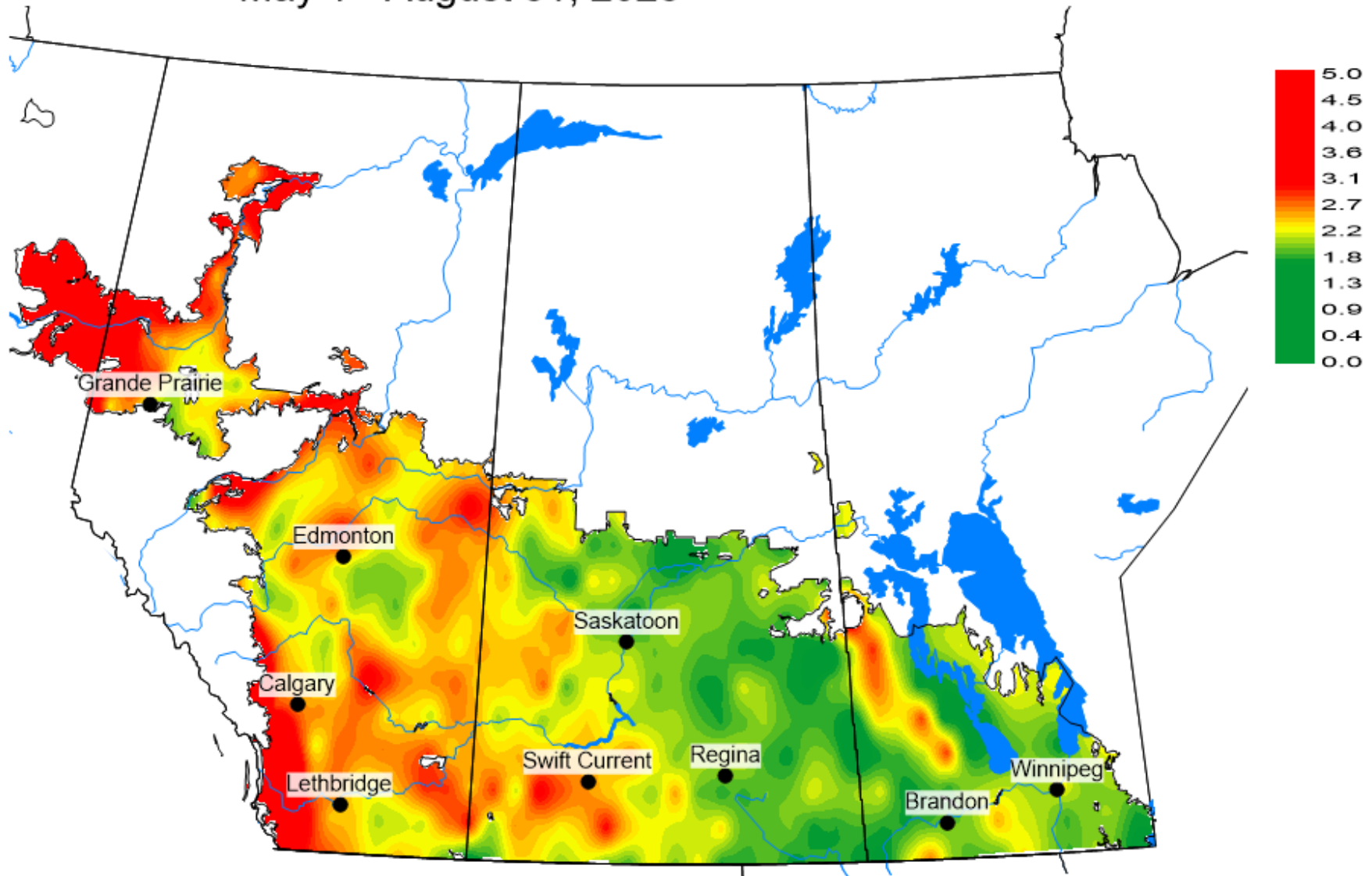
Growing season average temperature ($^{\circ}\text{C}$)
Observed (Avg= 16.5°C)
May 1 - August 31, 2023



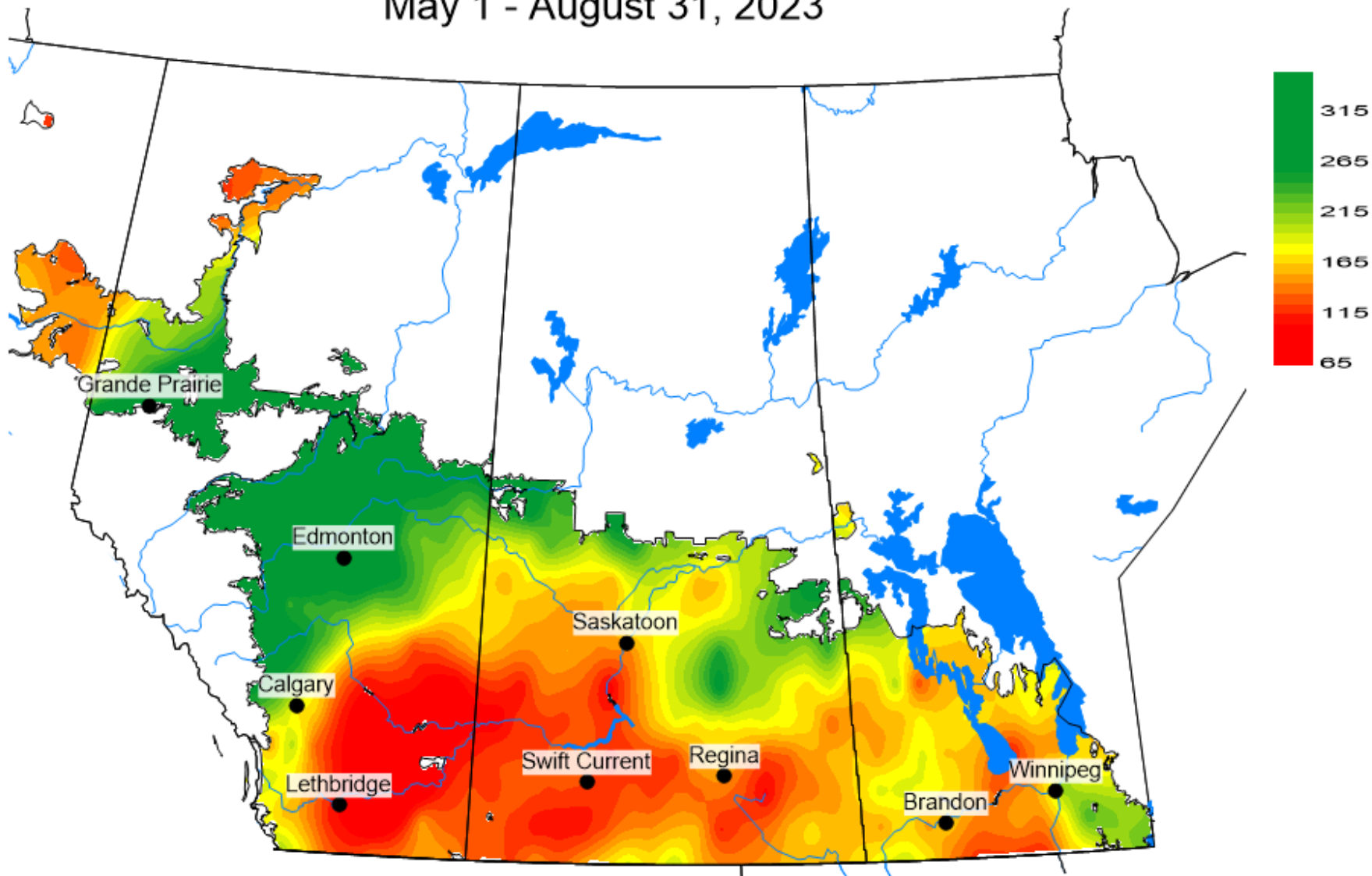
Growing season average temperature ($^{\circ}\text{C}$)
Long term normal (Avg= 13.9°C)
May 1 - August 31



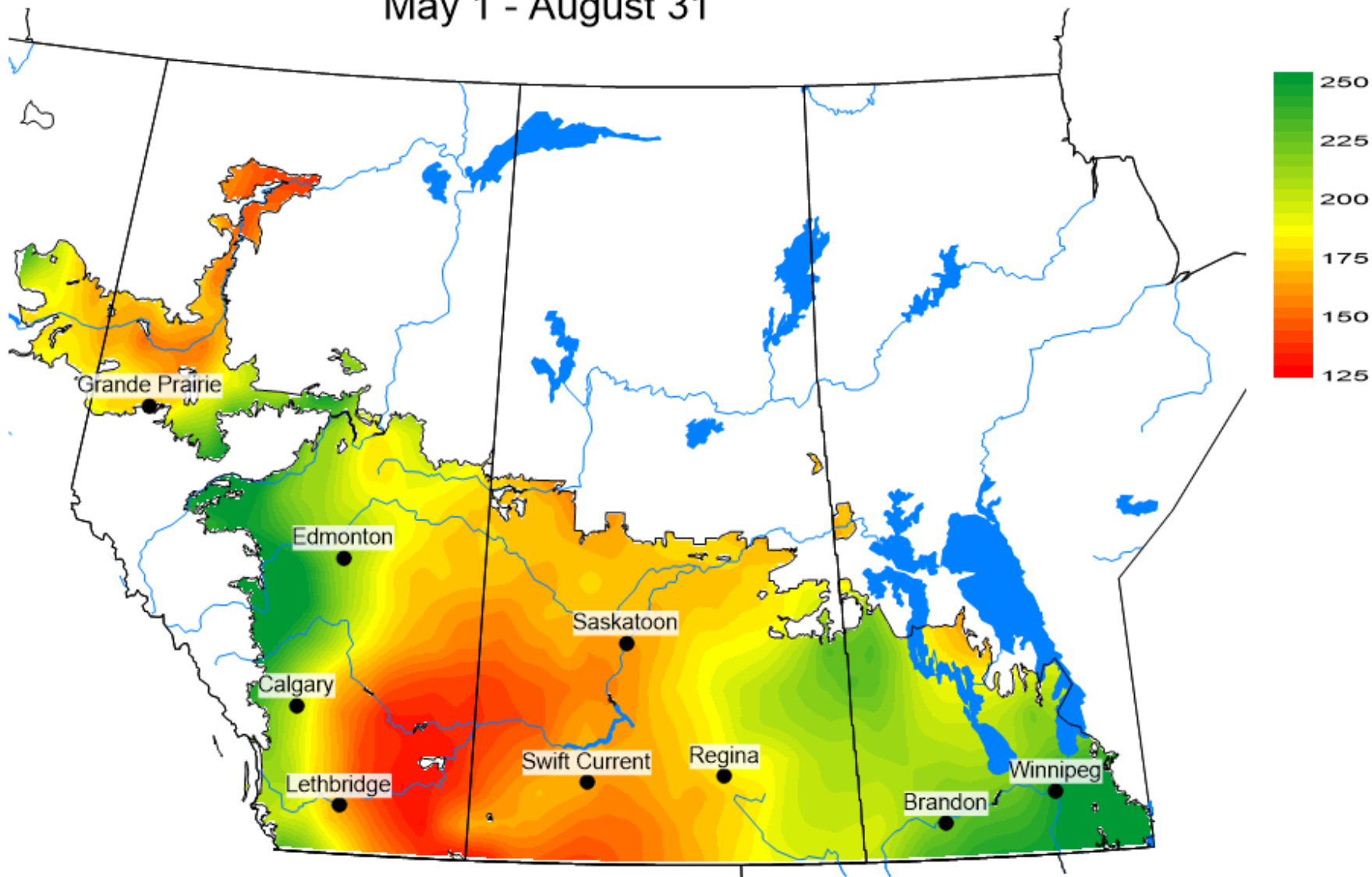
Growing season temperature difference from normal ($^{\circ}\text{C}$)
Average = 2.6°C
May 1 - August 31, 2023



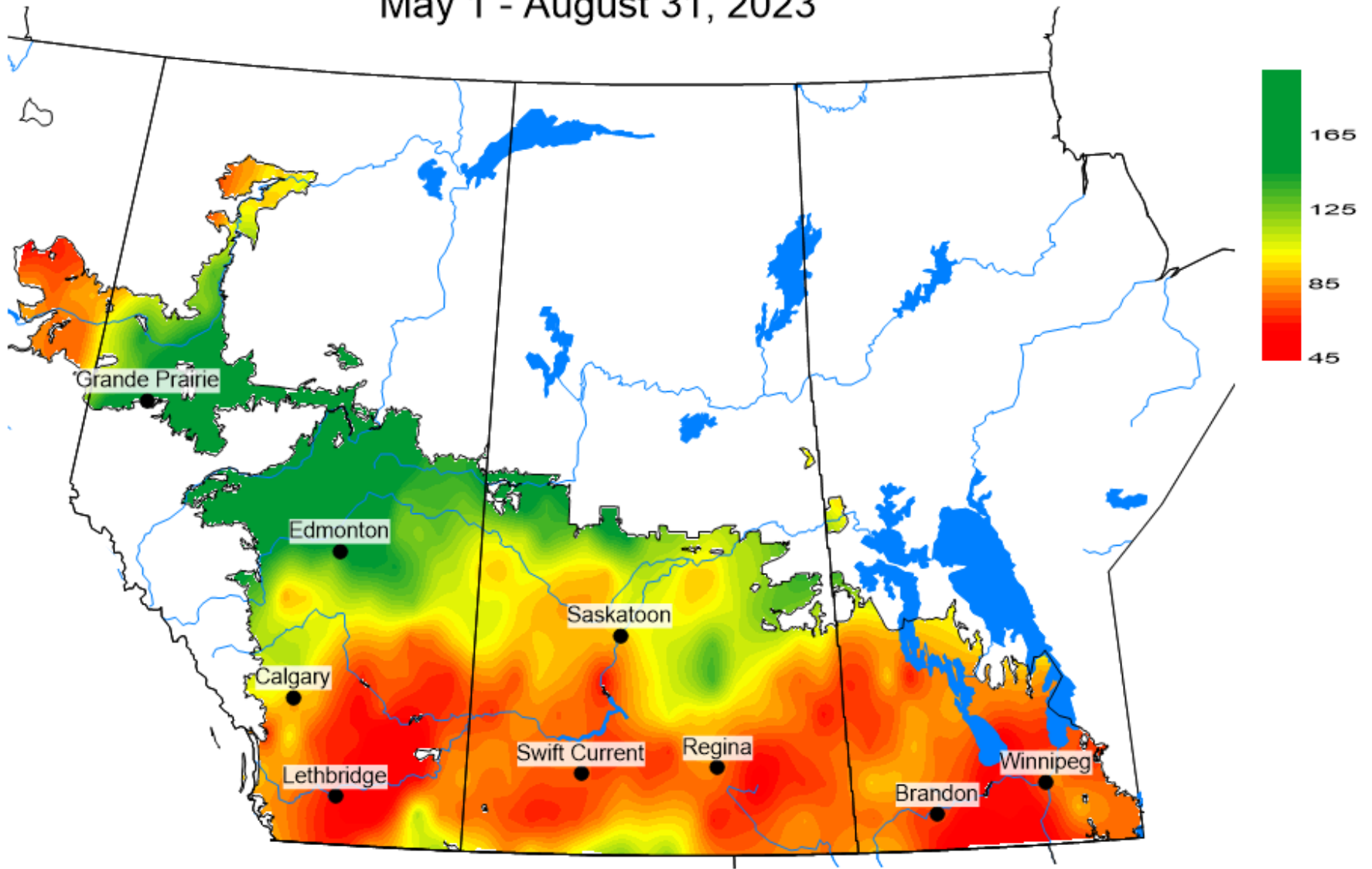
Growing Season cumulative rain (mm) Observed (Avg= 207 mm) May 1 - August 31, 2023



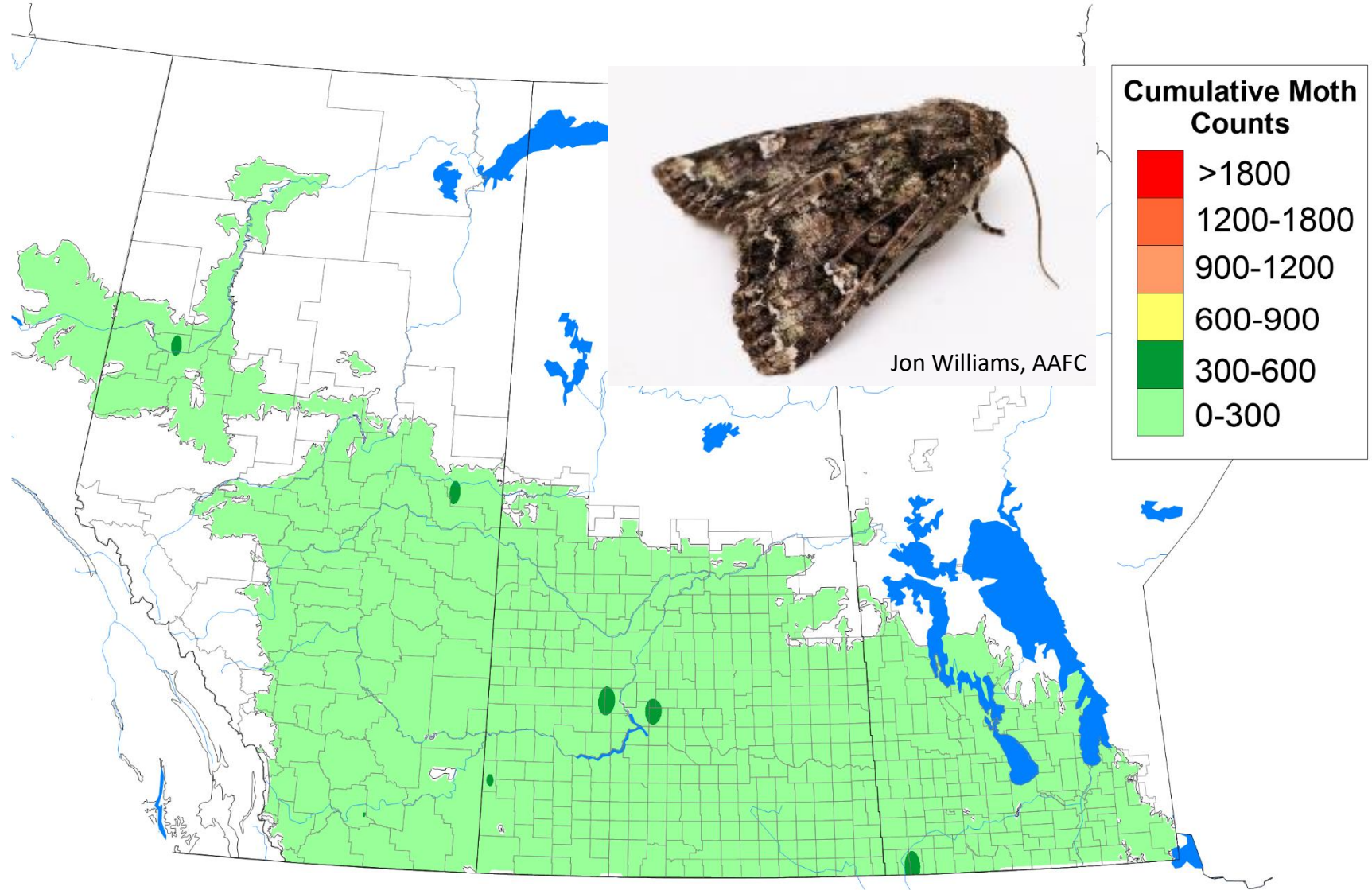
Growing Season cumulative rain (mm)
Climate normals (Avg=190 mm)
May 1 - August 31

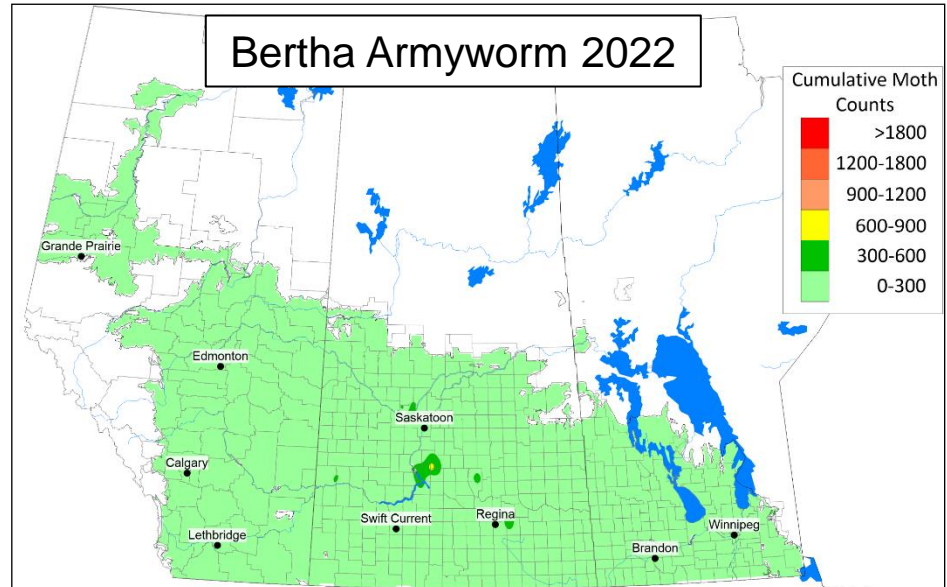
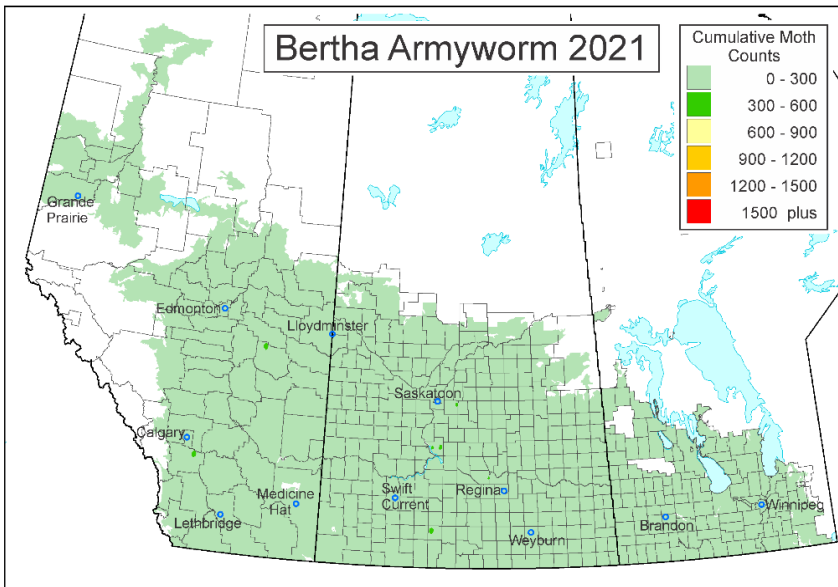
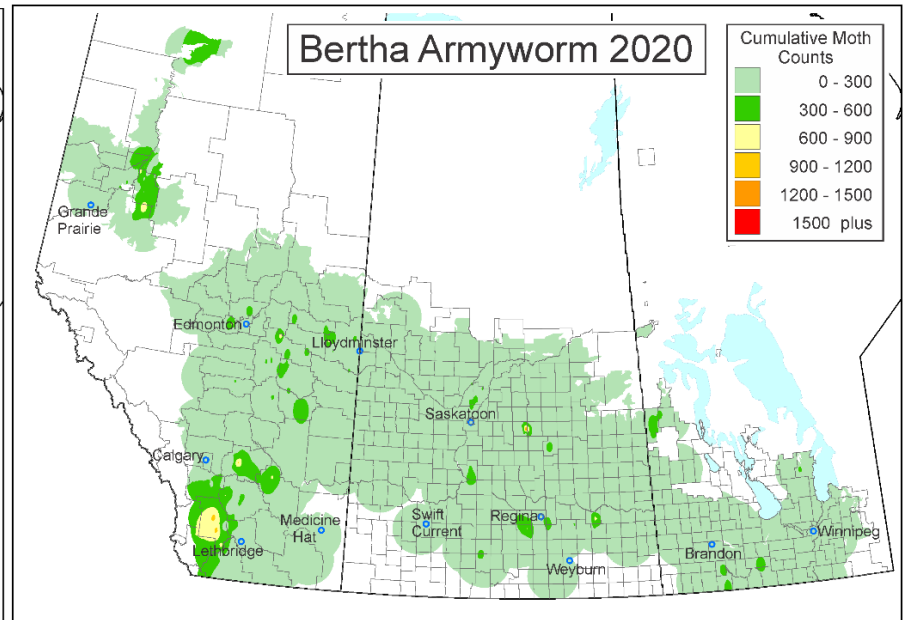
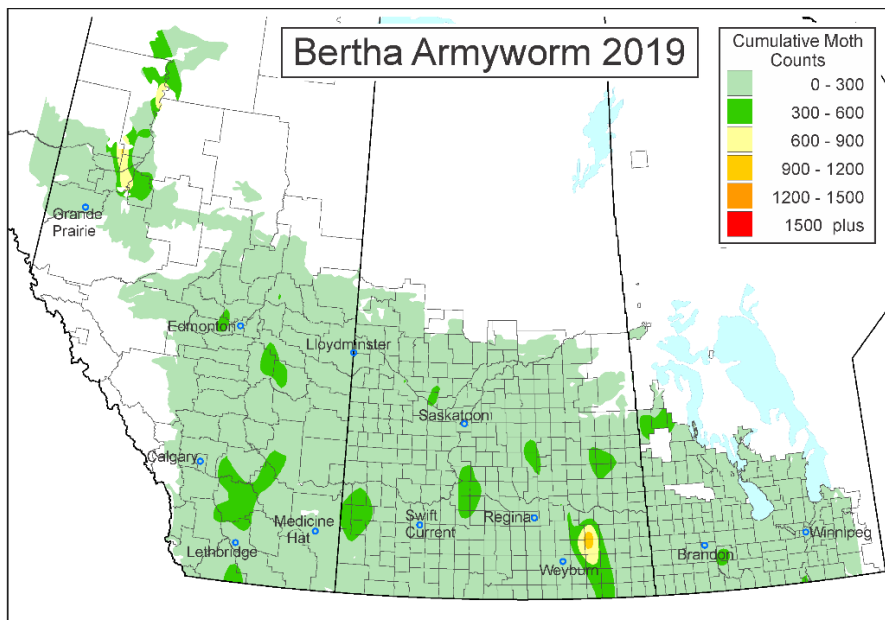


Growing Season cumulative rain (%)
Percent of climate normal (95%)
May 1 - August 31, 2023



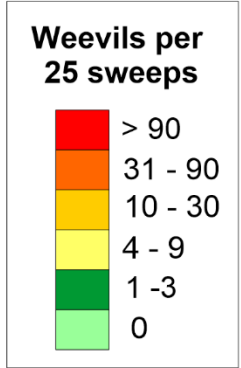
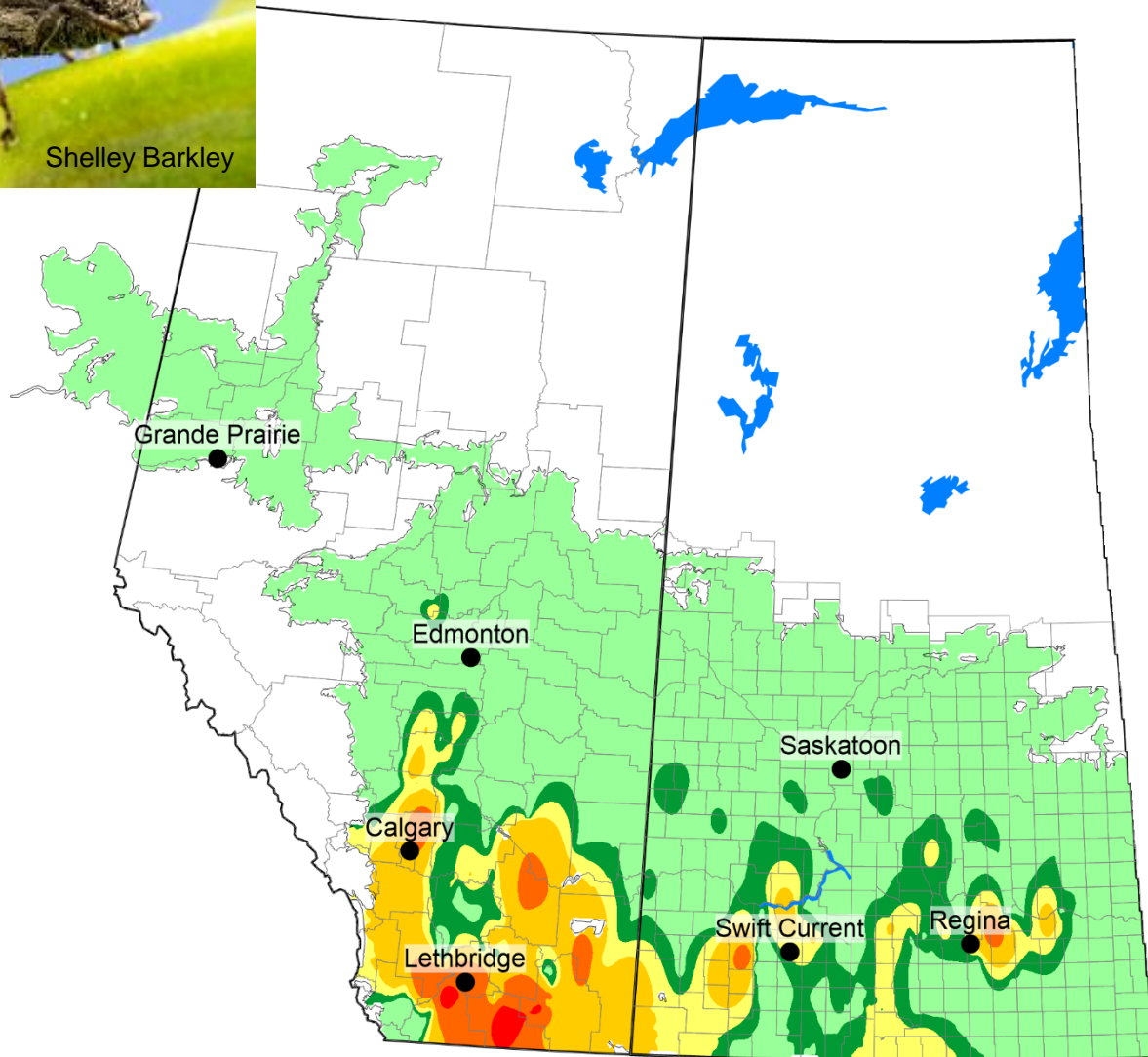
Bertha armyworm 2023 Survey



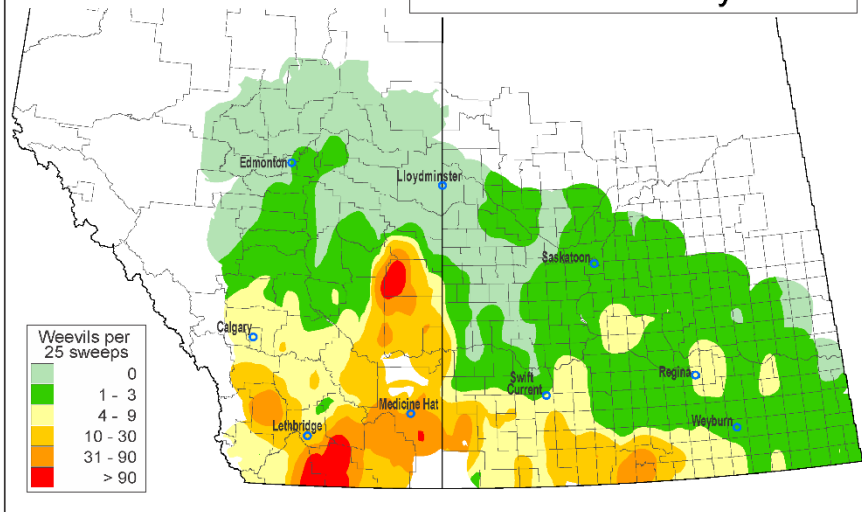


Maps by David Giffen and Ross Weiss (AAFC-Saskatoon)

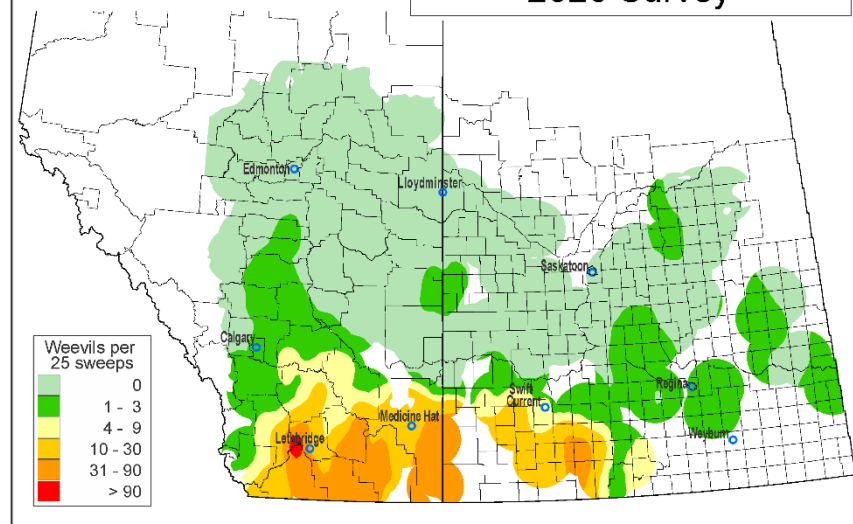
Cabbage Seedpod Weevil 2023 Survey



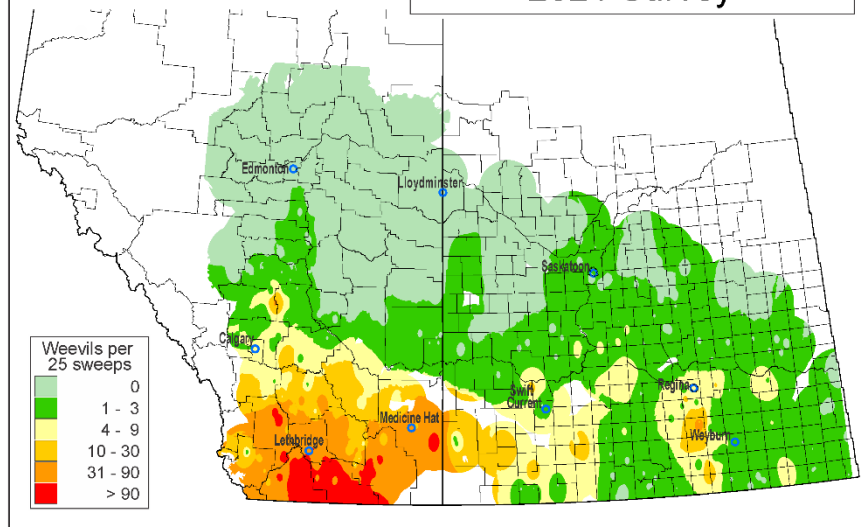
Cabbage Seedpod Weevil
2019 Survey



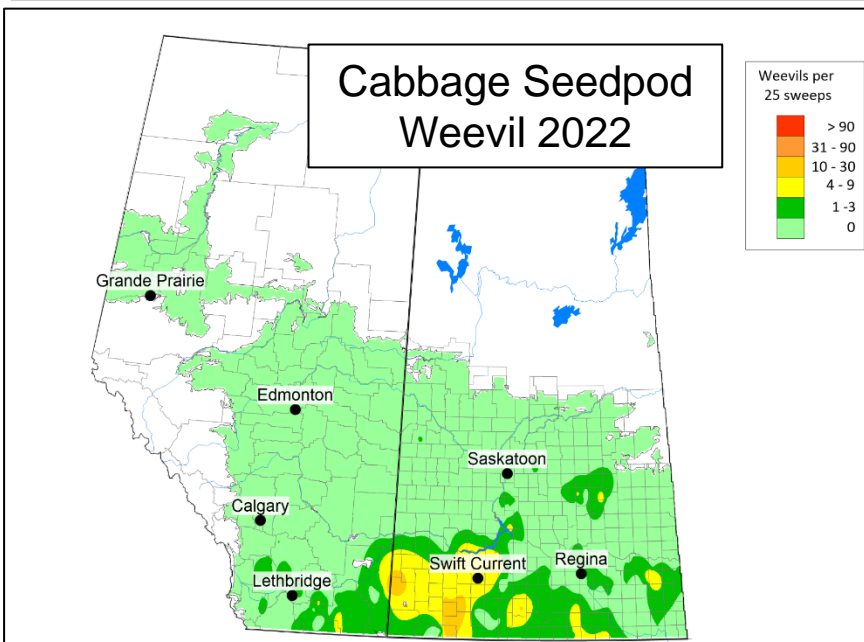
Cabbage Seedpod Weevil
2020 Survey



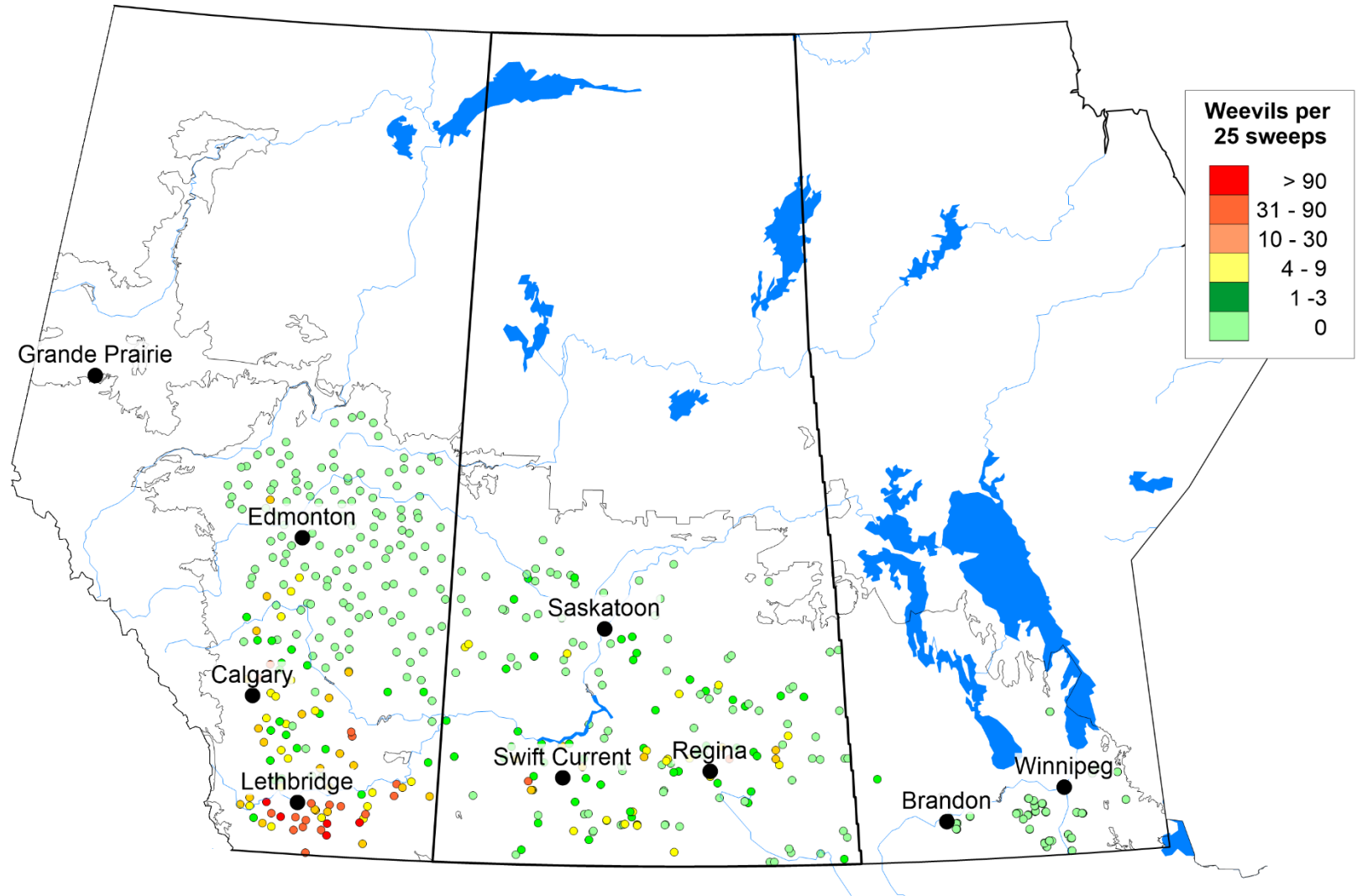
Cabbage Seedpod Weevil
2021 Survey



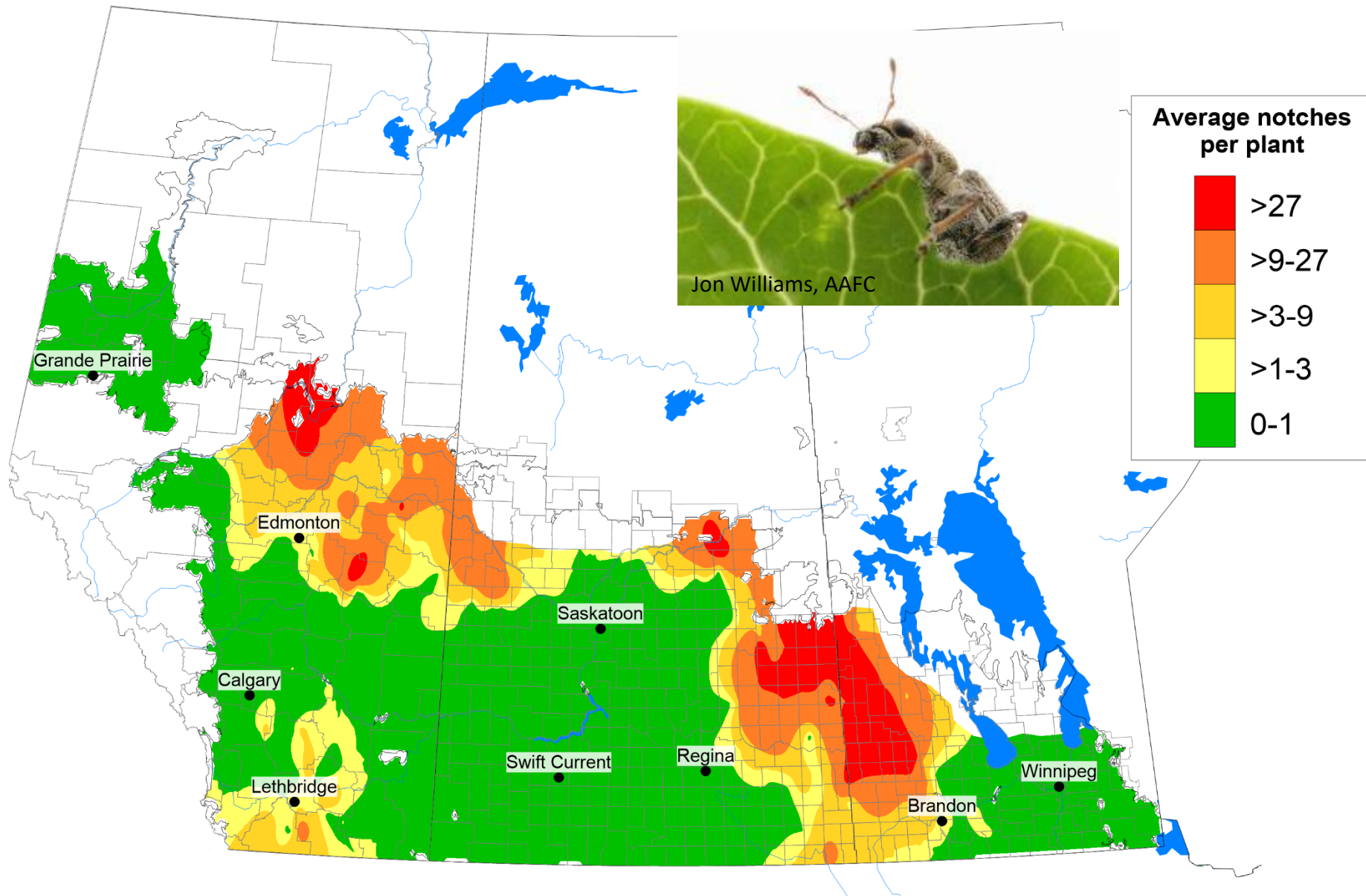
Cabbage Seedpod Weevil
2022

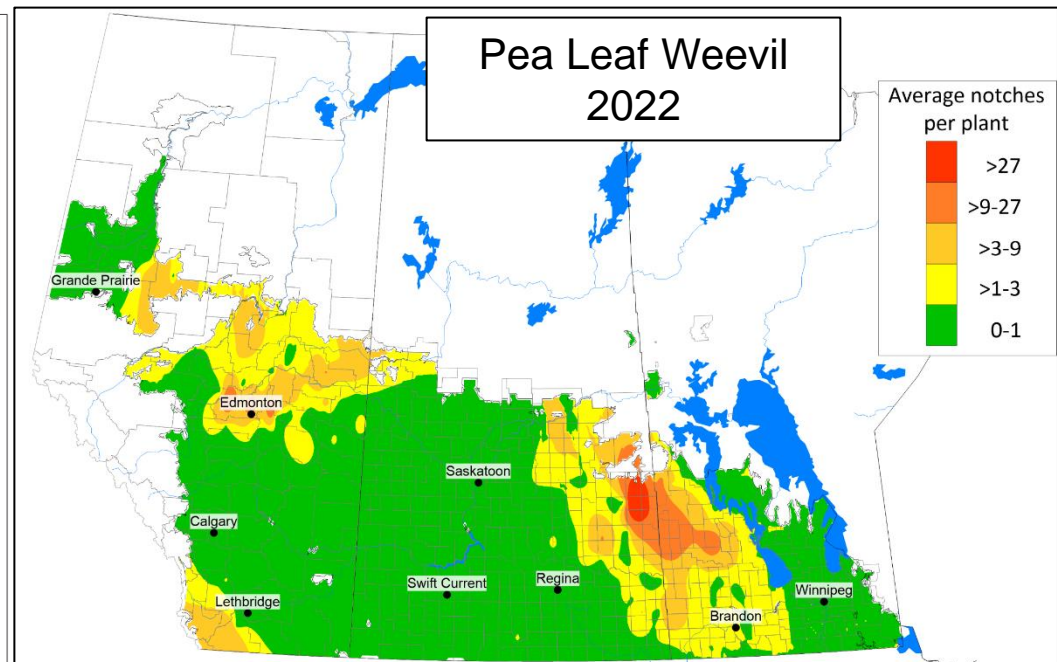
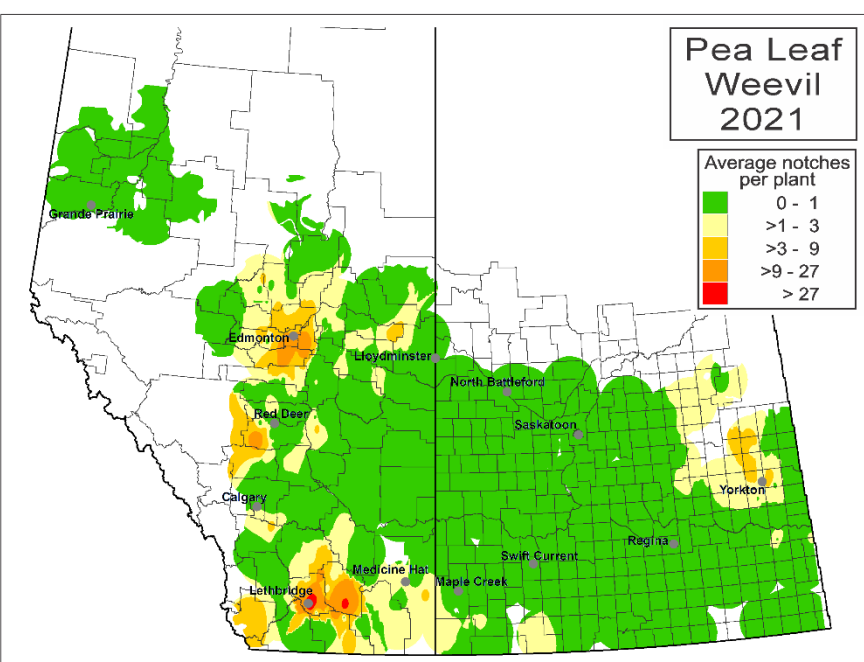
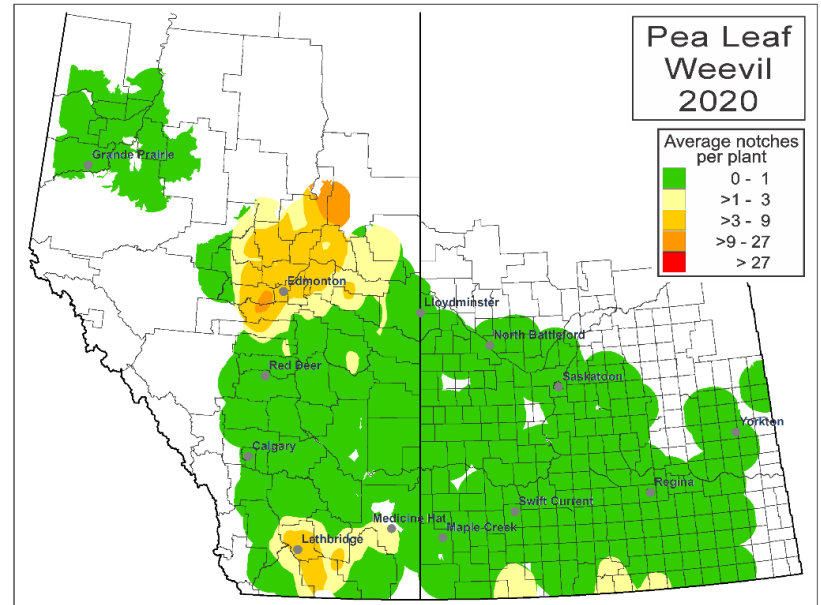
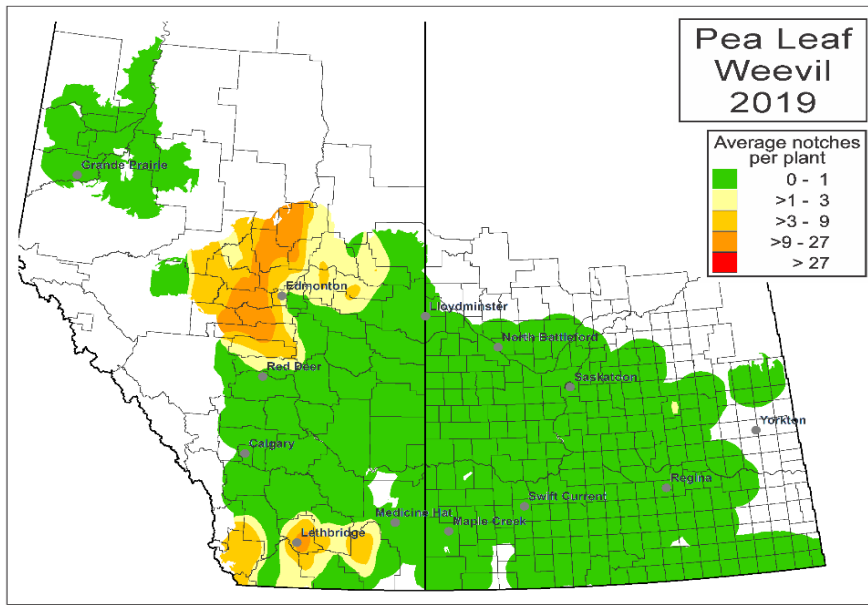


Cabbage Seedpod Weevil 2023 Survey



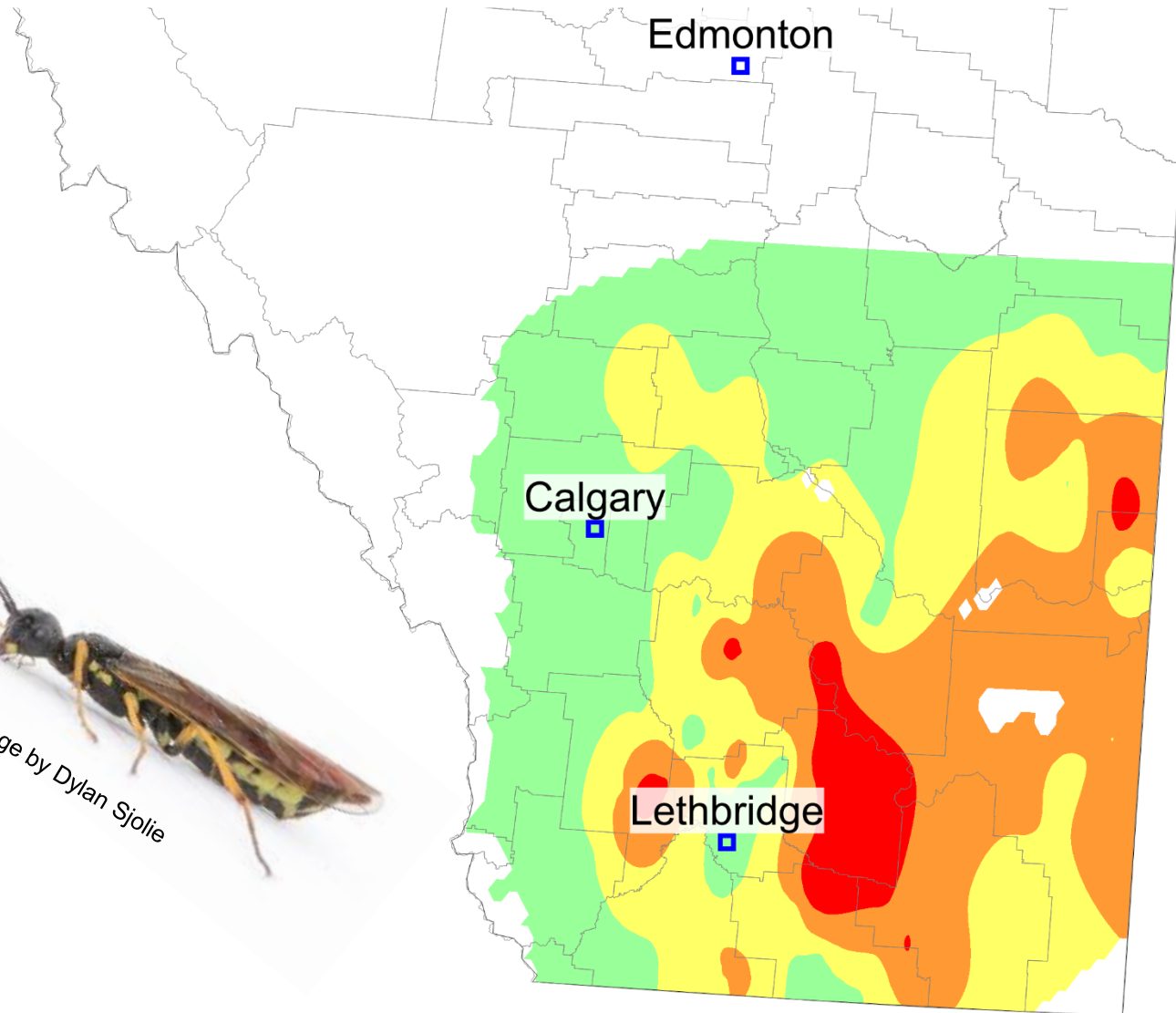
Pea Leaf Weevil 2023 Survey





Maps by David Giffen and Ross Weiss (AAFC-Saskatoon)

Wheat Stem Sawfly 2023 Survey



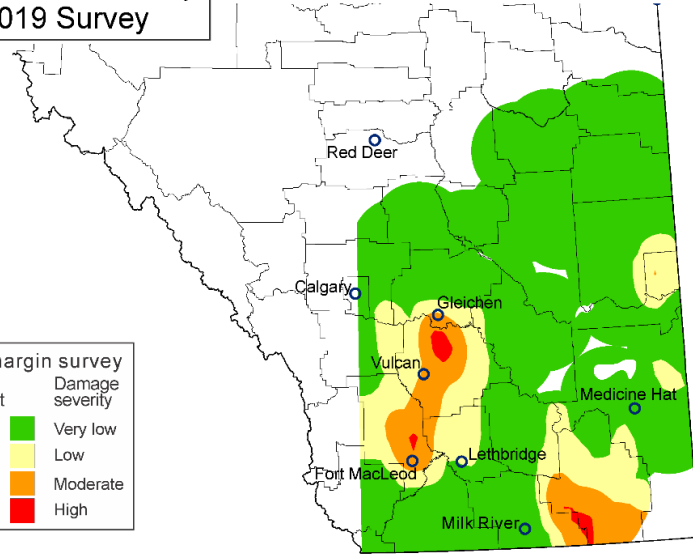
Field margin survey	
Damage severity	Percent stems cut
High	> 25
Moderate	10 - 25
Low	2 - 10
Very low	0 - 2



Image by Dylan Sjolie

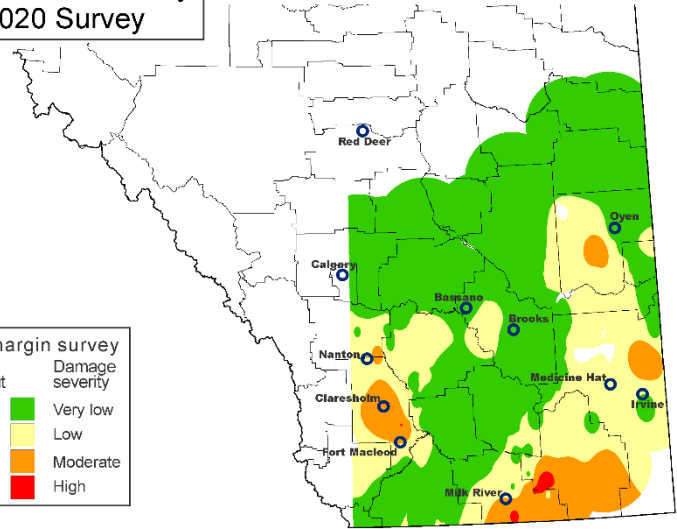


Wheat Stem Sawfly 2019 Survey



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

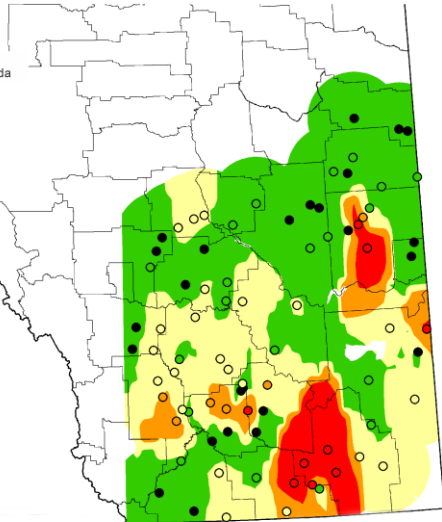
Wheat Stem Sawfly 2020 Survey



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

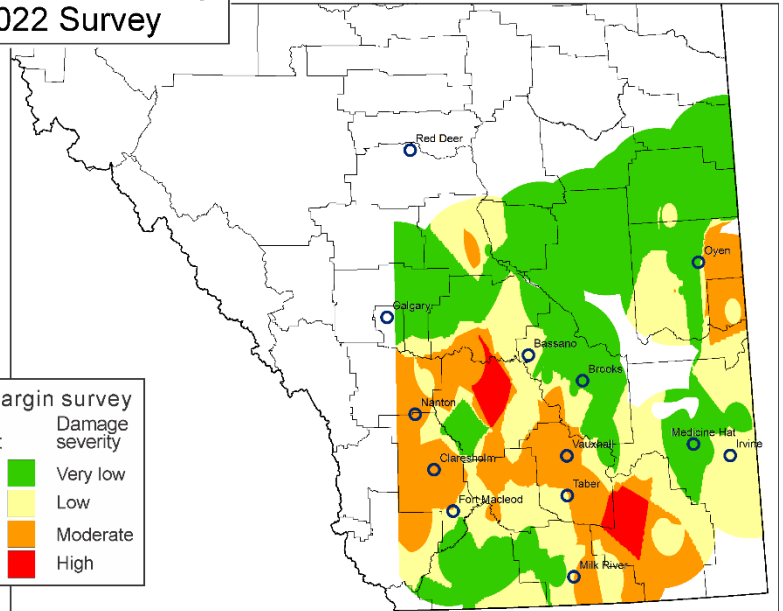
Wheat Stem Sawfly 2021 Survey

Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada



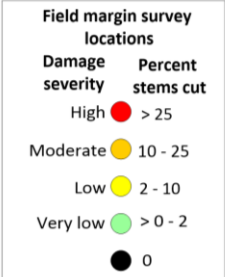
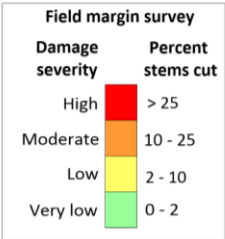
Percent stems cut	Damage severity
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2 - 10	Low
10 - 25	Moderate
> 25	High

Wheat Stem Sawfly 2022 Survey

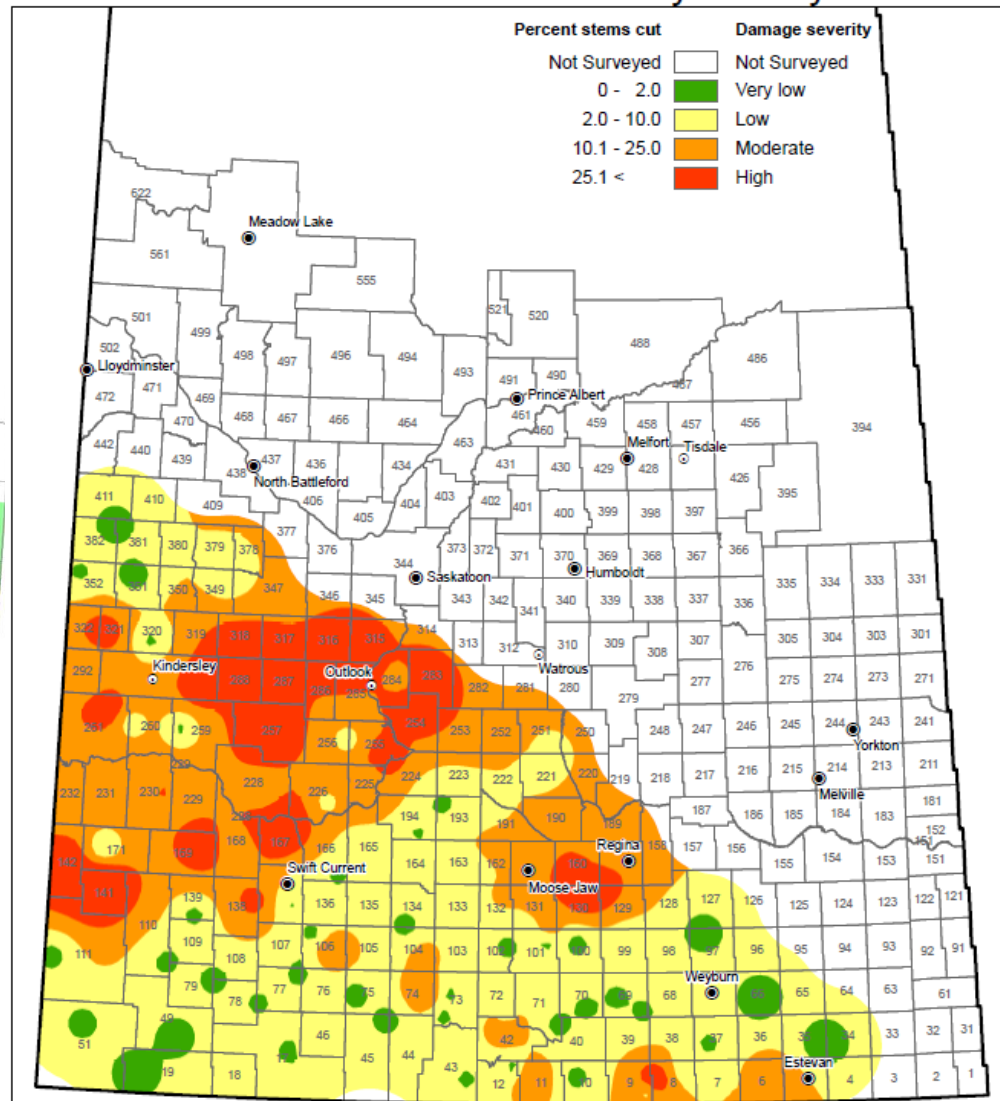
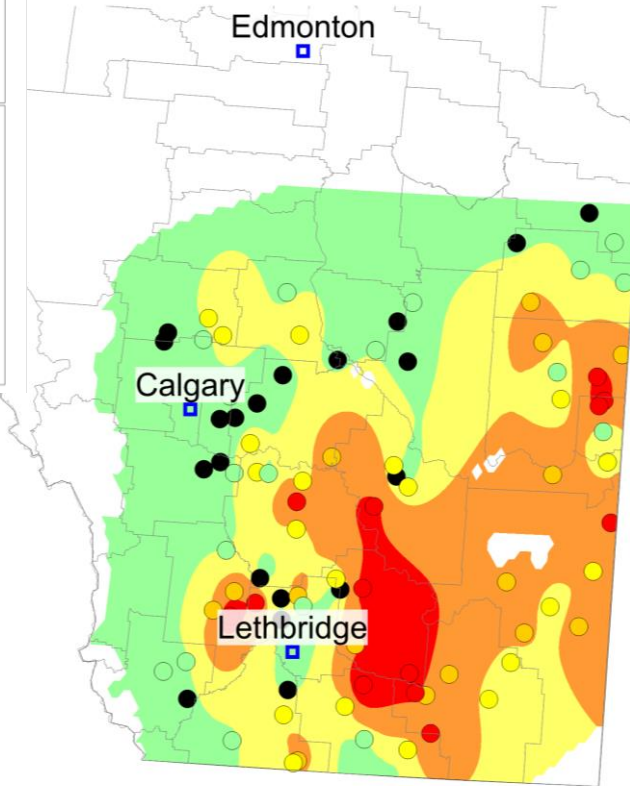


Percent stems cut	Damage severity
0 - 2	Very low
2 - 10	Low
10 - 25	Moderate
> 25	High

2023 AB & SK Wheat Stem Sawfly Survey Results



Wheat Stem Sawfly 2023 Survey



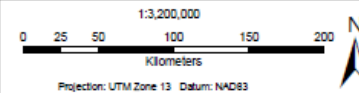
NOTE: Since techniques used to smooth the transition between zones can affect the values in localized areas, this map should be used for regional analysis only.



Agriculture and Agri-Food Canada

Agriculture et Agroalimentaire Canada

Alberta
Williams and Vankosky (AAFC) 2023

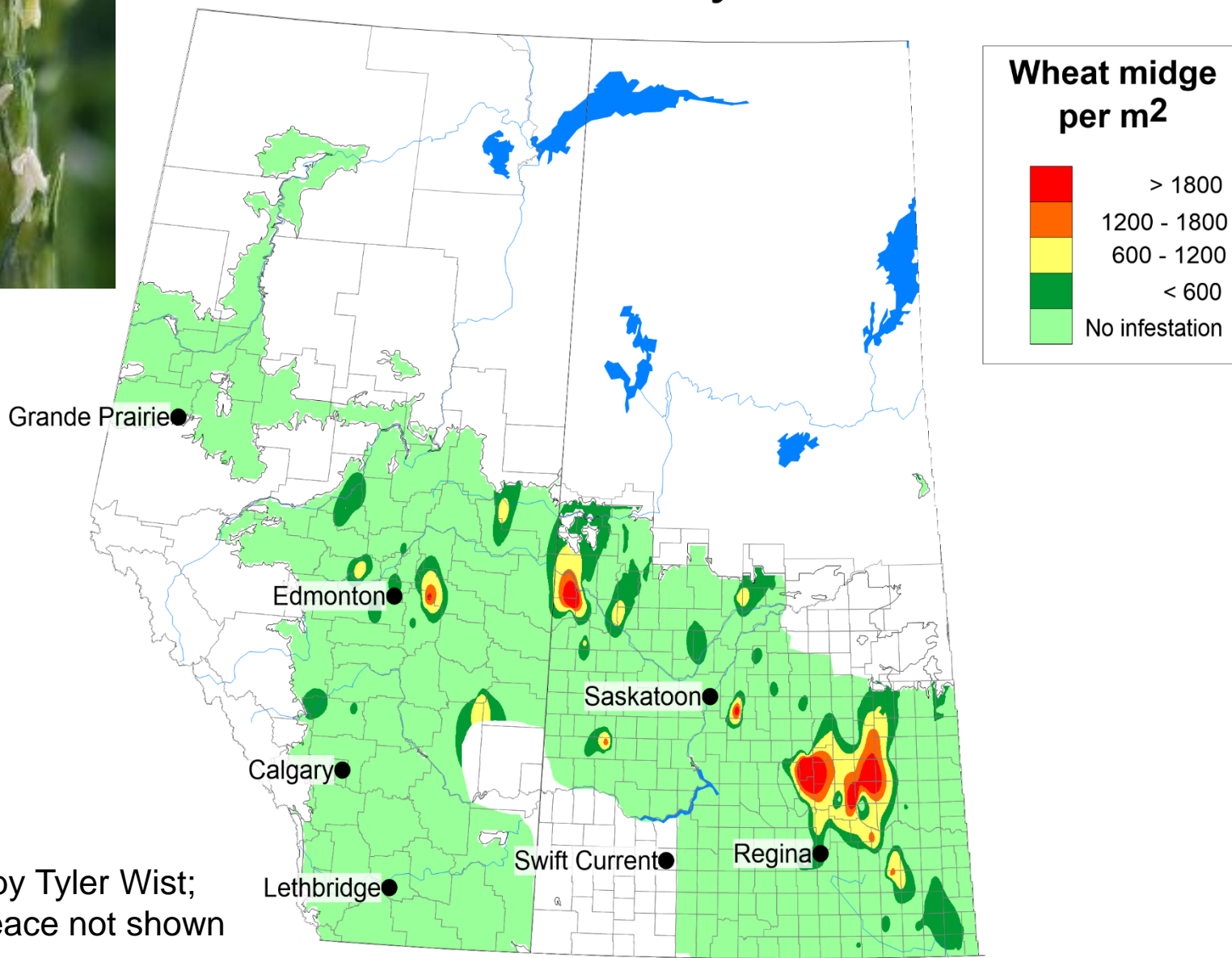


Data Source: Survey data - Mayland Consulting
IDW Interpolation (power 2.5, fixed radius 300 km)
On behalf of: **SaskWheat**
Geomatics Services, Ministry of Agriculture



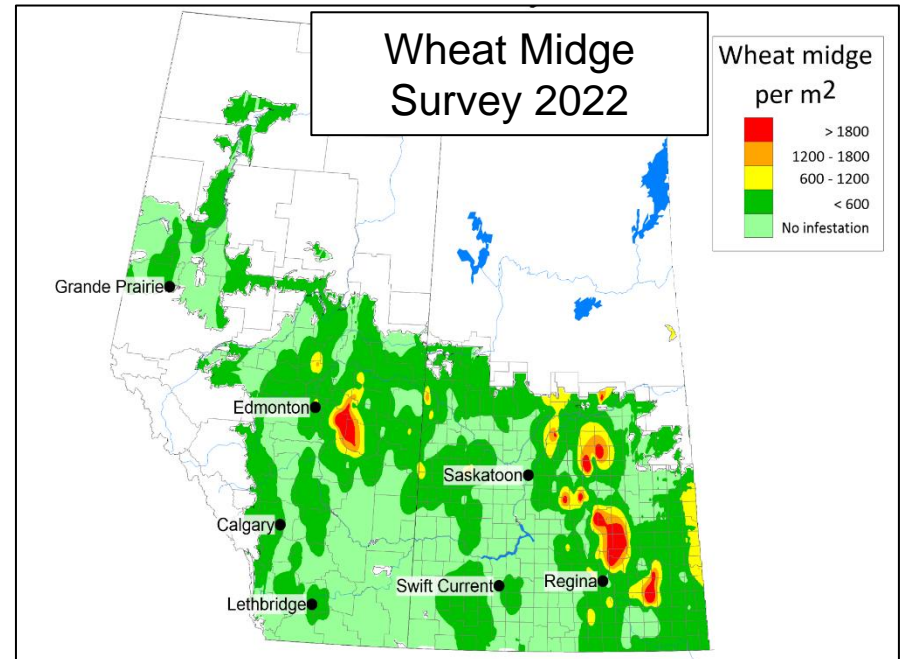
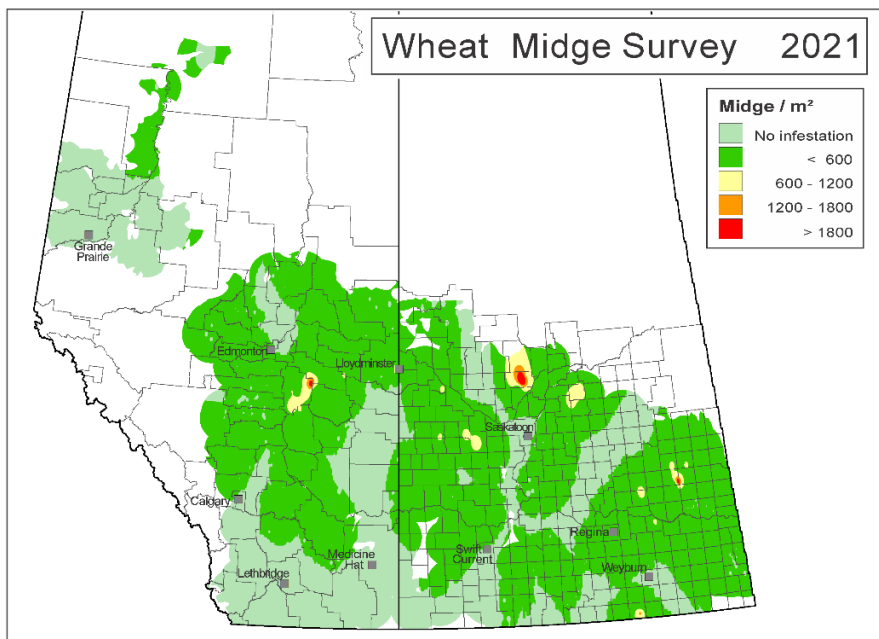
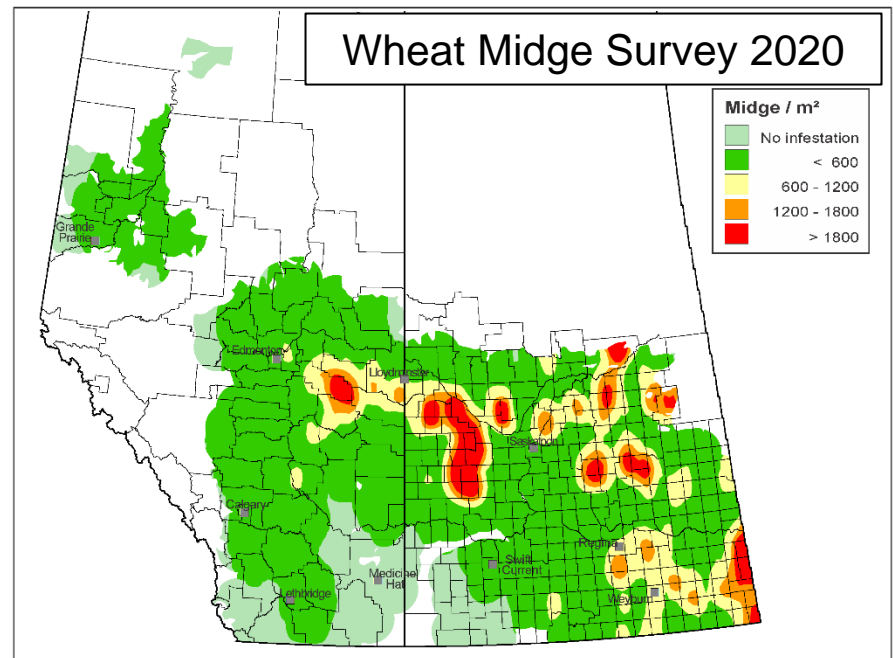
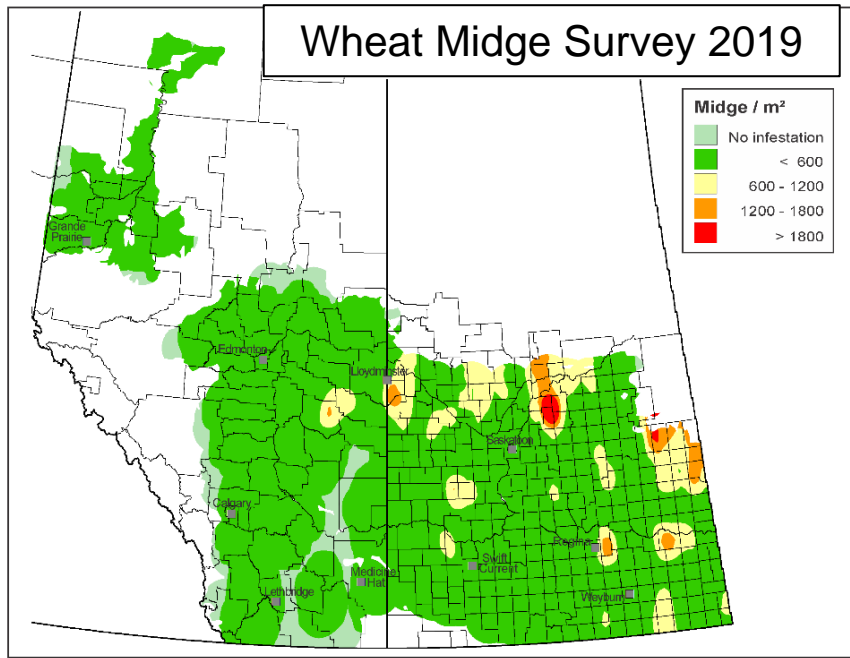
October 12, 2023

Wheat midge 2023 Survey



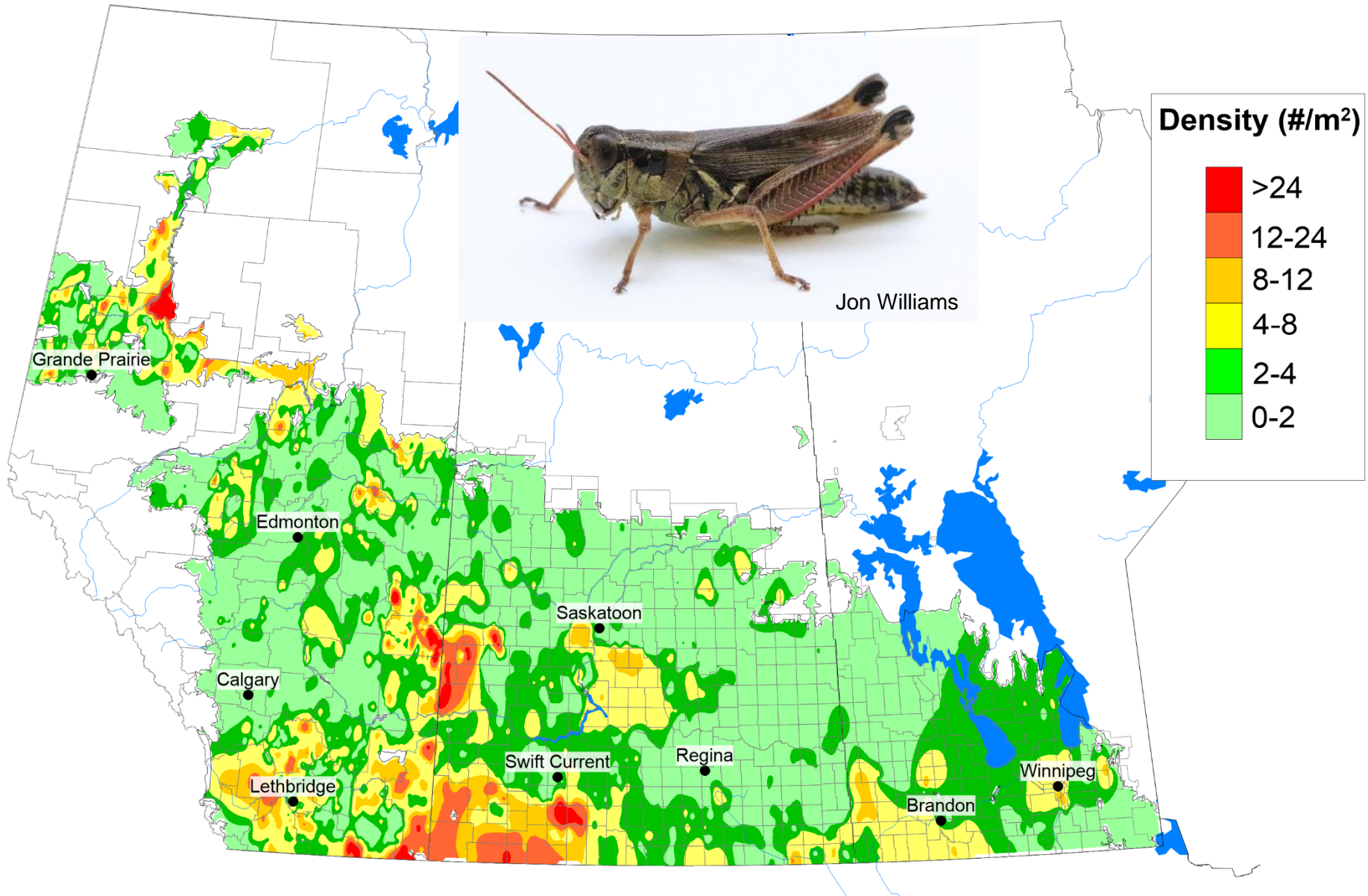
Midge picture by Tyler Wist;
Data from BC Peace not shown



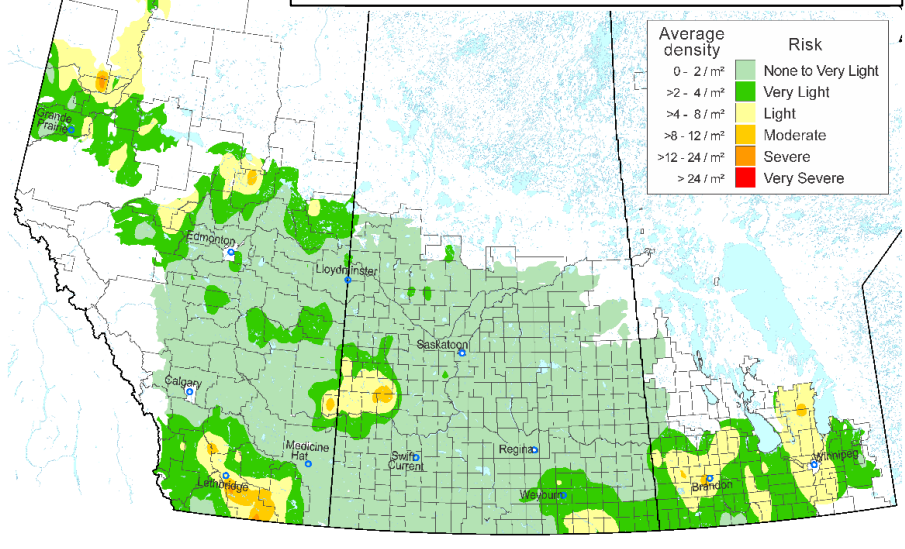


Maps by David Giffen and Ross Weiss (AAFC-Saskatoon); Data from BC Peace not shown

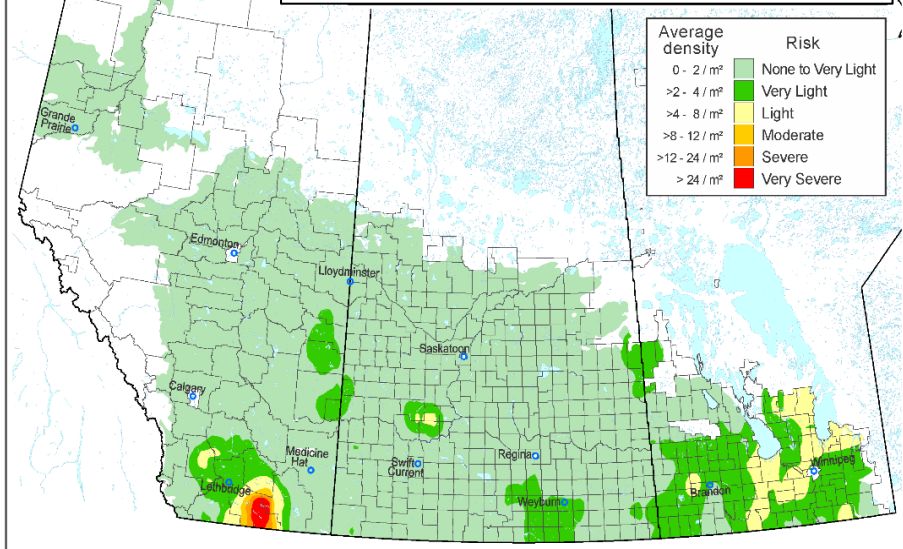
Grasshopper 2023 Survey



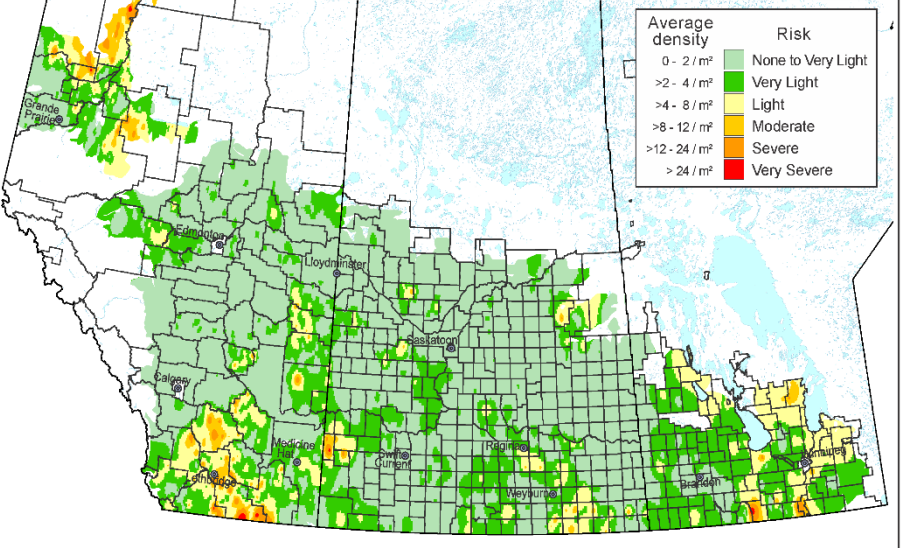
Grasshopper Survey 2019



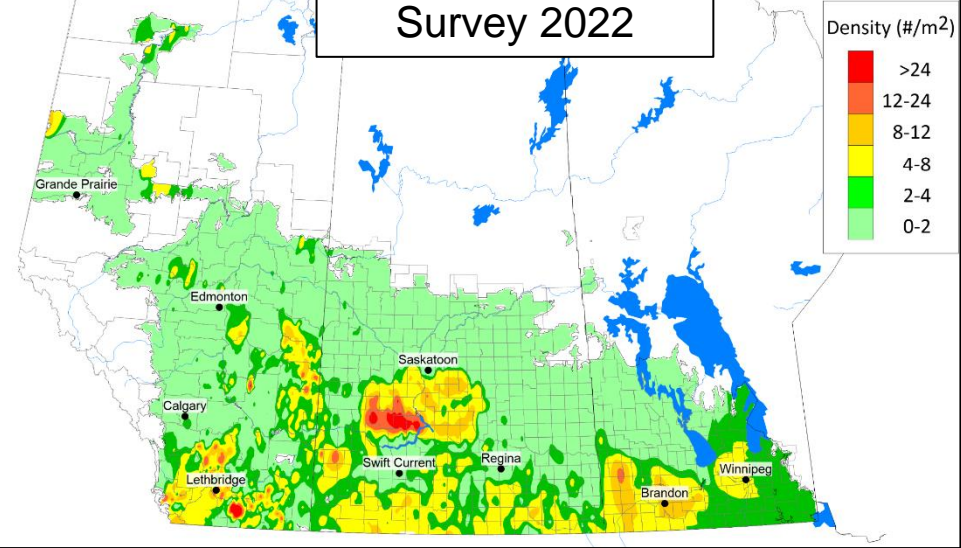
Grasshopper Survey 2020



2021 Grasshopper Survey



Grasshopper Survey 2022

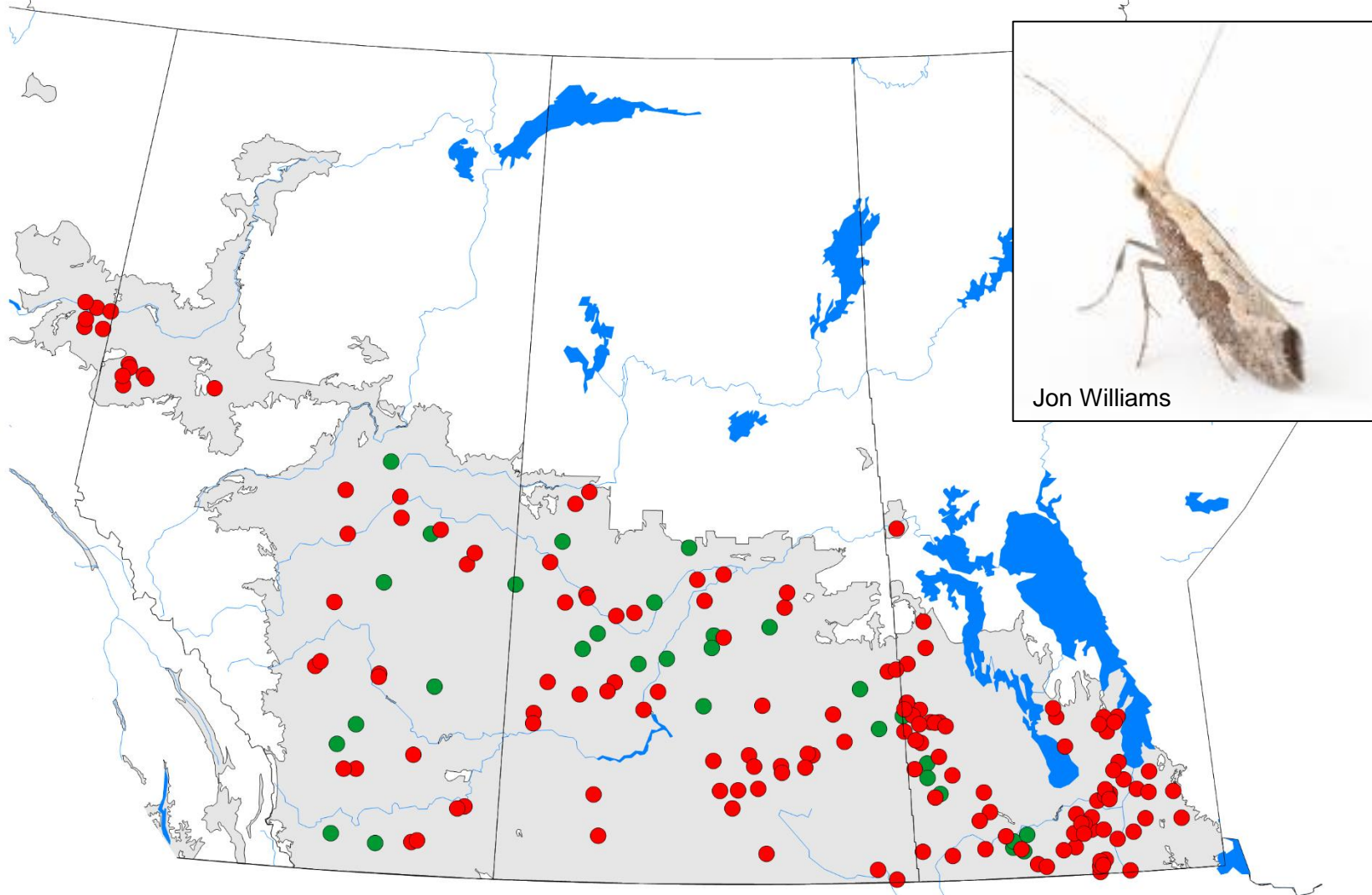


Maps by David Giffen and Ross Weiss (AAFC-Saskatoon)

Diamondback moth

2023 Survey

Presence (red - 82.9%)/Absence (green - 17.1%)



Jon Williams



Swede midge pheromone monitoring locations 2023

No swede midge were caught in pheromone traps in 2023!

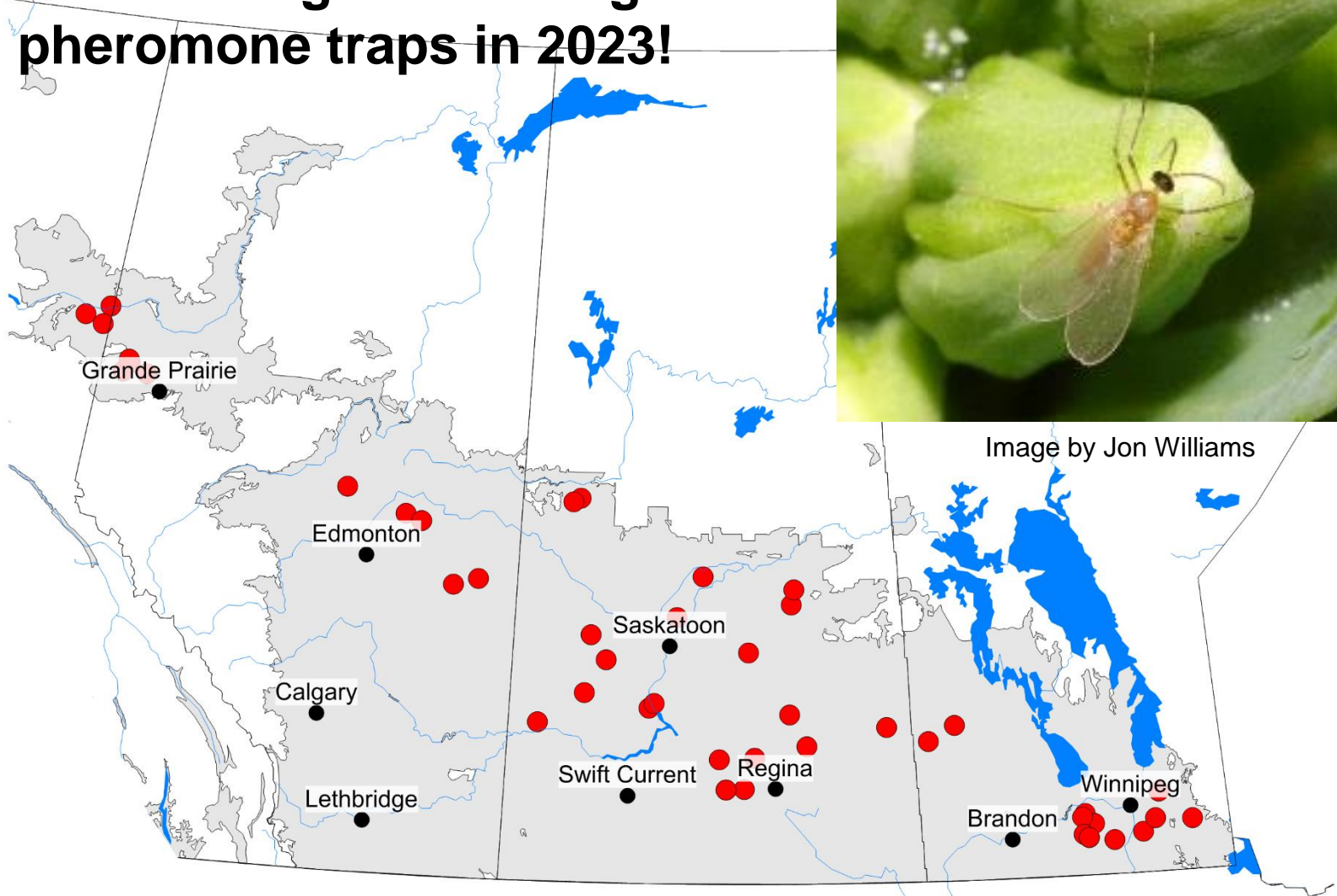


Image by Jon Williams

