

INSECT SURVEY RESULTS – 2022 – SMOKY LAKE

2022 Summary

None of the bertha armyworm traps went over the 300 warning level. In fact, they did not even go over 100 moths caught over the 6 week monitoring period. Even though the catch this year was low, trapping continues to be very important to watch for a possible build-up in the population and to get an early warning if there are issues brewing in the 2022 fields.

Pea leaf weevil damage was evident again in the survey conducted in late May – early June. But it is not at levels to cause concern to producers...yet. It will be important to watch this insect over the next few years to determine if it will become a problem in your area.

And no wheat midge. Producers and agronomists want to keep an eye on the wheat as it begins to flower in 2023 for signs of wheat midge populations. Experience has shown that the wheat midge population increases in wet years and when seeding is delayed.

No cabbage seedpod weevil were found in Smoky Lake.

Thank you Amanda for your continuing support of the surveys, grasshopper and bertha.

BERTHA ARMYWORM (BAW)

Bertha armyworm is very cyclical. In order to catch outbreaks and help producers minimize losses it is necessary to maintain a good monitoring system using pheromone traps. The number of moths caught in the traps informs us of the risk of damaging populations with a 3 to 5 week lead time. These numbers are generated from paired pheromone traps in single fields.

Bertha armyworm populations are normally kept in check by such factors as weather and natural enemies. Potential damage may be more or less severe than suggested by the moth count data depending on weather and crop conditions and localized population dynamics. Research has clearly shown that very few fields are ever affected in an area with moth catches less than 300. Even at higher moth counts field scouting is critical for pest management decisions because experience has shown that field to field and even within field variations can be very large.

LLD	TRAP AVERAGE
SW-27-59-19-W4	53
NE-11-59-17-W4	62

Shaded cells were managed by County

LLD	TRAP AVERAGE
NE-18-60-19-W4	30
SE-25-58-13-W4	37

CABBAGE SEEDPOD WEEVIL (CSPW)

Cabbage seedpod weevil overwinters as an adult so the risk of infestation is further indicated by the adult population of the preceding fall. Winter condition also appear to have an impact on populations with mild winter favoring build-up of populations and expansion of their range.

We track the population of other insects in these sweeps as well. These go into long term data sets that will help us research their population trends over time from individual fields.

LLD	CSPW in 25 sweeps	Lygus Adult	Lygus Nymph	Leafhopper	Striped Flea beetle	crucifer	Other Flea Beetle	Turnip beetle	DBM Adult	DBM larva	Wasp <5 mm	Wasp >5mm	honey bee	bee but not honey	caterpillar
nw-3-58-15-W4	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0
nw-20-59-16-W4	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0
nw-16-59-18-W4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
nw-19-60-19-W4	0	12	0	0	0	0	0	0	0	2	0	1	0	0	0

Samples done with standard sweep net. (15" diameter & 3 foot handle). 25-180 degree sweeps.

Sampling done by Alberta Agriculture and Irrigation, Plant and Bee Health Surveillance Section staff.

PEA LEAF WEEVIL (PLW)

Experience has shown us that high numbers of pea leaf weevil adults in fall will likely mean significant infestation levels in the following spring. The timing and intensity of spring damage is strongly related to the onset of warm conditions (>20°C) for more than a few days in April or May. The earlier the weevils arrive in fields the higher yield loss potential. Extended cool weather delays weevil movement into the field. Yield impact is lower if the crop advances past the 6 node stage before the weevils arrive. The numbers represented here are generated from assessing feeding damage on 10 plants in 5 locations in a field.

LEGAL LAND DESCRIPTION					AVERAGE NODE STAGE	TOTAL NOTCHES	AVERAGE NOTCHES/PLANT
nw	16	59	17	4	4.94	22.00	0.44
ne	33	58	17	4	5.78	44.00	0.88
nw	22	59	17	4	4.58	26.00	0.52

Sampling done by Alberta Agriculture and Irrigation, Plant and Bee Health Surveillance Section staff.

WHEAT MIDGE (SOIL) (WM)

Wheat midge is an insect that increases in numbers in wet years. Numbers can vary drastically from field to field and we try to sample wheat adjacent to the previous years' wheat in order to pick up populations if they are present. There is no definitive way to know exactly the risk in any given field so field scouting when the wheat comes into head is critical. The numbers shown here give a general trend of midge populations. Individual fields will have a different risk.

These numbers are generated by taking soil samples from wheat fields after harvest using a standardized soil probe.

The risk level as shown on our maps is as follows:

- 0 midge will be displayed as light grey (No infestation)
- 2 or less midge will be shown as dark grey (<600/m²)
- 3 to 5 will be shown as yellow (600 to 1200/ m²)
- 6 to 8 will be shown as orange (1200 to 1800/ m²)
- 9 or more will be shown as red. (>1800/ m²)

LEGAL LAND DESCRIPTION					TOTAL MIDGE	VIABLE	PARASITOID
ne	2	58	15	4	0	0	0
sw	21	59	17	4	0	0	0
ne	11	60	19	4	0	0	0

Sampling done by Alberta Agriculture and Irrigation, Plant and Bee Health Surveillance Section staff.