INSECT SURVEY RESULTS – 2023 – PARKLAND

2023 Summary

No cabbage seedpod weevil were found in Parkland County.

Bertha traps never climbed above the 100-moth mark. Continuing to monitor bertha will be key to giving us advance warning should the population start to build.

Wheat midge was found in one of the four fields sampled. This serves as a reminder for producers and agronomists to monitor fields in 2024 as the wheat heads out, especially if seeding is delayed and/or there is rain in May and June. This moisture is necessary for the midge to complete their lifecycle.

Pea leaf weevil is on the increase in the Edmonton region. We will have to keep an eye on these populations. Parkland though, has not seen the increase that east of the city has had.

There was a diamondback moth trap in the same area that had a low moth catch, but in the early flowering canola survey there was one field that had 57 larvae in it. If diamondback moths were an issue in 2023, please contact the Parkland County Agriculture office.

Two fields were reported with cutworm damage in the County through our voluntary online reporting tool. In 2023, cutworms were an issue in much of the province. Producers need to be prepared to scout in the spring, so they don't get caught out.

BERTHA ARMYWORM (BAW)

Bertha armyworm is very cyclical. 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 individual 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		LLD	TRAP AVERAGE
52-26-W4	17		50-28-W4	80
52-1-W5	28.5		53-27-W4	29

Shaded cells were managed by County.
Sampling period June 5 – July 17, 2023

CABBAGE SEEDPOD WEEVIL (CSPW)

In southern Alberta, including all counties south of and touching Highway 1, the earliest flowering canola crops will be at the highest risk from cabbage seedpod weevil and should be monitored very closely.

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.

LEGAL LAND DESCRIPTION	CSPW IN 25 SWEEPS	LYGUS ADULT	LYGUS NYMPH	LEAFHOPPER	FLEA BEETLE	RED TURNIP BEETLE	DBM ADULT	DBM LARVA	WASP <5 MM	WASP >5MM	HONEY BEE	BEE BUT NOT HONEY	CATERPILLAR

se	5	52	27	4	0	14	2	2	0	0	0	2	1	0	1	0	0
ne	24	52	6	5	0	11	3	0	0	0	0	57	0	0	0	0	0
se	4	53	2	5	0	1	2	0	0	0	0	0	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.

CUTWORM

Although we don't actively monitor for cutworms, we do have an online reporting tool. This tool relies on the volunteer reporting of cutworm finds in Alberta. In 2023, there was 31 reports of cutworm.

LLD	CROP	2022 CROP	SPECIES	ACRES AFFECTED	SPRAY REQUIRED
54-27-W4	Canola	Wheat	Glassy	30	Yes
54-27-W4	Wheat	Canola	Red Backed	50	Yes

DIAMONDBACK MOTH (DBM)

It is generally accepted that diamondback moth adults don't overwinter in the prairies and that most infestations occur when adult moths arrive on wind currents in the spring from the southern or western United States or northern Mexico. In mild winters there is suspicion that diamondback moth do overwinter in Alberta. To assess the population, a network of 43 monitoring sites has been established across the province. This network is meant to act as part of an early warning system for diamondback moth and should be used in conjunction with crop scouting.

LLD	TRAP AVERAGE
52-26-W4	15

Sampling period May 8 – June 18, 2023

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	TOTAL NODES	TOTAL NOTCHES	AVERAGE NODE STAGE	AVERAGE NOTCHES/PLANT
52-2-W5	300	319	6	6.38
52-28-W4	300	188	6	3.76
52-3-W5	300	225	6	4.5
51-3-W5	300	310	6	6.2

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

WHEAT MIDGE (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
		52	5	5	0	0	0
		52	1	5	6	6	0
		51	7	5	0	0	0
		50	28	4	0	0	0

Sampling done by Parkland County staff.

WHEN DOING FIELD VISITS, WE:

- never drive into the field
- sanitize our equipment between fields with bleach solution.
- wear boot covers