

February 2020

Volume 14, Issue 1

Have an interesting topic you want discussed in the newsletter or municipal meeting? Send suggestions to
Asst. Agricultural Fieldman
Tanis Ponath,
asb@mdwainwright.ca or call
780-842-4454

Municipal District of Wainwright No.61

The Municipal Agricultural Connection



The Plant Protein Alliance of Alberta is hosting a **Fractionation 101** workshop in conjunction with BRAED and FCC.

This workshop will explore the value added processing of crops such as pulses, canola and hemp.

February 20, 2020
Killam, AB
Workshop: 1:30-4:30
Networking: 4:30-6:00

PPAA
Members:\$50

General
Admission: \$100

Visit: <https://ppaa.ca/events/>
For more information

Integrated Pest Management Plan

The Insect Issue

An important part of a crop management plan is having a integrated pest management plan in place. The 6 elements of a integrated pest management are, prevention, identification, monitoring, economic thresholds, suppressing pest populations and evaluating results.

1. Prevention: Prevent pest problems from developing and prevent the build-up of disease and insect populations through proper crop rotations and selecting crops and varieties that are suitable for the growing conditions.
2. Identification: Proper identification and knowledge of pests and diseases when they are discovered will make sure the proper treatment plan is carried out since there is no "one size fits all" when managing pests and diseases.
3. Monitoring: Knowing the distribution, number, type of damage, and the natural enemies of pests will help determine if a crop is at risk of economic injury. Monitoring involves timely and correct scouting methods during the growing season.
4. Economic Thresholds: The economic threshold is the density of a pest at which a control treatment should be applied to prevent the increasing pest population from reaching a level of economic injury. The economic threshold is based on a number of factors; the presence of damage, crop stage, vigor, cost of control methods, value of the crop and the presence of beneficial insects. Applying economic thresholds can reduce the use, cost, and risks associated with using insecticides for control.
5. Suppressing Pest Populations: Suppressing or controlling pest populations relies on the information collected from the previous 4 steps. In addition, there are multiple suppression options that include biological control, cultural control, mechanical control and chemical control.

Biological Control: The introduction of natural enemies (parasites, predators and diseases) to keep pest populations below economic levels.

Cultural Control: Manipulation of a cropping environment to prevent or suppress pest development and damage.

Mechanical Control: Management of a pest by using physical means such as tillage and hand pulling.

Chemical Control: Applying registered pesticides to control pests.

6. Evaluating Results: Evaluations are important to determine what worked and what didn't work. Various management strategies work for various pests.

2019 Insect Survey Results

Each year the Agricultural Services Department partners with Alberta Agriculture on insect surveys. The information collected from these surveys are used to generate forecast maps that producers can use to make decisions during the growing season.

There were 7 Bertha Armyworms locations in the M.D. of Wainwright. Four were monitored by M.D. staff and other traps were monitored by industry partners. Only one location had a moth catch over the first threshold of 300 moths. Populations of bertha armyworms appear to be on the downward trend however, it is still important to scout because populations could go either way in 2020. Each year the risk varies depending on the flight into our area from southern North America.

Bertha Armyworm	
Twp/Rge	Trap Average
46-7	142.5
46-4	569
43-4	33
46-9	8

Bertha Armyworm	
Twp/Rge	Trap Average
46-8	68.5
45-8	31
46-5	57

Canola Blossom Midge was surveyed in 2 fields in the M.D. of Wainwright by Alberta Agriculture staff. The flower midge larvae was found in one of the fields. The Canola Blossom Midge is a new species of midge that is related to Swede Midge. Swede midge is a common pest in the Eastern provinces. It was thought that Alberta was starting to see swede midge move into the area however, after closer inspection from the CFIA it was determined that it was a new species of midge they named Canola Blossom Midge. It is unknown whether there is cause for economic concern. The purpose of the survey is to delineate the range and incidence of this insect in central Alberta and the Peace region. The M.D. of Wainwright surveys for Swede Midge in four fields across the M.D. To date we have not received the results back.

Canola Blossom Midge		
Twp/Rge	Damaged Buds	Larvae Infested Buds
41-2	2	2
46-6	0	0

No Cabbage Seedpod Weevil were found in our area, the population in central Alberta seems to have reduced to very low numbers in the past couple of growing seasons. Pea Leaf Weevil damage was low in the five fields surveyed in the M.D.

Pea Leaf Weevil			
Tw/Rge	Avg Node Stage	Total Notches	Avg Notches/Plant
41-3	4.96	34	0.68
43-4	5.68	35	0.7
45-4	5.98	37	0.74
45-6	6	0	0
45-8	6	3	0.06
47-9	5.96	8	0.16

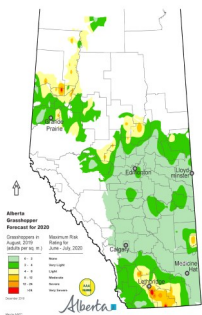
The Wheat Midge survey is completed in the fall when wheat fields have been harvested. Soil samples are collected from 5 fields across the M.D. Wheat Midge is an insect that increases in numbers in wet years however, numbers can vary dramatically from field to field. There is no definitive way to determine the risk in any given field, so field scouting when the wheat comes to head is important. The wheat midge numbers are up compared to last year in the M.D. Out of the five fields surveyed two fields showed elevated risk.

Wheat Midge				
Twp/Rge	Total Midge	Viable	Not Viable	Parasitoid
46-8	1	1	0	0
46-8	12	11	0	1
44-2	0	0	0	0
45-4	4	4	0	0
46-5	2	2	0	0

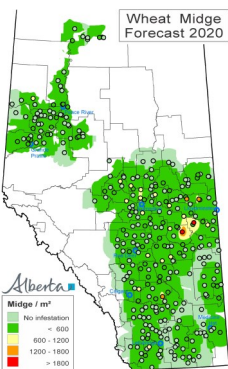
When doing field visits we never drive into the field, always sanitize our equipment between fields with a bleach solution and sanitize our footwear between fields with a bleach solution or wear boot covers.

Stay tuned for an announcement this spring of the surveys M.D. of Wainwright staff will be out completing this summer.

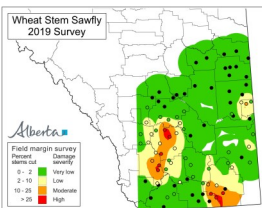
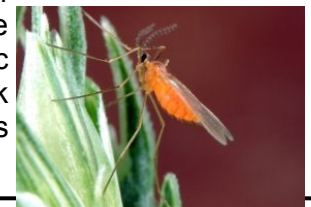
Alberta Survey Maps



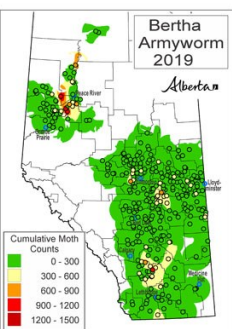
The 2019 grasshopper survey found moderate to high levels of grasshoppers throughout most of the Peace River Region, areas north of Edmonton and growing populations in southern Alberta. This forecast map is based on the grasshopper counts from the previous survey in August. Consecutive dry summers in the south are resulting in increasing grasshopper numbers. Even though some areas show elevated numbers of grasshoppers, the trend across the province is light to low grasshopper populations. Even though the forecast is indicating low numbers of grasshoppers in the M.D. of Wainwright, producers still may experience higher numbers in specific areas where conditions are favorable.



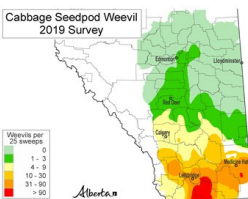
The Wheat Midge forecast for 2020 shows an overall low but increasing level of wheat midge across Alberta. The Wheat Midge population in central Alberta east of Edmonton has increased this year and there are some fields that have a high risk going into the 2020 crop year. Favorable conditions for Wheat Midge include higher than average rainfall in the spring and late seeding. Over the past couple of years field to field variation has been very considerable throughout the province. Individual fields may have economic levels of midge. Each producer needs to assess their risk based on indicators specific to their farm. In total 308 samples were taken from 64 municipalities in Alberta.



Wheat Stem Sawfly is not necessarily a risk for producer in the M.D. of Wainwright however, there are building populations in southern Alberta. The closest Municipal District to us with elevated numbers is the Special Areas.



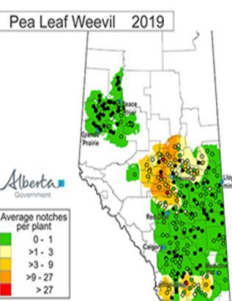
Bertha Armyworms were monitored at 326 locations across Alberta in 2019. Trap catches indicated a population increase in central Alberta and as far south as Lethbridge County. Spraying was reported in the Peace region and some areas of the south. No spraying was reported in central Alberta. The M.D. of Wainwright will again have traps out at 4 locations across the M.D. You can access the real time Bertha Armyworm map on the Alberta Pest Monitoring Network that will have up to date numbers from monitoring locations.



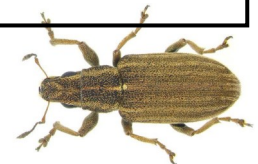
In 2019 266 fields were surveyed in 51 municipalities for the Cabbage Seedpod Weevil. They were found at economic threshold levels in southern Alberta however, the average numbers were lower than normal. In 2019 the Cabbage Seedpod Weevil range expanded again to areas in central Alberta as they did in 2016. No Cabbage Seedpod Weevils have been detected in the Peace region. Historically there has been economic threshold level detected as far north as Consort.



Shelley Barkley



The range of the Pea Leaf Weevil has expanded dramatically in central Alberta since 2013. Feeding damage from the pea leaf weevil increased in the NW part of central Alberta. The highest damage ratings were recorded west of Edmonton.



Beneficial Insects on Your Farm

Ladybird Beetles

The ladybird beetle or commonly known as ladybugs or ladybeetles feed on aphids, mites, scale insects, mealybugs, thrips and other soft bodies insects. They will also feed on insect eggs when preferred food is scarce or not available. Ladybird beetles are beneficial in both the larvae and adult stages. There are over 450 species of ladybird beetles in North America. Identification can vary depending on the species however, adults are small, round to oval and dome shaped. Their colour ranges from the familiar orange or red with black markings to black with red markings or no markings at all. Larvae can be up to 11 mm long with six legs. Their bodies are blue/black with various patterns of orange or yellow on the abdomen. Ladybird beetles lay their eggs in upright clusters of 3-300 eggs on host infested plants. In the larvae stage one ladybird beetle can consume 200-300 aphids per day. The variety in the ladybird beetles diets makes them a very valuable beneficial insect. Most species of ladybird beetles names reflect the number of spots they have, for examples the twospotted and sevenspotted ladybeetle.



Tachinids

Tachinid flies are considered to be parasitoids because adult female flies lay their eggs either on or in insects such as moths, sawflies, beetles and grasshoppers. Once the eggs hatch tachinid larvae feed on the inside of their host and weakening it or killing it. Tachinid flies are an important natural enemy of bertha armyworms. Larvae can range from 6-16 mm long and have a whitish maggot-like body. Adults range in colour from pale to dark brown, red or metallic green, their abdomen is covered with bristle like hairs and their wings are transparent. You can monitor for tachinids by examining caterpillars and other hosts for a small, white, elongated egg attached to the body. Hosts will appear to be sluggish when handled if infected. Hosts can be cut opened to look for the larvae.



Ground Beetles

There are various species of ground beetles. Adult ground beetles will feed on any immature or adult stages of insects that they can capture, they also feed on earthworms, slugs and snails. The ground beetle larvae feed on insects that are in the soft bodied stage of their lifecycle as well as earthworms, slugs and snails. Adults can be identified as 2-38 mm long, dark brown or black shiny bodies with large heads and pincher-like mouthparts. Ground beetles hunt mostly at night. Arable land normally contains more ground beetles compared to land planted to a permanent crop.



Syrphid Flies

Syrphid flies, also known as hover flies, feed on aphids in the larvae stage and then become important pollinators in their adult stage. Adults have smooth hairless bodies and can range in colour from yellow, brown and black or entirely black or brown. Syrphid flies are commonly mistaken with wasps however, wasps have 4 pairs of wings compared to syrphid flies which have 1 pair.



*Photo credits to Shelley Barkley with Alberta Agriculture

The 17th Annual Original Grazing School for Women

June 9 and 10, 2020

**Hosted in
Beaver County**

*Please check our website
<https://www.grazingschoolforwomen.com/>
or email aboese@beaver.ab.ca for more
details!*

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the
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