

SITONA LINEATUS

2018 PEA LEAF WEEVIL FORECAST

AGRONOMY UPDATE DECEMBER 2017

BATTLE RIVER IMPLEMENTS



Those of you who read this update monthly might remember me mentioning Pea Leaf Weevils (*Sitona lineatus* for all you Latin scholars in the crowd) as an up and coming pest to watch for if you grow peas in east central Alberta. The range and levels of this pest have been increasing at an alarming rate in Alberta since it was first identified in the Lethbridge area over 15 years

ago and it can now be found in virtually every county in the province, including in parts of the Peace River country. The adult pea leaf weevil is about 5 mm long, grey in colour and has 3 light coloured stripes extending the length of the thorax.

If you look at the pea leaf in the picture on the right, you can see the typical “notching” caused in the leaves by the feeding of the adults. While the leaf notching is what you look for and count when you are scouting for pea leaf weevils, it is not the adults that are going to cause you issues – it is the larvae.



Picture by Shelly Barkley – Alberta Agriculture

The Life Cycle

According to work done by Alberta Ag, the pea leaf weevil (PLW) will produce 1 generation per year in Alberta. They overwinter in alfalfa or other perennial legumes and begin to move about as the weather warms up – first by walking short distances, and once temperatures reach 17 C, they begin to fly. Every female can produce up to 1,500 eggs, which they lay in the soil near or on developing pea plants. When the larvae hatch, they move down onto the pea roots where they feed on the nitrogen fixing nodules



Picture by Patrick Beauzay, NDSU

A heavy infestation of PLW larvae can partially or even completely destroy the ability of the peas to fix nitrogen – potentially leading to significant economic losses.

These larvae are roughly the same size as the adults at around 3.5 to 5 mm in length. They are milky white in colour and typically are “C” shaped as the picture above shows. A heavy infestation of PLW larvae can partially or even completely destroy the ability of the peas to fix nitrogen –

potentially leading to significant economic losses.

So why am I bring PLW to your attention in December? Because many pea growers are currently booking inoculant seed and seed treatment for spring right now. There are no post emergent control measures for controlling PLW as the damage done by the adults is not generally yield

limiting unless the populations are extreme – the damage is occurring underground and can only be controlled with an insecticidal seed treatment. Since that seed treatment will typically run more than \$12 per acre, it's not a decision to be taken lightly.

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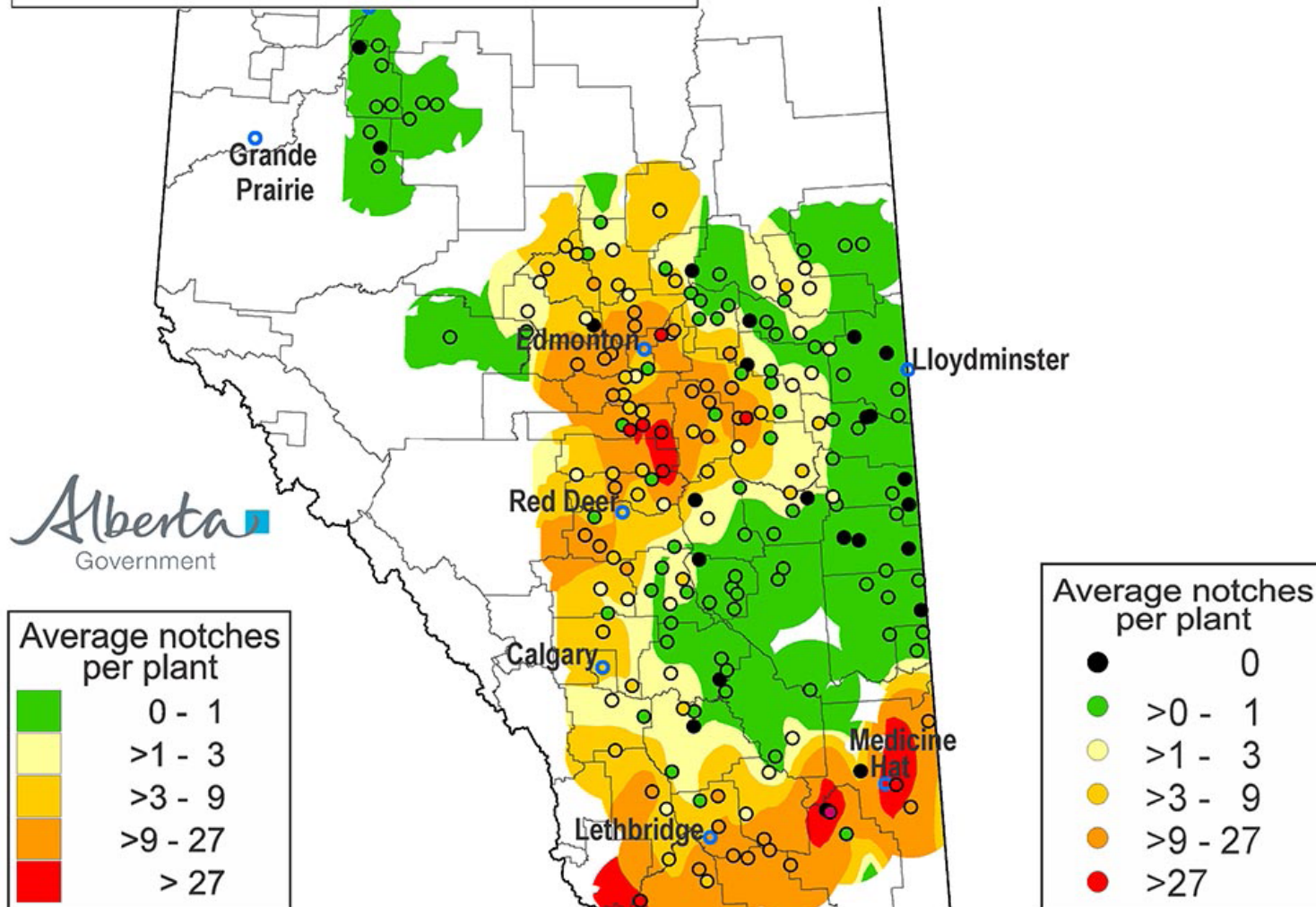
I have been finding adult PLW throughout central Alberta for 2 years now, so I am confident that if you grow peas you have a good chance of having some of these pests on your farm. Does that mean you need to pencil in another \$12 per acre for seed treatment in 2018? According to the Alberta Insect Monitoring Network, it's not likely, but certainly possible, especially if you farm in Camrose County or the west side of Flagstaff County. Below is map showing the PLW levels found in 2017, which gives you an evaluation of your risk level for 2018.

For details on what the map on the following page means and how to interpret it, follow this link to the Insect Monitoring Network at [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/prm13779](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/prm13779). I would recommend bookmarking this site as this is where all the insect forecasts for 2018 will be posted as they become available. The wheat midge forecast is already up and others will follow. There is also a Top Crop Manager article that I would recommend as it will answer some other questions you might have, such as other host crops and how effective foliar insecticide applications have been. Visit <https://www.topcropmanager.com/seed-treatment/pea-leaf-weevil-research-provides-management-recommendations-10548>. The article is more than 6 years old now, but there is still a lot of good information there if you don't have a lot of experience with this pest.

... strongly urge anybody growing peas to do some scouting this spring.

With regards to the map on the next page; while it is not a hard and fast rule, experience over the past several years have shown us that if the “Average Notches per Plant” exceed 9 there is a good chance of economic levels of injury to pea crops if environmental conditions favour the pest. Remember these forecast maps are based on individual field inspections across a large geography and may not accurately reflect what is happening in your fields. I strongly urge anybody growing peas to do some scouting this spring to see what levels of damage are happening to the leaves. By the time the crop is in the 5 node stage, adult feeding should be

Pea Leaf Weevil 2017



fairly general so it's easy enough to look for leaf notching while you are staging the peas for herbicide application. Don't forget to pull up a few plants to check nodulation and see if any of the larvae can be seen. You are unlikely to see adults at this time as they generally drop to the ground as you approach and their colour makes them hard to detect when they are on the soil surface. Keep track of the amount of plants showing feeding damage and the number of notches on each plant – this is going to give you a solid base for your decision in 2019 when you are deciding on what seed treatment is right for your situation.

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