

The Municipal Agricultural Connection



Partners in
Rural
Conservation
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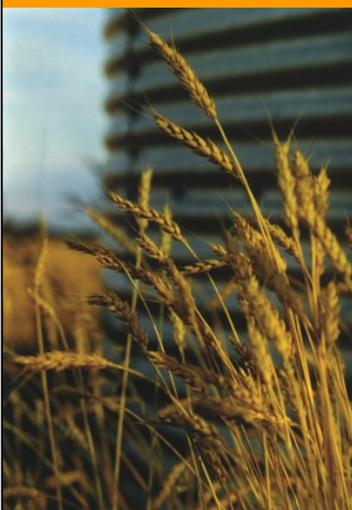
Why are my trees turning brown??

Needlecast is a fungal disease that affects all species of trees. Different pathogens of the disease attack certain species of trees. For example, *Rhizodphsera* needlecast mainly affects Colorado Spruce (occasionally other spruce species) and *Lophodermium spp.* affects pine and spruce species. *Rhizodphsera* needle cast infects the lower branches first and under suitable conditions the disease will progress up the tree eventually leading to a decline in tree health and potentially death. Symptoms appear in the spring with the inner needles turning yellow and by the end of summer needles will turn a purplish-brown colour. Most infected needles will shed by fall, however, the ones that don't will act as an infection source the following spring. Management of this disease is difficult. Prune severely infected branches, rake up the fallen needles in the fall and promote air circulation through trees. There are some registered fungicides for this type of needlecast. *Lophodermium spp.* needle cast causes severe defoliation of spruce and pine trees and can stunt the growth of younger trees and lead to death. Infections in older trees will generally not kill the tree but will lead to sparse looking branches. Yellow or reddish brown spots will first appear on infected needles, eventually the needles turn yellow, then reddish brown and severely infected needles appearing scorched. There are no effective cultural control methods for this pathogen, however, there are some registered fungicides. When applying fungicide follow the label instructions, most fungicides registered for needlecast must be applied at 3-4 week intervals until conditions no longer favor disease development.



Photo Courtesy of the Star News

This year the Wainwright and District Handivan Society added a brand new customized van to their transportation service. Thanks to funds from the Alberta Community Partnership Program grant, which was applied for in partnership with the M.D. of Wainwright the Handivan Society was able to acquire the new van.



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 780-842-4454

Please remember that all municipal taxes are due Nov 30, 2018.

M.D. of Wainwright Calendars should arrive at the beginning of November. Stay tuned to our Facebook and website for the announcement.

I would like to thank all residents that submitted photos this year. We had 19 submissions this year. Can't wait to see next years.

Congratulations to all of our winners!

- Heather Dubreuil
- Jade Eggen
- Rachel Lawson
- Margaret Hiller
- Rhonda Lawson
- Sheri White
- Sherry Christensen
- Allen Valleau
- Jen Koss
- Elizabeth Goddard
- Rebecca Tschetter

Stored Grain & Insect Pests

In Canada, there are over 55,000 different species of insects. Of those 55,000 species the Canadian Grain Commission recognizes 50 species as primary insect pests and 35 as secondary insect pests of stored grain. Primary insect pests are considered primary because they feed directly on grains causing damage. Insects feed on grain that is intact, stable and in good quality. Primary insect pests develop and reproduce very quickly when conditions are favorable. This allows for large infestations and a considerable amount of damage to occur within a few months. Examples of primary insect pests include the lesser grain borer, rusty grain beetle and saw-toothed grain beetle.

Secondary insect pests feed on damaged grain or grain that is going out of condition. Damaged grain kernels have exposed endosperm that is accessible food for insects and fungi. The presence of secondary pests indicate grain is not in optimal condition and steps should be taken to protect grain from further decline in quality. Examples of secondary insect pests include yellow mealworm, black fungus beetle and hairy fungus beetle.

Eight most common grain pests:

Rusty Grain Beetle: The rusty grain beetle is the most serious stored grain pest in Canada. The beetle feeds on the germ which is the embryo of the seed. Heavy infestation causes grain to spoil and heat.



Red Flour Beetle: The red flour beetle is found in stored grains and oilseeds on Canadian farms and primary elevators. Despite the name, the red flour beetle is more common in elevators and in bins than in flour mills.



Confused Flour Beetle: Unlike the red flour beetle, the confused flour beetle is most commonly found in flour mills. Larvae and adult beetles feed on flour, feed and other ground materials. Confused flour beetles are difficult to distinguish between the red flour beetle without using a microscope.



Saw-toothed Grain Beetle: The saw-toothed grain beetle is more common in Ontario and Quebec. It more commonly attacks oats than wheat, barley and canola. The beetles feed on dry grain, destroying the germ.



Granary Weevil: The granary weevil is one of the most destructive grain pests worldwide. It is not commonly found in the prairie provinces but occurs in Ontario. The weevils feed on kernels leaving only the hulls.



Rice Weevil: Although not very common, the rice weevil has been found in southern Ontario storage facilities and some grain elevators in the prairie provinces. When infestations are severe stored grain is reduced to hulls and larval excrement.



Yellow Mealworm: The yellow mealworm is a secondary insect pest therefore, it feeds on grain that is going out of condition and animal feed. They are not commonly found on farms and are the largest of the stored grain pests.



Lesser Grain Borer: The lesser grain borer is the one of the smallest and most destructive beetles in North America. The beetles attack most types of grains but are especially damaging to wheat, rice and corn. Both adult and larvae stages cause damage. In the past, the lesser grain borer was not considered a pest in Canada however, its distribution is expanding and they have been detected on the Canadian prairies. Although not likely to survive the Canadian winter it is something to keep a look out for. The beetles feed on kernels leaving behind a fine powder and particles of feces. They consume 17-20% of the kernel compared to the rusty grain beetle that consumes only 4% of the kernel.



That's a Wrap, 2018 ASB Programs

The purpose of the Agricultural Service Board is to provide effective and innovative agricultural and environmental programming to meet the needs of our rural residents, acreage owners and local industry in the M.D. of Wainwright.

This year, our program started the beginning of June with Roadside Brush Spraying. The objective of the Roadside Brush Spraying program is to control encroaching brush under 2m in height on M.D. right-of-ways that inhibits safety regarding snow removal, road grading, sightlines, vehicle/wildlife interaction and future road building projects. Currently, we are using a herbicide called Garlon XRT to control trees and shrubs. This is a contact herbicide that has no grazing restrictions for livestock at the rate we apply. M.D. roads are on a 2 year rotation which means they are only spot sprayed every 2 years for brush.

Once the Roadside Brush Spraying program is completed our Weed Inspectors move into the Roadside Spraying Program. The objective of this program is to control Prohibited Noxious, Noxious and Nuisance weeds growing on the M.D. right-of-ways. Prohibited Noxious and Noxious weeds are provincially regulated under the *Alberta Weed Control Act*. Prohibited noxious weeds must be destroyed and noxious weeds must be controlled under this legislation. All M.D. right-of-ways are blanket sprayed once every three years to reduce environmental impacts. We rotate which herbicides are sprayed on roadsides to reduce the chance of developing resistance. The herbicides we use in our Roadside Spraying Program are Clearview, Aspect and Tordon 22K (spot spraying only). All 3 products are broadleaf herbicides which means they may brown or purple the grass however, they do not kill grass when applied according to the label. These products have range and pasture labels which means there are no grazing restrictions on the products and they are safe for livestock. The products are Reclaim II (Clearview), Grazon (Aspect) and Tordon 22K. All 3 of our Weed Inspectors, James and myself hold Pesticide Applicator licenses and attend yearly training seminars. Along with controlling weeds on our own right-of-ways we work with landowners to control Prohibited Noxious and Noxious weeds on their property. We also have relationships with Alberta Transportation and CN Rail to promote control of Prohibited Noxious and Noxious weeds on their right-of-ways.

This year, our Weed Inspectors continued to battle Toadflax. Toadflax is arguably the most prevalent weed in the M.D. of Wainwright. Our heaviest infestations are in divisions 1 and 2 but the Noxious weed has been steadily spreading to our west border. We found a new Prohibited Noxious weed on M.D. roadside this year. Spotted knapweed is a perennial weed native to Europe and very difficult to control once established. We found new locations of burdock, tall buttercup and nodding thistle. If you spot anything suspicious and need assistance with identification give myself or James a call and we would be happy to assist.

The ASB Pest Control Officer Rod Gabrielson has had a busy 2018. Along with his 700+ rat checks completed in divisions 1 & 2 Rod is busy with beaver control on municipal infrastructure and dam removal.

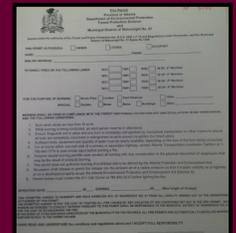
James and Tanis continue to assist rate-payers with tree and pest problems. Some of the issues that came up this year was leaf rollers, red gall sawfly, aphids, winter kills and needle cast.

If you have any questions regarding the Agricultural Service Department or you require assistance, contact the M.D. office at 780-842-4454.

The M.D. of Wainwright would like to remind all rural residents who are planning on burning this winter to have a valid fire permit before you burn. Fire permits can be picked up at the M.D. office or by calling your Councillor or fire chief. If your unable to make it into town, you can call the office and we can email or fax the permit to you. Remember any requests for a fire permit to burn a standing building will be referred to the fire chief in that area.

Here are a few key reminders while burning:

- Burn when winds are less than 15km/hr
- Make sure fireguards are in place
- Any burning within one-half mile of a highway contact Emcon to post smoke signs before burning, 842-7774
- Make sure any burn is completely extinguished by mechanical manipulation or other means to ensure all fuels are completely consumed or extinguished so as to prevent re-ignition (i.e. brush piles)
- For a full list of material you can and cannot burn visit the Alberta Environment and Parks website or stop in at the M.D. office.



Frost and Nitrate Accumulation

Many parts of the Province have already experienced some frost. Barry Yaremci, Beef and Forage Specialist at the Alberta Ag-Info Centre, looks at nitrate accumulation in crops and how to manage it. Nitrate accumulation can become a problem when crops experience light frosts of -1 C to -2 C for even only a few hours during the night. "These conditions damage the leaves of the plants but not the roots. Over the next three or four days, the roots continue to send nutrients up the plant. The damaged plant is unable to use those nutrients, resulting in nitrate accumulation," explains Yaremci. "When we get a heavy frost of -5 to -6 C for six or seven hours, the internal working system of the plant is completely destroyed and it can no longer move water or nutrients. A killing frost means that the plants are dead and therefore nitrates won't accumulate," says Yaremci. "Light frosts that are experienced for only a few hours damage the plant but not the internal bundles that move water and nutrients up the stem. The injured leaves can't use the nutrients effectively, and that is when there is the greatest chance of nitrate accumulating." Annual crops are the most susceptible to nitrate accumulation - oats being the worst - but also barley and wheat. Immature salvaged canola crops cut for silage or greenfeed also have a tendency for nitrate accumulation. "Alfalfa is a legume and the nodules attached to the roots tend to hoard the nitrogen and only release as much as the plants require," says Yaremci. "Nitrate accumulation is extremely rare in alfalfa." Application of nitrogen fertilizer or manure also has a significant influence on the susceptibility of the crops. High amounts of nitrogen fertilizer or manure increase the risk of nitrate accumulation. "If fields have been used for swath grazing, winter feeding areas, have had high manure applications or high amounts of fertilizers applied in the spring, those fields are more susceptible to accumulate nitrate in the plants," says Yaremci. "If no fertilizer has been applied, or if it is an old grass field, those fields are not typically a problem." After a frost, the timing for cutting the field is a key factor in managing nitrogen accumulation. "If producers can get out in the field the day after the frost and cut it as quickly as they can, there should not be a problem," says Yaremci. "Nitrate levels increase and peak on the third or fourth day after a frost. "If there is time for the plants to recover, and there is no additional frost to kill the plants, nitrate levels will decline and return to normal 14 days after the frost. "It is either get out there within one or two days after the frost and cut very quickly, or wait 10 to 14 days before cutting the field," says Yaremci.

For more information, contact the Alberta Ag-Info Centre at 310-FARM (3276).

Alberta Agriculture and Forestry, et al. "Frost and Nitrate Accumulation." *Alberta Agriculture and Forestry*, 6 Sept. 2018, [www1.agric.gov.ab.ca/\\$department/newslett.nsf/all/agnw28160](http://www1.agric.gov.ab.ca/$department/newslett.nsf/all/agnw28160).

Riparian Pasture Grazing

A riparian area is defined as land that is adjacent to streams, rivers, lakes and wetlands where the vegetation and soils are influenced by water. Grazing riparian areas can be beneficial to your operation because they normally produce twice as much forage as upland pastures. When grazing these areas, it is important to keep the integrity of the system by maintaining the water quality, preventing bank erosion, reducing flood damage and providing habitat for other organisms. Monitoring the intensity, duration and timing will allow for successful grazing in riparian pastures. The growth left behind in riparian areas should be somewhat more than upland so the riparian area can continue to perform its landscape functions. A rule of thumb is 4-6 inches of forage. It is preferable to graze more animals in less time than fewer animals for a longer period of time. Timing is the most important, as riparian areas are more susceptible to trampling, soil compaction and plugging. Graze areas when dry and allow for sufficient rest which can be up to 6 weeks. In most cases, producers will fence off the riparian area and install off-site watering systems so the grazing intensity, duration and timing can be managed depending on the year. Riparian grazing is a great way to extend your grazing into the fall during dry years.

The annual M.D. of Wainwright Rural Routes Supper was a rousing success. Thank you to all who donated to the Wainwright food bank. This year we raised \$927.00. Hope to see you all next year!