



CropPest Ontario

Agriculture Development Branch
Editor—Albert Tenuta-Plant Pathologist
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Comments, suggestions or articles are welcome. To be added to the distribution list please contact:

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Corn Rust Early This Year!

**Albert Tenuta, Field Crop Pathologist,
OMAFRA, Ridgeway**

The strong storm fronts and persistent rain showers have been ideal for common corn rust this year. Common rust, along with northern leaf blight and gray leaf spot, are the most economically important corn leaf diseases in the province. Unlike northern and gray leaf spot, which over-winters in Ontario, common rust spores originate each year from southern US/Mexico. Frequent storm fronts from these areas have deposited spores relatively early this year when compared to the past few seasons.

Growers need to assess their fields for leaf diseases as we enter the critical tasseling through to silking stage (VT to R1). In most years a fungicide application for disease control is not needed but if you are considering a fungicide application for disease control, take the following into consideration - the susceptibility of the hybrid to disease, yield potential of the field, weather conditions and forecasts, fungicide costs, application method, and crop growth stage. The primary purpose of fungicides is to protect leaves near the ear and above from significant disease. Refer to the OMAFRA Publication 812 “Field Crop Protection Guide” for Registered Products and the diseases they control. It can also be found at “www.omafra.gov.on.ca/english/crops/pub812/p812toc.html”.



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More Western Bean Cutworm Moths Captured

Tracey Baute, Field Crop Entomologist, OMAFRA—Ridgetown

Since the first moth was captured in Ontario two weeks ago, we have captured a few more moths at four other trap locations in southwestern Ontario. Numbers are very low still but we are starting to scout corn fields at our trap sites to see if eggs can be found. I recommend that corn fields still in the pretassel stage in the areas where we are finding moths be scouted weekly for egg masses. See the table below for our trap locations and sites that have had moths. Last week's CropPest newsletter article discussed scouting techniques and thresholds for corn. We will continue to report our trap numbers to keep you informed.

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Trap Location	Date Captured	Crop	Number of WBC moths captured
Woodslee	N/A	Corn	0
Belle River	N/A	Corn	0
Jeanette's Creek	N/A	Corn	0
Chatham	July 14th	Corn	4
Ridgetown	July 11th	Corn	1
Port Lamb-ton	July 4th	Corn	1
Glencoe	July 7th	Corn	2
Glencoe	July 14th	Corn	1
St. Thomas	July 7th	Corn	1
London	N/A	Corn	0
Thorndale	N/A	Bean	0
Centralia	N/A	Bean	0
Bornholm	N/A	Bean	0
Blyth	N/A	Bean	0
Elora	N/A	Corn	0
Harriston	N/A	Corn	0
Monck	N/A	Corn	0
Teeswater	N/A	Corn	0

Fusarium Head Blight Update

Albert Tenuta, Field Crop Plant Pathologist, OMAFRA, Ridgetown

With wheat harvest in full swing, initial reports concerning Fusarium levels gives producers and the industry reason to be “cautiously optimistic” according to Garnet Snobelen with the Canadian Grain Commission (CGC) in Chatham. The majority of wheat has been of good quality (grades #1 and #2) but a few as expected have been downgraded due to the disease. In terms of DON levels, the CGC has processed a very small number of samples but to date DON levels have been in the <0.5ppm DON which is the lowest category.

Although these very preliminary reports are good news we must all remain vigilante and be aware of potential “hot spots” this year as in every year. Fields with visual Fusarium need to be given priority at harvest and with the frequent and unpredictable rains/storms a delay could result in further secondary infection or DON accumulation.

The University of Guelph Ridgetown Campus along with OMAFRA is collecting samples from fields throughout the province where no fungicide was used. This information will be used to determine disease and DON levels plus provide further validating information necessary for the DONcast model which is the property of Weather INnovations Incorporated (WIN) in Chatham. A sufficient number of samples have been collected from Essex and Chatham-Kent counties but we still require other fields from across the province. If you would like to participate in the survey, please phone the OMAFRA office in Ridgetown at 519-674-1690 or fax field location/contact information to 519-674-1564 (c/o Michael Jay). Remember, to be included in the survey, fields must not have had a fungicide applied to them.

Thanks!

SOIL MANAGEMENT WORKSHOP

Tuesday, August 19, 2008
Guelph area

Cost: \$60 for the day

Special Offer: Soil and Crop Members \$40

Registration includes: Lunch, Refreshments and
Reference Materials

Getting to the root of the problem!
Soil quality affects crop performance

Fine tune the skills and techniques needed for diagnosing soil quality and fertility problems in the field. Identify soil and nutrient management practices you can use to improve and maintain soil health and productivity.

Topics Covered

- soil water and texture
- soil structure and compaction
- tools for diagnosing soil problems
- soil management influences on root systems
- soil life and nutrient cycling

**For more information contact the Woodstock OMAFRA
Resource Centre at (519) 537-6621.**

Hail Damage in Corn – What About Fungicides?

Albert Tenuta, Field Crop Plant Pathologist, OMAFRA, Ridgeway

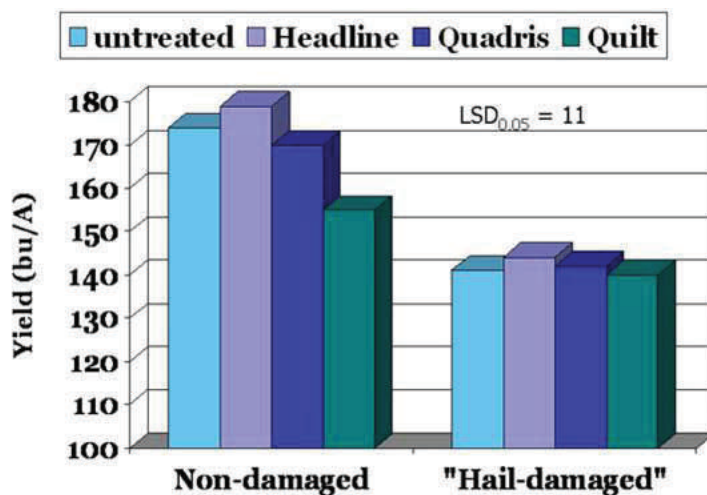
This week several severe thunderstorms moved across the province resulting again in significant hail “events”. Some of the hardest hit areas occurred in Lambton, Chatham-Kent and Middlesex areas. In a previous CropPest Ontario article (Issue 8 – June 27, 2008) Horst Bohner (OMAFRA soybean specialist) described the impact on hail damage on corn is very dependant on the corn growth stage. Unfortunately, some the fields damaged by hail were in the VT or tassel/pollen shedding stage which is the most prone to hail and other leaf defoliating injury. Refer to Horst’s article for Potential Yield Loss (%) in Corn based on Growth Stage and Defoliation.

A number of producers have asked “would a fungicide application help reduce my risk to secondary disease development due to hail damage?”. We have very little data to determine whether a fungicide application would reduce disease. What we do know is the primary economically important corn leaf diseases (Northern leaf blight, common rust and gray leaf spot) in the province are excellent “pathogens”. What makes them very good disease organisms is their ability to infect regardless of whether the corn is wounded or not. Therefore they are not dependent on open wounds to get into the plant and thus it is unlikely to see a increase in these three leaf diseases as a result of hail injury. The one disease which will increase directly from hail injury is common smut but it is not controlled by foliar fungicides.

Common smut incidence increases in fields where the plants have been wounded by not only hail but frost, drought, mechanical injury, detasselling, herbicide injury, insects or sandblasting as well. High levels of nitrogen and manure promote this disease. Common smut overwinters, not only in the soil but in corn residue as well. The spores are spread by wind and rain through splashing. All above-ground plant tissue is susceptible, but infection occurs most often in areas of actively growing tissue.

Greyish smut galls up to 10 cm (4 in.) in diameter develop on the stalks, ears and tassels, while smaller galls often appear on the leaves. The galls initially have a white membrane cover that eventually breaks and releases dark-brown or black powdery spores. On the leaves, galls develop into a hard, dry growth. Smut galls can replace kernels. Unlike common smut, head smut occurs can occur on both the ears or tassels.

One of the few studies looking at disease, fungicide and hail interactions comes from Carl Bradley (Extension Pathologist) with the University of Illinois. In 2007, he conducted a simulated hail-fungicide trial in which corn plants were damaged with a string trimmer just before tasseling to simulate hail damage. As a control some plots were left undamaged. The fungicides Headline, Quadris, and Quilt were applied to the plots and compared to an untreated check. When the data were statistically analyzed, fungicides did not significantly improve yield compared to the untreated check in the "hail-damaged" plots or the nondamaged plots. Carl did find significant differences in yield however between the damaged and undamaged plots. The simulated hail damage alone did decrease yield by approximately 30 bu/A compared to the nondamaged plots.



Results from a simulated hail damage x foliar fungicide trial on corn at Urbana in 2007. (Source Carl Bradley, University of Illinois).