

This is the Muck Station Report and IPM Information for Friday August 01, 2008.

The weather forecast for this weekend is relatively warmer. This relative warmer weather condition will decrease the development of leaf wetness at night and through to the morning. A high day time temperature also decreases the survivability of many fungal spores. Therefore the risk of leaf disease symptoms either appearing or increasing in your crops is moderate.

A total of 25.3 mm rain has been accumulated between July 28 and 31. This year's July rainfall was a record high in 10 years with a total of 121.3 mm rain during the month.

DOWNCAST has predicted onion downy mildew sporulation infection periods occurred in the last four days. Risk of downy mildew development is moderate. If growers are having onions on onions and the field has a history of onion downy mildew, the risk of developing downy mildew will increase.

We have not found downy mildew of onions on station yet. Symptoms are not usually visible until infected areas of leaves sporulate. The best time to see early downy mildew symptoms is early in the morning when the leaves are still wet. Infections usually occur in patches within the field. A violet or greyish growth develops, and the tissue dies quickly, resulting in straw-coloured lesions and eventually plant death. The disease can spread by rain, by machinery or by people in the field when the leaves are wet. Flag hot spots and either remove the whole area or quarantine so that workers do not spread the spores. At this time it is best to spray a systemic fungicide such as Ridomil, Cabrio and Aliette but remember to rotate through the fungicides. If symptoms are present apply either Aliette or Cabrio. Refer page 138 tables 9-59 of the OMAFRA's publication 363 for registered fungicides.

BOTCAST, which is used to predict botrytis on onions, has a cumulative disease severity index of 28. This means that if you have not sprayed yet your lesion count has the potential to be above the threshold of 1 lesion per leaf. In most fields fungicide applications have been made and lesion counts are well below threshold. Daytime temperatures around 30 C effectively kills botrytis spores. Irrigation or rain increases the risk of botrytis blight.

BREMCAST has predicted a couple of sporulation infection periods over the past few days. Lettuce downy mildew is present on station. Risk of disease development is moderate to high.

Purple blotch, caused by *Alternaria* has been found in some onion fields and at our research plots. Infection occurs when warm temperatures (18-30°C) coincide with prolonged dews or leaf wetness. Weaker plants or those affected by other diseases such as blight and downy mildew are at high risk. Lesions are not always purple but are more light tan with brown or reddish-purple margins. There may be a yellow zone around the lesion, which can stretch up and down the leaf but is more often 1 to 5 cm in length.

Onion thrips counts decreased at our research station to 0.08 thrips per leaf and at our other research site at Woodchoppers lane thrips count increased to 0.3 thrips per leaf. The threshold for pesticide application is 1 thrips per leaf.

Onion grown on soils with a pH of 6.5 or higher may turn pale green or yellow. The plants become stunted, twisted and bent. If this happens it might be zinc deficiency. Spray one or two times with zinc sulphate at 1.6 kg/ha.

Onion maggot counts on station remain low at 0.25 flies per trap per day and at our other research site are also low at 0.5 flies per trap per day.

Carrot rust fly counts started to increase around the Holland Marsh. However, today no carrot rust fly found on sticky traps at both sites of our research station. Currently the degree day model for rust fly is at 1429, which means second generation emergence of carrot rust flies appeared.

In celery and lettuce fields, some damage from Tarnished plant bugs has been seen. To monitor for this pest, check 50 to 100 plants. Today tarnished plant bug count in celery on station was 0.02 bugs per plant, which is below spray threshold. The spray thresholds are 0.1 and 0.2 TPB per plant for fresh and processing celery and or 6% of the plants showing damage. Tarnished plant bug control recommendations are listed on pages 105 and 131 for celery and lettuce respectively in publication 363 of the 2008-2009 edition.

Aster leafhopper counts on station and fields around the Holland Marsh are currently low to medium.

A complete list of herbicides for weed control in carrots is listed on page 219-221 in publication 75. A list for onions can also be found on page 230-230 in publication 75.