



MUCK CROPS RESEARCH STATION IPM 2010

This is the Muck Crops Research Station Report and IPM Information for Tuesday July 20, 2010

Purple blotch has been observed in many onion fields. Infection occurs when warm temperatures (18-30°C) coincide with prolonged dews or leaf wetness. Weaker plants or those affected by other diseases or physiological disorders such as herbicide, heat and pelting rain damages are at highest risk. No spray thresholds have been established, but application of fungicide is recommended if there is high incidence (more than 5%). Mancozeb such as Dithane should work well at this time, which will also act as protectant fungicide for other diseases.

Symptoms of carrot leaf blight have been seen in carrots around the Holland Marsh. Monitor your fields regularly. The spray threshold for carrot leaf blight is 25% disease incidence (i.e. 25% of the plants scouted show symptoms). Carrot disease control recommendations are listed on page 96 in OMAFRA's publications 363 of the 2010/11 edition.

We have found carrots that are affected by heat canker. Heat canker in carrots is caused by tissues of the root at or near the soil surface collapsing and dying due to high soil surface temperature. It appears as a constriction at the crown restricting water and nutrient flow to the carrot tops. As a result the plant wilts and eventually the top breaks off at the crown.

DOWNCAST predicted no sporulation infection period for the last 4 days. Risk of downy mildew on all onions is low to moderate. If the temperature cools down and leaf wetness is prolonged, risk of downy mildew will increase as the crop canopies are getting larger. No downy mildew has been found on onion fields around the Holland Marsh.

BOTCAST has a cumulative disease severity index (CDSI) of 20, which is still low for fungicide spray. Risk of developing botrytis on onions at this time is low.

As of next week we will set up spore traps in onion fields to monitor botrytis and downy mildew spores.

To control emerged broadleaf weeds in onions, spray Goal. Goal should be sprayed after there has been dry, sunny weather for two days. Do not mix Goal with other herbicides, but manganese sulphate can be added to Goal.

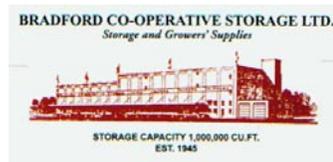
If you are not applying manganese sulphate with Goal, continue to spray onions with manganese sulfate at a rate of 1.5 to 2.75 Kg/ha in 300 L of water repeated in 4 to 5 sprays 10 days apart.

Onion fly activity currently is moderate. The count is expected to increase as we reached the 2nd generation emergence and if the temperature gets cooler. Onion maggot fly count at our research station was 2.6 flies/trap/day.

Thrips count started to increase in most fields around the Holland Marsh. Thrips count at our research station increased to 1.1 thrips/leaf, which is a threshold level for insecticide application. Counts of thrips can rapidly reach to threshold level quickly in hot weather. Monitor your fields for thrips regularly. The threshold for insecticide application is 1 thrips per leaf.

Rust fly counts at our research station increased to 0.1 flies/trap/day as the second generation flies beginning to emerge. Thresholds for insecticide spray are 0.1 flies/trap/day for fresh market and 0.2 for processing carrots.

Once celery is one third grown it is time to apply magnesium and boron. Use Epson salt or other forms



of magnesium and spray every 10-14 days. Foliar application of calcium in the form of calcium chloride or calcium nitrate reduces development of black heart.

Tarnished plant bug activity is moderate, but the counts and the damages vary from field to field. Check your fields regularly. Thresholds are 0.1 and 0.2 TPB per plant for fresh and processing celery and/or 6% of the plants showing damage.

Aster leafhopper activity started to increase, but is still low to warrant insecticide spray. Continue to watch for aster leafhoppers in crops like celery, lettuce and carrots, which are vulnerable to aster yellows infection.

A spray of calcium on young lettuce can reduce the risk of tip burn during hot humid weather.

BREMCAST predicted no sporulation infection period in the last 3 days. Risk of downy mildew on lettuce is moderate. If it rains, gets cooler and leaf remains wet for longer periods, risk of downy mildew will be higher especially in older plantings.

The soil temperature at the Research Station at 5 and 10 cm depth is currently 22.2 and 21.8°C. A total of 14.4 mm rain was accumulated between July 16 and 19.

ANY QUESTIONS OR COMMENTS? Call Michael or Mary Ruth McDonald at 905-775-3783