MUCK CROPS RESEARCH STATION IPM 2013

This is the Muck Crops Research Station Report and IPM Information for July 11, 2013

To date, we have received 113 mm of rain in May and 94 mm in June, which is above the 10 year average. We observed extended periods of leaf wetness in the last few days in all crops. Longer dew or leaf wetness periods accompanied by high humidity and optimum temperatures are ideal for most foliar pathogens. We also have seen tip burn, rain pelting damage, purple blotch and stemphylium leaf blight on onions. Tip burn and rain pelting damage are ideal entry points for fungal pathogens that cause stemphylium leaf blight and purple blotch. Infection occurs when warm temperatures (18-30^{o}C) coincide with prolonged dews or leaf wetness. Weaker plants or those affected by insects, other diseases or physiological disorders such as herbicide damage and pelting rain damage are at highest risk. Growers should monitor their onion fields for symptoms of stemphylium leaf blight and purple blotch. Recommendations for fungicide spray are listed on OMAF's publication 838.

A combination of warm weather and moisture from rain or irrigation also makes a good environment for the development of bacterial diseases, especially when plants have already been damaged from insects or other problems. Thus, growers should keep an eye for bacterial problems in all crops. We have observed bacterial infections mainly in celery and cole crops.

BOTCAST: The cumulative disease severity index (CDSI) for botrytis leaf blight is 24. Risk of botrytis leaf blight at this time is low to moderate to high although lesion counts are low. Growers should monitor their fields regularly for botrytis leaf blight and apply fungicide if their field has 3 lesion/leaf. The first spray threshold is when the CDSI is more than 30 or when botrytis lesion count is 3/leaf. Recommendations for fungicide spray are listed OMAFRA's publication 838.

The onion fly activity has increased as the second generation onion maggot flies started to emerge. The count at our research station this morning was 11.5flies/trap/day.

The carrot rust fly activity around the marsh is generally low to moderate. This morning the count at our research station was 0.07 rust flies/trap/day. Thresholds are 0.1 and 0.2 flies/trap/day for fresh market and processing carrots respectively.

Aster leafhoppers have been caught in all areas of the marsh, but the numbers on sticky trap counts remain low. The maximum number we found this morning at our station was 5 aster leafhoppers/trap, which is low to warrant insecticide spray. No symptoms of aster yellows have been reported on the marsh.

The onion thrips count has decreased in most onion fields probably due to the rain we received in the last few days, which washed the thrips from the plant. Thirps count at our research station this morning was 0.1 thrips/leaf. The threshold for insecticide application is 1 thrips/leaf.

Chateau WDG herbicide provides preemergence control of several broadleaf weeds common in onion fields. It may be applied when onions are between 3 and 6 leaf stages. Follow the label carefully.

Continue to apply foliar application of manganese starting when onions are about 15 cm. This can be applied at a rate of 1.5 to 2.75 kg/ha in 300 L of water repeated in 4 to 5 sprays over the growing season 10 days apart.

DOWNCAST predicted a sporulation infection period in the last 3 days. Taking into account the weather forecast and crop canopy size, risk of downy mildew on transplanted onions is moderate to high and low to moderate on

seeded onions. Risk may increase if leaves remain wet for longer periods and the temperature cools down. No onion downy mildew has been report around the marsh.

In celery, tarnished plant bugs (TPB) and some damage from TPB have been found in the marsh. Spray thresholds are 0.1 and 0.2 TPB/plant for fresh market and processing celery respectively and/or 6% plants showing damage. Good weed control is an important management tool for reduction in TPB populations.

Early blight (caused by *Cercospora apii*) and bacterial leaf spot have been confirmed in celery fields. Carefully monitor your fields and if your field is infected with bacterial leaf spot, stay out of the field when it is wet. Bravo, Echo, mancozeb (Dithane, Penncozeb and Manzate), Polyram and Pristine are registered for the management of early blight of celery.

BREMCAST predicted a sporulation infection period in last 3 days, Risk of downy mildew on lettuce at this time is moderate to high.

A total of 25.5 mm rain was accumulated at our weather station between July 8 and July 10. The soil temperatures at the 5 and 10 cm depth are currently 23.2 and 22.5°C respectively.

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