



Science For A Better Life



## MUCK CROPS RESEARCH STATION IPM 2017

This is the Muck Crops Research Station Report and IPM Information for Tuesday July 18, 2017

### *Onion*

Transplants are developing well and seem to have mostly recovered from the wet start to the season. Seeded onions have plenty of true-leaves. Foliar applications of manganese sulfate are recommended when onions are about 15 cm tall. This can be applied at a rate of 1.5 to 2.75 kg/ha in 300 L of water, repeated 4-5 times over the growing season 10 days apart.

### *Onion Insects*

The second generation of onion maggot should be starting based on our degree day model. Onion maggot fly counts are 0.06 flies/trap/day on station and 0.25 flies/trap/day at our Jane street field, though with the second generation started we expect counts to be increasing.

A few thrips have been noted, but populations are scattered and small with 0.03 thrip/leaf on station and 0 thrips at our Jane street field. Typically, the heavy rains we've been experiencing limit thrip populations.

### *Onion Diseases*

Our forecasting has predicted just one sporulation period for **downy mildew** this season, however we have confirmed downy mildew in multiple fields in the Holland Marsh. **We recommend a protective application of Ridomil Gold MX 68WG**, particularly in transplant onions with well developed canopies where relative humidity is likely the highest. Protective sprays are needed as downy mildew will develop in onion plants without visible symptoms. Afterwards, regular sprays should always involve a rotation. For control, not just suppression, of downy mildew, Alliete WDG, Revus, Zampro, and Manzate Pro-stick are registered. Alliete should not be tank mixed with any other product, particularly micronutrients.

Stemphylium continues to spread. The fungicides registered for stemphylium, Luna Tranquility, Sercadis, and Quadris Top, are only registered for suppression, meaning protective sprays are more valuable than reactive sprays. Sercadis also shares a mode of action with Luna Tranquility meaning they are not effective rotation partners. Some purple blotch has been identified as well, attacking weaker, yellowing leaves. BOTCAST has also reached its second threshold, although applications made to control stemphylium should be effective in controlling botrytis. Some bacterial rots in onions have appeared in a couple fields.

### *Carrot*

Carrot weevil egg laying on station has continued despite being past the 90% egg laying threshold. If nothing has been applied for weevil control in the past 7-10 days, an additional spray may be warranted particularly under high weevil pressure. Rimon has shown good results at the research station, and the mode of action is effective even against weevil eggs in carrot plants. If you've recently applied Exirel for control of some of its labelled pests, recent research at the station suggests it is also effective against weevil meaning another insecticide application wouldn't be needed.

We're catching rust flies, but the second generation isn't expected for another week or two. Current counts are 0.1 flies/trap/day on station and 0.05 flies/trap/day at our Jane street field.

Aster leafhopper counts are still generally low around the marsh.

Both Cercospora and alternaria leaf blight have appeared on carrots in the marsh.





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### Celery

So far, we have not seen much tarnished plant bug activity.

Blackheart in celery has been noticed in multiple fields in the marsh. Blackheart develops due to calcium deficiency, and preventative applications of calcium are beneficial as it is more difficult to control blackheart once it begins developing. Remember boron and magnesium are also important for celery development.

Celery leaf curl has been identified in multiple fields in the marsh. The disease is new, and currently only Quadris is registered for control. Recent trials at the research station have indicated applications of Bravo ZN or Flint for leaf blights may also contribute to leaf curl control.

**BREMCAS**T – There has been one sporulation infection period (SIP) for downy mildew on lettuce in the past four days, meaning risk is low.

### Soil Temperatures:

July 17: 5 cm – 25.7  
10 cm – 24.8  
20 cm – 22.7

DATE (July, 2017)	TEMPERATURE (°C)		ACCUMULATED RAINFALL (mm)
	MAX	MIN	
14	21.4	15.2	0.0
15	26.3	17.2	0.0
16	27.4	17.0	2.2
17	26.2	15.2	0.0

