



Science For A Better Life



MUCK CROPS RESEARCH STATION IPM 2017

This is the Muck Crops Research Station Report and IPM Information for Friday July 21, 2017

Downy mildew on onions was found this week in the marsh. Protective sprays are required as the disease only creates symptoms once it is established in the field. Celery leaf curl has also been identified. Recommendations are below.

Onion

Some early transplants are already starting to lay down, while early seeded onions have 8-9 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 Diseases

We have **confirmed downy mildew** in multiple fields in the Holland Marsh. Our forecasting has predicted just no sporulation periods for downy mildew this week but there have been two infection periods, and sporulation has been limited by relative humidity meaning in well developed canopies sporulation could have occurred. **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, Torrent 400SC, 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.

Onion Insects

The second generation of onion maggot should be starting based on our degree day model. Onion maggot fly counts are 0 flies/trap/day on station and 0 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 0.02 thrip/leaf on station and 0 thrips at our Jane street field. Typically, the heavy rains we've been experiencing limit thrip populations.

Celery

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.

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.





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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 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 alternatia leaf blight have appeared on carrots in the marsh.

BREMCAST – 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 – 26.4
10 cm – 24.9
20 cm – 23.4

DATE (July, 2017)	TEMPERATURE (°C)		ACCUMULATED RAINFALL (mm)
	MAX	MIN	
18	27.0	21.9	0.0
19	29.0	22.0	0.0
20	30.8	23.2	10.0

