



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 28, 2017

We are still seeing some downy mildew problems developing around the marsh. Protective sprays are important as this is a severe disease with outbreaks that can threaten neighbouring crops as well.

We currently have a graduate student researching celery leaf curl. If you believe you have leaf curl developing in your celery field, this student would like plant samples to evaluate the disease across the marsh. Please contact the station and Zach will arrange a sample collection.

Onion

Early transplants are starting to lay down, while early seeded onions have 8-10 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

Downy mildew has continued to spread. Our forecasting has predicted conditions have been appropriate for infection over the past week, although the necessary sporulation has been limited by relative humidity. Relative humidity is likely higher in well developed canopies meaning there is a high risk in transplants and sufficient risk to onions across the marsh for proactive control measures. Our first recommended product to apply is Ridomil Gold MX 68WG (+). 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 (+), Orondis Ultra (+), Zampro(+), Revus, Torrent 400SC, and Manzate Pro-stick are registered. Alliete should not be tank mixed with any other product, particularly micronutrients. Products indicated with a (+) have shown strong success at controlling downy mildew on station.

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. BOTCAST has also reached its second threshold and some botrytis spores have been identified on spore traps, 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 starting to increase, though still low with 0.2 flies/trap/day on station and 0.2 flies/trap/day at our Jane street field. With the second generation started we expect counts to begin to increase.

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. No major infestations have been found.

Carrot

Carrot weevil egg laying on station is finally starting to slow. Egg laying hasn't completely stopped, but additional applications are likely not necessary at this point unless it's been 10-14 days since the last application and the field has a heavy weevil infestation.





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We're catching rust flies, and the second generation has essentially started. Current counts are 0.05 flies/trap/day on station and 0 flies/trap/day at our Jane street field.

Aster leafhopper counts are moderate, although there have been a few peaks in some fields.

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

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 research has indicated applications of Pristine, Bravo ZN, Flint, or mancozeb (Dithane, Penncozeb, Manzate) 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 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.

BREMCAST – There have been no sporulation infection period (SIP) for downy mildew on lettuce in the past four days, meaning risk is low.

Soil Temperatures:

July 28: 5 cm – 19.7

10 cm – 18.8

20 cm – 19.7

DATE (July, 2017)	TEMPERATURE (°C)		ACCUMULATED RAINFALL (mm)
	MAX	MIN	
25	21.7	15.7	1.2
26	25.1	15.7	11.8
27	21.9	10.4	0.0

