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2016 Downy Mildew Control Strategy for Cucumber Crops

Elaine Roddy, Vegetable Crop Specialist, OMAFRA, Ridgetown

The 2016 Downy Mildew Control Strategy for Cucumber Crops (https://onvegetables.files.wordpress.com/2016/05/2016-downy-mildew-control-strategy-for-cucumber-crops_final1.pdf) contains an updated list of fungicides, including the newly registered Orondis Ultra. The restricted entry interval for Bravo has also been updated to reflect the new Bravo ZN label.

Due to the development of resistance and concerns about efficacy, Tattoo C and Presidio have been removed from the 2016 strategy. These products may provide suppression under low risk conditions, however research results indicate that they are not sufficient controls under higher disease pressure.

For more reading:

Research Update – Fungicide Efficacy on Downy Mildew in Cucumbers (<https://onvegetables.com/2015/11/12/research-update-fungicide-efficacy-on-downy-mildew-in-cucumbers/>)

Ontario CropIPM – Downy Mildew (<http://www.omafra.gov.on.ca/IPM/english/cucurbits/diseases-and-disorders/downy-mildew.html#advanced>)

“In This Issue”

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Cucurbit Downy Mildew

Rust and Purple Spot Appearing in Young Asparagus Fields

Elaine Roddy, Vegetable Crop Specialist, OMAFRA, Ridgetown

Young asparagus fields are most susceptible to foliar diseases. Depending on the weather conditions, they will typically appear soon after the plants begin to fern out. Scout regularly, especially as harvest winds down in the immature fields. Both rust and purple spot lesions have been reported in numerous fields this week. Foliar fungicide programs are most effective if they are started at very early stages of development; before the disease gets into the upper canopy, branches and cladophylls. Both diseases start in the bottom 12-24" of the stem.

Rust (below right) first appears as slightly raised, oval lesions; 2-5mm in length. Depending on the age of the lesion, the colour ranges from pale cream to light green or light orange. Dark orange spores appear as the disease matures. These spores disseminate in the canopy causing further infections.

Stemphylium (below left) appears as a slightly sunken, oval lesion. Very new infections are brownish purple in colour. Older ones have a light tan centre with a darker purple border. Stemphylium spores will also move quickly from the lower lesions into the new growth.

We are interested in scouting immature asparagus fields (2-3 years old) and monitoring the foliar health of these crops over the growing season. If you have a young field, and are interesting in participating in the project, call or email Elaine Roddy (519 674 1616) or elaine.rodny@ontario.ca.



Pesticide drift – You can't say you didn't know

Jason Deveau, Application Technology Specialist, OMAFRA, Simcoe

Sprayers 101

When it comes to information about pesticide drift, it's easy to find and there's a lot of it. I have an archive of 29 articles written by the Ontario Ministry of Agriculture staff spanning 1999 to 2014. There's so much, in fact, that it sometimes feels like there's nothing left to say that hasn't already been said. Here are four common themes – see if you recognize any:

- **The Carrot:** This theme outlines the benefits to not drifting, like better neighbourly relations, reduced environmental impact and saving money in wasted pesticide.
- **The Stick:** Insurance adjusters or regulators give stats or case studies warning of the wasted time and the financial, legal, and insurance impacts of drift.
- **The Heart:** Those impacted by drift vent their frustration and emotional and financial impact, or those accused talk about the conflict, irritation and personal insult of being accused.
- **The Facts:** Technical specialists lay out math, methods and models of how to keep spray where it belongs with talk of wind-speed, nozzles and pressure.

Pesticide drift – You can't say you didn't know...con't

And these resources aren't just the written word! There are internet videos, live and archived powerpoint presentations, hands-on workshops and demos, government factsheets, marketing brochures and smartphone apps. And yet, every May/June, the drift complaints roll in regardless. For those that ask "why?" here are a few possible scenarios:

- Maybe busy growers forget a few key best practices with everything else that's happening on the farm.
- Maybe the applicators that make the effort to access and understand these resources aren't the target audience.
- Maybe applicators are lulled into false security driving so many acres, for so many hours, for so many years while insulated in the cab of a tractor/sprayer.
- Maybe there are huge disconnects when the land is rented by one person, to a farmer that isn't there, who has their fields sprayed by custom applicators, who don't know what's around the field.
- Or maybe, just maybe, even the best applicator can have bad luck.

And who is to blame when drift happens? We hear about field crop applications damaging horticultural operations, but it's more than that. Horticultural and field crop applications can drift onto residential areas, sensitive environmental areas or onto one another. Commercial operations can drift onto organic operations. A single operation can even drift an incompatible chemistry onto itself!

Communication between neighbours can make such a big difference, both in preventing drift and in dealing with an incident if it occurs. Here are two ways to look at the same situation – which one will be easier to resolve?

1. A "wheat farmer that drives 20 miles per hour in high winds" is accused by a MOECC officer on behalf of an "angry tomato guy that's always complaining about something". The court date is on the 5th.
2. Sarah knocks on Kevin's door and says there might be something wrong with her crop – can he come have a look? She has (rightfully) contacted the MOECC to collect samples just in case, but she asks if they can discuss it to figure out what happened, how to deal with it and how to prevent it down the road.

Once there's a face and a name, it's so much easier to find solutions! It doesn't mean someone wasn't in the wrong, or that money shouldn't change hands, but the dialogue makes everything faster, easier and less emotional. And it works both ways – the potential driftee can make themselves known to the potential drifter as easily as the other way around. Both parties benefit from keeping one another informed about when sprays go on and the state of any sensitive crops.

So the core of this article isn't how to prevent drift, or what to do if you suspect it. That's all been said and a few key resources are listed below for reference. This article is about being aware of drift, about opening lines of communication between those that share borders, and about knowing where to get the right information if it's needed.

In the meantime, share this article. Learn more when you can. Go introduce yourself to your neighbour.

Pesticide drift – You can't say you didn't know...con't

Resources:

- **Article**(<http://sprayers101.com/spray-drift/>)– Includes 4 videos and a factsheet about what drift is, how to prevent it and what to do if you suspect it.
- Power Point presentations (**one**—<http://sprayers101.com/prevent-pesticide-drift-or-ill-keep-giving-this-talk-slide-presentation/>) and (**two**—<http://sprayers101.com/about-drift-slide-presentation/>)- Drift basics and mitigation.
- Narrated **Power Point**(<http://sprayers101.com/vegetative-barriers-to-spray-drift-slide-presentation/>) presentation – Drift and vegetative barriers.
- **Article**(<http://sprayers101.com/surface-inversions/>) – Includes a video and a factsheet about surface inversions and drift.
- **Article**(<http://sprayers101.com/five-tips-for-spraying-in-the-wind/>) – Spraying in the wind.
- **Video**(<http://sprayers101.com/exploding-sprayer-myths-episode-5-early-spraying/>) – The time of day can affect drift potential.
- **Video**(<http://sprayers101.com/understanding-spray-quality-video/>) – Spray quality (i.e. droplet size) and how it relates to drift.
- Articles (**one**—<http://sprayers101.com/increase-sprayer-productivity-without-driving-faster/>) and (**two**—<http://sprayers101.com/how-fast-should-i-drive-my-sprayer/>) – Reducing travel speed and employing other means of increasing efficiency.
- **Article**(<http://sprayers101.com/the-case-for-low-drift-sprays/>) – Drift-reducing nozzles.
- **Power Point**(<http://sprayers101.com/drift-nozzle-choice-slide-presentatation/>)presentation – Nozzle selection and low drift.

Seasonal Topics – May 30, 2016



May 30, 2016 — Some topics are relevant year after year, but you might not always take the time to filter through previous posts to find them. I've highlighted some here that might be of interest this week. Click on the preview images below to jump to the articles.

Let's hope we don't see any crop damage due to spray drift this season. But if you do suspect herbicide drift damage, what do you do?

You suspect herbicide drift – now what?

June 27, 2011 by Janice LeBoeuf

Crop injury caused by herbicide drift is guaranteed to cause misery and confrontation, not to mention insurance claims and legal charges. **No one wins when herbicides drift** – the applicator loses two ways: his herbicide misses the

Is it safe to mix this chemical and that one? If only there was a way to be sure. There's an app for that — or an old-fashioned jar test. (There are other tank mix apps, too. What's your favourite?)

Tank Mixing and Pesticide Compatibility – “The Jar Test”

April 11, 2013 by Janice LeBoeuf

Are you considering a new tank mix this year? Perhaps two new fungicides, or an adjuvant you want to try? Be sure you know what you're doing before you risk an untested tank mix. Users of commercial class pest control products for crop protection or vegetation management are permitted to apply unlabelled tank

Tomato growers — here's a review of some post-emerge broadleaf herbicide ratings from Dr. Darren Robinson at Ridgetown Campus.

Annual broadleaf weed control for POST herbicides in tomatoes

May 29, 2015 by Janice LeBoeuf

	Common lambsquarters	Common ragweed	Eastern black nightshade	Hairy nightshade	Redroot Pigweed	Velvetleaf
Sencor	10*	0*	5	3	10*	0*

How soon do you have to get in there with those post herbicides? Check out these visuals from Dr. Robinson on how fast weeds grow.

How fast do weeds grow?

May 13, 2011 by Janice LeBoeuf

Weed size is critical when timing herbicide applications, but do you know how long it takes for a weed to go from almost too small to see – to too big to kill? Here's a visual example. To begin, the plot was cleared of weeds, without disturbing the