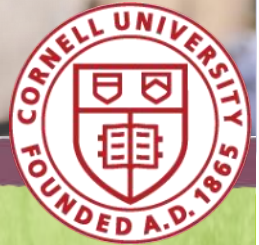


Vegetable News



Herbicide Options for Pumpkins and Squash

Charles Bornt, CCE ENYCHP

I know some early pumpkins and winter squash has already gone in the ground, but I suspect that the majority of them will be planted in the next couple weeks. The herbicides labeled and mentioned below all work best as post plant, pre-emergent applications. They are mostly seed germination inhibitors or root inhibitors. In my opinion, there are three important factors for these herbicides to work their best:



Field preparation: Fit and plant the field as closely together as possible. Do not fit the field and let it sit for more than 2 or 3 days before planting it as this will allow weed seeds to germinate (if the conditions are right). Most of these products' activity and efficacy is reduced when seeds are already germinated. If you have to wait, consider re-fitting the field with a shallow cultivation before planting. Also, make sure the field is not full of clumps as this will also reduce the efficacy of the herbicides.

Application timing: As with field fitting, do not delay your herbicide application for more than a day after planting! The same reason applies—this gives seeds time to germinate and reduces their activity. Planting and spraying your herbicide within a day will improve weed control.

Moisture: All of these materials require either a rain or irrigation after application in order to "activate" them. Not only does this activate the herbicide, but it also activates seed germination. If it looks like there is no rain coming for a while and you don't have irrigation, my suggestion is to go ahead and still get the herbicide on. It's better than waiting for a rain.

As I've said in years past, I would not use any of these products pre-emergent/post-

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plant by themselves with the exception of Strategy (already has 2 different active ingredients pre-mixed). We have seen that tank mixes are the best value and result in much better weed control. Many of these products have a narrow range of weeds they target so tank mixing a couple of them improves overall weed control. Tank mixes that we think have potential for pumpkins and winter squash are: Sandea (Profine is the generic version) plus Dual Magnum plus Command 3ME; Sandea plus Command 3ME or Strategy plus Sandea. As always, please read the label carefully and if you have questions about what you read below, please do not hesitate to call me at 518-859-6213 and I will do my best to answer them.

Dual II Magnum and Dual Magnum Notes: We go over this every year as I want to make sure everyone is in compliance! Yes, pumpkins are on both the Dual Magnum and Dual Magnum II label—however, if you read the label it clearly states that it can only be applied **“as an inter-row or inter-hill application in pumpkin. Leave 1 foot of untreated area over the row, or 6 inches to each side of the planted hill and/or any emerged pumpkin foliage (inter-row or inter-hill means not directly over the planted seed or young pumpkin plants).”**

What’s it all mean? It means you cannot broadcast apply either Dual Magnum product according to the regular label that comes on the jug. **In order to use the broadcast application, you must have the 24C Special Local Needs (SLN) label and the only formulation that has the broadcast application is Dual Magnum!** **Therefore, you cannot use Dual II Magnum broadcast on either pumpkins or winter squash!** The broadcast method of Dual Magnum is an indemnified label which means that you accept the risk of using this material and any injury or crop loss is not the responsibility of the company. In order to obtain the correct label, you will need to register with Syngenta and indicate that you are using this product on those specific crops. **The use of generic “Dual” products is not legal to use on pumpkins**

or winter squash.

How do I get the “indemnified label”? The process is simple, but needs to be done via the internet and needs to be completed every year too! Registering with Syngenta and obtaining the 24 c SLN:

1. Go to www.farmassist.com and in the top header bar click “Crop Protection” and then select “Indemnified Labels”.
2. Either login or create a user name and password. Once you’ve logged in, the top of the header should say “Indemnified Label Search”. Select New York and Dual Magnum.
3. Go to the second Dual Magnum 24 label that comes up and select the crop (it only allows you to choose one at a time so you will need to do this for as many crops as you want to apply Dual Magnum to).
4. You will then be navigated to a “WAIVER OF LIABILITY AND INDEMNIFICATION AGREEMENT” page where you will either accept or decline the special instructions for using this product on the selected crops.
5. Once you’ve accepted the liability, the label will appear and you should print it as well as save it on your computer. If you decline it, the labels will not appear and you legally cannot apply Dual Magnum to the selected crop(s).
6. Farmassist will save all of the indemnified labels you have agreed to in case you lose your label and need another one. If you need assistance you can call the Syngenta Customer Resource Center at 866-796-4368.

Remember, you need to have a copy of the Dual Magnum 24C label in your possession when using this material. More information regarding other labeled materials can be found in Table 1.

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Table 1: Recommended Pre-Emergent/Post Seeding Herbicides for Pumpkins and Winter Squash

Product	Crops	Weeds controlled	Rate	Comments
Sandea, Profine 75 (halosulfuron)	All cucurbits	Broadleaves (pigweed, velvetleaf, etc.)	0.5 - 1.0 ounces per acre	Needs to be mixed with a grass herbicide when used pre-emergent. Can stunt and delay emergence especially at higher rates but temporary (I recommend 0.5 oz rate), short residual of about 4 weeks, will start to see some weed species breaking through (common lambsquarter, Eastern black nightshade) around the 4th of July. Using a 0.5 oz. once pre-emergent allows you to use another 0.5oz. once post emergent.

Dual Magnum (S-metolachlor)	Pumpkins, winter squash	Mostly grasses and some broadleaf suppression	2/3—1.33 pints per acre depending on soil type	PLEASE SEE OTHER NOTES ON DUAL MAGNUM! I have seen very good results and limited injury using the 1.0 pints per acre rate. <u>Do not incorporate</u> as this increases the risk of severe injury! Best if used as a post plant pre-emergent and can be used post-transplant within 72 hours of planting (weed seed germination issues).
Command 3ME (clomazone)	All cucurbits	Annual grasses and some broad-leaves	2/3 – 1.33 pints per acre depending on soil type	Labeled on all cucurbits (Label actually says “Do not use on Jack-O-Lantern pumpkins” because the companies distributing this product will not accept liability for potential off-color responses that have been observed in numerous varieties). I find that the 1.0 pint per acre rate is used and provides good control. Do not incorporate! The ME (micro-encapsulated) formulation does not need to be incorporated! May be used prior to seeding or transplanting (make sure transplant is planted below the chemical barrier) or post seeding but before crop emerges.
Curbit EC (ethalfluralin)	All cucurbits	Mostly annual grasses and some broadleaf suppression	3.0—4.5 pints per acre depending on soil & organic matter level	Use as a post plant pre-emergent application only within 2 days of planting or banded application between rows after crop emergence or transplanting (be very careful of drifting onto the crop). Do not use under plastic mulches or rowcovers. Cold, wet soils can increase injury or even result in crop failure! Label recommends using a minimum of 20 gals/acre fixed spray volume. Weed control may be reduced on soils with organic matter over 5%. Not recommended for soils with more than 10% organic matter.
Strategy (Pre-mix of Command and Curbit) (clomazone + ethalfluralin)	All cucurbits	Most annual grasses and some broad-leaves	2.0 - 6.0 pints depending on soil texture	I would recommend no less than 4 pints/acre. Do not incorporate, recommended as a post plant pre-emergent or banded application between rows after emergence or transplanting. Do not broadcast apply and then transplant into treated soil as severe injury will occur. It can also be banded to row middles after a cultivation. Do not let this material freeze in storage as it could potentially settle out and clog your sprayer screens, tips etc. Label also recommends to use 10 to 30 gallons per acre finished spray volume. Be sure to check the label as there are crop rotational restrictions that are rate dependent.
Reflex (fomesafen)	Pumpkins and winter squash except butternut	Broad-leaves and some annual grass suppression	0.5—1.0 pints per acre	24C Special Local Needs label on pumpkins, summer squash and most varieties of winter squash, except butternut. “Indemnified” label like Dual Magnum which means you accept any crop losses associated with using this material and same registration process as Dual Magnum. See the “Registering with Syngenta and obtaining the 24 c SLN” section under Dual Magnum. For direct seeded crops you need to apply to the row middles only or leave the area over the seed furrow untreated. Do not use as a broadcast application on direct seeded pumpkins or squash! However, for transplants you can use it as a pre-transplant non-incorporated pre-emergence (weed seeds) broadcast application up to 7 days prior to transplanting. Do not exceed 1 pint per acre of Reflex on pumpkins, winter or summer squash per season. Please note the 18-month crop rotation restrictions for sweet corn. Do not use Reflex alone.

Responding to Hailstorms

Crystal Stewart, CCE ENYCHP

Unfortunately, the hail season has started early and with a vengeance this year. If you find yourself facing the aftermath of a hailstorm, here are a few things to consider.

The damage left by hail varies tremendously based on the size and shape of the hailstone, the wind velocity of the storm, the duration of the hail event, and the stage of growth plants are in. Deciding how to respond is really case-by-case. Two farms right next to each other can experience very different levels of damage. However, there are some rules of thumb that generally hold true.

- **Cucurbits are going to look really bad but are likely to recover.** Those huge leaves tend to tatter very dramatically during hail, and can look absolutely awful. However, the leaves can also help to protect the growing points, which largely determine whether a plant will recover or not. Generally cucurbits that are old enough to have an established root system and have intact growing points will be able to generate new leaves very quickly and will begin producing fruit within a couple of weeks. To facilitate this process, give some extra nitrogen through the drip system. Pick and remove summer squash fruit that were damaged by hail if you can.
- **All plants will benefit from a protective fungicide application.** After hail, plants have hundreds of small (or large) wounds which leave them extremely vulnerable to diseases. As soon as you can get on the field, apply a protectant such as copper or chlorothalonil (copper will protect from bacterial and fungal diseases so is the better option), even if you applied one before the storm. This will help prevent infection while the plant heals up those wounds.
- **Incidence of bacterial rot in onions is going to increase.** We tend to see many more issues with onion storage following hail. Copper may help somewhat, but results have been mixed to poor.
- **Document the Damage.** In case the county or state declares your area a disaster zone, you may be eligible for compensation for losses. Take the time to photograph damage to crops, buildings, and other farm infrastructure to better support your estimated economic impact.

Deciding what to do with tomatoes can be tricky. According to Dr. Reiners, determinate varieties suffering



Exposed fruit have been severely damaged by hail. If these plants were saved, these fruit would not be marketable. Image: CLS

from moderate to severe damage (think of snapped branches and stripped leaves as seen in the image) are most likely to be lost causes because by the time they recover they will practically be at the end of their lives. It is best to pull plants at this threshold out. Indeterminate tomatoes have a better chance of recovering from hail. All fruit which was hit will be relegated to seconds at the very best. Damage can vary greatly by variety because of the differences in canopy cover, so assess each separately. Last year we saw Primo Reds that were a complete loss next to Amish Paste tomatoes which were about 80% ok.

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Determinate plants were snapped off about halfway by high winds and stripped by hail. These plants are not salvageable. Image: CLS



On plants with heavy foliage such as corn and sweet potatoes, a foliar feeding including nitrogen and some micronutrients may be beneficial. Remember that you have to have intact foliage to spray for this to be effective.

Once you have done everything you can to clean up and protect your plants, it is often best from a mental health standpoint to walk away for a few days up to a week.

There is a small period of time where this is nothing more to do but let the plants recover. Nice time for a mini vacation. Really.

As always, if you would like help deciding what to do after hail or any other weather event, please give us a call.

A Spring Tale of Springtails

Teresa Rusinek, CCE ENYCHP

Last week, I went to check on a problem a grower was having in his high tunnel cucumber crop. Carefully inspecting the leaves, I found many tiny, 1/16th of inch-long insects all over the cucumber plants. They jumped about from one cucumber plant to the next, munching away at tender foliage that was beginning to look like Swiss cheese!

The minuscule insects turned out to be springtails. In my 20+ years diagnosing vegetable pest problems, I've never come across these as a crop pest. For the most part springtails, also known as Collembola, feed on decaying plant material and are considered beneficial. But, under dry soil conditions, springtails seeking moisture may feed on and cause significant injury to young plants. The damage and appearance of springtails can look very much like flea beetles, but we don't typically see flea beetles attacking cucumber and the springtails are about half the size of a flea beetle. Similar to a flea beetle, they will spring away when disturbed using a structure under their abdomen called a furcular.

Springtails have been reported feeding on many veg crops including beans, beets broccoli potato radish, and even garlic. According to Cornell pest management guidelines,



"These insects are generally susceptible to insecticides and are likely to be controlled when an application is made to control another seedling pest."

Springtails lay eggs in moist soil with high organic matter. The eggs hatch out into juveniles in about 10 days and then molt multiple times throughout the season. Adults may live through the year but only seem to be a problem to crops in May or June when plants are small and tender.

Cucumber leaf in High Tunnel with springtails feeding causing shot holes in leaf. Close up of a springtail using chewing mouth-parts to feed on cucumber leaf. Photos by T. Rusinek

Biocontrol Bytes- Would you like to learn more about biocontrol and how to use it successfully?

NYS IPM Biocontrol Specialist Amara Dunn has a new blog - "Biocontrol Bytes" at <https://blogs.cornell.edu/biocontrolbytes/> Short articles are posted approximately once a month, sharing information, answering stakeholder questions, and connecting you to other relevant resources. There's also an option there to subscribe to future posts by email.



Lookout for Leek Moth

Amy Ivy, CCE ENYCHP

Leek moth is a pest of all allium crops: onions, garlic, leeks, shallots and chives. It is widespread through the southern parts of Ontario and Quebec in Canada, northern NY and in recent years, most of Vermont (see map).

Leek moth overwinters as an adult and begins flying in mid-April. This year the first adults were caught in Essex on April 21, in spite of very cold weather the week prior. The adults seek out alliums on which to lay eggs; emerging garlic and onion seedlings are known to be popular sites. Overwintering onions and emerging chives could be likely hosts for these first egg laying efforts as well. Larvae should be hatching in a couple of weeks.

Be cautious when buying and selling onion transplants between growers in the infested areas. We have seen leek moth appear in new locations when infested plants were brought in from other farms. It is not known in the southern US so seedlings from there should not be a concern for leek moth but caution is advised when buying any northern grown seedlings.

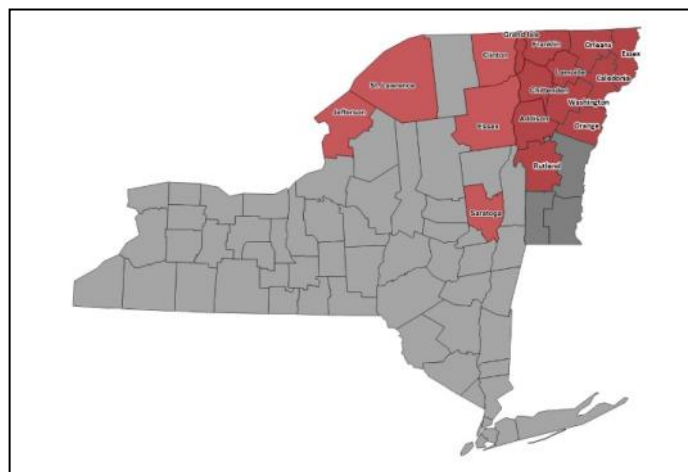
Leek moth larvae can do considerable damage to garlic scapes and this is a good first place to look for them when scouting. Look inside folded leaves near the developing scapes as well. There are 2ee labels for Entrust (organic), Radiant, Lannate and Warrior II w/ Zeon. Controlling this first emergence of larvae can help protect onions from the second generation of leek moth which is more difficult to control since the larvae are more protected because they feed inside the hollow onion leaves.



Left: Early leek moth damage to garlic. Unfold the youngest leaves near the emerging scape to find the damage and young caterpillars.



Right: Damage to garlic scape as it emerges.



Counties in New York and Vermont as of 2017 with confirmed leek moth infestations.

Weed Control Options for Spring Planted Crucifers

Andrew Senesac, Weed Science Specialist, CCE Suffolk County

First appeared in Long Island Fruit and Vegetable Update April 26, 2018

In 2018, Goal 2XL and Goaltender 4EC (oxyfluorfen) continue to be registered for cabbage, broccoli and cauliflower for pre-transplant application for residual control of annual broadleaf weeds like galinsoga, lambsquarters, pigweed and purslane.

In addition, since 2009 there has been a NYS Special Local Needs (SLN NY 090002) registration for Goaltender for these crops for use as a post-emergence broadcast or directed application for broadleaf weed control in cabbage, broccoli and cauliflower. The SLN label allows for application at rates that are reduced compared to the primary Goaltender label. By reducing rates (4 to 6 fl. oz. per acre for broadcast), over-the-top applications can be

fairly well tolerated. However, crops are not tolerant until they have reached a certain field age. For seeded, plants need a minimum of 4 leaves. For transplants, a two-week period is needed between planting and first Goaltender application. Also, because rates are reduced, certain broadleaf weeds will not be as well controlled as with the higher rates for pre-transplant applications. To minimize crop injury, avoid application during periods of cool, cloudy weather, and do not use adjuvants, surfactants or fertilizers with this application.

If annual grasses like crabgrass, barnyard grass or fall panicum have the potential to be problem weeds in a given field, there is a choice of products that can provide residual grass control as well as additional BL weed control: Treflan HFP can be used for this purpose, but it must be applied and incorporated immediately. Prefar-4E and Devrinol are also possibilities. They can be incorporated with tillage or with irrigation or rain. Each of these have limitations that will guide the choice. Mid to late season application can interfere with fall cover crop establishment and there are some plant back restrictions that should be considered before using some of these. Prowl H2O is also labeled, but only for post-plant directed applications. If grasses are expected to be only an occasional or moderate weed problem, then holding off on the pre-emergence and treating the grasses post emergence with Select Max or Poast is a practical approach. We still lack any useful tool to manage yellow



Prowl H2O and Goaltender (SLN) can both be used post-emergent on transplanted brassicas. As always, consult the labels for details.

nutsedge in crucifer crops on Long Island (EDITOR'S NOTE: Dual Magnum is available to growers in the ENYCHP region and does have activity on yellow nutsedge. For cabbage and broccoli, post-plant applications to direct seeded crops can be made when the crop has 4 true leaves. The SLN registration for brassica leafy greens allows post-emergence applications when the crop has at least 1 true leaf- EG). Cultural practices such as disking as soon as the crop is harvested might lessen the problem, but unfortunately, not provide any long term answer.

Looking to Try Something New?

Chuck Bornt, CCE ENYCHP



I just wanted to let everyone know that I have a fair amount of potato seed leftover from our potato variety trial. The varieties and descriptions are below. All that I ask is that you keep track of them and let me know what you thought of them both visually and eating wise. None

of this seed is certified organic, but it does come from reputable seed sources. With that said I would like to extend my sincere thank you to our trial seed providers: Ralph Child of Childstock Farm, Dr. Walter De Jong at Cornell University, Dr. Dave Douches at Michigan State University and Dr. Greg Porter from the University of Maine. I would also like to take this opportunity to thank our two trial cooperators, Max Morningstar of Copake and Jake Hooper of Barbers Farm in Middleburgh. We look forward to another great potato variety trial and look forward to seeing some of you maybe this fall at a potato variety twilight

meeting!

If you are interested in any of the varieties below, please contact Chuck Bornt at 518-859-6213 – this is a first come first serve basis so don't wait!

Continued on next page

Variety Name	Seed Source	Skin color	Flesh Color	Amount (lbs)	Variety notes
6049	Childstock	red	yellow	20	nice
747	Childstock	white	white	20	large size, good culinary qualities
Adirondack Blue	Cornell	purple	purple	30	Dark purple skin and flesh, oblong shape
Belmonda	Childstock	white	yellow	20	full season, stress and disease tolerant
Eva	Cornell	white	white	10	Standard white, main season storage
Green Mountain	Cornell	white	white	30	Old standard white, good storage
Joli	Childstock	white	white	20	oval, scab resistant, smooth, attractive
Keuka Gold	Cornell	white	yellow	30	Nice, high yielding yellow fleshed
Lamoka	Cornell	white	white	30	Nice bright white skin and flesh
Lehigh	Cornell	white	yellow	10	Fairly early, pale yellow flesh, large
N35-3	Cornell	white	white	30	New white
N35-9	Cornell	white	white	30	New white
Nordonna	Cornell	red	red	30	Nice red, stores fairly well
Norland	Cornell	red	white	10	Standard red
NY 140	Cornell	white	white	30	Decent white, main season
NY 162	Cornell	white	white	10	New white
NY136	Cornell	red	white	10	Aka Strawberry Paw, large red
NY141	Cornell	white	white	20	Really attractive white, main season
NY149	Cornell	white	yellow	10	Similar to Yukon Gold with better internal
NY151	Cornell	white	white	10	Really nice bright white skin and flesh
NY161	Cornell	White	yellow	10	high yielding, and visually interesting, yellow
NY164	Cornell	red	white	10	smooth skinned red
Purple Majesty	Childstock	purple	purple	20	Nice dark purple outside and inside
Soraya	Childstock	white	yellow	30	oval, low N requirements, smooth, nice
Superior	Cornell	White	white	30	Early standard white,
Waneta	Cornell	white	white	30	Really attractive white, main season
Yukon Gold	Cornell	white	yellow	5	Standard yellow flesh

Cornell Hosts First Organic Symposium, Launches New Organic Website

Crystal Stewart, CCE ENYCHP



On April 27th Cornell hosted its first ever organic symposium designed to bring together researchers, extension staff, and students who work in organic agriculture. Roughly one hundred people attended this event to share ideas about how to further our work and nurture the next generation of organic farmers. Part of this information exchange was a poster session, with 26 entries. These entries are now posted on the new Organic@Cornell website: <https://organic.cals.cornell.edu/about-us/organic-symposium-posters>.

The new organic website has a page devoted entirely to work happening with vegetables, but there are also pages for livestock, field crops, and dairy. Highlights of the website include research happening in Cornell Labs with an organic focus, field days being hosted by CCE or Cornell, and general updates relating to organic agriculture.

Check out the vegetable page of the website and let us know what you think! <https://organic.cals.cornell.edu/>

20 Minute Ag Manager

All webinars run from 12:00-12:30pm

For more information:

Contact Liz Higgins at emh56@cornell.edu

To register, go to <https://tinyurl.com/y9gfqbmX>.

Registering once gives you access to the series.

May: Basic Farm Finances

- May 15—Setting Up Your Farm's Accounts in Your Financial System
- May 22—Understanding Depreciation
- May 29—Understanding Assets and Liabilities vs Income and Expenses

June: Zoning and Land Use

- June 5—NYS Ag Assessment 101
- June 12—Local Zoning 101
- June 19—NYS Ag Districts 101
- June 26—Using On-line Data and Maps to Assess a Property Remotely

July: Managerial Accounting

- July 3—Budgeting 101
- July 10—Assessing a Capitol Investment
- July 17—Relevant Information and Sensitivity Analysis
- July 24—Pricing for Profit
- July 31—Know When to Hold'em, Know When to Fold'em (assessing performance)

August: Insurance

- August 7—Crop Insurance 101
- August 14—Crop Insurance for Diverse Farms
- August 21—Flood Insurance and Other Disaster Programs



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