

2011 PUMPKIN HERBICIDE COMPARISON

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Next to the question of “what varieties should I grow”, the next most popular question we seem to get is what is the best herbicide program I can use in my pumpkins? It seems like most of the vine crop growers I talk with all have different opinions of what works well and what doesn’t. We don’t have a lot of options for weed control with vine crops like we do with other crops, but at least we have a few more then we did a couple of years ago. I wish I had a one herbicide or tank mix that would fit all situations but the truth is each one has strengths and weaknesses.

The best plan will use a combination of post plant, pre-emergent herbicides. Before I continue, I think it is important to note with these pre-emergent materials how important timing and field preparation are. Because these are seed germination inhibitors, I think they work best if you can prepare the field, plant it and then get it sprayed as soon as possible. Don’t prepare the field (final tillage,) let it set for a couple days, then plant and wait another couple days to spray it with your herbicide. If these three steps can be done consecutively, you don’t give weed seeds a chance to germinate. If you wait, weed seeds germinate and the herbicide may not be as effective as it would have if it was in place before the seeds germinated. Secondly, field preparation is important – if you have a field with a lot of large clods and clumps of soil, these herbicides are not going to work as well if the field is fairly smooth and free of clods and clumps. This doesn’t mean you need to disk the life out of your soil, but make sure your soils aren’t too wet when you plow or that if you plan on going into a sod field, be sure to kill the sod the fall before you want to till it. Clod free fields will help your herbicide be evenly distributed across the field.

Brief Review of the Labeled Herbicides for Pumpkins:

- Sandea is labeled on pumpkins and winter squash and controls many different broadleaves at a rate of 0.5 – 1.0 ozs./acre. However, I highly recommend the 0.5 ozs./ acre rate as there is less injury to your crop. Additionally, the max use rate per season is 1.0 ozs, so the 0.5 ozs rate will allow you to use another 0.5 ozs/acre as a post emergent application later in the season if needed. Sandea has a wide use range on its label. It is labeled on bare ground direct seeded or transplanted cucumbers. For summer squash and melons you can’t use it directly on the crop as it is only labeled for row middles regardless if they are direct seeded or transplanted. Common Lambsquarter can be a difficult weed to control with Sandea alone and we often see it escape about 4 weeks after Sandea has been applied pre-emergent. Likewise, Eastern Black Nightshade can also become problematic later in the season when Sandea is used alone.
- Dual Magnum is labeled on pumpkins and winter squash. Dual Magnum is labeled at a rate of 0.67 – 1.33 pints per acre depending on soil type and is used to control many annual grasses.

It is particularly good at controlling galinsoga. **Dual Magnum is to be applied as a post plant pre-emergent application only – do not incorporate otherwise injury could occur.** Please be aware that Dual Magnum not Dual II Magnum is labeled for pumpkins and winter squash and that the user must have in his possession a copy of the New York State's multi-crop 24 (c) Special Local Need (SLN) supplemental label. Not only does the grower need to have the label, he or she also requires indemnification from Syngenta because it allows a wider range of use rates than the Federal label. To view a copy of the 24 C SLN label and indemnification, go to the "special labels" link found at www.farmassist.com or call the Syngenta Customer Resource Center at 1-866-796-4368. Please make sure to complete these steps if you decide to use Dual Magnum as I know last year several growers were inspected by DEC and asked to show their copy of the labels. Dual Magnum can also be applied post plant to transplants as long as it is applied within 72 hours of transplanting.

- Sandea plus Dual Magnum has become a popular tank mix recently. However, you are pretty much restricted to using this combination post plant pre-emergent as Sandea is not recommended for transplants.
- Sandea with Curbit can pick up many of the annual grasses Sandea alone might miss. Both are labeled for all the different vine crops. Curbit needs to be applied no later than 2 days after planting otherwise injury can be a problem. Do not incorporate either of these materials as injury will be likely to occur. I have also seen Curbit injure plantings if heavy rains occur soon after application.
- Command can only be used on processing type pumpkins. Jack-O-Lanterns or in essence any pumpkins sold for decoration are not on the label. You might also remember that because the older formulation of Command was quite volatile, it was recommended that it be incorporated. The good news is the new 3 ME (microencapsulated) formulation does not need to be incorporated. Again, your crop and some weeds may turn white but should usually does not result in yield or crop quality. Command is especially good on annual grasses and also picks up a lot of the annual broadleaves. However, it can be very poor on pigweed.
- Strategy is a pre-mix of Command and Curbit. The nice thing about Strategy is that it is labeled on all the vine crops at a rate of 2-6 pints per acre depending on soil type and is very good at controlling many of the annual grasses and broadleaves. **Do not** incorporate Strategy. Because Strategy contains Command, you may notice weeds and your crop turn white after emergence. This is not unusual and does not result in crop yield or quality reduction.

In 2011 we compared all of the above labeled herbicides plus an additional one called Reflex (fomasafen). We were informed that Syngenta was seeking more information on weed control and crop safety in order to send a request to NYS DEC for adding pumpkins to the label. The results, including costs comparisons can be found in the table on the next page. We were quite impressed with the additional weed control Reflex demonstrated. It is especially helpful on Common Lambsquarter, Eastern Black Nightshade and Common Purslane and it appeared to be safe for the crop.

Herbicide Treatment	Actual amount of product used per acre	Cost per Acre ⁴	Weed Ratings ²	Weed Escapes ³
Sandea 75 DF+ Dual Magnum EC	0.5 ozs + 1.0 pints	\$14.00 + \$13.12 = \$27.12	1.25	CP, EBNS
Sandea 75 DF + Strategy 2EC ¹	0.5 + 6.0 pints	\$14.00 + \$68.16 = \$82.16	4.00	EBNS, CP
Sandea 75 DF + Command 3 ME	0.5 ozs + 1.0 pint	\$14.00 + \$15.68 = \$29.68	4.50	EBNS, CP
Sandea 75 DF + Command 3 ME + Dual Magnum EC	0.5 ozs + 1.0 pint + 1.0 pint	\$14.00 + \$15.68 + \$13.12 = \$42.80	5.00	EBNS, LQ
Sandea 75 DF + Reflex 2L ⁵ + Dual Magnum EC	0.5 ozs + 1.0 pint + 1.0 pint	\$14.00 + \$13.60 + \$13.12 = \$40.72	5.00	CLEAN
Strategy	6.0 pints	\$68.16	4.50	EBNS, LQ, MYC
Sandea 75DF + Reflex 2L	0.5 ozs + 1.0 pint	\$14.00 + \$13.60 = \$27.60	4.50	EBNS
Reflex 2L	1.0 pint	\$13.60	3.50	EBNS, LQ, PW, CP
Strategy + Reflex 2L	6 pints + 1.0 pint	\$68.16 + \$13.60 = \$81.76	5.00	EBNS, LQ
Strategy + Reflex 2L + Dual Magnum EC + Sandea 75DF	6.0 pints + 1.0 pint + 1.0 pint + 0.5 oz	\$68.16 + \$13.60 + \$13.12 + \$14.00 = \$108.88	5.00++	CLEAN
Reflex 2L + Dual Magnum EC	1.0 pint + 1.0 pint	\$13.60 + \$13.12 = \$26.72	4.50	LQ, EBNS
Command 3 ME + Dual Magnum EC	1.0 pint + 1.0 pint	\$15.68 + \$13.12 = \$28.80	4.50	EBNS, PW
Command 3 ME + Reflex 2L + Dual Magnum EC	1.0 pint + 1.0 pint + 1.0 pint	\$15.68 + \$13.60 + \$13.12 = \$42.40	5.00+	CLEAN
Command 3 ME + Reflex 2L	1.0 pint + 1.0 pint	\$15.68 + \$13.60 = \$29.28	4.00	EBNS, PW
Weedy Check	NA	\$0	0	CP, EBNS, PW, LQ, AG

Planting Date: June 16, 2011 **Variety:** Aladdin

Sprayed: Pre-emergent: June 17, 2011

¹ = Strategy is a pre-mix of Command and Curbit

² = Weed Ratings taken on July 28, 2011. Scale is based on a 0 - 5 scale where 0 = no weed control and 5 = Excellent weed control

³ = Weed Escapes: EBNS = Eastern Black Nighthshade; CP = Common Purslane; LQ = Common Lambquarters; PW= Redroot Pigweed; MYC = Marsh Yellowcress

⁵ Reflex is not currently labeled on pumpkins but is expected to be labeled as a pre-emergent application in 2012.

⁴ = **Cost per Acre:** These values are based on prices received from one local chemical dealer and should only be used to compare the costs per acre in this trial. Cost per units can be found in the table below. Prices will vary depending on who you purchase chemicals from.

Chemical Name	Rate Range per Acre	Cost per Unit	Cost per Acre
Sandea/Profine 75 DF	0.5 ozs - 0.9 ozs	\$27.98/oz	\$14.00 - \$25.18
Dual Magnum EC	0.67 pints - 1.33 pints	\$105.02/gallon	\$8.79 - \$17.45
Reflex 2L	1.0 pints	\$108.04/gallon	\$13.60
Command 3ME	0.67 pints - 2.0 pints	\$125.79/gallon	\$10.51 - \$31.36
Strategy	2.0 pints - 6.0 pints	\$91.11/gallon	\$22.72 - \$68.16