

2024 Weed Control Programs for Yellow and Zucchini Summer Squash

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Crop rotation, tillage, and a sound herbicide program are all critical components for a successful production system. The objective of maximizing weed control while minimizing crop injury is directly influenced by the production practice; thus, specific programs are needed for 1) seeding into bareground, 2) transplanting into bareground, and 3) transplanting into “old” mulch. When implementing a new tool, such as Rely, be careful to try on a limited number of acres to gain experience as grower practices can influence crop injury.

SEEDED BAREGROUND PRODUCTION:

Step 1. Ensure no weeds are emerged at planting. Tillage and/or the use of Roundup and/or Gramoxone are excellent options. Ideally apply Roundup at least 3 d before seeding at a max rate of 1.13 lb ae/A (RU PMA3 = 30 oz/A) while paraquat can be applied up until just before crop emergence.

Step 2. Place squash seed in moist soil.

Step 3. Apply Reflex 6-8 oz/A + Curbit 12-20 oz/A preemergence within 1 d of seeding (Fig 1). Command at 11-21 fl oz/A may be able to be included (refer to label for cultivar restrictions). Also, add paraquat if weeds have germinated.

Step 4. After the preemergence herbicide is applied, **lightly irrigate at least 36 hours prior to squash emergence**. Irrigate as a means to activate the herbicide but not to move it down around the squash seed.

Step 5. When squash is 3” and growing normally, apply Dual Magnum overtop or directed at 10 to 12 oz/A. **DO NOT APPLY DUAL** at planting (Fig 2). If plowing, plow first followed by Dual Magnum and then irrigate for activation.

Step 6. Apply Select Max at 9 oz/A without adjuvant when grasses are 3”, goosegrass 1” or less.

Row Middle. 1) Dual Magnum rate can be increased to 1.33 pt/A. 2) Use Sandea 0.75 oz/A + surfactant for nutsedge and radish; do not contact crop directly. 3) Treflan, up to 1.5 pt/A, can be applied as a directed spray when plants are > 4 leaf; irrigate within 24 hr. 4) Roundup, Rely, paraquat, and Aim can be applied under hoods; **avoid drift**.

Fig 1. Seeded Squash Injury from Reflex applied preemergence (PRE). Tifton, GA.

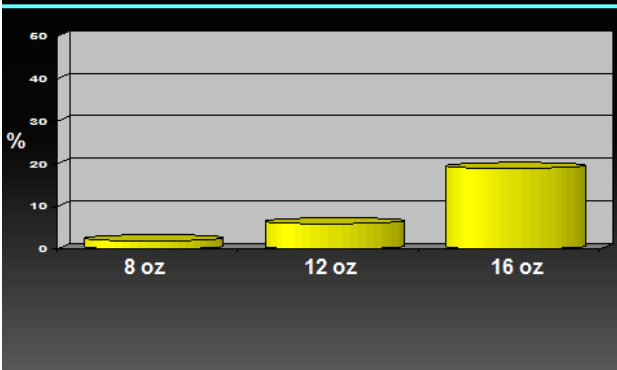
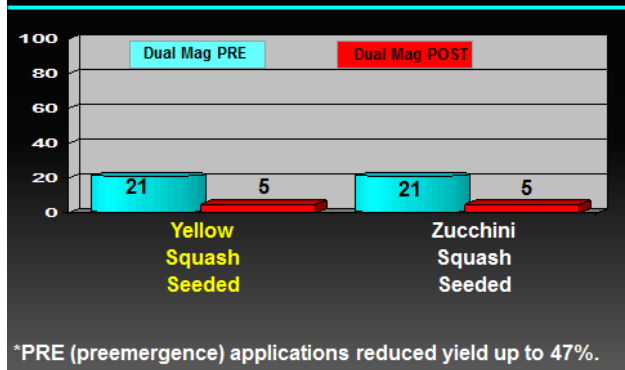


Fig 2. Yellow & Zucchini Visual Injury (%) from Dual Magnum. Tifton, GA.



Critical Thinking Points for All Production Systems!

1. The # 1 weed control mistake made by squash growers is applying the grass herbicide too late.
2. **Mixing Rely with Roundup may reduce control of many weeds compared to Roundup alone.**
3. **Obtain Dual Mag. & Reflex State 24 (c) labels at <https://www.syngenta-us.com/labels/indemnified-label-login>**
4. Command and Reflex pose serious carryover risks, check labels closely before use.
5. **DO NOT apply Dual Magnum at planting and DO NOT allow Reflex to contact squash foliage.**
6. Plowing can be very effective; ideally plow, then apply residual herbicides back to row middles.
7. Use conservative herbicide rates on sandy soils with low organic matter and/or with intense irrigation.
8. Curbit has the same active ingredient as Sonalan; however, only Curbit is labeled for use.
9. Curbit is not labeled for pre-transplant applications or for use under mulch.
10. Always follow herbicide label recommendations and restrictions.

TRANSPLANT BAREGROUND PRODUCTION:

Step 1. Be certain that all weeds are controlled prior to planting. Tillage, Roundup, and/or paraquat are effective options. Paraquat can be applied up until 24 hr before transplanting. For Roundup, apply at least 7 days prior to transplanting at a max rate of 1.13 lb ae/A (RU PMAX 3 = 30 oz/A) and irrigate with 0.5" after application and prior to transplanting.

Step 2. After preparing land for planting, apply Reflex 6-8 oz/A alone or with Command at 11-21 fl oz/A (see Command label to confirm its use on cultivar selected). Once the herbicide(s) is applied, lightly irrigate to activate the herbicide moving it into the soil avoiding "splash". After irrigation, prepare plant holes if desired and plant. **DO NOT** include Curbit preplant, it can only be banded as a row middle spray (2-3 pt/A).

Step 3. About 10 d after planting when crop is growing normally, apply Dual Magnum topically or directed at 10-12 oz/A. If plowing, plow first followed by Dual Magnum and then irrigate for activation.

Step 4. Apply Select Max at 9 oz/A without adjuvant when grasses are 3", goosegrass is 1" or less.

Row Middle. 1) Dual Mag. rate can be increased to 1.33 pt/A. 2) Use Sandea 0.75 oz/A + surfactant for nutsedge and radish; do not contact crop directly. 3) Treflan, up to 1.5 pt/A, can be applied as a directed spray when plants are > 4 leaf; irrigate within 24 hr. 4) Roundup, Rely, paraquat, and Aim can be applied under hoods; **avoid drift.**

Fig 3. Residual activity of Roundup if plant lands in "old" hole vs. a "new" hole.*



*Mulch was washed after applying Roundup and before transplanting.



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Fig 4. Cucurbit Response to Rely Applied Preplant Over Mulch



Rely - mulch washed



Rely - mulch **NOT** washed

TRANSPLANT MULCH PRODUCTION (2nd, 3rd crop etc.):

Step 1. Control previous crop and emerged weeds with metam sodium (Vapam, etc.), Roundup*, Rely*, paraquat, and/or Aim. Metam drip injected plus herbicides is usually the best option. However, Roundup* followed 5 days later by Rely* or paraquat can be effective on most plants. Reflex at 8 oz/A can be added with the burndown to provide residual control; Command is labeled pre-transplant for some cultivars but the label does not mention mulch.

*Roundup can be applied over mulch at 1.13 lb ae/A (RU PowerMax 3 = 30 oz/A) 3 or more days before transplanting or rates can be increased to 2.25 lb ae/A if applied 10 or more days prior to planting. Rely can be applied twice not to exceed 64 oz/A if applied 3 or more days prior to planting.

Step 2. All herbicides must be removed from mulch with 0.5 inch rain/irrigation in a single event prior to planting; do not punch transplant holes until after mulch is washed. If "new" holes end up in "old" holes or within 6 inches of "old" holes then injury may occur from concentrated herbicide rates of Roundup or Rely (Fig 3 and 4).

Step 3. About 10 d after transplanting when crop is growing normally, apply Dual Magnum topically at 8-12 oz/A.

Step 4. Apply Select Max at 9 oz/A without adjuvant when grasses are 3", goosegrass 1" or less.

Row Middle Prior to Planting: Chateau 51 WDG at 4-6 oz/A + Dual Mag. 1.33 pt/A is the ideal choice but spray must avoid contact with the mulch surface; rates are provided as broadcast so adjust accordingly. Add Roundup, Rely, or paraquat as needed. A rainfall is needed after application but before planting to move the residual herbicides into the soil.

Row Middle After Transplanting: Sandea 0.75 oz/A + surfactant can be used to control nutsedge and radish. Treflan, up to 1.5 pt/A, also can be applied to row middles as long as the crop has at least 4 leaves, irrigation or rainfall needed within 24 hr. Roundup, Rely, paraquat, and Aim can be applied under hoods; **avoid drift.**

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