

# UGA Weed Control Programs for Yellow and Zucchini Squash in 2018

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Crop rotation, tillage, and a sound herbicide program are all critical components for long-term success. This circular focuses on developing sound herbicide programs while minimizing crop injury for production systems including: 1) seeding into bareground, 2) transplanting into bareground, and 3) transplanting into mulch. New indemnified labels for Reflex and Dual Magnum have greatly improved weed control options (see back). Specific production practices may alter weed and crop responses; thus, **growers must evaluate these programs on limited acres until gaining experience**. Also, make sure to review the “Critical Thinking Points” and herbicide labels before considering any of these programs.

## SEEDED BAREGROUND PRODUCTION:

**Step 1.** Control all weeds prior to planting with tillage or herbicides. Roundup should be applied at least 3 d before seeding while Gramoxone can be applied up until just before crop emergence.

**Step 2.** Apply Reflex 8 oz/A + Curbit 12 to 20 oz/A PRE within 1 d of seeding (Fig 1). Command at 0.67 to 1 pt/A may be able to be included (refer to label for cultivar restrictions). Also, add Gramoxone if weeds have germinated.

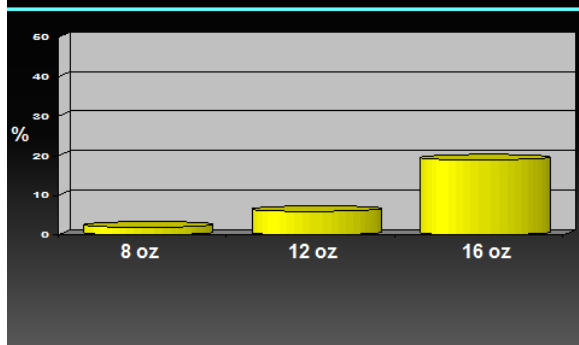
**Step 3.** After the PRE herbicide is applied, **lightly irrigate at least 36 hours prior to squash emergence**.

**Step 4.** When squash is 4” and growing normally, apply Dual Magnum overtop or directed at 8 to 12 oz/A. Delay Dual Magnum application or direct the application if plants are stressed. **DO NOT APPLY DUAL PRE** (Fig 2).

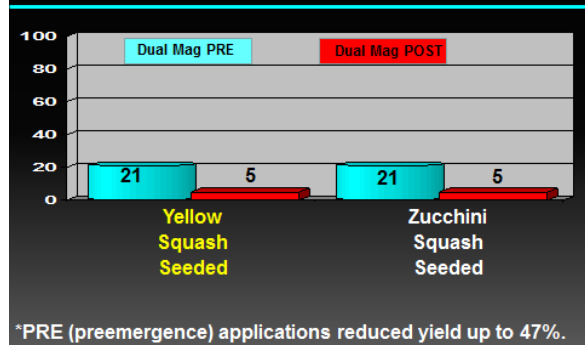
**Step 4.** Apply Select Max at 9 oz/A without adjuvant when grasses are 3 inches or less.

**Row Middle.** 1) Dual rate can be increased to 1.33 pt/A. 2) Use Sandea + surfactant for nutsedge control; do not contact crop. 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 and Gramoxone can be applied under hoods; spray often escapes hoods so be cautious.

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



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



**TRANSPLANT BAREGROUND PRODUCTION:** Weed control is actually easier to achieve in seeded production; however, somewhat effective programs are available and discussed below.

**Step 1.** Control all weeds prior to planting with tillage or herbicides. Gramoxone can be applied up until 24 hr before transplanting (REI for Gramoxone is 24 hr). Roundup should be applied at least 3 d prior to transplanting and irrigation should be implemented after application and prior to transplanting.

**Step 2.** After preparing land to plant, apply Reflex 8 oz/A and lightly irrigate to activate the herbicide and move it into the soil preventing “splash”. Command at 0.5 to 1 pt/A may be able to be included with Reflex (refer to label for cultivar restrictions). After irrigation, prepare plant holes and plant. **DO NOT** include Curbit preplant, can band in row middles.

**Step 3.** About 10 d after planting when plants are growing normally, apply Dual Magnum topically or directed at 8 to 12 oz/A. Delay Dual Magnum application or direct application if plants are stressed. **DO NOT** apply pre-transplant.

**Step 4.** Apply Select Max at 9 oz/A without adjuvant when grasses are 3 inches or less.

**Row Middle.** 1) Dual rate can be increased to 1.33 pt/A. 2) Use Sandea + surfactant for nutsedge control; do not contact crop. 3) Treflan up to 1.5 pt/A can be applied as a directed spray in middles when plants are > 4 leaf; irrigate within 24 hr. 4) Roundup and Gramoxone can be applied under hoods; spray often escapes hoods so be cautious.

**TRANSPLANT MULCH PRODUCTION:** Programs below assume 2<sup>nd</sup> crop or beyond on large bed mulch (30+inch wide bedtop; at least 4” tall). For first crop plasticulture, see the 2018 Fumigant circular.

**Step 1.** Control previous crop and emerged weeds with metam sodium (Vapam, etc.), Roundup, Gramoxone, and/or Aim. The combination of metam and herbicides offers the most success. For the best herbicide system, apply Roundup followed by Gramoxone 5 to 7 days later. Herbicides must be removed from mulch with 0.5 inch rain/irrigation in a single event prior to planting. Avoid Roundup applications within 5 d of planting if possible.

**Step 2.** Apply Reflex 8 oz/A alone or with the burndown followed by 0.5” irrigation to wash the mulch before poking new holes. Bed formation must allow Reflex to wash off the mulch while not concentrating in low areas on the mulch. Also, if “new” holes end up in “old” holes then injury may occur from concentrated Reflex rates. Command can be applied pre-transplant but the label does not address mulch; thus, UGA research is in progress to understand its value.

**Step 3.** About 7-10 d after transplanting when plants are growing normally, apply Dual Magnum topically at 8 to 12 oz/A. Delay Dual Magnum application or direct application if plants are stressed. Do not apply pre-transplant.

**Step 4.** Apply Select Max at 9 oz/A without adjuvant when grasses are 3 inches or less.

**Row Middle: Prior to planting.** Chateau 4 oz/A + Dual Magnum 1.33 pt/A; rates are provided as broadcast so adjust for banded application. Add Roundup or Gramoxone as needed. Avoid contact with mulch, must rain before planting.

**Row Middle: After transplanting.** Use Sandea + surfactant to control nutsedge without contacting crop; the addition of Roundup will improve weed control but be extremely careful to not drift on the crop. Roundup, Gramoxone, and Aim are labeled for row middle applications; avoid all contact with the crop which is often difficult with sprays even when using hoods. Additionally, Treflan can be included as long as the crop is at least 3 inches; rainfall will be needed within 24 hr.

### Critical Thinking Points!

1. Command and Reflex pose serious carryover risks, check labels closely before use.
2. **DO NOT APPLY DUAL PREPLANT OR PRE (Fig 2); DO NOT APPLY REFLEX POST.**
3. Plowing is very effective; ideally plow and then apply more residual herbicides back to row middles.
4. Use conservative herbicide rates on sandy soils with low organic matter and/or with intense irrigation.
5. Curbit has the same active ingredient as Sonalan; however, Sonalan is not labeled.
6. Curbit is not labeled for pre-transplant applications.
7. Always follow label restrictions of each product used; read label for potential injury or carryover concerns.

### Process for GA Growers To Obtain Dual Magnum and Reflex Indemnified Labels

1. [www.farmassist.com](http://www.farmassist.com)
2. Products
3. Indemnified labels
4. Login (or create login and password)
5. Georgia, Dual Magnum or Reflex
6. Accept Waiver
7. Print label



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