

# UGA WEED CONTROL PROGRAMS FOR BROCCOLI, CABBAGE, AND CAULIFLOWER 2017

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When it comes to growing commercial broccoli, cabbage, and cauliflower, crop rotation, tillage, and a sound herbicide program are all often critical components for long-term success. This circular focuses on developing sound herbicide programs while minimizing crop injury for the following production systems: 1) transplanting into mulch, 2) transplanting into bare ground, and 3) seeding into bare ground. It is critical for growers to understand that their specific production practices may alter weed and crop responses; *thus, growers must evaluate these programs on limited acres until gaining experience.*

**TRANSPLANT MULCH PRODUCTION:** A systems approach using Goal 2XL, Dual Magnum, and Select Max can be extremely effective in the management of weeds while avoiding unacceptable crop injury.

**Step 1.** Control emerged weeds with Roundup and/or Gramoxone prior to planting; both products must be removed from mulch by 0.5-inch rain/irrigation in a single event prior to planting or severe injury can occur (Figure 1). Avoid Roundup applications within five days of planting even when washing mulch.

**Step 2.** Apply Goal 2XL prior to punching new holes and wait at least five days (**at least two days must be sunny**) after application **before** punching holes and transplanting. In most situations, Goal 2XL at 12 oz/acre is in order. Goal is a very effective herbicide for controlling pigweeds, purslane, primrose, henbit, and many other broadleaf weeds (Figure 2).

**Step 3.** About 10 days after transplanting, when plants are growing normally, apply Dual Magnum topically at 8-12 oz/acre (Figure 3). Delay Dual Magnum application if plants are stressed.

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

**Step 5.** For row middles prior to planting, Treflan + Dual Magnum + Goal + Roundup is an excellent option. Avoid contacting mulch, wait 3 days (at least two sunny days) after applying Goal prior to planting the crop.

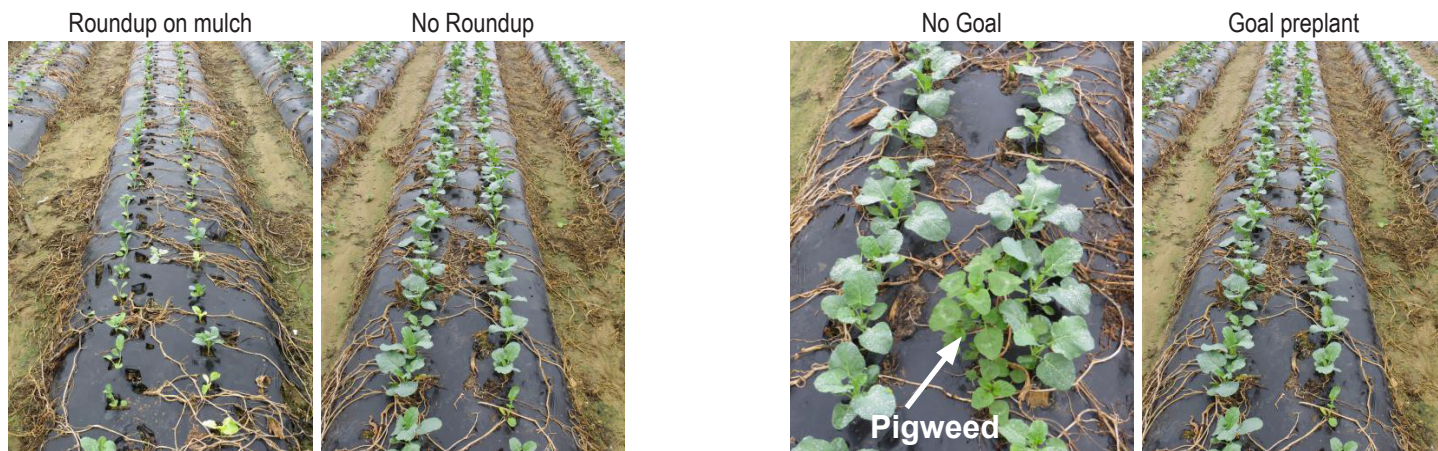


Figure 1. Roundup must be removed from the mulch.

Figure 2. Goal is very effective on many problem weeds.

**TRANSPLANT BARE-GROUND PRODUCTION:** A systems approach using Treflan, Goal 2XL, Dual Magnum, and Select Max can be extremely effective in the management of weeds while minimizing injury.

**Step 1.** Incorporate Treflan 2 inches deep into a moist soil at 10-16 oz/acre; use lower rates on lighter soils, in an intense irrigation program, and/or in a harsh environment. Transplants are more tolerant than seeds.

**Step 2.** After land is prepared for planting, apply Goal 2XL, irrigate for ideal planting environment, wait at least three days (**at least two days must be sunny**), and then punch holes and transplant. Goal 2XL rate should be 8-12 oz/acre; lower rates on sands with intense irrigation or when cold and wet. Also, use of transplants at least five weeks of age can reduce injury potential. Goal is a very effective herbicide for controlling pigweeds, purslane, primrose, henbit, and many other broadleaf weeds (Figure 2); include Gramoxone or Roundup when applying Goal 2XL if weeds have emerged.

**Step 3.** About 10 days after transplanting, when plants are growing normally, apply Dual Magnum topically at a rate of 8-12 oz/acres (Figure 3). Delay Dual Magnum application if plants are stressed.

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

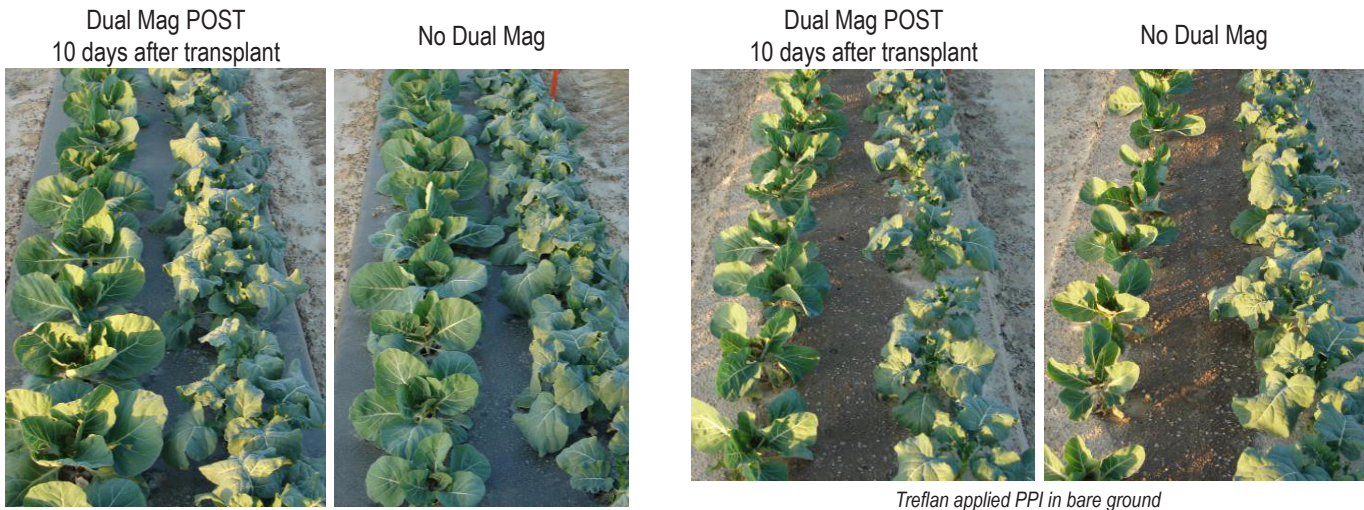


Figure 3. Response to Dual Magnum applied safely overtop of cabbage and broccoli crops 10 days after transplanting into mulch or bare ground.

**SEEDED BARE-GROUND PRODUCTION:** Seeded production offers greater challenges in weed control and poses greater crop injury potential as compared to using transplants; however, the program below may be helpful.

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| <b>Step 1.</b> Incorporate Treflan 2 inches deep into a moist soil at 10-16 oz/acre with lower rates used on lighter soils, in an intense irrigation program, and/or in a harsh environment. |
| <b>Step 2.</b> Once plants have reached 3 inches growing normally, apply Dual Magnum topically at 8-12 oz/acre.  |
| <b>Step 3.</b> Apply Select Max at 9 oz/acre without adjuvant when grasses are 3 inches or less.   |

**Critical Thinking Points to Avoid Crop Injury:**

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| 1. In transplant production, use the Goal 2XL formulation. DO NOT USE GOAL IN SEEDED PRODUCTION!  |
| 2. Use conservative herbicide rates when planting on sandy soil with low organic matter and/or with intense irrigation.   |
| 3. Dual Magnum topical application should be applied when crop is growing normally and not overly stressed.   |
| 4. In mulch, avoid Roundup over mulch within seven days of planting regardless of washing the mulch. Gramoxone can be applied the day before planting as long as it is washed from the mulch appropriately. |
| 5. In bare-ground production, do not apply Roundup within three days of transplanting.  |
| 6. In bare-ground transplant production, do not disturb Goal application with tillage.  |
| 7. Dual Magnum is a third party registration and labels must be obtained from <a href="http://www.farmassist.com">www.farmassist.com</a>  |
| 8. Always follow label restrictions of each product used; read label for potential injury or carryover concerns.  |
| 9. Although growers prefer to spray Treflan preemergence after planting and then irrigate, this use pattern is not currently labeled. Efforts with Dow AgroSciences are underway to address this need.      |

*It is important to always read any pesticide label before use. Use the product strictly according to the label directions. It is particularly important to follow all safety precautions. Trade and brand names are used only for information. The University of Georgia does not guarantee nor warrant published standards on any product mentioned; neither does the use of a trade or brand name imply approval of any product to the exclusion of others, which may also be suitable.*

