

UGA Weed Control Programs for Watermelon in 2014

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Dual Magnum has not been approved for use in watermelon row middles as of March. The label is expected in early April. By law, the Dual Magnum label must be in hand at the time of application.

New herbicidal tools are being developed to assist growers in the battle against weeds in watermelon. These tools are a result of cooperative efforts involving The University of Georgia, IR-4, The Georgia Department of Agriculture, The Georgia Agricultural Commission for Vegetables, and Industry. This circular is an effort to provide effective weed management programs for seeded and transplant watermelon. However, it is critical growers understand that their specific production practices may alter weed and crop responses to recommended herbicides. ***Growers must evaluate these programs on limited acres until gaining experience.***

A systems approach using Curbit, Dual Magnum, Reflex, Sandea, Select Max and/or Sinbar can be effective for managing weeds while avoiding unacceptable crop injury. Production practices addressed with this circular include 1) transplanting into small-bed relatively flat mulch, 2) transplanting into bareground, and 3) seeding into bareground. Large-raised bed mulch production is not addressed on this circular but that information can be found on the methyl bromide alternatives circular found at gaweed.com or at your local Extension office.

TRANSPLANT SMALL-BED MULCH PRODUCTION:

Step 1. If significant weed infestations are expected, the addition of metam sodium (Vapam, others) for the control of small-seeded grass and broadleaf weeds (≥ 50 GPA broadcast rate) and nutsedge (75 GPA broadcast rate) will be, by far, the most effective option under the mulch. Telone II may also be needed for nematodes.

Step 2. After laying mulch over a bed that facilitates herbicidal removal with washing and before punching transplant holes (Figures 1 and 2), broadcast Reflex (10-12 oz/A), Sinbar (2-4 oz/A), and/or Curbit (1.5-2 pt/A) over the mulch and bare soil. Include Gramoxone or Roundup to control emerged weeds, if needed.

Step 3. All herbicides must be removed from mulch prior to transplanting with a single 0.5" rain/irrigation event. All herbicides, except glyphosate, can be applied any time prior to planting; do not apply glyphosate within 7 d of planting.

Step 4. Apply Select Max at 9-12 oz/A without adjuvant when grasses are $\leq 3''$; do not apply within 14 d of harvest.

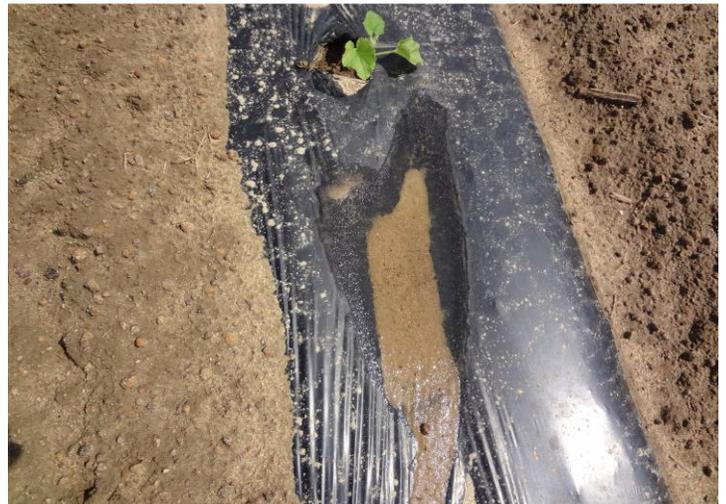
Step 5. Dual Magnum (12-16 oz/A), Sandea (0.75 oz/A) and/or Treflan (1-1.5 pt/A) can be applied to row middles for additional residual control and emerged nutsedge control; residual will likely be beneficial after plowing.

NOTE FOR UNDER MULCH APPLICATIONS: Reflex, Sinbar, and/or Sandea can be applied under mulch as long as the herbicide is applied in a manner where it is not disturbed during the plastic laying process. These herbicides under mulch will only suppress most weeds including nutsedge; although pigweed control is often very good with Reflex. Delay planting at least 7 d after the Sandea application; no planting interval is needed with Reflex or Sinbar.

Figure 1. Mulch must be free of holes and beds must be formed allowing irrigation/rain to wash herbicides off mulch.



Figure 2. Bed formation allowing herbicides to puddle can result in injury; holes allowing herbicide under mulch is problematic.



TRANSPLANT BAREGROUND PRODUCTION:

Step 1. Prepare land for transplanting, but do not poke transplant holes. Broadcast Sinbar (2-4 oz/A) and/or Reflex (10-12 oz/A) plus Gramaxone at any time prior to planting. Roundup can be used instead of Gramoxone as long as it is applied 3 d prior to planting. Sandea (0.67 oz/A) may also be applied but application must be 7 d prior to planting.

Step 2. Irrigate to activate herbicides and to move them into the soil, thereby reducing injury potential.

Step 3. Poke hole and transplant.

Step 4. After planting, irrigate to maintain a perfect stand but limit irrigations to as few as possible during first 2 wks.

Step 5. Apply Select Max at 9-12 oz/A without adjuvant when grasses are $\leq 3''$; do not apply within 14 d of harvest.

Step 6. Dual Magnum (12 oz/A), Sandea (0.75 oz/A) and/or Treflan (1-1.5 pt/A) can be applied to row middles for additional residual control and emerged nutsedge control; residual herbicide will likely be beneficial after plowing.

Note: *Curbit is only labeled for use between watermelon rows in bareground transplant production.*

SEEDED BAREGROUND PRODUCTION:

Step 1. After seeding watermelon into a weed free environment with excellent moisture, apply Sinbar (2-4 oz/A), Reflex (10-12 oz/A), and/or Curbit (12-20 oz/A); include Gramoxone if weeds are emerged.

Step 2. Lightly irrigate at least 36 hours prior to watermelon emergence; this will activate herbicides while preventing their movement down around the seed.

Step 3. After planting, irrigate to maintain a perfect stand but limit irrigations to as few as possible during first 2 wks.

Step 4. Apply Select Max at 9-12 oz/A without adjuvant when grasses are $\leq 3''$; do not apply within 14 d of harvest.

Step 5. Dual Magnum (12 oz/A), Sandea (0.75 oz/A) and/or Treflan (1-1.5 pt/A) can be applied to row middles for additional residual control and emerged nutsedge control; residual herbicide will likely be beneficial after plowing.

OTHER CRITICAL THINKING POINTS!

1. Dual Magnum and Reflex are a third party registration and labels must be obtained from www.farmassist.com
2. Reflex poses very serious carryover concerns to certain crops; Sinbar also poses some carryover concerns. When applied under mulch, carryover of these herbicides is greatly increased (Figure 3).
3. Use conservative herbicide rates when planting on sandy soils with low organic matter and/or intense irrigation.
4. Dual Magnum should not be applied within 6" of the transplant root ball or seed; do not apply within 60 d of harvest.
5. Sandea should never contact emerged watermelon foliage.
6. Treflan should be directed or applied in row middles after the crop has 3 to 4 true leaves.
7. Metam sodium (Vapam, etc.) requires a fumigant management plan (FMP).
8. Always follow label restrictions of each product used; read label for potential injury or carryover concerns.

Figure 3. Carryover risk with Reflex under mulch greatly increased.



Watermelon/Cotton Intercropping:

1. Do not use Sinbar as it will kill cotton.
2. Sandea is not labeled for cotton; injury may occur.
3. An effective system might include Treflan + Reflex preplant, wash mulch, transplant melons, plant cotton, and then apply Treflan as a banded PRE application to cotton. Select Max may be used to control annual grasses.



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