

# 2,4-D-Based Weed Management Programs for 2017 Enlist Cotton

(A. S. Culpepper, A. C. York, and J.C. Smith)

Mitigating off-target movement of 2,4-D is the greatest challenge for a 2,4-D-based weed management system. Georgia has many areas where this herbicide should not be applied in-season; for areas where it can be applied safely, review labels closely. Mitigating off-target movement of 2,4-D and implementing sound programs are addressed. *The Georgia Cotton Commission, Cotton Incorporated, and Industry are primary funding sources!!*

Enlist Duo, a premix of glyphosate and 2,4-D choline, is the only formulation labeled for use at planting or in-season for Enlist cotton.

Enlist Duo can only be tank mixed with products approved at [www.EnlistTankmix.com](http://www.EnlistTankmix.com). As of Jan 16, no herbicides are approved for tank mixing. See discussion on back.

## CRITICAL STEPS FOR ON-TARGET 2,4-D CHOLINE APPLICATIONS (yes, it is complex)

1. Person responsible for an in-crop application of Enlist Duo must have attended the Using Pesticides Wisely Training.

2. At least 15 factors should be understood for success; only having the right nozzle or only applying in low winds will not end well (Fig 1).

3. Most broadleaf vegetables, fruits, and nuts are very sensitive to 2,4-D, avoid applications near these sensitive crops (Fig 2).

4. Apply in winds between 3 to 10 mph; drift distances can still be large. Land terrain and direction of wind have huge impacts on drift.

5. Sprayer ground speed influences drift greatly. Suggest staying under 10 mph. Absolutely no aerial applications!

6. Enlist Duo label currently allows numerous spray nozzle options; see back page for more details.

7. Boom height should be minimized based upon the nozzle selected; 24" above the target is ideal when feasible.

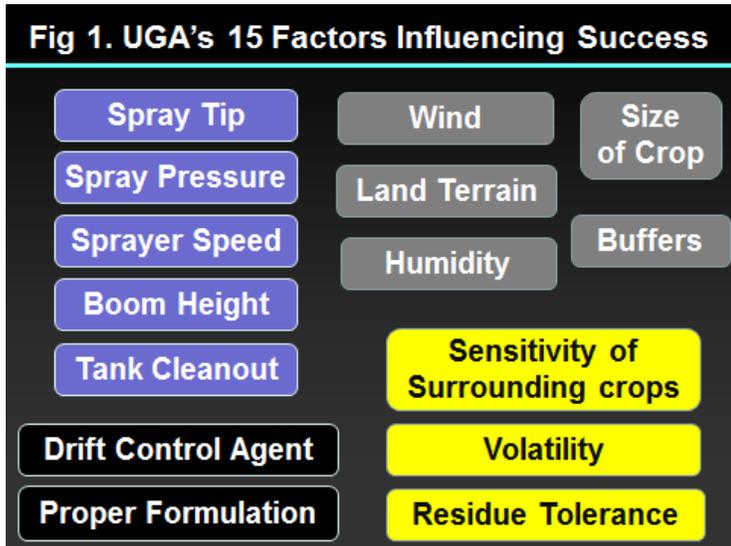
8. Drift distances can be cut nearly in half with a 24" boom height compared to one at 50".

9. Downwind in-field buffers for 1X rate is 30 ft. Label clearly restricts any application being made with winds toward susceptible plants.

10. Labels are written to protect the manufacturer from drift. No matter the distance, if you have spray drift, you are solely responsible.

11. Strongly encourage applying 2,4-D through hoods or layby rigs. DO NOT make more than 2 applications/year in a field for resistance mgmt.

12. Water volume 10-15 GPA with applications from burndown through cotton in full flower; UGA suggest direct sprays only after 8-lf.



**Fig 2. 2,4-D Visual Sensitivity Scale for 2017**

Lower	Moderate	Severe	Extreme
Broccoli Cabbage Kale Mustard Onions Turnip	Cantaloupe Canola Cucumber Peaches Peanut Pecan Squash	Pepper Tomato Watermelon	Cotton Grapes* Sweet potato* Tobacco*
>1/75X	1/75-1/300X	1/300-1/800X	< 1/800X
Herbicide Rate of Visually Detectable Injury			
For relative comparison, tomato, squash, and watermelon response to Roundup would be in the "lower" category.			
*Asterisk notes data from literature; all other data generated in 64 UGA field experiments.			

Herbicide resistance is threatening the sustainability of ALL FAMILY FARMS. The use of cover crops and/or tillage with a diversified herbicide program will reduce herbicide dependency and improve weed control. **HAND WEED ESCAPES!**



