

### Ryegrass

Prevent ryegrass resistance to Roundup. Controlling this pest at planting without tillage or Roundup will be very difficult; fall management will become an expensive management approach.

#### Better take ryegrass seriously – Roundup issues

Ryegrass resistant to Roundup poses a great threat to reduced tillage



Expected response to glyphosate (control)

Response of 3 different Georgia locations (not randomly sampled)

### Nutsedge Is On The Move and Hard to Kill

1. If nutsedge patches are up prior to planting, spot apply 60 oz/A of Roundup PMAX 3 or equivalent and follow with paraquat 5-7 days later.
2. Reflex preemergence suppresses yellow nutsedge.
3. Sequential applications of Roundup in-season will slow nutsedge down; Envoke + Roundup can be very effective but study injury carefully.
4. Diuron + MSMA + Envoke or Roundup + diuron + Envoke layby directed is required for a successful program.

### Tropical Spiderwort

For spiderwort management, one must implement overlapping residual herbicides during early/mid-season and finish the season with a layby.

#### BENGAL DAYFLOWER...AKA TROPICAL SPIDERWORT



##### Residual Control:

Warrant : excellent  
Dual Mag: excellent  
Outlook: excellent

##### POST Control:

2,4-D: excellent  
Gramoxone: excellent  
Direx+MSMA: excellent  
RU + Direx: very good  
RU + Staple: good  
RU + Aim: good  
RU + Valor: good  
RU + dicamba: fair  
Liberty: no good



PRE: Warrant

POST Before UP:  
Warrant/Dual/Outlook

POST After UP:  
RU + Staple or RU +  
auxin; will need to get  
residual in somewhere

Layby: Direx + MSMA +  
Dual/Warrant/Outlook  
/Zidua/Anthem Flex

### Goosegrass Is Spreading Rapidly

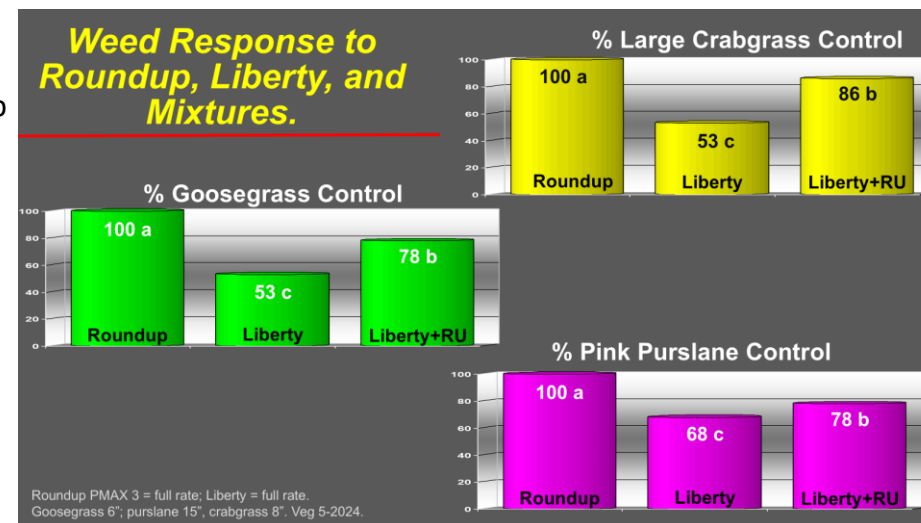
1. Use effective residual herbicides to reduce the number of plants that emerge but also to slow growth of those plants escaping the residual.
2. Apply Roundup alone or with grass herbicides (clethodim, etc.).
3. Mixing dicamba or Liberty with Roundup will likely reduce control.

### Understand How to Mitigate Antagonism with your Tank Mixes

Mixing dicamba or Liberty with Roundup improves morningglory and Palmer control; however, mixing Liberty with Roundup can reduce the activity of Roundup on grasses, purslane, and radish (figure right). Similarly, mixing dicamba with Roundup can reduce the activity of Roundup on grasses, especially goosegrass.

#### Keys to overcoming antagonism:

1. Smaller weed sizes are key – residual herbicides will improve coverage, with plant escapes growing more slowly (data on back).
2. Smaller weed sizes are key – treat before weeds exceed 3 inches; make application 15-17 days after previous treatment (data on back).
3. Always use full herbicide rates in mixtures.
4. Sequential applications are the best option to overcome the concern.



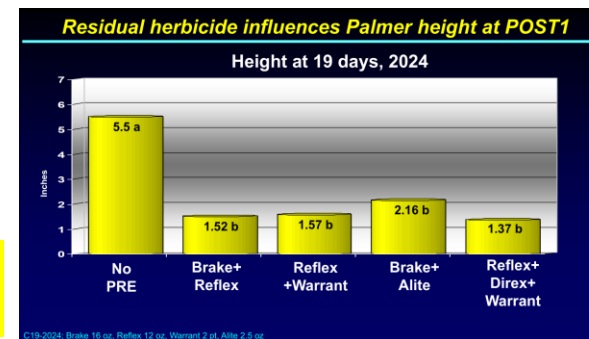
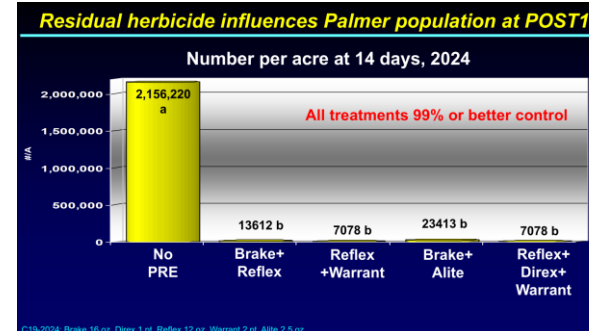
# Implementing an Economically Effective Cotton Weed Management Program

## Step 1. Remove weeds prior to planting!

Cover crops, tillage, and herbicides are all important components of farm sustainability. **Cover crops** reduce weed emergence decreasing herbicide selection pressure. **Deep turning** can place weed seeds at a depth where they cannot emerge. Suggest all weeds and cover crops, except for cereal grains, be killed at least 14 days before planting. Valor at 2 oz/A and/or Direx at 1 to 2 pt/A are needed for residual control in most fields. Dicamba or 2,4-D would be beneficial to control primrose, horseweed, fleabane, and radish (2,4-D is much more effective on radish). Gramoxone + Direx offers the most effective option for emerged Palmer amaranth while mixtures of glyphosate + 2,4-D + Valor or Direx or glyphosate + dicamba + Valor or Direx are effective on most weeds. *Follow all plant back interval requirements.*

## Step 2. Apply two residuals at planting, both herbicides effective on Palmer!

The single most impactful part of a weed management program is applying residuals at planting. If the right combination is selected, and activated, Palmer control can exceed 90% for the entire season; 99% for 2-3 weeks (figure right). Additionally, for those Palmer plants escaping the residual herbicide, slower growth is anticipated, facilitating a smaller plant size when treated with a postemergence herbicide thereby improving coverage and control (figure right).



## Step 3. Two postemergence applications are needed for Palmer control in most fields! Currently, in-crop dicamba products are not expected to have labels for the 2025 season and are not included.

POST 1 ~15-17 d after PRE (assuming PRE is activated)	POST 2 ~ 15-17 d after POST 1 <sup>1</sup> (before 9-leaf cotton)
<b>LIBERTY OR LIBERTY + ROUNDUP SYSTEMS</b>	
Liberty + Roundup + Dual Mag., Outlook, or Warrant* or Liberty + Dual Mag, Outlook, Warrant, or Staple	Liberty + Dual Mag., Outlook, or Warrant* (Including Roundup will improve Palmer amaranth and morningglory control; crop injury can be significant)

\*Mixtures of Liberty + Roundup + residual can cause 25+% injury. Mixing Liberty with Roundup may reduce grass, radish, and purlane control; maximize Roundup rate.

<b>ENLIST ONE SYSTEMS – ENLIST COTTON</b>	
Enlist One 2 pt/A + Liberty or approved glyphosate***	Enlist One 2 pt/A + Liberty or approved glyphosate***

\*\*\*Warrant (2 pt/A) or Dual Mag. (1 pt/A) mixed with Enlist One + Liberty or glyphosate improves residual weed control; however, more injury often reaching 25+% occurs in some conditions. Visit web site for latest information on approved ESA requirements, tank mixtures, adjuvants and drift reduction agents for Enlist One or Enlist Duo ([www.enlisttankmix.com](http://www.enlisttankmix.com)).

## Step 4. MAKE A DIRECTED LAYBY! Diuron + MSMA or Roundup + diuron are effective options to control many weeds; add Envoke for morningglory or nutsedge or add Warrant, Outlook, or Dual Magnum for tropical spiderwort and annual grasses.