

Specific Recommendations: For particular defoliant tank-mixture recommendations visit the UGA Pest Management Handbook (pages 226 – 235) at <http://www.ent.uga.edu/pest-management/Commercial-Cotton.pdf> In the UGA cotton defoliant section of the handbook, recommendations are broken up two different ways. First, a separate section is available for each “season” or relative range of temperatures. This is done to account for effectiveness of products related to temperature. Another way the recommendations are organized relates to harvest aid functions needed to get the crop ready. For more information on these recommendations and how to incorporate them into your operation, please contact your local UGA Cooperative Extension office. Although there a lot of tank mixture options for cotton defoliation, one mixture utilizes three products and has become one of the most common and effective treatments in Georgia. This “three-way” mix contains ethephon to open bolls, tribufos to remove mature foliage, and thidiazuron to remove juvenile tissue and prevent regrowth. The table below contains rates for each product based on seasonal temperature.

Comments on Additives: Refer to manufacturer’s recommendations. Consider potential negative effects with increased leaf desiccation. Hot temperatures can increase potential for leaf desiccation and possible fiber quality deductions. Unless a label requirement, USE AT OWN RISK.

“Three-way” Defoliation Mixtures

Season (Temperatures)	Ethephon (Prep)	Thidiazuron (Dropp)	Tribufos (Folex)
Early Season (Highs > 90, lows > 70)	21 - 24 oz (1.33 to 1.5 pt)	1.6 - 3.2 oz	6 - 12 oz
Mid-Season (Highs 80-89, lows 60-70)	24 - 32 oz (1.5 to 2.0 pt)	2 - 3.2 oz	8 - 12 oz
Late-Season (Highs < 80, Lows < 60)	32 – 42 oz (2.0 to 2.67 pt)	---	16 – 20 oz

Ethephon = rates increase with cooler temps

Thidiazuron = rates increase with cooler temps, increase rate with more regrowth potential. Activity is lessened when low temperatures are less than 65F for 3 days.

Tribufos = Increase rate with cooler temps. When rates are too high for conditions leaf desiccation may occur.

In cases where weeds are present at harvest, some cotton defoliants are products that have herbicidal activity on particular pests. See the table below from the UGA Pest Management Handbook for specific recommendations.

HARVEST AID WEED MANAGEMENT

PRODUCT COMMON NAME	BROADCAST RATE/ ACRE	REMARKS AND PRECAUTIONS <i>The rates below are given in the broadcast amount per acre unless otherwise noted.</i>
carfentrazone Aim EC	1 oz.	Add 1% v/v crop oil. Effective on morningglory, coffee senna, and tropical spiderwort.
carfentrazone + fluthiacet-methyl Display	up-1 oz.	Limited data, adhere to label restrictions, use precaution.
glyphosate (numerous brands)	1.2-2 pt.	Use in combination with Del/Folex, dimethipen (Harvade) and/or ethephon. Glyphosate provides fair regrowth suppression of cotton. However, glyphosate WILL NOT provide regrowth suppression when applied to RF cotton. See specific labels for product rates.
paraquat Gramoxone Max, Firestorm, or Parazone	1-4 oz.	Use in combinations with standard defoliation applications. May cause crop desiccation and damage to unopened bolls.
Gramoxone Inteon	3-5 oz.	
pyraflufen ethyl ET	1.5 oz.	Add 0.5% v/v crop oil when temperatures are above 90°F. Add 1% v/v crop oil when temperatures are 89°F or below. Effective on morningglory.
Follow-up Treatments Desiccants paraquat or sodium chlorate	See “Desiccants for Cotton Harvest Preparation” next page.	

