

# COTTON DEFOLIATION / HARVEST AID OPTIONS

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The following are basic guidelines for harvest aid application. Rates indicated are amount per acre. Specific rates should be adjusted according to temperature, humidity, day-length, plant leaf condition and maturity, expected weather, and desired effects such as defoliation, regrowth control, boll opening, and/or weed control. Defoliant should be applied in a minimum spray volume of 5 gal/A by air and 10-20 gal/A by ground.

Reduced performance issues are often related to low spray volume and poor canopy penetration. Fields should fit into one of the following categories based on temperature and harvest aid function. Preparing cotton for harvest is often difficult and is influenced by many factors, therefore the guidelines below should be considered as basic recommendations. Always observe label restrictions before using cotton harvest aids.

HARVEST-AID FUNCTION	HERBICIDE	BROADCAST RATE/ACRE	REMARKS AND PRECAUTIONS <i>(The rates below are given in the broadcast amount per acre unless otherwise noted)</i>
<b>EARLY-SEASON (highs 90°F plus, lows 70°F plus)</b>			
Defoliation Only (combinations provide more consistent defoliation than a single product)	<i>carfentrazone</i> Aim EC	0.75-1 oz	Add non-ionic surfactant at 0.25% v/v. The potential for leaf sticking is greater during periods of high temperatures.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add crop oil at 1-2 pt/A. Limited data, use precaution. The potential for leaf sticking is greater during periods of high temperatures.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add crop oil at 1 pt/A. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add crop oil at 0.5% v/v. The potential for leaf sticking is greater during periods of high temperatures.
	<i>sodium chlorate</i>	3 lb ai	Apply to mature foliage only. Do not mix with products containing <i>tribufos</i> or <i>ethephon</i> .
	<i>tribufos</i> Def/Folex	1.5 pt	Reduce rate to 1.25 pt if above 94°F.
Regrowth Control and Defoliation	<i>thidiazuron</i> (Numerous brands)	3.2 oz	For <b>maximum</b> regrowth control. <i>Thidiazuron</i> is sensitive to wash-off when rain occurs within 6-12 hours after application. Addition of <i>tribufos</i> (4-8 oz) or <i>ammonium sulfate</i> (2 lb/A) enhances rainfastness.
	<i>thidiazuron</i> (Numerous brands) + <i>tribufos</i> Def/Folex	1.6-2.5 oz + 4-16 oz	For <b>maximum</b> regrowth control apply <i>thidiazuron</i> at 1.6 oz plus <i>tribufos</i> at 8-12 oz. For good regrowth control apply <i>thidiazuron</i> at 2.5 oz plus <i>tribufos</i> at 8-12 oz. For superior regrowth control apply <i>thidiazuron</i> at 3.2 oz plus <i>tribufos</i> at 6-8 oz.  These combinations may cause “leaf sticking” when temperatures exceed 94°F, when combined with spray adjuvants, or when calibration errors occur. Consider reducing higher rates of <i>tribufos</i> by 10-20% when temperatures exceed 94°F. Regrowth control or suppression is minimal when <i>thidiazuron</i> is applied at rates below 1.6 oz. Higher rates (2.5-3.2 oz) or sequential applications increase time of effectiveness.
	<i>thidiazuron</i> (Numerous brands) + <b>ONE OF THE FOLLOWING:</b>	1.6-2.5 oz +	
	<i>carfentrazone</i> Aim EC	0.75 oz	Add 0.25 % v/v non-ionic surfactant.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add crop oil at 1 pt/A. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add crop oil at 1 pt/A. Limited data, use precaution. The potential for leaf sticking is greater during periods of high temperatures.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 0.5% v/v crop oil.

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<b>EARLY-SEASON (highs 90°F plus, lows 70°F plus) (continued)</b>			
Regrowth Control and Defoliation <i>(continued)</i>	<i>thidiazuron + diuron</i> (Numerous brands)	6.4-8 oz	Limited data are available with these products. Regrowth control is minimal when some brand products are applied at rates below 6.4 oz. Likelihood of leaf sticking may occur when temperatures exceed 94°F or when high rates are used.
	<i>glyphosate</i> (Numerous brands) + <i>tribufos</i> Def/Folex	1.2-2 pt + 8-16 oz	<i>Glyphosate</i> WILL NOT provide regrowth suppression when applied to RF cotton. See specific labels for product rates.
Boll Opening and Defoliation	<i>ethephon</i> (Numerous brands)	2-2.67 pt	
	<i>ethephon</i> (Numerous brands) + <b>ONE OF THE FOLLOWING:</b>	1.33-1.5 pt +	
	<i>carfentrazone</i> Aim EC	0.75 oz	Add 0.25 % v/v non-ionic surfactant.
	<i>carfentrazone + fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 0.5% v/v crop oil.
	<i>tribufos</i> Def/Folex	1-1.25 pt	
	<i>thidiazuron</i> (Numerous brands)	1.6 oz	
	<i>thidiazuron + diuron</i> (Numerous brands)	4-6 oz	Likelihood of “leaf sticking” is increased when applied at or above 5 oz in combinations of defoliant. Rate of 4 oz suggested during periods of high temperatures.
	<i>ethephon + urea sulfate</i> FirstPick + <b>ONE OF THE FOLLOWING:</b>	1.75-2 qt +	Likelihood of leaf sticking is increased during periods of high temperatures.
	<i>carfentrazone</i> Aim EC	0.75 oz	
	<i>carfentrazone + fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	
<i>thidiazuron</i> (Numerous brands)	1.6 oz		
<i>thidiazuron + diuron</i> (Numerous brands)	4-6 oz	Likelihood of “leaf sticking” increases when applied at or above 5 oz in combinations of defoliant. Rate of 4 oz recommended during early season.	
<i>tribufos</i> Def/Folex	4-6 oz		

**COTTON DEFOLIATION / HARVEST AID OPTIONS**

<b>HARVEST-AID FUNCTION</b>	<b>HERBICIDE</b>	<b>BROADCAST RATE/ACRE</b>	<b>REMARKS AND PRECAUTIONS</b> <i>(The rates below are given in the broadcast amount per acre unless otherwise noted)</i>
<b>EARLY-SEASON (highs 90°F plus, lows 70°F plus) (continued)</b>			
Boll Opening and Defoliation <i>(continued)</i>	<i>ethephon + cyclanilide</i> Finish 6 Pro <b>+ ONE OF THE FOLLOWING:</b>	1.33-1.5 pt +	
	<i>carfentrazone</i> Aim EC	0.75 oz	Add 0.25 % v/v non-ionic surfactant.
	<i>carfentrazone + fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 0.5% v/v crop oil.
	<i>thidiazuron</i> (Numerous brands)	1.6 oz	
	<i>thidiazuron + diuron</i> (Numerous brands)	4-6 oz	Likelihood of “leaf sticking” increases when applied at or above 5 oz in combinations of defoliant. Rate of 4 oz recommended during early season.
	<i>tribufos</i> Def/Folex	4-6 oz	
Boll Opening, Regrowth Control, and Defoliation	<i>ethephon</i> (Numerous brands) <b>+ ONE OF THE FOLLOWING:</b> <i>thidiazuron</i> (Numerous brands) <i>thidiazuron + diuron</i> (Numerous brands)	1.33-1.5 pt + 2-2.5 oz 6.4 oz	Limited data are available for some products. Regrowth control is minimal when these products are applied at rates below 6.4 oz.
	<i>ethephon</i> (Numerous brands) + <i>thidiazuron</i> (Numerous brands) + <b>ONE OF THE FOLLOWING:</b>	1.33-1.5 pt + 2-2.5 oz +	
	<i>carfentrazone</i> Aim EC	0.75 oz	Add 0.25 % v/v non-ionic surfactant.
	<i>carfentrazone + fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 0.5% v/v crop oil.
	<i>tribufos</i> Def/Folex	6-12 oz	

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<b>HARVEST-AID FUNCTION</b>	<b>HERBICIDE</b>	<b>BROADCAST RATE/ACRE</b>	<b>REMARKS AND PRECAUTIONS</b> <i>(The rates below are given in the broadcast amount per acre unless otherwise noted)</i>
<b>EARLY-SEASON (highs 90°F plus, lows 70°F plus) (continued)</b>			
Boll Opening, Regrowth Control, and Defoliation  (continued)	<i>ethephon + urea sulfate</i> FirstPick <b>OR</b> <i>ethephon + cyclanilide</i> Finish 6 Pro <b>+ ONE OF THE FOLLOWING:</b> <i>thidiazuron</i> (Numerous brands)	1.75-2 qt 1	Likelihood of “leaf sticking” is increased when temperatures exceed 94°F.
	<i>thidiazuron + diuron</i> (Numerous brands)	0.33-1.5 pt + 1.6-2 oz 6.4 oz	Limited data are available with some products. Regrowth control is minimal when these products are applied at rates below 6.4 oz.
<b>MID-SEASON (highs 80-89°F plus, lows 60-70°F)</b>			
Defoliation Only (combinations provide more consistent defoliation than a single product)	<i>carfentrazone</i> Aim EC	0.75-1 oz	Add 1% v/v crop oil for 0.75 oz rate. Add 0.25% non-ionic surfactant for 1 oz rate.
	<i>carfentrazone + fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 1% v/v crop oil.
	<i>sodium chlorate</i>	4 lb ai	Apply to mature foliage only. Do not mix with products containing <i>tribufos</i> or <i>ethephon</i> .
	<i>tribufos</i> Def/Folex	1-1.5 pt	
Regrowth Control and Defoliation	<i>thidiazuron</i> (Numerous brands)	3.2 oz	
	<i>thidiazuron</i> (Numerous brands) <b>OR</b> <i>glyphosate</i> <b>+ ONE OF THE FOLLOWING:</b>	2-2.5 oz 1.2-2 pt +	<i>Glyphosate</i> WILL NOT provide regrowth suppression when applied to RF cotton. See specific labels for product rates.
	<i>carfentrazone</i> Aim EC	0.75-1 oz	
	<i>carfentrazone + fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 1% v/v crop oil.
	<i>tribufos</i> Def/Folex	1 pt	Add 0.25% v/v non-ionic surfactant to the 0.75 oz rate or 1% v/v crop oil to the 1 oz rate.
	<i>thidiazuron + diuron</i> (Numerous brands)	6.4-8 oz	Limited data are available with these products. Regrowth control is minimal when these products are applied at rates below 6.4 oz.

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<b>MID-SEASON (highs 80-89°F plus, lows 60-70°F) (continued)</b>			
Boll Opening and Defoliation	<i>ethephon</i> (Numerous brands)	2-2.67 pt	
	<i>ethephon</i> (Numerous brands) + <b>ONE OF THE FOLLOWING:</b>	1.5-2 pt +	
	<i>carfentrazone</i> Aim EC	0.75-1 oz	Add 0.25% v/v non-ionic surfactant to the 0.75 oz rate or 1% v/v crop oil to the 1 oz rate.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 1% v/v crop oil.
	<i>tribufos</i> Def/Folex	1-1.25 pt	
	<i>thidiazuron</i> (Numerous brands)	1.6 oz	
	<i>thidiazuron</i> + <i>diuron</i> (Numerous brands)	6.4 oz	Limited data are available with some of these products
	<i>ethephon</i> + <i>urea sulfate</i> FirstPick +	2 qt +	
	<b>ONE OF THE FOLLOWING:</b>		
	<i>carfentrazone</i> Aim EC	0.75-1 oz	
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	
	<i>thidiazuron</i>	1.6 oz	
<i>thidiazuron</i> + <i>diuron</i> (Numerous brands)	5 oz	Limited data are available with some of these products.	
<i>tribufos</i> Def/Folex	6-8 oz		

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<b>MID-SEASON (highs 80-89°F plus, lows 60-70°F) (continued)</b>			
Boll Opening and Defoliation <i>(continued)</i>	<i>ethephon</i> + <i>cyclanilide</i> Finish 6 Pro +	1.33-1.5 pt +	
	<b>ONE OF THE FOLLOWING:</b> <i>carfentrazone</i> Aim EC	0.75-1 oz	Add 0.25% v/v non-ionic surfactant to the 0.75 oz rate or 1% v/v crop oil to the 1 oz rate.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 1% v/v crop oil.
	<i>tribufos</i> Def/Folex	6-8 oz	
	<i>thidiazuron</i> (Numerous brands)	1.6 oz	
<i>thidiazuron</i> + <i>diuron</i> (Numerous brands)	5 oz	Limited data are available with some of these products.	
Boll Opening, Regrowth Control, and Defoliation	<i>ethephon</i> (numerous brands) +	1.5-2 pt +	
	<b>ONE OF THE FOLLOWING:</b> <i>thidiazuron</i> (Numerous brands)	2-2.5 oz	
	<i>thidiazuron</i> + <i>diuron</i> (Numerous brands)	6.4-8 oz	Limited data are available with some of these products.
	<i>ethephon</i> (Numerous brands) +	1.5-2 pt +	
	<i>thidiazuron</i> (Numerous brands) +	2-2.5 oz +	
	<b>ONE OF THE FOLLOWING:</b> <i>carfentrazone</i> Aim EC	0.75-1 oz	Add 0.25% v/v non-ionic surfactant to the 0.75 oz rate or 1% v/v crop oil to the 1 oz rate.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 1% v/v crop oil.
<i>tribufos</i> Def/Folex	8-12 oz		

**COTTON DEFOLIATION / HARVEST AID OPTIONS**

<b>HARVEST-AID FUNCTION</b>	<b>HERBICIDE</b>	<b>BROADCAST RATE/ACRE</b>	<b>REMARKS AND PRECAUTIONS</b> <i>(The rates below are given in the broadcast amount per acre unless otherwise noted)</i>
<b>LATE-SEASON (highs below 80°F, lows below 60°F)</b> In these conditions, proper defoliation may require a preconditioning treatment (see preconditioning section)			
Boll Opening, Regrowth Control, and Defoliation  <i>(continued)</i>	<i>ethephon + urea sulfate</i> FirstPick <b>OR</b>	2 qt	
	<i>ethephon + cyclanilide</i> Finish 6 Pro + <b>ONE OF THE FOLLOWING:</b>	1.5-2 pt +	
	----- <i>thidiazuron</i> (Numerous brands)	2-2.5 oz	
	----- <i>thidiazuron + diuron</i> (Numerous brands)	6.4-8 oz	Limited data are available with some of these products.
Defoliation Only (combinations provide more consistent defoliation than a single product)	<i>carfentrazone</i> Aim EC	1 oz	
	<i>carfentrazone + fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	
	<i>sodium chlorate</i>	4 lb ai	
	<i>thidiazuron + diuron</i> (Numerous brands)	8-10 oz	Limited data are available with some of these products.
<i>tribufos</i> Def/Foalex + <i>paraquat</i> (Numerous brands)	1.5 pt + 1-6 oz	May cause crop desiccation and damage to unopened bolls.	

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<b>LATE-SEASON (highs below 80°F, lows below 60°F) (continued)</b> In these conditions, proper defoliation may require a preconditioning treatment (see preconditioning section)			
Boll Opening and Defoliation	<i>ethephon</i> (Numerous brands)	2-2.67 pt	
	<i>ethephon</i> (Numerous brands) + <b>ONE OF THE FOLLOWING:</b>	2-2.67 pt +	
	<i>tribufos</i> Def/Folex	1-1.25 pt	
	<i>thidiazuron</i> + <i>diuron</i> (Numerous brands)	6 oz	Limited data are available with some of these products.
	<i>carfentrazone</i> Aim EC	1 oz	Add 1% v/v crop oil.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 1% v/v crop oil.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>ethephon</i> + <i>cyclanilide</i> Finish 6 Pro + <b>ONE OF THE FOLLOWING:</b>	1.75-2 pt +	
	<i>carfentrazone</i> Aim EC	1 oz	Add 1% v/v crop oil.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>flumiclorac</i> Resource	4-6 oz	Add 1-2 pt/A crop oil. Limited data, use precaution.
	<i>fluthiacet-methyl</i> Blizzard	0.5-0.6 oz	Add 1 pt/A crop oil. Limited data, use precaution.
	<i>pyraflufen ethyl</i> ET	1.5 oz	Add 1% v/v crop oil.
<i>thidiazuron</i> + <i>diuron</i> (Numerous brands)	6 oz		
<i>tribufos</i> Def/Folex	8-12 oz	Limited data are available with some of these products.	



## COTTON DEFOLIATION / HARVEST AID OPTIONS

**PRECONDITIONING:** Fields with a dense canopy of foliage and significant numbers of green bolls may require two applications. The goal is to remove much of the foliage with an initial application, exposing un-open bolls to sunlight and improving air circulation within the canopy. The follow-up application should be

made 7-10 days later when sufficient leaf drop has occurred to allow spray coverage with boll opening products containing *ethephon*. However, premature preconditioning or defoliation may increase the risk of halting development of younger or immature bolls, rendering them unharvestable.

TREATMENT	HERBICIDE	BROADCAST RATE/ ACRE	REMARKS AND PRECAUTIONS <i>(The rates below are given in the broadcast amount per acre unless otherwise noted)</i>
Initial Preconditioning Treatment	<i>carfentrazone</i> Aim EC	1 oz	Add 1% v/v crop oil.
	<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
	<i>ethephon</i> (Numerous brands)	0.67-1.33 pt	
	<i>flumiclorac</i> Resource	4 oz	Add 1-2 pt crop oil.
	<i>fluthiacet-methyl</i> Blizzard	0.5 oz	Add 1 pt crop oil
	<i>glyphosate</i> (Numerous brands)	1.2-2 pt	<i>Glyphosate</i> WILL NOT provide regrowth suppression when applied to RF cotton. See specific labels for product rates.
	<i>pyraflufen ethyl</i> 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.
	<i>tribufos</i> Def/Folex	0.5-1.25 pt	
Follow-up Treatments	<b>Should include products containing <i>ethephon</i> with harvest aid mixtures listed in the previous table.</b>		

## HARVEST AID WEED MANAGEMENT

HERBICIDE	BROADCAST RATE/ ACRE	REMARKS AND PRECAUTIONS <i>The rates below are given in the broadcast amount per acre unless otherwise noted.</i>
<i>carfentrazone</i> Aim EC	1 oz	Add 1% v/v crop oil. Effective on morningglory, coffee senna, and tropical spiderwort.
<i>carfentrazone</i> + <i>fluthiacet-methyl</i> Display	up-1 oz	Limited data, adhere to label restrictions, use precaution.
<i>glyphosate</i> (Numerous brands)	1.2-2 pt	Use in combination with Def/Folex, <i>dimethipen</i> (Harvade) and/or <i>ethephon</i> .  <i>Glyphosate</i> provides fair regrowth suppression of cotton. However, <i>glyphosate</i> WILL NOT provide regrowth suppression when applied to RF cotton. See specific labels for product rates.
<i>paraquat</i> 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	
<i>pyraflufen ethyl</i> 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.
<i>Follow-up Treatments</i> Desiccants <i>paraquat</i> or sodium chlorate	See “Desiccants for Cotton Harvest Preparation” next page.	

## DESICCANTS FOR COTTON HARVEST PREPARATION

DESICCANT	FORMULATION (lb ai/gal)	BROADCAST RATE/ ACRE (AMOUNT OF FORMULATION)	SPRAY VOLUME (gal/A)		REMARKS AND PRECAUTIONS <i>The rates below are given in the broadcast amount per acre unless otherwise noted.</i>
			Ground	Air	
<i>paraquat</i> Firestorm	3				For addition to defoliant mixtures in cotton at least 75% open. Improves activity in colder, late-season conditions. May cause crop desiccation and damage to unopened bolls.
Gramoxone Inteon	2	3-5 oz	10-20	5	
Gramoxone Max	3	1-4 oz	10-20	5	
Parazone	3				
<i>paraquat</i> Gramoxone Max	3	5.5 oz-1.5 pt	10-20	5	For desiccation of weeds and cotton regrowth after defoliation. Add surfactant at 1-2 qt/100 gal of spray solution. Be prepared to harvest in a timely manner to minimize bark problems. May cause crop desiccation and damage to unopened bolls.
Firestorm	3				
Parazone	3				
Gramoxone Inteon	2	1-2 pt	10-20	5	
<i>sodium chlorate</i>	4-6	3-6 lb ai	15-30	5-10	

## PERFORMANCE RATING OF HARVEST AIDS BY FUNCTION

CHEMICAL NAME	FUNCTION				
	Removal of Mature Foliage	Removal of Juvenile Foliage	Boll Opening	Regrowth Suppression	Weed Desiccation
<i>ethephon</i> (Numerous brands)	F-G	F	E	P	P
<i>ethephon</i> + urea sulfate First Pick	G	G	E+	P	F
<i>ethephon</i> + cyclanilide Finish 6 Pro	G-E	F-G	E+	F	P
<i>paraquat</i> Gramoxone Max, Gramoxone Inteon, Parazone, Firestorm	F	F	P-F	P	G
<i>PPO inhibitors</i> Aim, ET, Resource, Blizzard	G	F	P	P	F
<i>sodium chlorate</i>	F	P	P	P	F-G
<i>thidiazuron</i> (Numerous brands)	G-E	G	P	G-E	P
<i>thidiazuron</i> + diuron (Numerous brands)	G-E	G	P	G-E	P
<i>tribufos</i> Def/Folex	G-E	P-F	P	P	P

P – Poor, F – Fair, G – Good, E – Excellent