

## COTTON

TABLE 1. Effectiveness of selected cotton herbicides.

	copperleaf	smellmelon	bermudagrass	rhizome johnsongrass	seedling Johnson grass	annual grasses	nutsedge	spotted spurge	teaweed	pigweed	morningglory	cocklebur	hemp sesbania	sicklepod
<b>PREEMERGENCE HERBICIDES:</b>														
Command	6	6	3	9	8	9	0	4	8	4	6	6	1	-
Cotoran, Meturon or Fluometuron	9	9	0	7	7	8	0	5	8	9	8	6	8	-
Dual (all formulations)	1	1	0	7	6	8	-	6	4	8	4	1	3	-
Karmex DF or Direx 4L	7	7	0	7	6	7	0	4	7	9	6	3	7	-
Treflan or Prowl	1	1	2	9	8	9	0	2	2	8	4	1	1	-
Zorial	7	8	3	7	6	8	4	7	8	8	6	4	5	-
Treflan or Prowl + Cotoran,	9	9	0	9	9	9	0	6	8	9	9	8	8	-
Treflan, or Prowl + Karmex	8	8	0	9	9	9	0	5	7	9	8	5	8	-
Treflan or Prowl + Zorial	8	9	3	9	9	8	4	8	8	9	6	4	5	-
Staple LX + Cotoran	9	9	0	9	7	8	3	9	9	9	8	6	8	-
<b>POSTEMERGENCE HERBICIDES:</b>														
Aim	-	8	0	-	0	0	0	-	0	8	9	9	9	6
Aim + MSMA	5	5	0	-	8	8	8	-	7	8	9	9	9	8
Aim + glyphosate	9	9	7	-	9	9	7	-	8	9	9	9	9	9
Assure II/Targa	0	0	8	-	9	9	0	0	0	0	0	0	0	0
Cobra + MSMA	9	9	0	-	9	7	6	7	8	9	9	8	8	6
Cotoran, Meturon or Fluometuron	8	8	0	-	7	6	3	6	6	7	5	6	5	-
Caparol or Cotton-Pro	8	8	0	-	8	7	5	6	7	8	8	7	6	-
Caparol or Cotton-Pro + MSMA	9	9	0	-	9	8	7	6	8	9	9	8	7	8
Cotoran + MSMA	9	9	0	-	8	8	6	7	7	9	8	8	6	8
Envoke	8	9	0	-	6	5	8	1	3	9	8	7	8	8
Fusilad DX	0	0	8	-	9	9	0	0	0	0	0	0	0	0
glyphosate	9	9	7	-	9	9	7	9	8	9	8	8	8	8
Goal + MSMA	9	9	0	-	9	8	7	8	7	8	9	8	7	8
Ignite 280	10	10	6	-	9	9	4	9	9	9	10	9	9	9
Karmex or Direx	7	7	0	-	8	6	0	3	7	8	7	7	6	8
Karmex or Direx + MSMA	8	8	0	-	9	9	7	4	8	9	8	8	6	8
Linex + MSMA	9	9	0	-	9	8	6	6	8	9	9	8	7	8
Poast Plus	0	0	8	-	9	9	0	0	0	0	0	0	0	0
Select	0	0	8	-	9	9	0	0	0	0	0	0	0	0
Sequence	9	9	7	-	9	9	7	9	8	9	8	8	8	8
Staple LX	2	4	0	-	6	5	5	1	8	9	8	7	8	6
Staple LX + glyphosate	9	9	7	-	9	9	7	9	9	9	9	9	9	8
Suprend	8	9	0	-	8	7	8	6	7	9	8	7	8	8
Valor	9	9	0	-	0	0	3	-	8	9	9	9	9	8

COTTON<sup>1</sup>

Active Ingredient and Rate <sup>2</sup>	Active Ingredient and Rate	Weeds Controlled	Remarks and Precautions
<b>PREPLANT:</b>			
s-metolachlor @ 1.0-1.9 lb/A	Dual Magnum @ 1.33-1.67 pt/A	Italian ryegrass	This is a 24-C label to control glyphosate resistant ryegrass and expires January 26, 2014. Apply to prepared seedbeds between September and November. Best control is generally observed from late-October to mid-November. Will not control emerged ryegrass. Mix with paraquat to control emerged ryegrass. Incorporation will be beneficial if an activating rainfall is not received soon after application. Don't incorporate deeper 2-3 inches. The maximum combined fall and spring metolachlor rate is 2.54 lb ai/A.
fomesafen @ 0.25 lb/A	Reflex 2 EC @ 1 pt/A	Residual control of pigweed and control and/or partial control of other broadleaf weeds, sedges, and grasses.  Mix with other herbicides to burndown <sup>1</sup> existing vegetation.	This is a 24 C label for weed control in cotton and expires February 23, 2014. Apply 14-21 days before planting. Do not plant until at least 0.5-inch of rainfall or overhead irrigation has been received following the application. Plant at least 0.75 inches deep. Do not use on light/coarse textured soils. Cotton plants may exhibit some crinkling or spotting on foliage or stunting, but plants normally outgrow these effects.
<b>PREPLANT INCORPORATED:</b>			
pendimethalin @ 0.50 - 1.5 lb/A	Prowl 3.3 EC 1.2-1.8 pt/A on coarse soil 1.8- 2.4 pt/A on medium soil 2.4-3.6 pt/A on heavy soil	Most annual grasses, seedling johnsongrass and fair control of some broadleaf weeds	Apply before planting and incorp-orate up to 1/2" deeper than the seed is planted. Incorporation will be necessary if sufficient rain-fall is received within 7 days.
trifluralin @ 0.5-1.5 lb/A	Treflan, Trifluralin, Trific, Trilin, Tri 4 and other 4L formulations @ 1-1.5 pt/A on coarse soil 1.5- 2 pt/A on medium soil 3 pt/A on heavy soil	Most annual grasses, johnsongrass from seed and fair control of some broadleaf weeds	Apply prior to or after planting. Incorporate up to 1/2" deeper than seed if applied preplant or almost to seed if applied after planting.
<b>PREEMERGENCE:</b>			
clomazone @ 0.5-1.25 lb/A	Command 3 ME @ 1.3 - 3.3 pt/A	Most annual grasses and good control of wild poinsettia, spurred anoda, velvetleaf and itchgrass	Apply before or after planting. Requires the use of disulfoton or phorate applied infurrow to "safen" cotton from injury. Read and follow label instructions concerning application conditions and buffer zones to reduce nontarget drift injury. <b>Excessive rainfall at planting may lead to injury.</b>
metolachlor <sup>3</sup> @ 0.49-1.3 lb/A	Parallel 7.8 EC, Parrlay 8 EC @ 0.5-1.0 pt/A on coarse soil 0.67-1.33 pt/A on medium soil 1.0-1.33 pt/A on heavy soil	Most annual grasses	Apply after planting before weeds emerge. May also be applied before planting or preplant incorporated. Cotton should be planted 1.5 inches deeper than incorporated zone.

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Active Ingredient and Rate <sup>2</sup>	Active Ingredient and Rate	Weeds Controlled	Remarks and Precautions
<b>PREEMERGENCE: continued</b>			
S-metolachlor <sup>3</sup> @ 1.5 - 2.0 lb/A	Dual Magnum, Dual II Magnum @ 1.0-1.33 pt/A on medium soil 1.33 pt/A on heavy soil	Most annual grasses	Apply after planting before weeds emerge. May also be applied before planting. Cotton should be planted 1.5 inches deeper than incorporated zone.
fluometuron @ 0.8-2.0 lb/A	Cotoran 80WP, Meturon 80DF, Fluometuron 80DF @ 1.0 lb/A on light soil 1.5 lb/A on medium soil 2.5 lb/A on heavy soil  Cotoran, Meturon 4L @ 0.8 qt/A on coarse soil 1.2 qt/A on medium soil 2.0 qt/A on heavy soil	Most small-seeded annual grasses and broadleaf weeds	Apply at planting. Cover seed at least 1/2" deep. Apply to soil surface behind press wheel.
pendimethalin @ 0.5-1.5 lb/A	Prowl 3.3, Pendimax @ 1.2-2.4 pt/A on coarse soil 1.8-2.4 pt/A on medium soil 2.4-3.6 pt/A on heavy soil  Prowl H2O @ 1-2 pt/A on coarse soil 2 pt/A on medium soil 3 pt/A on heavy soil	Annual grasses and some broadleaf weeds	Apply at planting. Rainfall required within 7 days for activation. Can be used in no-till or reduced till cotton where incorporation cannot be used.
pyrithiobac @ 0.03-0.05 oz/A + fluometuron @ 0.8-2 lb/A	Staple LX @ 1.3- 2.1 fl. oz./A + fluometuron as above	Better control of yellow nutsedge and certain broadleaf weeds	Apply at planting. Best control is achieved with sequential post emergence Staple LX treatments. Follow label directions.
norflurazon @ 1.0 - 2.0 lb/A	Zorial Rapid 80 @ 1.25 lb/A on light soil 1.9 lb/A on medium soil 2.5 lb/A on heavy soil	Most small-seeded annual grasses and broadleaf weeds. Fair control of nutsedge.	Apply at planting. Can be applied up to 30 days before planting. Can be incorporated before planting at the same rate as the surface application or split 1/2 PPI and 1/2 PRE.
<b>POSTEMERGENCE:</b>			
quizalofop @ 0.06-0.15 lb/A	Assure II/Targa @ 5 - 10 oz/A  Apply with NIS @ 1 qt/100 gal or COC @ 1 gal/100 gal	Annual grasses and perennial grasses	Apply before grasses exceed height for treatment. Use 5-8 oz/A on annual grasses and 10 oz/A on perennial grasses.
trifloxysulfuron-sodium @ 0.0047-0.007 lb/A	Envoke @ 0.1-0.15 oz/A.  Apply with NIS @ 1 qt/100 gal	Broadleaves (including sicklepod) and sedges; weak on prickly sida	Apply after cotton reaches the 5 true leaf stage. Do not apply to cotton that is stressed. Do not tankmix with any EC formulated product as increased injury may be observed. Consult label for approved tank-mixes. Do not tank-mix with grass herbicides as grass control will be reduced. Not labeled for aerial application.

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Active Ingredient and Rate <sup>2</sup>	Active Ingredient and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b>			
fluazifop @ 0.125 - 0.50 lb/A	Fusilade DX @ 0.37 - 0.75 pt/A  Apply with NIS @ 1 qt/100 gal or COC @ 1 gal/100 gal.	Annual and perennial grasses	Apply before annual grasses reach 4 inches and johnsongrass reaches 2 feet. Use the highest rate on bermudagrass with runners. Activity may be reduced if mixed with other herbicides. Use lowest range of rates for shatter cane and seedling johnsongrass.
fenoxaprop-ethyl + fluazifop @ 0.15 lb/A	Fusion @ 10 oz/A.  Apply with NIS @ 1 qt/100 gal or COC @ 1 gal/100 gal.	Same as above	Same as above
sethoxydim @ 0.19-0.47 lb/A	Poast Plus @ 1.5- 2.25 pt/A  Apply with NIS @ 1 qt/100 gal or COC @ 1 gal/100 gal.	Annual and perennial grasses	Apply at 1.5 pt/A before annual grasses reach 4 inches and johnsongrass reaches 2 feet. Use 2.25 pt/A to control bermudagrass with 4-6 inch runners. Application to larger grasses or grasses under stress will result in reduced control. Activity may be reduced if mixed with other herbicides.
pyrithiobac @ 0.065- 0.095 lb/A	Staple LX @ 2.6-3.8 fl. oz/A  Apply with NIS @ 1 qt/100 gal	Pigweed, cocklebur, morning-glory, prickly sida and other broadleaf weeds	Apply when weeds are small and actively growing. Weak on sicklepod. Can be banded. Spray grade nitrogen fertilizer or ammonium sulfate may improve weed control. Refer to label.
clethodim @ 0.05-0.12 lb/A	Select Max @ 6-16 oz./A  Apply with NIS @ 1 qt/100 gal or COC @ 1 gal/100 gal	Annual and perennial grasses	Apply before grasses exceed height recommended for treatment. Use 6-8 oz/A to control annual grasses, 8-10 oz/A to control johnsongrass and 8-16 oz/A to control bermudagrass.
glyphosate <sup>4</sup> @ 1.0 lb/A	Roundup Weathermax, Roundup OriginalMax @ 22 oz/A Roundup Ultramax @ 26 oz/A 4L formulations @ 32 oz/A	Most broadleaf weeds and grasses	<b>Roundup Ready varieties only:</b> Apply before the 4-leaf cotton stage. Subsequent glyphosate treatments may be post-directed utilizing equipment that prevents spray from contacting the plant. Spray to plant contact after the 4-leaf stage may result in abnormal fruiting. Consult label for approved formulations.
glyphosate <sup>4</sup> @ 1 lb/A + s-metolachlor <sup>3</sup> @ 0.47-1.27 lb/A	4 L glyphosate @ 1 qt/A + Dual Magnum @ 0.5 -1.33 pt/A  Sequence 5.25 L @ 2.5-4.0 pt/A	Most broadleaf weeds and grasses	<b>Roundup Ready varieties only:</b> Apply before the 4-leaf cotton stage. See other cautions above. DO NOT mix with Staple LX. Apply in the first or second overtop application to provide residual control. Do not use additional surfactant. Check label for approved products. Do not exceed 3.5 pt/A/season
glyphosate + pyrithiobac @ 1.0 + 0.021 – 0.032 lb/A	Glyphosate (4 lb/gal formulations) + Staple LX @ 1.0 qt/A + 0.8 – 1.7 oz/A	Most broadleaf weeds and grasses	<b>Roundup Ready varieties only:</b> Apply before the 4-leaf cotton stage. See comments for glyphosate and pyrithiobac. DO NOT mix with any metolachlor product. DO NOT exceed a total of 2 oz/A/year of Staple LX.

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Active Ingredient and Rate <sup>2</sup>	Active Ingredient and Rate	Weeds Controlled	Remarks and Precautions
<b>POSTEMERGENCE: continued</b> glyphosate <sup>4</sup> @ 1.0 lb/A	Roundup Weathermax, Roundup OriginalMax @ 22 oz/A Roundup Ultramax @ 26 oz/A 4L formulations @ 32 oz/A	Most broadleaf weeds and grasses	<b>USE ON ROUNDUP READY FLEX VARIETIES ONLY:</b> No restriction on cotton size. Larger cotton may interfere with spray coverage resulting in reduced weed control. Allowing weeds to compete with cotton for an extended period may reduce cotton yield. Can be mixed with insecticides and PGRs. Air induction nozzles may reduce insecticide efficacy. Total in crop applications of OriginalMax or WeatherMax cannot exceed 4 qt/A from at-crack applications to 60% open bolls. Consult label for approved formulations. Do not add surfactants or products with surfactants.
glyphosate <sup>4</sup> @ 1 lb/A + s-metolachlor <sup>3</sup> @ 0.47-1.27 lb/A	4 L glyphosate @ 1 qt/A + Dual Magnum @ 0.5 -1.33 pt/A  Sequence 5.25 L @ 2.5-4.0 pt/A	Most broadleaf weeds and grasses	<b>USE ON ROUNDUP READY FLEX VARIETIES ONLY:</b> No restriction on cotton size. See other cautions above. DO NOT mix with Staple LX. Can be applied in first or second overtop application to provide residual control. Do not use additional surfactant. Check label for approved products. Don't exceed 3.5 pt/A/season
glyphosate + pyriithiobac @ 1.0 + 0.021 – 0.032 lb/A	Glyphosate (4 lb/gal formulations) + Staple LX @ 1.0 qt/A + 0.8 – 1.7 oz/A	Most broadleaf weeds and grasses	<b>USE ON ROUNDUP READY FLEX VARIETIES ONLY:</b> No restriction on cotton size. See comments for glyphosate and pyriithiobac tank-mix. DO NOT mix with any metolachlor product. DO NOT exceed a total of 2 oz pyriithiobac/year.
glufosinate @ 0.42-0.52 lb/A	Ignite 280 @ 22-29 oz/A	Broadleaves and grasses. Consult label for rates and size restrictions	<b>LIBERTY-LINK VARIETIES ONLY:</b> Apply from cotton emergence to early bloom. Time applications to weed size, not crop stage. Weak on sedges, large goosegrass & signalgrass. Pigweeds may not be effectively controlled if larger than 4-5 inches. Prowl PRE may aid in pigweed control in this system. Do not apply more than 87 oz/A/season. 70 days to harvest. Do not use air induction spray tips. Apply in a minimum of 15 GPA.
glufosinate @ 0.42-0.52 lb/A + metolachlor <sup>3</sup> @ 0.47-1.27 lb/A	Ignite 280 @ 22-29 oz/A + Dual Magnum @ 0.5 - 1.33 pt/A	Broadleaves and grasses. Consult label for rates and size restrictions	<b>LIBERTY-LINK VARIETIES ONLY:</b> See above comments. Apply in a minimum of 15 GPA. Do not use air induction spray tips. DO NOT mix with Staple LX. Apply at cotton emergence to early bloom. Time applications to weed size, not crop stage.
glufosinate @ 0.42-0.52 lb/A + pyriithiobac @ 0.021-0.032 lb/A	Ignite 280 @ 22-29 oz/A + Staple LX @ 0.8-1.7 oz/A	Most broadleaf weeds and grasses	<b>LIBERTY-LINK VARIETIES ONLY:</b> Broadcast to improve pigweed control. Maximum use rate for pyriithiobac is 2 oz/year.

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<b>POSTEMERGENCE: continued</b>			
glufosinate @ 0.78 lb/A	Ignite 280 @ 43 oz/A	Salvage situation if broadleaf and grass weed size is large	<b>LIBERTY-LINK VARIETIES ONLY:</b> See note above. DO NOT exceed 29 oz/A in sequential application. Do not apply more than 72 oz/A/season.
<b>DIRECTED POSTEMERGENCE:</b>			
The following herbicides can be applied singly with a surfactant or in combination MSMA as a directed spray. MSMA use in cotton is limited to one application/year not to exceed 2 lbs/A. A 50-foot buffer zone is required around permanent water bodies of water. Glyphosate <sup>4</sup> and Ignite 280 can also be tank-mixed with many of the following products according to label directions. Use glyphosate <sup>4</sup> and Ignite 280 with the appropriate herbicide resistant cotton variety.			
carfentrazone @ 0.012-0.024 lb/A	Aim 2 EC @ 0.75-1.5 oz/A.  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Broadleaf weeds, except prickly sida	Apply after cotton is 12" tall. Avoid contact with cotton above the bark layer. Must be tank-mixed with MSMA or glyphosate (Roundup Ready cotton only) to control grasses. Do not apply more than 3.25 oz/A/year as a layby or post-direct application. May improve morningglory and sesbania control with glyphosate.
fluometuron @ 0.8-1.2 lb/A	Cotoran/Meturon, Fluometuron 80DF @ 1.0 - 1.5 lb/A  Cotoran/Meturon 4L @ 0.8-1.2 qt/A.  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Annual seedling grasses and broadleaf weeds	Apply after cotton is 3" tall. Two POST applications can be providing fluometuron was not used PRE. Make one early-POST application if fluometuron was used PRE.
lactofen @ 0.19 lb/A	Cobra 2 EC @ 12.5 oz/A.  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Broadleaf weeds	Apply after cotton is 8" tall. Apply as a directed spray only.
prometryn @ 0.5 - 0.7 lb/A	Caparol 80 WP @ 0.50-0.80 lb/A Caparol 4L/Cotton-Pro @ 0.5-0.7 qt/A.  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Annual seedling grassy and broadleaf weeds	Apply after cotton is 3" tall. Directed spray only. If MSMA is added, do not apply after first bloom.
diuron @ 0.2-0.4 lb/A	Direx 4L @ 0.4-0.8 pt/A Karmex DF @ 4.0-8.0 oz/A.  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Annual seedling grasses and broadleaf weeds less than 3" tall and actively growing	Apply after cotton is 6" tall and actively growing. Directed spray only. If MSMA is added, do not apply after first bloom.
oxyfluorfen @ 0.25 - 0.50 lb/A	Goal 1.6E @ 1.0 - 2.0 pt/A  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Annual seedling grassy and broadleaf weeds	Apply after cotton is 8" tall. Apply as a directed spray. Use low pressure and large droplets. Avoid contact with cotton.

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<b>DIRECTED POSTEMERGENCE: continued</b>			
fomesafen @ 0.25-0.375 lbs/A	Reflex 2 EC @ 1-1.5 pt/A  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Controls broadleaves with some soil residual.	Apply after cotton is at least 6" tall. May be used as lay-by or under hooded sprayers. Do not apply Reflex later than 70 days before harvest. Do not apply more than 1.5 pints per acre of Reflex in any year. Avoid spray contact with cotton leaves. May be tank-mixed with other products, especially grass herbicides to provide broad spectrum weed control.
linuron @ 0.50 - 0.75 lb/A	Linex 4L @ 1.0-1.5 pt/A.  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal.	Annual seedling grassy and broadleaf weeds	Apply After cotton is 8" tall. Apply as a directed spray only.
trifloxysulfuron-sodium @ 0.7-0.01 lb/A + prometryn @ 0.8-1.2 lb/A	Suprend @ 1-1.5 lb/A.  Apply with NIS @ 1qt/100 gal Or COC @ 1gal/100 gal	Select grasses and many broadleaves. Good on sicklepod.	Apply after cotton is at least 6" tall. May be tank-mixed with diuron, MSMA, glyphosate or Cobra for improved control of existing grasses.
<b>LAYBY (one application):</b>			
diuron @ 0.4 -1.2 lb/A	Karmex 80 DF @ 0.5 lb/A on light soil 1.0 lb/A on medium soil 1.5 lb/A on heavy soil Direx 4L @ 1.5 pt/A on medium soil 2.0 pt/A on heavy soil	Most small-seeded annual grasses and broadleaf weeds. Weak on signalgrass and browntop millet.	Apply when cotton is at least 15" tall to a clean field. Apply with 4 nozzles per row or one flooding nozzle adjusted to completely cover the row but to keep spray off the cotton plants. Actively growing weeds up to 3" tall can be controlled by adding 1 pt of surfactant per 25 gal of spray mixture.
prometryn @ 0.8-1.6 lb/A	Caparol 80 WP @ 1.5 lb/A on light soil 1.75 lb/A on medium soil 2.0 lb/A on heavy soil Caparol 4L, Cotton-Pro @ 2.4 pt/A on light soil 2.8 pt/A on medium soil 3.2 pt/A on heavy soil	Most small-seeded annual grasses and broadleaf weeds	Apply when cotton is at least 15" tall to a clean field. (Same remarks as for single application of diuron for layby.)
linuron @ 0.5-1.5 lb/A	Linex 4L @ 1 pt/A on light soil 2 pt/A on medium soil 3 pt/A on heavy soil	Most small-seeded annual grasses and broadleaf weeds	Same remarks as for single application of diuron for layby. Use this treatment if fall seeded crops will be grown.
fluometuron @ 1.0 lb/A	Cotoran, Meturon, Fluometuron 80 DF @ 1.25 lb/A  Cotoran or Meturon 4L @ 1.00 qt/A	Most annual grasses with fair control of broadleaf weeds	Apply when cotton is at least 15" tall to a clean field. (Same remarks as for single application of diuron for layby.)

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Active Ingredient and Rate <sup>2</sup>	Active Ingredient and Rate	Weeds Controlled	Remarks and Precautions
<b>LAYBY (one application): continued</b>			
flumioxazin @ 0.032-0.064 lb/A	Valor SX @ 1- 2 oz/A  Apply with NIS @ 1qt/100gal.	Pigweeds, prickly sida, copperleaf, morninglory, sicklepod, cocklebur	Apply post-directed when cotton is at least 16" tall and has at least 2" of bark. Do not apply more than 2 oz/A/application or more than 4 oz/A/season. Do not use crop oil concentrate, organo-silicant surfactants, or methylated seed oils. Valor will control emerged weeds given sufficient spray coverage. Good residual control of broadleaves with suppression of grasses.
<b>LAYBY – split application</b>			
Karmex or Direx may be applied as layby by splitting the single application rate into two equal portions. The second half should not be applied if the weed problem does not justify such. Either or both of the split portions may be applied with 1 pt of surfactant per 25 gal of water in the spray mixture. This is necessary if small weeds are present when layby is applied. A surfactant will probably be essential any time the second portion of layby is applied. Do not exceed the single application rate in the 2 split applications.			
<b>SPOT TREATMENT:</b>			
fluazifop-P-butyl @ 1.0 lb/100 gal water	Fusilade @ 2 qt/100 gal water.  Apply with NIS @ 1qt/100 gal or COC @ 1 gal/100 gal	Johnsongrass	Same as above Apply to rapidly growing grass 1-2 feet tall. Spray to wet.
clethodim @ 0.33–0.67 lb/100 gal water	Select @ 44- 88 oz/100 gal water  Apply with NIS @ 1qt/100 gal or COC @ 1 gal/100 gal	Same as above	Same as above
sethoxydim @ 1.0 lb/100 gal of water	Poast Plus at 1.0 gal/100 gal water.  Apply with NIS @ 1 qt/100 gal	Johnsongrass	Same as above Apply to rapidly growing grass 1-2 feet tall. Spray to wet.
glyphosate <sup>4</sup> @ 4 – 8 lb/100 gal of water	Glyphosate (4 lb/gal formulations) @ 1.0-2.0 gal/ 100 gal of water	Grasses or broadleaf weeds	Apply to rapidly growing weeds. Thoroughly wet the weed foliage and keep spray off of the crop plants. May be used as a salvage application after 20% cracked bolls.
<b>ROPE WICK APPLICATIONS:</b>			
glyphosate <sup>4</sup> @ 2.0 lb/1.0 gal of water	Glyphosate (4 lb/gal formulations) @ 0.5 gal/1.0 gal of water	Johnsongrass	Apply when johnsongrass is at least 12" taller than crop. The rope wick should remain moist for best results. Repeated applications may be necessary.

<sup>1</sup> Refer to the burndown section of this guide for suggestions on managing cool season weeds.

<sup>2</sup> Refer to the herbicide resistance section of this guide for suggestions on herbicide resistance management.

<sup>3</sup> Dual is manufactured by Syngenta Crop Protection, has been extensively used in cotton production and has the common name metolachlor. When metolachlor is manufactured, it contains a 1:1 ratio of two metolachlor isomers; the –R and the –S isomer. The –S isomer has greater herbicidal activity than the –R isomer, which allows for a reduction in the amount of –S isomer herbicide needed to obtain similar weed control compared to the –R isomer herbicide. To differentiate between metolachlor herbicides containing the –R or –S isomer consult the label under the “active ingredients” section. The –R isomer is denoted by metolachlor while the –S isomer is denoted by acetamide – (s). Alternatively, according to the Syngenta Crop Protection labels, if the trade names Bicep or Dual include the word “Magnum” (Dual Magnum, Dual II Magnum, Bicep II Lite Magnum), the –S isomer is an active ingredient. If the trade name does not include “Magnum”, the metolachlor –R:-S isomer ratio is 1:1 (Dual II, Bicep II, Bicep Lite II).

<sup>4</sup> See “Appendix A” for **GLYPHOSATE PRODUCTS, FORMULATIONS AND SURFACTANT RECOMMENDATIONS.**