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This publication serves as a guide to commonly used cotton herbicide options in the Texas Southern High Plains. Always carefully read and follow herbicide labels for rates and soil and plant back restrictions. Other generic brand names may exist that are not listed in these tables as well as other herbicides registered for use in cotton.

Preplant Incorporated (Conventional Tillage)/ Burndown (Conservation Tillage)

Tillage	Herbicide	Rate
Conventional	Treflan ¹ , generic trifluralin	1-2 pints/acre ²
	Prowl H ₂ O ¹ , generic pendimethalin	1-3 pints/acre ²
Conservation/No-till	Prowl H ₂ O ¹ , generic pendimethalin	2-4 pints/acre ²
	Dicamba/2,4-D	See product label for rates and planting restrictions
	Roundup, generic glyphosate	32-44 fl oz/acre
	Valor, generic flumioxazin	2 oz/acre >21 days before planting + at least 1-inch irrigation
	Gramoxone, generic paraquat (2 and 3 lb formulations)	1-2 pints/acre (2 lb/gallon) 1.7-2.7 pints/acre (3 lb/gallon)

Preemergence Herbicide Options³

Herbicide	Rate
Prowl H ₂ O ¹ , generic pendimethalin	1-3 pints/acre ²
Caparol, generic prometryn	1.6-3.2 pints/acre ² DO NOT USE on sand or loamy sand soils
Direx, generic diuron	0.8-1.2 quarts/acre ² DO NOT USE on sand or loamy sand soils
Cotoran, generic fluometuron	2 pints/acre DO NOT USE on coarse soils
Warrant	3 pints/acre
Reflex ⁴ , generic fomesafen	1 pint/acre DO NOT USE on coarse soils
Staple LX, generic pyriithiobac	2 fl oz/acre DO NOT USE on coarse soils
Brake	16 fl oz/acre DO NOT USE on coarse soils

¹ For optimal weed control, a two-pass incorporation system should be utilized with the dinitroaniline herbicides.

² Rate dependent on soil type. Always consult the label prior to herbicide application.

³ Preemergence herbicides will be most effective when activated by irrigation or rainfall events.

⁴ Reflex may be applied at 1 pt/acre immediately after planting of cotton provided that 0.5 inch of irrigation is applied prior to cotton cracking the soil surface. Do not apply more than 1 pt/acre of Reflex in any year.

Sequential postemergence applications are often needed. A two-pass system is typical for most farms; including a residual herbicide in either the first or second pass as well as tank mixing different modes of action better steward new technologies and combat herbicide resistance. Two broadcast applications followed by a residual herbicide at layby will finish the season clean and prevent late emerging weeds from producing seed.

Postemergence Herbicide Options

	Xtendflex	GlyTol/ LibertyLink	Enlist	Roundup Ready	Conventional
Post Herbicides	Xtendimax ³ or FeXapan ³ 22 fl oz/acre	Liberty 43 fl oz/A ¹	Enlist One ³ 1.5-2 pints/acre	Roundup 32-44 fl oz/acre	Staple LX 2 fl oz/acre
	Engenia ³ 12.8 fl oz/acre	Roundup 32-44 fl oz/acre	Enlist Duo ³ 3.5-4.75 pints/acre		
	Liberty 43 fl oz/acre ¹		Liberty 43 fl oz/acre ¹		
	Roundup 32-44 fl oz/acre		Roundup 32-44 fl oz/acre		
	Tavium ³ 56.5 fl oz/acre				

Plus...

Post-Topical Residual Herbicides	Dual Magnum, generic S-metolachlor	1-1.33 pints/acre
	Outlook	14-16 fl oz/acre Apply between 1 st leaf and mid-bloom stage
	Warrant	3 pints/acre
	Staple LX, generic pyriithiobac	2 fl oz/acre Apply between 4- and 8- leaf stage
	Prowl H ₂ O, generic pendimethalin	1-2 pints/acre Apply between 4- and 8- leaf stage

Layby/Post-Directed Residuals

Herbicide	Rate
Direx, generic diuron	0.8-1.2 quarts/acre ²
Caparol, generic prometryn	1.6-3.2 pints/acre ²
Roundup, generic glyphosate	32-44 fl oz/acre
Valor, generic flumioxazin	2 oz/acre
Zidua, generic pyroxasulfone	0.75-2.1 fl oz/acre ² Apply between 5 leaf and early bloom stage

¹ Total Liberty rate per year should not exceed 72 fl oz/acre, maximum rate per application is 43 fl oz/acre.

² Rate dependent on soil type. Always consult the label prior to herbicide application.

³ Check product websites or labels for approved tank mix partners.