



Weed Control Recommendations in Wheat

Weed Control Recommendations in Wheat

Gaylon D. Morgan, Assistant Professor and Extension Small Grains Specialist
Paul A. Baumann, Professor and Extension Weed Specialist
Texas Cooperative Extension
The Texas A&M University System

Weeds may be controlled in cropland through cultural, mechanical and chemical means. Use these methods judiciously — individually or in combination — to manage weeds effectively without causing economic loss or environmental harm.

Selecting the proper management strategy(ies) to implement depends largely on the target weed(s) and the infestation level. Also, the timing of mechanical measures depends in large part on the crop type.

Considerations for cultural and mechanical weed control:

- Use weed-free seed to protect against weed infestations in the row and to prevent the introduction of new weed species or herbicide resistant weeds.
- Clean harvesting equipment thoroughly before moving from one field to the next, or require it of custom harvesters before they enter the field.
- Before planting in conventional tillage systems, use mechanical tillage to remove initial weed flushes, thereby reducing or eliminating the potential for continued infestation.
- Rotate crops that physically out-compete certain weeds, resulting in their gradual decline.
- Remove light or spotty infestations of weeds by hand hoeing or spot cultivation to prevent weed seed production and the spread of rhizomes or roots.
- Exercise caution when plowing perennial weeds, being careful to prevent the transport and spread of plant parts to other areas of the field.

Strategies for managing herbicide-resistant weeds:

- Employ integrated weed management strategies. Use herbicides only when necessary, and combine their use with mechanical, cultural or biological methods.
- Rotate or mix herbicides with different modes of action.
- If possible, rotate crops where herbicide rotations are feasible.
- Scout fields regularly to look for resistant weed populations.
- Control the weed escapes (treat the same as a newly established invasive species).
- Plant weed-free wheat seed.
- Clean tillage and harvest equipment to prevent the spread of resistant species.

This publication is no substitute for the herbicide product labels! It is intended to serve only as a guide for controlling weeds in wheat. Because labeled rates and restrictions change constantly, consult a current product label before use.

The recommendations contained herein are based primarily on herbicide labels researched by Texas Cooperative Extension. The use of product names is not intended as an endorsement of the product or of a specific manufacturer, nor is there any implication that other formulations containing the same active ingredient are not equally effective. Product names are included solely to aid readers in locating and identifying the herbicides suggested.

Information given herein is for educational purposes only. References to commercial products or trade names are made with the understanding that no discrimination is intended and no endorsement by Texas Cooperative Extension is implied.

Table 1. Recommendations for controlling weeds in wheat at preplant and preemergence.

Product	Product Rate/Acre	Weeds Controlled	Grazing and Forage	Application Timing	Remarks	Mode of Action ¹
Preplant						
Amber (DF)	0.28-0.47 oz 0.56-oz rate for annual grass suppression	Annual broadleaves: mustards, pennycress, vetch. Annual grass suppression: annual ryegrass, downy brome, cheat, Japanese brome	No restrictions	PPI	Use only if disk drill is used for planting, not hoe/sweep drills. Incorporate into top 1 inch of soil.	ALS
Finesse (DF)	0.2-0.4 oz	Annual broadleaves: mustards, curly dock. Annual grasses: cheat, downy brome	No restrictions	PPI	Do not apply if wheat has germinated and has started to emerge above the soil line or on wheat planted into dry soil or on coarse soil. Wheat should be planted at least 1 inch deep. Do not use in soils with a pH above 7.9. Long rotation restrictions.	ALS
Trifluralin 4 EC	1.5-2.0 pt	Annual grasses: ryegrass, brome, cheatgrass. Annual broadleaves: henbit	No restrictions	PPI	Rate varies by soil type. Must be incorporated 1-2 inches deep within 24 hr of application. Stand reduction may occur under some conditions. Deep-seeded wheat is less likely to incur injury.	Mitotic disruptors
Preemergence						
Amber	0.28-0.47 oz 0.56-oz rate for annual grass suppression	Annual broadleaves: mustards, pennycress, vetch. Annual grass suppression: annual ryegrass, downy brome, cheat, Japanese brome	No restrictions	PRE	Requires rainfall to activate (enough to wet 2-3 inches deep)	ALS
Finesse	0.2-0.5 oz	Annual broadleaves: mustards, curly dock. Annual grasses: cheat, downy brome, ryegrass	No restrictions	PRE	The 0.5-oz rate is only for suppressing cheat, brome and ryegrass.	ALS
Glean FC	0.5 oz	Annual grasses: ryegrass suppression. Annual broadleaves: mustards, curly dock	No restrictions	PRE	North Central Texas and South Oklahoma only. Wheat seeds should be planted at least 1 inch deep; Crop rotations are dependent on soil pH.	ALS
Hoelon 3 (EC)	2-2.66 pt	Annual grasses: ryegrass	Do not graze.	PRE	Apply at planting; if no rain occurs within 7 days, expect reduced control; Rate dependent on soil type.	ACCase
Maverick Pro	0.66 oz	Annual grasses: cheat, downy brome. Annual broadleaves: wild mustard	No restrictions	PRE	Preemergence applications are not recommended for no-till systems; Rotational restriction for sorghum and corn is 22 months.	ALS

Table 2. Recommendations for controlling weeds in wheat at postemergence.

Postemergence	Product Rate/Acre	Weeds Controlled	Grazing and Forage	Weed Application Timing	Remarks	Tank Mixes	Mode of Action
Achieve 40DG	0.44-0.6 lbs	Annual grasses: Italian ryegrass, wild oats	Do not graze or hay for 30 days.	1-4-inch ryegrass 1-6-inch wild oat 1-5-inch foxtails	Prepackaged with its own adjuvant. Crop rotation for cereal grains: 30 days; all other crops: 106 days	Buctril, Bronate, Curtail M, Stinger	ACCase
Aim WDG	0.33 -1.24oz	Annual broadleaves: field pennycress, tansy mustard, henbit, shepherds purse	Do not graze for 7 days.	Up to 4 inches tall and up to 3 inches across	Apply up to wheat jointing stage. Add non-ionic surfactant.	2,4-D, MCPA, refer to label for additional tankmixes	Photosynthetic inhibitor
Ally DF	0.1 oz	Annual broadleaves: annual mustards, kochia, wild buckwheat	No restrictions	Up to 4 inches tall or across	Dryland wheat: apply 2 leaf to boot stage. Irrigated wheat: apply after tillering to boot stage and irrigation should be delayed for 3 days after treatment. Do not apply to soils above a pH of 7.9.	Dicamba, bromoxynil, 2,4-D, Express, Harmony Extra, Maverick, MCPA, Starane. Do not tank-mix with Malathion	ALS
Amber 75 DF	0.28-0.47 oz	Annual broadleaves: pennycress, tansy mustard, kochia, henbit	No restrictions	Up to 6 inches tall, dependent on weed. Refer to label.	Do not apply to stressed wheat. Do not apply to soils above a pH of 7.5, except in the Texas Blacklands.	Dicamba, bromoxynil, 2,4-D, Express, Harmony Extra, Maverick, MCPA, Starane.	ALS
Assert 2.5LC	1-1.5 pt	Annual broadleaves: wild mustard, field pennycress, wild buckwheat. Annual grasses: wild oat	Do not graze or cut for silage or hay.	Wild oat: 1-4 leaves	Apply when wheat is 2 leaf to jointing. Do apply under freezing conditions. High wild oat densities require higher spray volume.	Numerous options–refer to label	ALS
Avenge 2ASU	2.5-4.0 pt	Wild oat	Do not graze. Cut for silage or hay.	3-5 leaves	Some wheat varieties are sensitive. Rainfast – 6 hours. Do not apply if wheat is stressed or if moisture is on leaves.	Assert and numerous broadleaf herbicides	ACCase
Beyond	4-6 oz	Annual grasses cheat, jointed goatgrass, wild oat, ryegrass, rescuegrass, feral rye. Annual broadleaves: mustards, henbit, primrose	Do not graze for 30 days.	Grasses: 1 to 4 leaf stage. Broadleaves: 1-3 inches tall. Refer to label.	Use only with Clearfield wheat seed. A surfactant and nitrogen based fertilizer must be added to spray solution. A maximum of 8 oz/A can be applied each growing season. Seed cannot be saved. Clearfield wheat can be planted only for 2 sequential season; refer to label. Refer to label for rotational restrictions.	Dicamba, 2,4-D, Buctril, Starane, Stinger	ALS

Table 2. Recommendations for controlling weeds in wheat at postemergence. (continued)

Postemergence	Product Rate/Acre	Weeds Controlled	Grazing and Forage	Weed Application Timing	Remarks	Tank Mixes	Mode of Action
Bromoxynil 4 EC	0.75-1.0 pt	Annual broadleaves: field pennycress, wild mustard	Do not graze for 45 days.	8-leaf, 4 inches tall or rosette up to 2 inches. Refer to label	Good crop tolerance. Do not apply when crop covers weeds or crop is under water stress.	Numerous broadleaf and grass herbicides	Photosynthetic inhibitor
Bronate 4 EC	1.0-2.0 pt	Annual broadleaves: pepperweed, wild mustard, Russian thistle. Annual grasses: wild oat	Do not graze for 45 days.	8-leaf, 4 inches tall or rosette up to 2 inches. Refer to label.	Apply when wheat is 2-leaf to 2-tiller stage.	Numerous options	Photosynthetic inhibitor
Clopyralid (Stinger)	0.25-0.33 pt	Annual and perennial broadleaves: dandelion, sow thistle	Do not graze for 7 days. Do not harvest hay.	Up to 5-leaf stage. Thistles – rosette to bud stage	Apply when wheat is from 3-leaf to early boot stage. Rotation restriction of 10-18 months for sorghum. Avoid drift.	Refer to label	Growth regulator
2, 4-D 2,4-D 4 Amine 2,4-D 4 Low V Ester 2,4-D 6 Low V Ester	0.5-2.0 pt 0.5-2.0 pt 0.3-1.3 pt	Annual and perennial broadleaves: mustards, thistles, dock. Also garlic and onion	Do not graze for 14 days.	Small weeds	Apply in the spring when wheat is full tiller but before boot stage. Crop injury may occur at higher rates.	Commonly tankmixed with sulfonylurea and imidazolinone herbicides	Growth regulator
Dicamba Banvel SFG 2L Banvel 4L Clarity 4L Sterling 4L	4-8 oz 2-4 oz 2-4 oz 2-4 oz	Annual and perennial broadleaves. Less effective on winter annual mustards	Do not graze for 7 days for lactating dairy cattle. No haying for 37 days	Up to 2-3 leaf stage and/or rosettes up to 2 inches across	Apply before to wheat-jointing stage. Early crop stages have more tolerance.	Usually tankmixed with other broadleaf herbicides	Growth regulator
Everest 70 WDG	0.61 oz	Annual grass–foxtail, wild oat; suppression of ryegrass	Do not graze for 60 days.	1-6 leaves	Apply to wheat between 1 to 4 leaves on the main stem plus 2 tillers. 1 application per season. No application by air or irrigation.	Tankmix with Broadleaf herbicides	ALS
Express 75DF	0.17-0.33 oz	Annual broadleaf weeds–mustards, pennycress	Do not graze.	Less than 4 inches tall or wide	Apply after wheat is 2 leaf , but before flag leaf is visible. Short rotational restriction.	Assert, Dicamba, Bromoxynil, 2,4-D, MCPA, Starane	ALS
Finesse DF Combination of Glean and Ally	0.2-0.4 oz	Annual broadleaves–mustards, curly dock. Annual grasses–cheat, downy brome	No grazing restrictions	Small weeds – species dependent	Apply from 1 leaf to boot stage of wheat; Should not be used in soils with a pH above 7.9. Long rotation restrictions.	2,4-D, Dicamba, MCPA, Diuron, Bromoxynil, Metribuzin	ALS

Table 2. Recommendations for controlling weeds in wheat at postemergence. (continued)

Postemergence	Product Rate/Acre	Weeds Controlled	Grazing and Forage	Weed Application Timing	Remarks	Tank Mixes	Mode of Action
Glean FC (DF)	0.17-0.33 oz	Annual broadleaves: tansymustard, henbit Suppression of annual ryegrass	No grazing restrictions	Small weeds – species specific	Apply from 2-leaf stage but before boot stage of wheat. Application interval and rate is dependent on the location in TX – see label. Do not apply to soil with a pH above 7.9.	Dicamba, Bromoxynil, MCPA, 2,4-D	ALS
Harmony Extra (DF)	0.3-0.6 oz	Annual broadleaves: tansy mustard, chickweed	Do not graze, feed forage, or hay.	Less than 4 inches tall or wide	Apply from 2-leaf but before boot stage. Add approved surfactant.	2,4-D, MCPA, Dicamba, Ally, Bromoxynil, Express, Hoelon	ALS
Hoelon 3(EC)	1.33-2.66 pt	Annual grasses: ryegrass, wild oat	Do not graze, feed forage or hay.	4 leaf	Apply to wheat before jointing. Use crop oil concentrate surfactant.	Amber, Glean, Bromoxynil, Harmony Extra, MCPA	ACCCase
Maverick Pro	0.66 oz	Annual broadleaves: tansy mustard, shepherds purse, penny cress. Annual grasses: cheat, wild oat, ryegrass	Do not hay 30 days.	2-3 leaf stage for grasses. Broadleaves weeds less than 2-inch diameter	Apply after 2-leaf stage but before jointing.	Bronate, Buctril, 2,4-D, MCPA, Sencor	ALS
MCPA 2 lb/gal– sodium salt 4 lb/gal–amine and ester formulations	1.5-3.0 pts 0.5-1.0 pts	Annual, biennial, perennial broadleaves: dandelion, yellow rocket, wild radish	Do not graze for 7 days	Annual weeds: small. Perennial weeds: at bud stage, but before wheat boot stage	After 3 leaf stage up to boot stage; high rate after tiller to early boot. Late-season application for control of perennial weeds must be made before wheat boot stage.	Refer to label	Growth regulator
Peak (WDG)	0.38-0.5 oz	Annual broadleaves: prickly lettuce, pennycress, tansy mustard, wild mustard	Do not graze for 30 days; Silage–40 days; Grain– 60 days	1-4 leaf stage or 1-6 leaf stage, depending on weed species. Consult the label.	Apply to wheat after 3-leaf stage to before second node is detectable. Consult the product label for crop rotation restrictions.	Dicamba, Bronate, 2,4-D, MCPA; Refer to label	ALS
Rave 59 (WDG) (Amber + dicamba)	2.0-4.0 oz	Annual and perennial broadleaves: henbit, mustards, kochia, bindweed, curly dock	Do not graze for 7 days for dairy cattle or 30 days before slaughter.	1-4 inches for most weeds; 1-12 inches for mustard species	Apply after wheat emergence up to jointing. Consult label for early developing varieties (TAM 107).	Aim, Ally, Buctril, Bronate, 2,4-D. Tilt fungicide	ALS + Growth regulator

Table 2. Recommendations for controlling weeds in wheat at postemergence. (continued)

Postemergence	Product Rate/Acre	Weeds Controlled	Grazing and Forage	Weed Application Timing	Remarks	Tank Mixes	Mode of Action
Puma 1(EC)	10.6 oz	Wild oat	No grazing restrictions	2-leaf to 2-tiller stage	Application to wheat from the 2-leaf to the 6-leaf stage; do not exceed 10.6 oz/A annually. Do not apply 70 days before harvest.	Refer to label to prevent reduced efficacy.	ACCase
Sencor 4L DF	1.5-16 oz 1-10.66 oz	Annual broadleaves: henbit, filaree, shepherds purse, pennycress. Annual grass suppression: cheat, brome grass	Do not graze for 14 days.	Grasses: less than 2 inches. Broadleaves: less than 1 inch	Apply after 2-leaf up to jointing stage. Wheat varietal sensitivity; refer to label. Do not apply when wheat is dormant. Correct timing is necessary to minimize crop injury. Rates vary by soil texture and organic matter. Do not use crop oil adjuvants. Crop injury may occur on high-pH soils.	Ally, Amber, Finesse, Glean, Harmony Extra, 2,4-D, MCPA, Dicamba, Bronate, Buctril	Photosynthetic inhibitor
Starane	0.33-0.66 pt	Annual and perennial broadleaves: chickweed, prickly lettuce	Do not graze for 7 days.	Before 8 inches tall or vining	Apply from 2-leaf stage up to flag leaf emergence. One application per season.	Maybe tank-mixed with other registered products. Refer to label.	Growth regulator
Tiller (EC)–Premix (Puma+2,4-D+MCPA)	1-1.7 pt	Annual broadleaves: pennycress, mustards. Annual grasses: wild oat, volunteer corn	Do not graze.	Grasses: 2 leaf to 2 tiller. Broadleaves: less than 4 inches	Apply after 3 tillers to jointing stage.	Buctril, Stinger, Tordon 22K, Peak, Starane; refer to label	ACCcase + Growth regulator

Table 3. Recommendations for Harvest Aids in wheat.

Harvest Aids	Product Rate/Acre	Weeds Controlled	Harvest Restrictions	Crop Application Timing	Remarks	Tank Mixes	Mode of Action
Ally	0.1 oz	Annual broadleaf weeds	A waiting interval of 10 days is required before harvest.	Apply when wheat is in the dough.	Always apply with a non-ionic surfactant. Do not use in soils with a pH exceeding 7.9. Weeds growing under limited moisture may not be controlled. Do not use straw for livestock feed.	2,4-D, Clarity	ALS
Clarity	0.5 pt/A	Annual and some perennial broadleaf weeds	A waiting interval of 10-14 days is required before harvest.	Apply when wheat is in the hard dough stage and the joints of the stem are no longer green.	Do not use pre-harvest treated wheat for seed unless a germination test is conducted. Do not allow grazing or use of feed from treated area.	Ally, 2,4-D, Roundup	Growth regulator
Glyphosate Roundup Touchdown	0.5-1.0 qt 0.5-1.0 qt	Annual and some perennial broadleaf and grass weeds	A waiting interval of 7 days is required before harvest.	Apply after hard dough stage of grain (less than 30% moisture).	Do not exceed 1 quart/A. Not recommended for wheat being harvested for seed. Do not feed treated straw or permit dairy or meat animals being finished for slaughter to graze treated grain fields within 2 weeks after treatment.	2,4-D, Clarity	ALS
2,4-D 2,4-D 4 Low V Ester	1.0-2.0 pt	Annual and some perennial broadleaf weeds	Do not allow dairy cattle or slaughter animals to graze for 2 weeks after treatment.	Apply after wheat is in the hard dough stage.	Do not use treated straw for livestock feed.	Ally, Clarity, Roundup	Growth regulator

¹ **Mode of Action** is the primary biochemical or biophysical event that a herbicide directly affects and results in the death of the plant.

ACCase herbicides inhibit the enzyme acetyl-CoenzymeA carboxylase in the pathway leading to lipid synthesis in plants.

ALS herbicides inhibit the pathways leading to amino acid production in plants.

Growth regulator herbicides disrupt hormone balance and protein synthesis in the plant leading to weak cells walls and rapid cell proliferations.

Mitotic disruptor herbicides inhibit cell division and prevent shoot and root elongation.

Photosynthetic inhibitor herbicides inhibit electron transport in the photosynthetic reaction of plants.

Table 4. Recommendations for controlling Perennial weeds after wheat harvest.

Post-harvest herbicides	Rate per Acre	Weeds Controlled	Application Timing	Remarks
2,4-D	1-3 qt	Annual and perennial broadleaf weeds: field bindweed	Apply during the bloom to bud stage while weeds are actively growing.	Allow 2 weeks after a 0.5-inch rainfall for 2,4-D to degrade before planting wheat.
Dicamba	1-2 qt	Perennial broadleaf weeds–field bindweed	Apply to 6-10-inch plants in September to October.	Plant-back restrictions of 45 days per quart applied
Paramount (DF) (quinclorac)	5.3-8.0 oz	Annual grass and annual broadleaf weeds: field bindweed	Plants should be actively growing and at least 4 inches long; Apply in fall just before first freeze. After tillage, allow 30 days for regrowth before herbicide application.	Restricted for use only in the High Plains of Texas. Refer to label for acceptable counties.
Roundup	4-5 qt	Annual and perennial grass and broadleaf weeds	Apply during the bloom to bud stage while weeds are actively growing.	No plant-back restrictions
Tordon 22K	0.5-1.0 pt	Annual and perennial broadleaf weeds: field bindweed	Apply during the bloom to bud stage while weeds are actively growing.	For use on non-cropland only or land to be planted to a small grain the following year
Weedmaster (Premix) 2,4-D + Clarity	1-2 qt	Annual and perennial broadleaf weeds	Apply after wheat harvest and before killing frost.	Allow 40 days between application and planting to prevent wheat injury. Do not exceed 4 qts/A per year.

Produced by Agricultural Communications, The Texas A&M University System
Extension publications can be found on the Web at: <http://tcebookstore.org>
Visit Texas Cooperative Extension at: <http://texasextension.tamu.edu>

Educational programs of Texas Cooperative Extension are open to all people without regard to race, color, sex, disability, religion, age or national origin.

Issued in furtherance of Cooperative Extension Work in Agriculture and Home Economics, Acts of Congress of May 8, 1914, as amended, and June 30, 1914, in cooperation with the United States Department of Agriculture. Chester P. Fehlis, Deputy Director, Texas Cooperative Extension, The Texas A&M University System.

1M, New