

Crop, Situation, and Active Chemical Per Broadcast Acre	Weeds Controlled	Formulated Material Per Broadcast Acre	Time of Application	Method of Application and Precautions
WHEAT				
chlorsulfuron/metsulfuron @ 0.023 lb/A	Mustards, henbit, chickweed, mayweed, buttercup, coreopsis, primrose, dock, and suppression of ryegrass, Hoelon-resistant ryegrass, cheat and garlic.	Finesse 75 DF 0.5 oz/A.	Immediately after planting. Add glyphosate or paraquat if emerged vegetation present.	Note: May only be followed with STS soybean in spring if pH is 7.5 or less. Carryover will injure non-STs soybean varieties.
pyroxasulfone + carfentrazone @ 0.47 + 0.033 to 0.93 + 0.066 lb/A	Ryegrass, other grass weeds, and some small-seeded broad-leaves.	Anthem Flex 4L 2 to 4 oz/A. Rate depends on soil type.	Apply from delayed pre to early post.	Do not apply delayed pre until wheat has germinated.
pyroxasulfone @ 0.038 to 0.15 lb/A	Ryegrass, other grass weeds, and some small-seeded broad-leaf weeds.	Zidua 85 WG or Zidua 4.17 SC 0.7 to 2.5 oz/A or 1.25 to 4 oz/A. Rate depends on soil type and timing.	Apply from delayed pre to early post.	Do not apply delayed pre until wheat has germinated.
flufenacet/metribuzin @ 0.55 to 0.92 lb/A	Annual bluegrass and broadleaf weeds. Ryegrass suppression.	Axiom 68 DF 6 to 10 oz/A. See label for soil type restrictions.	Spike to 2-leaf wheat.	Apply early. Some varieties may be injured by metribuzin (see metribuzin, page 89). Will suppress ryegrass, but must follow with post application of Axial XL, Osprey or PowerFlex.
penoxaden @ 0.053 lb/A	Ryegrass, ALS-resistant ryegrass.	Axial XL 0.42 EC 16.4 oz/A.	Apply to 1-leaf to 2-tiller ryegrass. Apply from 2-leaf wheat to pre-boot. 60 day PHI.	Do not use on oats. Do not tank mix with 2,4-D.
mesosulfuron-methyl @ 0.013 lb/A	Ryegrass, wild oat, and annual bluegrass.	Osprey 4.5 WDG 4.75 oz/A. Follow label recommendation for adjuvant and fertilizer carrier.	Apply to winter wheat only from emergence up to joint stage. Do not apply more than 4.75 oz/A on one wheat crop.	Apply to small actively growing ryegrass in the 4-leaf to 2-tiller growth stage. Osprey will control larger ryegrass under good conditions as a salvage treatment, but significant yield loss from ryegrass competition will occur if it is not controlled early. Rainfast in 4 hours. Cold weather following an application may reduce effectiveness. For spring applications, avoid simultaneous activation of topdress nitrogen and Osprey. See label for nitrogen restrictions.

FOR SEVERE RYEGRASS INFESTATIONS/ALS/HOELON-RESISTANT RYEGRASS

Where ryegrass populations are most severe, especially resistant ryegrass, it may be necessary to take a program approach. This may include a full tillage program following the first “flush” of ryegrass followed by a post-applied herbicide prior to planting (glyphosate or paraquat) followed by a sequential program of Axiom (or Axiom plus Prowl or Zidua/Anthem Flex) in the fall (1- to 2-leaf wheat), followed by a spring application of Axial. In addition, one year of fallowing a field and not allowing ryegrass to go to seed will typically eliminate 95% of ryegrass seed in the soil seed bank.

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pendimethalin @ 1.0 lb/A	Residual only. Suppression of ryegrass. Good control of small-seeded winter annual weeds.	Prowl H₂O 3.8 CS 2.1 pt/A.	After wheat has 1 leaf, until 4 tillers. Prior to weed germination.	Emerged weeds will not be controlled. University testing has shown good crop safety both pre and delayed pre (in cases of poor stand) as long as seed is covered by at least 0.5 inch of soil. Prowl H ₂ O can be tank mixed with Axial, Hoelon, PowerFlex or Osprey to provide around 30 days of residual ryegrass control.
pyroxsulam @ 0.016 lb/A	Ryegrass, henbit, vetch, chickweed, curly dock and others.	PowerFlex HL 13 DG 2 oz/A. Add 0.5% nonionic surfactant or 1 to 1.25% crop oil concentrate or 1% MSO.	Apply from 3-leaf to joint, after ryegrass has emerged.	Do not apply more than 2 oz/A per year. Do not use on oats. Do not harvest within 60 days. See label for nitrogen restrictions.
metribuzin @ 0.094 to 0.141 lb/A	Cheat, bluegrass and little barley.	Metribuzin 75 DF 2 to 3 oz/A.	After wheat plants have 2 leaves and 1 inch secondary roots.	Do not use on oats. Best cheat control with fall application. Soft Red Winter Wheat Reaction to Metribuzin: Some wheat varieties are tolerant to metribuzin and some will be injured. For a list of metribuzin-tolerant wheat varieties, go to www.uaex.edu . Avoid use on sandy soils.
2,4-D amine or LV esters @ 0.5 to 0.75 lb/A	Mustard, thistles, buttercup, dock seedlings, horseweed seedlings, vetch and winter peas.	2,4-D amine or LV esters 1 to 1.5 pt/A of 4 lb/gal 2,4-D.	In spring after the wheat plants have tillered and are 4 to 8 inches tall to the time the joint begins to elongate. (Growth stages 3 to 5.)	Apply when temperature is above 60°F and when no rain is expected for 12 hrs. Do not graze lactating dairy animals until 7 days after application. AVOID DRIFT.
2,4-D LV esters @ 0.75 to 1 lb/A	Wild onion or garlic.	2,4-D LV esters 1½ to 2 pt/A of 4 lb/gal formulation. Add a surfactant. Use 2 pt rate only if severe infestations and if some injury can be tolerated. See right column for addition of Banvel .	In spring after the wheat plants have tillered and are 4 to 8 inches tall to the time the joint begins to elongate. (Growth stages 3 to 5.) The LV esters can be applied in liquid N if the optimum timing for the two applications coincide.	Prevents seed and aerial bulblets but will not completely control. Do not graze lactating dairy animals until 14 days after application. AVOID DRIFT. Banvel can be added at the rate of 4 oz/A of 4 lb/gal or 8 oz/A of 2 lb/gal Banvel. This may increase garlic suppression. It is less selective and should not be used unless some injury can be tolerated. Do not add Banvel if any joint movement has occurred in wheat.
halauxifen + florasulam @ 0.075 + 0.075 lb/A	Henbit, mustards, horseweed, shepherdspurse.	Quelex 20 DF 0.75 oz/A.	Apply from 2 leaf to flag leaf emergence.	60-day PHI. Do not apply more than one application per year. Do not apply less than 21 days prior to cutting for hay, 7-day grazing restriction.
thifensulfuron/tribenuron @ 0.023 to 0.028 lb/A	Wild garlic, buttercup, mayweed, dock, chickweed, primrose, and suppression of vetch.	Harmony Extra 50 SG 0.75 to 0.9 oz/A. Surfactant required for both water and liquid N carriers.	In early to mid-March when wild garlic is 6" to 12" tall.	Apply to actively growing weeds. May be tank mixed with liquid N if slurried in water first. Thorough spray coverage is necessary; coarse spray is not recommended. May be used on oats after 3-leaf but prior to jointing. Do not use on Ogle Premier or Porter oat varieties.

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thifensulfuron/tribenuron + 2,4-D @ 0.023 to 0.75 lb/A	Horseweed.	Harmony Extra 50 SG + 2,4-D LV ester 0.75 oz/A + 1.5 pt/A of 4 lb/gal formulations. Add surfactant.	See 2,4-D above.	For severe horseweed infestations, add 4 oz of Clarity. Effective treatment when intentions are to plant soybeans after harvest.
tribenuron @ 0.008 to 0.016 lb/A	Buttercup, mayweed, chickweed. Suppression of vetch and curly dock.	Express 50 SG 0.25 to 0.50 oz/A. Surfactant required for both water and liquid N carriers.	Apply before flag leaf emergence.	Same as above.
prosulfuron @ 0.009 to 0.018 lb/A	Wild garlic, vetch, chickweed, henbit.	Peak 57 WG 0.25 to 0.5 oz/A. Add a surfactant.	After wheat plants have developed 3 leaves and before second node is detectable.	Expect slow results. Use high rate for garlic. (10-month minimum plant back interval for soybeans.)
Preharvest				
glyphosate @ 1 lb/A	Annual broadleaf and grass weeds and johnsongrass.	Glyphosate (4 lb/gal formulations) 2 pt/A.	Timing after hard dough stage (30% or less moisture) and at least 7 days prior to harvest.	Apply in spray volume of 3 to 10 GPA. Not recommended for use on wheat grown for seed because reduction in germination and vigor can occur.
carfentrazone @ 0.0312 lb/A	Morningglory desiccation.	Aim 2 EC 2.0 oz/A. Add 1% crop oil concentrate.	7 days prior to harvest.	Good coverage is critical to Aim activity. 10 gpa is recommended.