

Table 1. Spring applied wheat herbicide rates, crop stage restrictions, weed control spectrum, soybean plant back timing, and liquid fertilizer carrier recommendations (Source: 2019 Weed Control Guide for Ohio, Indiana and Illinois).

Active Ingredient	Trade name(s)	Rate per Acre	Application Timing	Winter Annual Weeds Controlled	Liquid Fertilizer Carrier Recommendations	Soybean Plant Back Restriction
2,4-D	Weedar 64, Weedone, Formula 40, others	1 to 2 pts	Tillering to before jointing	Prickly and wild lettuce, mustards, field pennycress, shepherd's purse, horseweed (marestail), dandelion*	The use of a liquid fertilizer as a carrier will increase the risk of crop injury	No restriction for early spring applications
Bromoxynil	Buctril, Moxy	1 to 2 pts	Emergence to boot stage	Mustards, henbit, field pennycress, shepherd's purse,	UAN used as a carrier in early spring may increase leaf burn, do not use fertilizer carrier after jointing	No restriction for early spring applications
Bromoxynil + pyrasulfotole	Huskie	13.5 to 15 oz	After 1-leaf stage up to flag leaf emergence	Purple deadnettle, henbit, prickly and wild lettuce, horseweed (marestail), mustards, field pennycress, shepherd's purse, chickweed	Can be applied in a liquid fertilizer solution that does not exceed 50% nitrogen and is not being applied above 30 lb/Acre	4 Months
Bromoxynil + fluroxypyr + 2,4-D	Cleansweep D	1 to 1.5 pts	Tillering to before jointing	Henbit, horseweed (marestail), mustards, field pennycress, shepherd's purse, Canada thistle		4 Months
Bromoxynil + fluroxypyr + MCPA	Cleansweep M	1 to 1.5 pts	2-leaf to flag leaf emergence	Henbit, horseweed (marestail), mustards, field pennycress, shepherd's purse, Canada thistle		4 Months
Clopyralid	Stinger	0.25 to 0.33 pts	After 2-leaf stage until boot stage	Horseweed (marestail), Canada thistle, dandelion*		10.5 Months

				prickly and wild lettuce		
Clopyralid + 2,4-D	Curtail	1 to 2.67 pts	Tillering to jointing	Prickly and wild lettuce, mustards, field pennycress, shepherd's purse, Canada thistle, dandelion*, horseweed (marestail)	UAN can be used as a liquid fertilizer carrier	10.5 Months
Dicamba	Banvel, Clarity, Sterling Blue, others	0.125 to 0.25 pt	Emergence to before jointing	Prickly and wild lettuce, horseweed (marestail), shepherd's purse, dandelion*	Conduct compatibility test as outlined by label prior to application	No restriction for early spring applications
Florasulam + MCPA	Orion	17 oz	3-leaf to preboot stage	Prickly and wild lettuce, chickweed, field pennycress, shepherd's purse, mustards		9 Months
Halauxifen-methyl + florasulam	Quelex	0.75 oz	2-leaf to flag leaf emergence	Horseweed (marestail), henbit, chickweed, field pennycress, shepherd's purse, mustards	Maximum of 0.25% v/v NIS should be used when applying with a liquid fertilizer	3 Months
MCPA	Chiptox, Rhomene, Rhonox, others	1 to 4 pts	Tillering to before jointing	Field pennycress, shepherd's purse, mustards pigweed, prickly lettuce, horseweed (marestail)	The use of a liquid fertilizer as a carrier will increase the risk of crop injury	No restriction for early spring applications
Mesosulfuron-methyl	Osprey	4.75 oz	Emergence to preboot stage	Ryegrass, bluegrass, wild oat, field pennycress, wild oat	Can be applied in a liquid fertilizer solution that does not exceed 15% nitrogen fertilizer. Maximum of 0.25% v/v NIS should be used when applying with a liquid fertilizer	90 Days
Pinoxaden	Axial XL	16.4 oz	2-leaf to preboot stage	Ryegrass	Can be applied in a liquid fertilizer solution that does not exceed 50% nitrogen fertilizer. Crop injury may be possible.	120 Days

Pinoxaden + fluroxypyr	Axial Star	16.4 oz	2-leaf to preboot stage	Ryegrass	Can be applied in a liquid fertilizer solution that does not exceed 50% nitrogen fertilizer. Crop injury may be possible.	4 Months
Propoxycarbazone-sodium	Olympus	0.6 to 0.9 oz	Emergence to before jointing	Cheat, downy brome, purple deadnettle, horseweed (marestail), mustards, field pennycress, shepherd's purse,	Maximum of 0.25% v/v NIS should be used when applying with a liquid fertilizer carrier. Temporary crop injury may occur.	12 Months and 24" of precipitation
Propoxycarbazone-sodium + mesosulfuron-methyl	Olympus Flex	3 to 3.5 oz	1-leaf to before jointing	Cheat, downy brome, purple deadnettle, horseweed (marestail), mustards, field pennycress, shepherd's purse, annual bluegrass, ryegrass	Maximum of 0.25% v/v NIS should be used when applying with a liquid fertilizer solution. Carrier solutions should not contain more than 15% nitrogen fertilizer	5 Months and 18" of precipitation
Prosulfuron	Peak	0.5 oz	Emergence to second node visible	Mustards, field pennycress, prickly and wild lettuce, shepherd's purse, wild garlic, wild onion	Apply with NIS at 1-2 qt/100gal when using a liquid fertilizer carrier	10 Months
Pyroxulam	PowerFlex, PowerFlex HL	3.5 oz	3-leaf to jointing	Cheat, downy brome, ryegrass, chickweed, mustards, field pennycress, shepherds purse	Can be applied in a liquid fertilizer solution that does not exceed 50% nitrogen and is not being applied above 30 lb/Acre. NIS at 0.25% v/v should be added to solution.	3 Months
Thifensulfuron + tribenuron	Harmony Extra TotalSol	0.45 to 0.9 oz	After 2-leaf stage but before flag leaf becomes visible	Wild garlic and onion, field pennycress, mustards, chickweed, henbit shepherd's purse, prickly and wild lettuce, horseweed (marestail), purple deadnettle	Include a surfactant at 0.5-2 pts/100 gal when applying in a carrier that consist of less than 50% nitrogen fertilizer.	45 Days

Tribenuron	Express TotalSol	0.25 to 0.5 oz	After 2-leaf stage but before flag leaf becomes visible	Chickweed, deadnettle, henbit, wild lettuce, mustards, field pennycress, shepherd's purse	Liquid fertilizer carriers should have 0.06-0.25% v/v NIS added. Temporary crop yellowing and stunting may occur when applied in liquid fertilizer. This injury is occasionally severe, and risk of sever injury may increase under saturated soil conditions.	45 Days
* The highest labeled herbicide rates should be used to achieve control of dandelion plants with spring applications.						