



# Harvest Aid

## Weed Management in Wheat

June 2019

**Misha Manuchehri**

Small Grains Weed Science Extension Specialist

**Heath Sanders**

SW Area Extension Agronomist

**Josh Bushong**

NW Area Extension Agronomist

Heavy rains in some areas have resulted in wheat fields that are weedier than normal and led to questions about the use of herbicides for harvest aid weed management. A harvest aid application will help reduce the amount of green, weed material the combine has to process. Green material at harvest can lead to higher grain moisture and cause moisture/plant material build-up on critical combine components like concaves, chaffers and sieves. For wheat, 2,4-D, dicamba, glyphosate, metsulfuron and Aim® EC (as well as combinations of these products) are labeled for use as harvest aids (Table 1). Sharpen® also is labeled; however, it is not included in the table on page 2 as maximum residue limits (MRLs) have not been set for all export markets. There are commercial products not labeled for harvest aid use, so it is important to read individual product labels. Paraquat is one active ingredient that is not labeled for use as a harvest aid in wheat. Paraquat residues are easily detectable and have resulted in condemned wheat. For products that are labeled, follow directions carefully regarding herbicide carriers and additives. Using diesel fuel as the carrier for harvest aid herbicides will

Oklahoma Cooperative Extension Fact Sheets  
are also available on our website at:  
**facts.okstate.edu**

result in loads of wheat being rejected at the elevator due to contamination and odor.

All pre-harvest applications should be made when wheat is in the hard dough stage (30 percent or less grain moisture). The pre-harvest interval for most harvest aid herbicides is seven to 14 days. Weeds may be large and fairly mature at the time of a harvest aid application, therefore it may take seven days or longer for weeds to dry down. Because of this, it is important to use the full product and carrier rates to achieve maximum weed control. Depending on the weed species, harvest aid herbicides may stop weed growth, but will not kill weeds. Be sure to check the product label for appropriate use rates and rotation restrictions. The use of 2,4-D, dicamba and metsulfuron may impact a following double crop.

If winter annual grassy weeds are the problem, it may be necessary to delay harvest until weed seed heads are mature enough so they can be threshed by the combine and separated from the wheat by the combine's cleaning fan. *Bromus* species (downy brome, true cheat and rescuegrass) and wild oats do not usually delay harvest, as they mature before or near the same time as wheat. However, ryegrass can require delaying wheat harvest, by which time lodging and summer weeds can cause serious harvest issues.



Horseweed/marestail (*Conyza Canadensis* L.) in Kay County during the 2017-18 winter wheat season.

**Table 1. Herbicides labeled for use as a harvest aid in wheat.**

<i>Herbicide</i>	<i>Mode of action</i>	<i>Weed notes</i>	<i>Preharvest Maximum rate</i>	<i>interval</i>	<i>Notes</i>
2,4-D	Synthetic auxin	No grass control, kochia and wildbuck are tolerant	1 pint/A (5.5 lb ae/gal) 2/3 pint/A (6 lb ae/gal)	14 days	Be aware of plant-back restrictions with the use of 2,4-D if planning to double crop.
dicamba	Synthetic auxin	No grass control	8 fl oz/A (4 lb ae/gal)	7 days	Apply when wheat is in the hard dough stage or when the green color is gone from the nodes/joints of the stem. A germination test should be performed on preharvest-treated seed to ensure satisfactory germination. Be aware of plant-back restrictions with the use of dicamba if planning to double crop.
glyphosate	EPSP synthase inhibitor	Resistant horseweed, kochia and pigweed	1 qt/A (3 lb ae/gal) 1.5 pints/A (4 lb ae/gal) 22 fl oz/A (4.5 lb ae/gal)	7 days	Do not apply to wheat grown for seed, as reduction in germination or vigor may occur. There are no rotation restrictions with glyphosate.
metsulfuron	ALS inhibitor	Resistant horseweed, kochia and pigweed	0.1 oz/A	10 days	To improve weed management, metsulfuron should be applied in combination with glyphosate, 2,4-D, or dicamba. The addition of a surfactant is required.
Aim EC (carfentrazone)	PPO inhibitor	No grass control	2 fl oz/A	7 days	Applications should be made in spray volumes sufficient to provide complete coverage of foliage. The addition of a surfactant is required.

Oklahoma State University, as an equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. Oklahoma State University is committed to a policy of equal opportunity for all individuals and does not discriminate based on race, religion, age, sex, color, national origin, marital status, sexual orientation, gender identity/expression, disability, or veteran status with regard to employment, educational programs and activities, and/or admissions. For more information, visit <https://eeo.okstate.edu>.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President for Agricultural Programs and has been prepared and distributed at a cost of 20 cents per copy. 0619 GH.