

Cover Crop Termination

How to Select Herbicide Programs



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When terminating cover crops, consider the need for additional tank-mix partners in glyphosate- or paraquat-based burndown programs to control emerged weed populations, as well as the grass, legume and/or brassica cover crop species. We recommend three keys for developing cover crop burndown programs:

1. Know which weeds are present in your cover crop stand.

A well-established cover crop stand suppresses many fall- and spring-emerging weed species. But some species, such as glyphosate-resistant horseweed, may also be present within cover crop stands. Consequently, it may be necessary to adjust your cover crop burndown program or application timing to achieve effective weed control.

2. Tank-mix synthetic auxins for legumes and brassicas.

Though both glyphosate and paraquat have activity on broadleaf cover crops, Mid-Atlantic field trials consistently show that including dicamba or 2,4-D LVE in the tank improves control of legumes and brassicas (Table 4 - other side).

3. Understand pre-plant application restrictions for tank-mix partners.

Make sure to check herbicide labels to understand restrictions in both corn and soybeans (Table 3). For example, cover crop termination timing and soybean seed trait technology (i.e., Enlist 3, Xtend, XtendFlex, LibertyLink) will determine which herbicide formulations and rates can be used.

Table 3: Herbicide restrictions and BMPs in cover crop termination scenarios within field crops

Tank Mix Partners	Herbicide Group	Restrictions and BMPs (Always consult herbicide labels)
Sharpen (saflufenacil)	14	Apply 0-14 days pre-plant in corn at 1-3 oz/ac and in soybean at 1 oz/ac. Add MSO (1% v/v) + AMS.
2,4-D LVE	4	Apply >7 days pre-plant in corn at 0.5-1.0 lb ae/ac.
dicamba	4	Apply >7 days pre-plant in corn at 0.5-1.0 lb ae/ac.
clethodim	1	Apply SelectMax >6 days pre-plant at 6 fl oz in corn and pre-emergence up to 8 fl oz in soybean. Restrictions and adjuvants will differ for other clethodim products.
metribuzin	5	Tank mix with paraquat before soybean at 0.2 lb ai/ac. Check label for rate restrictions based on soil type. Metribuzin is not labeled for pre-plant applications before corn.
atrazine	5	Tank mix with paraquat at 1 lb ai/ac in corn only.
rimsulfuron	2	Apply Resolve 25 DF or Basis Blend 30WDG at 1 oz/ac in corn only.



Table 4: Effectiveness of burndown herbicides and tank mixtures

Control ratings (1-10) based on Mid-Atlantic field trials. Ratings of 9 or greater should be selected for optimal cover crop control.

Corn or soybean program*	Annual ryegrass	Winter cereal**	Med. red clover	Crimson clover	Hairy vetch	Austria winter pea	Brassica spp***
glyphosate (0.75 lb ae)	8	9	7	8	7	8	6
glyphosate (1.5 lb ae)	9	9+	7+	8+	8	8+	7+
glyphosate (0.75 lb ae) +							
<i>Sharpen (1 oz/ac)</i>	8+	9	7	8	8+	8+	7
<i>2,4-D LVE (0.5 lb ae)</i>	8	9	8	9	9+	9	8
<i>2,4-D LVE/choline (1 lb ae)</i>	8	9	9	9	9+	9	9
<i>dicamba (0.5 lb ae)</i>	8	9	9	9	9+	9	7
<i>clethodim (6-8 oz)</i>	9+	9+	7	8	7	8	-
paraquat (0.75 lb ai)	6	8	8	8+	8	8	8
paraquat (0.75 lb ai) +							
<i>2,4-D LVE (0.5 lb ae)</i>	6	8	8+	9	9+	8	8+
<i>dicamba (0.5 lb ae)</i>	6	8	8+	9+	9+	8	8
Soybean program only							
paraquat (0.75 lb ai) +							
<i>metribuzin (0.2 lb ai)</i>	7	8+	8+	9+	9	8+	8+
Corn program only							
glyphosate (0.75 lb ae) +							
<i>rimsulfuron (0.015 lb ai)</i>	9+	9+	7	8	7	8	6
paraquat (0.75 lb ai) +							
<i>atrazine (1 lb ai)</i>	7	8+	8+	9+	9	8+	9

*glyphosate at 0.75 lb ae is equivalent to Roundup PowerMax 3 at 19 fl oz; paraquat at 0.5 lb ai is equivalent to Gramoxone SL 3 at 1.3 pt; metribuzin at 0.2 lb ai is equivalent to metribuzin 75DF at 4.3 oz wt;**winter wheat, triticale, cereal rye; ***overwintering brassica spp, winter canola, rapeseed

Prepared by:

John Wallace (Penn State University), Michael Flessner (Virginia Tech), Dwight Lingenfelter (Penn State University), Vijay Singh (Virginia Tech), Mark VanGessel (University of Delaware), Kurt Vollmer (University of Maryland), Factsheet designed by Emily Unglesbee (GROW), October 2024.



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