

Supremacy® tank mixes for the control of mayweed chamomile in spring wheat

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A field study was conducted at the WSU Cook Agronomy Farm near Pullman, WA to generate post-emergence broadleaf weed control data with Supremacy herbicide in tank mix combinations. Supremacy contains fluroxypyr a product in the synthetic auxin group (Group 4) and thifensulfuron and tribenuron products in the sulfonyleurea family within the acetolactate synthase (ALS) inhibitor group (Group 2).

The soil at this site is a Thatuna silt loam with 4.3% organic matter and a pH of 5.1. On April 19th, 'Diva' spring wheat was planted using a Horsch air drill with 12-inch row spacing. The initial post-emergence application took place on May 26th with a CO₂-powered backpack sprayer set to deliver 10 gpa at 42 psi at 2.3 mph. Conditions were an air temperature of 60°F, relative humidity of 44% and the wind out of the W at 5 mph. Wheat was at the second detectable tiller stage and was 12 inches tall. Mayweed chamomile was one-inch tall at the time of application and at a density of 15 plants per square foot. The second post-emergence application took place on June 7th with a CO₂-powered backpack sprayer set to deliver 10 gpa at 42 psi at 2.3 mph. Conditions were an air temperature of 83°F, relative humidity of 26% and there was no air movement. Wheat was at the two node stage and was 19 inches tall. Mayweed chamomile was four inches tall at the time of application and at a density of 13 plants per square foot.

No crop injury was observed among all treatments evaluated. At the June 30th rating, 35 and 22 days after the initial and second application, none of the treatments were providing commercially acceptable control. When the final rating was taken the wheat was approaching maturity and the mayweed chamomile was flowering. Even though mayweed chamomile plants could be seen within the plots, the lack of flowering was factored into the weed control rating. Supremacy at 6.0 oz/A and Starane® Flex at 13.5 fl oz/A provided 0.094 and 0.0878 lb ae fluroxypyr per acre, respectively. These two treatments did not provide commercially acceptable control of mayweed chamomile. The addition of Maestro® Advanced 12.8 fl oz/A to Supremacy at either 5 or 6 oz/A, at either application timing, significantly improved mayweed chamomile control. Maestro Advanced should be considered as a tank mix partner for Supremacy for mayweed chamomile control. Adding additional thifensulfuron and tribenuron from Audit® 1:1 to the various Supremacy tank mixtures did not improve mayweed chamomile control. Yield data was not collected within the trial area.

Treatment	Rate	Application Date	Mayweed chamomile control	
			6/30	7/14
	fl oz/A		-----%	
Nontreated Check	--	--	--	--
Supremacy + Maestro Advanced	6 oz + 12.8	6/7	66 a ¹	91 a
Supremacy + Maestro Advanced	6 oz + 16	6/7	64 ab	90 a
Supremacy + Maestro Advanced	6 oz + 12.8	5/26	62 ab	87 ab
Supremacy + Maestro Advanced	5 oz + 12.8	5/26	64 ab	86 a-c
Supremacy + Maestro Advanced + Audit 1:1	6 oz + 12.8 + 0.2 oz	6/7	50 a-c	85 a-c
Supremacy + Maestro Advanced + Audit 1:1	5 oz + 12.8 + 0.2 oz	6/7	60 a-c	82 a-c
ARY-0546-001 + Comet [®] + Maestro Advanced	0.3 oz + 8 + 12.8	6/7	50 a-c	82 a-c
Supremacy + Maestro Advanced + Audit 1:1	5 oz + 12.8 + 0.2 oz	5/26	47 a-c	74 a-c
Supremacy + Huskie [®]	6 oz + 11	6/7	42 bc	70 bc
Supremacy + Brox [®] 2EC	6 oz + 16	6/7	37 cd	70 bc
Supremacy + Rhonox [®] MCPA Ester	6 oz + 8.6	6/7	44 a-c	67 cd
Starane Flex	13.5	6/7	17 de	49 de
Supremacy + R-11 [®]	6 oz + 0.25% v/v	6/7	12 e	32 e

¹ Means, based on four replicates, within a column, followed by the same letter are not significantly different at P = 0.05 as determined by Fisher's protected LSD test, which means that we are not confident that the difference is the result of treatment rather than experimental error or random variation associated with the experiment.

Some of the pesticides discussed in this presentation were tested under an experimental use permit granted by WSDA. Application of a pesticide to a crop or site that is not on the label is a violation of pesticide law and may subject the applicator to civil penalties up to \$7,500. In addition, such an application may also result in illegal residues that could subject the crop to seizure or embargo action by WSDA and/or the U.S. Food and Drug Administration. It is your responsibility to check the label before using the product to ensure lawful use and obtain all necessary permits in advance.