

## **Control of mayweed chamomile in spring wheat**

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A study was established at Duane Oehlwein's farm near Davenport, WA to evaluate crop tolerance and mayweed chamomile control with herbicides in spring wheat. The objective of the study was to determine how FMC's Affinity<sup>®</sup> BroadSpec [thifensulfuron + tribenuron (group 2)] and Aim<sup>®</sup> EC [carfentrazone (group 14)] would influence the performance of Huskie<sup>®</sup> [pyrasulfotole (group 27) + bromoxynil (group 6)] and Talinor<sup>™</sup> [bicyclopyrone (group 27) + bromoxynil] for the control of mayweed chamomile in winter wheat. Moxy<sup>®</sup> 2E plus Affinity BroadSpec were considered tank mix partners for the control of mayweed chamomile in this study. Cadet<sup>™</sup> [fluthiacet (group 14)] was also evaluated in combination with Huskie. Cadet is not labeled for use in wheat.

The soil at this site is a Broadax silt loam with 3.8% organic matter and a pH of 7.6. On April 12<sup>th</sup>, 'Louise' spring wheat was planted with a Morris no-till drill with Anderson openers on a 12-inch row spacing to a depth of 1.5 inch at a rate of 70 lb seed per acre. Postemergence treatments were applied on May 27<sup>th</sup> with a CO<sub>2</sub>-powered backpack sprayer set to deliver 10 gpa at 48 psi at 2.3 mph. The applications were made under 4 mph winds out of the southwest with an air temperature of 72°F and relative humidity of 22%. The majority of the wheat had 1 to 2 tillers and plants were 6 inches tall. Mayweed chamomile was uniformly distributed, and its population was high across the trial area. Mayweed chamomile was 1.5-inch-tall and 1.5-inch-wide at the time of application and had a density of 17 plants per square foot in the nontreated check plots. Mayweed chamomile was continuing to germinate at the time of application as this area of the field was sub-irrigated. The trial area was harvested with a Kincaid 8XP plot combine on August 24<sup>th</sup>.

Crop injury was evident in Aim EC- and Cadet-treated plots 3 days after treatment (DAT) and peaked on June 10<sup>th</sup>, 14 DAT (Table). Crop injury was noted as chlorosis and speckling. Carfentrazone and fluthiacet are fast acting, contact herbicides. We hypothesized that the addition of Aim EC to Huskie, Talinor and Moxy 2E + Affinity BroadSpec, as well as the addition of Cadet to Huskie, would accelerate and improve control of mayweed chamomile. This was not the case when the initial rating was taken 3 DAT (May 30<sup>th</sup>) (Table). On June 10<sup>th</sup>, 14 DAT, all treatments containing Huskie, Talinor and Moxy 2E + Affinity BroadSpec were providing  $\geq 80\%$  control of mayweed chamomile (Table). Treatments containing Talinor stood out by providing  $\geq 95\%$  control of mayweed chamomile. The addition of Affinity BroadSpec or Aim EC to Huskie or Talinor; or Cadet to Huskie did not provide better mayweed chamomile control when compared to Huskie or Talinor applied alone. Yield data were not presented since there was a significant wild oat infestation within the trial area, especially in the third and fourth reps.

		5/30	6/10	5/30	6/10
		3 DAT	14 DAT	Mayweed chamomile	
Treatment <sup>1</sup>	Rate	Crop injury		control	
	fl oz/A	-----%-----		-----%-----	
Nontreated check	--	--	--	--	--
CoAct + Talinor <sup>™</sup>	2.75 13.7	0 a <sup>2</sup>	0 a	38 a	99 a
CoAct + Talinor	2.75 13.7	0 a	0 a	40 a	98 a
Affinity <sup>®</sup> BroadSpec	1.0 oz				
CoAct + Talinor	2.75 13.7	5 b	10 c	48 a	95 a
Aim <sup>®</sup> EC Affinity BroadSpec	0.5 1.0 oz				
Moxy <sup>®</sup> 2E Aim EC Affinity BroadSpec	24 0.5 1.0 oz	4 b	6 b	45 a	80 b
Moxy 2E Affinity BroadSpec	24 1.0 oz	0 a	0 a	48 a	81 b
Huskie <sup>®</sup> Aim EC	13.5 0.5	5 b	6 b	38 a	86 b
Huskie Affinity BroadSpec	13.5 1.0 oz	0 a	0 a	43 a	85 b
Huskie Affinity BroadSpec Aim EC	13.5 1.0 oz 0.5	4 b	6 b	48 a	86 b
Huskie Cadet <sup>™</sup>	13.5 0.75	4 b	6 c	45 a	80 b
Huskie	13.5	0 a	0 a	40 a	85 b

<sup>1</sup> All treatments, excluding the nontreated check, were tank mixed with NIS at 0.25% v/v. Treatments were applied 5/27/20.

<sup>2</sup> 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.

### Disclaimer

**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.**