Evaluation of Maestro EXT for the control of mayweed chamomile in winter wheat
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A field study was conducted at the Palouse Conservation Field Station near Pullman, WA to assess the level of control provided by Maestro EXT on mayweed chamomile in winter wheat. Maestro EXT is a premixture of bromoxynil (Group 5) and dichlorprop-p (Group 4) herbicides. 2,4-D, MCPA and dicamba are also Group 4 herbicides. Dichlorprop-p has not been utilized as a broadleaf herbicide in small grains. The primary objective of this trial was to determine the level of control dichlorprop-p provides on mayweed chamomile.

The soil at this site is a Thatuna silt loam with 4.4% organic matter and a pH of 5.0. The field has been in continuous cereals and this trial followed a planting of 'Ryan' spring wheat. On October 21, 2021, a blend of 2/3 Norwest Tandem 1/3 PNW Trooper winter wheat was direct-seeded using a Horsch air seed drill with a 12-inch row spacing at the rate of 100 lb seed per acre. In the same planter pass, the field was fertilized with 150 lb N:20 lb Cl per acre. Postemergence treatments were applied on May 4, 2022 with a CO_2-powered backpack sprayer set to deliver 10 gpa at 46 psi at 2.3 mph. The applications were made at an air temperature of 70°F and relative humidity of 40%, and winds were out of the south at 6 mph. The majority of the wheat had two tillers and plants were 7 inches tall. Mayweed chamomile was uniformly distributed, and its population was high across the trial area. Mayweed chamomile was only 0.5-inch in height and there were so many plants per square foot that we were unable to accurately count them.

The area identified for the trial was in a low-lying area of the field. It was a very wet late winter, so much so, that it delayed normal growth of the wheat, when compared to wheat planted in the well-drained soils around it. The trial area seemed like an ideal location because of the density and widespread distribution of mayweed chamomile. The thought was that the excessive soil moisture would dry up, but the spring provided well-above average precipitation. It turned out that one of the weaknesses of the trial was that a significant portion of the trial area was lacking crop competition. In turn, yield data are not presented.

There were not large differences in the level of mayweed chamomile control within a treatment over multiple ratings made during the trial. All herbicide treatments were challenged with the above average precipitation and below average temperatures, which allowed the mayweed chamomile to tolerate the herbicide treatments to some degree, and the lack of crop competition was also in the weed's favor. There was no crop injury observed in this trial. The final rating on July 13 is representative of how the products performed in the study. Duplosan (dicloroprop-p), applied at 0.5 lb ai/a, did not provide acceptable control of mayweed chamomile (Table). Maestro EXT applied at 20 fl oz/a, which would distribute dicloroprop-p at 0.5 lb ai/a and bromoxynil at 0.25 lb ai/a, showed a slight improvement of mayweed chamomile control, but it was commercially unacceptable. Maestro EXT applied at 40 fl oz/a, which would distribute dicloroprop-p at 1.0 lb ai/a and bromoxynil at 0.5 lb ai/a, provided commercially acceptable

control of mayweed chamomile. TruSlate (clopyralid + fluroxypyr) applied at 16 fl oz/a was the only other treatment that provided commercially acceptable control of mayweed chamomile in the study.

			7/13/22
		Rate	Mayweed chamomile
Treatment[1]	Formulation (lb ae/gal)	fl oz/A	control (%)
Nontreated Check		--	--
Maestro EXT	dicloroprop-p + bromoxynil (3.2 + 1.6)	16	45 bc[2]
Maestro EXT	dicloroprop-p + bromoxynil (3.2 + 1.6)	20	48 b
Maestro EXT	dicloroprop-p + bromoxynil (3.2 + 1.6)	40	79 a
Duplosan	dicloroprop-p (4.0)	16	23 d
Maestro 2EC	bromoxynil (2.0)	16	35 b-d
Rhonox MCPA	MCPA (3.7)	17.3	25 cd
Scorch EXT	dicamba + 2,4-D + dicloroprop-p (1.3 + 1.33 + 2.67)	9.0	35 b-d
Scorch EXT	dicamba + 2,4-D + dicloroprop-p (1.3 + 1.33 + 2.67)	16	50 b
TruSlate	clopyralid + fluroxypyr (0.75 + 0.75)	21.3	86 a
Maestro 2EC + Rhonox MCPA	bromoxynil + MCPA (2.0 + 3.7)	16 + 17.3	38 b-d

[1] All treatments were tank-mixed with NIS at 0.5% v/v

[2] 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.

Duplosan™ is not registered for use in the state of Washington.
Maestro EXT is not registered for use in the United States. The product is pending a federal EPA registration.

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.