

## **Evaluation of Arysta experimental formulations for the control of common lambsquarters and 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 Arysta's experimental formulations including AL-X1581ad, AL-X1780aa and AL-X1795aa.

The soil at this site is a Palouse silt loam with 3.6% organic matter and a pH of 5.3. On April 19<sup>th</sup>, 'Diva' spring wheat was planted using a Horsch air drill with 12-inch row spacing. The post-emergence application took place on May 26<sup>th</sup> with a CO<sub>2</sub>-powered backpack sprayer set to deliver 10 gpa at 43 psi at 2.3 mph. Conditions were an air temperature of 64°F, relative humidity of 36% and the wind out of the W at 5 mph. Wheat was at the first detectable tiller stage and was 12 inches tall. Common lambsquarters was two inches tall at the time of application and at a density of 23 plants per square foot. Mayweed chamomile was 1.5 inches tall at the time of application and at a density of 5 plants per square foot.

No crop injury was observed among all treatments evaluated. In general, the experimental compounds had better activity on common lambsquarters than mayweed chamomile. AL-X1780aa tank mixed with either 2,4-D LV 6, Maestro<sup>®</sup> Advanced or Rhonox<sup>®</sup> MCPA, provided outstanding control of common lambsquarters when a rating was taken 32 DAT (June 27<sup>th</sup>). AL-X1581ad when tank mixed with Audit<sup>®</sup> 1:1 and WideMatch<sup>®</sup>, provided outstanding control of common lambsquarters when a rating was taken 32 DAT (June 27<sup>th</sup>). AL-X1795aa was tested as a solo product at two rates and provided outstanding control of common lambsquarters when a rating was taken 32 DAT (June 27<sup>th</sup>). At the June 27<sup>th</sup> rating, 32 DAT, none of the treatments were providing commercially acceptable control of mayweed chamomile. When the final rating was taken, July 14<sup>th</sup> (49 DAT) 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. At this time, only AL-X1581ad tank mixed with Audit 1:1 + WideMatch was providing excellent control of mayweed chamomile. PerfectMatch<sup>™</sup> and the tank mix of Everest<sup>®</sup> 2.0 plus Supremacy<sup>®</sup> also were providing excellent control of mayweed chamomile at the final rating evaluation. Yield data was not collected within the trial area.

Treatment	Rate fl oz/A	Common lambsquarters control		Mayweed chamomile control	
		6/10	6/27	6/27	7/14
		15 DAT	32 DAT	32 DAT	49 DAT
		-----%-----		-----%-----	
Nontreated Check	--	--	--	--	--
AL-X1780aa + 2,4-D LV 6 Ester <sup>1</sup>	16.8 + 8.7	87 a <sup>2</sup>	99 a	34 a	75 ab
AL-X1780aa + Rhonox <sup>®</sup> MCPA Ester	16.8 + 13	87 a	97 a	22 a	72 a-c
AL-X1795aa	15.8	85 ab	97 a	25 a	64 a-c
AL-X1795aa	19	85 ab	96 a	45 a	61 bc
AL-X1581ad + Audit 1:1 + WideMatch	2 + 0.4 oz + 16	81 a-c	95 a	60 a	94 a
AL-X1780aa + Maestro Advanced	16.8 + 16	85 ab	89 ab	40 a	55 b-d
Everest 2.0 + Supremacy	1 + 5 oz	77 a-d	85 a-c	52 a	81 ab
PerfectMatch <sup>™</sup>	16	75 b-d	74 b-d	42 a	94 a
AL-X1581ad + ARY-0546-001 + Metsulfuron + Comet <sup>®</sup>	2 + 0.285 oz + 0.0357 oz + 8	79 a-d	74 b-d	27 a	27 d
AL-X1581ad + ARY-0546-001 + Comet	2 + 0.285 oz + 8	75 b-d	71 cd	27 a	49 cd
AL-X1780aa	14	71 c-e	69 cd	22 a	57 b-d
AL-X1780aa	16.8	70 de	67 de	25 a	56 b-d
GoldSky <sup>®</sup>	16	62 e	60 de	30 a	75 ab
Huskie <sup>®</sup> Complete	2.27	69 de	51 e	30 a	75 ab

<sup>1</sup> All treatments were tank mixed with NIS at 0.25% v/v and AMS at 1.0 lb/A.

<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.

**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.**