

## **Rates of Armezon Pro for Postemergence Weed Control in Fallow**

*R.S. Currie and P.W. Geier*

### **Summary**

A study was initiated near Garden City, KS, in 2016, comparing the weed control of several tank mixes of Armezon in fallow. Control of kochia and Russian thistle generally increased as Armezon Pro (topramezone + dimethenamid) rates increased from 14 to 20 oz/a. Although these herbicides injured the weeds present, smaller weeds will need to be targeted for effective control. The population of kochia was too thick and the size of the weeds was too large to allow enough coverage for this product to work under the conditions of this trial. The level of tissue damage suggests that further testing is needed with smaller weeds in a thinner population.

### **Introduction**

Field observations have suggested that Armezon Pro might provide excellent burndown and residual control in fallow. It is not known when to apply Armezon Pro, what weeds it will control, and the duration of its residual control. Therefore, it was the objective of this study to establish a dose response relationship for Armezon Pro with a naturally occurring population of kochia and Russian thistle.

### **Experimental Procedures**

An experiment conducted at the Kansas State University Southwest Research-Extension Center near Garden City, KS, evaluated the efficacy of Armezon Pro rates for postemergence weed control in fallow. All treatments were applied May 16, 2016, when kochia averaged 10 inches tall and 10 plants/square foot and Russian thistle averaged 4 inches in height and 1 plant per square foot. Herbicides were applied using a compressed-CO<sub>2</sub> backpack sprayer calibrated to deliver 20 GPA at 3.0 mph and 27 psi. Plots were 10- by 35-feet, and arranged in a randomized complete block with four replications. Soil was a Ulysses silt loam with pH of 8.0, organic matter of 1.4%, and cation exchange capacity of 18.4. Visual weed control was determined on May 23, June 1, and June 14, 2016, which was 7, 16, and 29 days after treatment (DAT).

### **Results and Discussion**

At 7 and 16 DAT, control of kochia and Russian thistle generally increased as Armezon Pro rates increased from 14 to 20 oz/a. By 29 DAT, no differences occurred between herbicide rates. Although these herbicides injured the weeds present, smaller weeds will need to be targeted for effective control. Although field observations at other locations suggested that this product could work, the kochia was clearly too large and the popula-

tion was too dense to allow adequate coverage of the kochia and Russian thistle tissue. Based on the observed burning of the tissue, this study should be repeated on smaller weeds at lower populations to allow complete coverage of the tissue.

**Table 1. Armezon Pro rates for fallow weed control**

Treatment <sup>a</sup>	Rate	Timing	7 days after treatment		16 days after treatment		29 days after treatment	
			Kochia	Russian thistle	Kochia	Russian thistle	Kochia	Russian thistle
			----- % control -----					
Armezon Pro	14	POST	27	20	66	73	73	85
Atrazine	16	POST						
COC	1%	POST						
AMS	2%	POST						
Armezon Pro	16	POST	28	18	63	78	70	83
Atrazine	16	POST						
COC	1%	POST						
AMS	2%	POST						
Armezon Pro	18	POST	30	20	68	80	76	86
Atrazine	16	POST						
COC	1%	POST						
AMS	2%	POST						
Armezon Pro	20	POST	35	28	70	80	76	85
Atrazine	16	POST						
COC	1%	POST						
AMS	2%	POST						
Untreated	---	---	0	0	0	0	0	0
Least significant difference (0.05)			5	5	7	4	7	6

<sup>a</sup> COC is crop oil concentrate, and AMS is ammonium sulfate.



**Figure 1. Untreated control.**



**Figure 2. Armezon Pro 14 oz + atrazine 16 oz postemergence, 28 days after treatment.**



**Figure 3. Armezon Pro 16 oz + atrazine 16 oz postemergence, 28 days after treatment.**



**Figure 4. Armezon Pro 18 oz + atrazine 16 oz postemergence, 28 days after treatment.**



**Figure 5. Armezon Pro 20 oz + atrazine 16 oz postemergence, 28 days after treatment.**