

THE EFFECT OF THREE HERBICIDES ON 4 RED WHEATS AND 4 DURUM WHEATS YUMA VALLEY EXPERIMENT STATION

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This trial compared the effects of 3 herbicides used for annual grass control in small grains on 4 red and 4 durum wheats without weed competition.

The varieties were planted with a 10 ft. drill in January 1979. Each variety was planted in a 10 ft. strip 120 ft. long and replicated 4 times in a randomized completed block design. Herbicide treatments were 30 ft. long subplots in each variety strip.

<u>Varieties</u>			
		<u>Durum wheat</u>	<u>Red wheat</u>
		Jori	Tanori
		Crane	Yecora Rojo
		WBP 1000 D	Probred
		Produra	Zaragosa

  

<u>Herbicide treatments</u>			
<u>Herbicide</u>			
<u>Common Name</u>	<u>Trade Name</u>	<u>lb/A</u>	<u>Application gpa</u>
Difenzoquat	Avenge	1.0	20
Barban	Carbyne	.4	6
Diclofop	Hoelon	1.5	20

Herbicides were applied February 8 when the wheat was 3 to 7 leaf stage using a compressed air sprayer. The wheat was relatively small for Avenge and Hoelon applications, but near normal size for Carbyne.

An evaluation of wheat stand and vigor at application time showed that Jori was very slow to grow and the stand was only 40% of the other varieties.

Evaluations of wheat growth and vigor were made periodically during the growing season. Harvest was June 13 with a plot combine 4.6 ft. wide the length of the treatments. All varieties were dry and mature. There was no lodging by any variety or treatment.

VARIETY AND HERBICIDE TREATMENTS % STUNT OF WHEAT MARCH 12 AND APRIL 18 AND HARVEST WEIGHT IN CALCULATED lb/A JUNE 13. YUMA VALLEY EXPERIMENT STATION.

<u>Variety</u>	<u>Treatment</u>	<u>lb/A</u>	<u>% stunt</u>		<u>Yield</u>
			<u>March 12</u>	<u>April 18</u>	<u>lb/plot</u>
Jori	Avenge	1.0	72	27	5280 a*
	Carbyne	.4	7	0	5984 a
	Hoelon	1.5	2	0	5632 a
	Check		0	0	5984 a
Crane	Avenge	1.0	82	52	5280 b
	Carbyne	.4	27	2	6688 a
	Hoelon	1.5	10	0	7392 a
	Check		0	0	7040 a
WBP 1000 D	Avenge	1.0	7	0	7744 a
	Carbyne	.4	12	0	7744 a
	Hoelon	1.5	10	0	7744 a
	Check		0	0	8096 a
Produra	Avenge	1.0	17	7	6688 a
	Carbyne	.4	52	12	5632 b
	Hoelon	1.5	10	0	6688 a
	Check		0	0	6336 a
Tanori	Avenge	1.0	7	0	6336 a
	Carbyne	.4	12	0	7040 a
	Hoelon	1.5	2	0	7040 a
	Check		0	0	7392 a

<u>Variety</u>	<u>Treatment</u>	<u>lb/A</u>	<u>% stunt</u>		<u>Yield</u>
			<u>March 12</u>	<u>April 18</u>	<u>lb/plot</u>
Yecora Rojo	Avenge	1.0	2	0	7744 a
	Carbyne	.4	12	0	7744 a
	Hoelon	1.5	7	0	7744 a
	Check		0	0	8448 a
NK Probred	Avenge	1.0	5	0	7392 a
	Carbyne	.4	20	2	7040 a
	Hoelon	1.5	9	0	7744 a
	Check		0	0	8096 a
Zaragosa	Avenge	1.0	5	0	7392 a
	Carbyne	.4	27	10	6336 a
	Hoelon	1.5	5	2	7744 a
	Check		0	0	7392 a

\*Means in the same column and within the same variety followed by the same letter are not significantly different at the 5% level of probability.

All herbicide treatments had some effect on early season growth of all varieties. On March 12 Avenge stunted Crane and Jori an estimated 82 and 72% respectively. Carbyne consistently effected early season growth of all varieties, but by April 18, when the wheat was headed out, most varieties had recovered.

Crane treated with Avenge yielded 25% less wheat than the check. Jori treated with Avenge did not yield significantly less than the untreated check but yields were reduced 12%.

Carbyne significantly reduced the yield of Produra. Zaragosa and Crane were stunted early in the season but yields were not significantly lowered.

Hoelon applications resulted in little early season stunting and yields were not effected with any variety.

There was no lodging in any variety or from any treatment.