

BROADLEAF WEED CONTROL IN SPRINKLER IRRIGATED BRAGG SOYBEANS

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Twelve herbicides were evaluated for control of broadleaf weeds and safety to the soybeans in co-operation with Barkley Company of Arizona near Somerton, Arizona. The soil type was a silt clay loam. Plot size was 15 feet wide by 30 feet long. Lasso, Cobex, Vernam, Prowl, Tolban and R-40244 were applied pre-plant on July 7, 1978 and double incorporated with a disc to the approximate depth of 3 inches. Six rows of soybeans, 30 inches apart, were sown through each plot with flex-type planters on July 13. Dacthal, Sencor (Lexone) and Surflan were applied pre-emergence to the soybeans on July 14. The area was then sprinkle irrigated as needed until September 10, at which time they were flood irrigated for the remainder of the season. Post-emergence applications of Basagran and Tenoran were made to the soybean and weed foliage on August 2. Wright groundcherry was in the 4 to 8 leaf stage with 6 leaves being predominate. Common purslane plants were 2 to 6 inches in diameter, with most 3 inches. Soybean plants were mostly in the first trifoliolate leaf stage when the post-emergence applications were made. All herbicides were applied with a knapsack compressed air sprayer in 20 gallons of water per acre. Population of Wright groundcherry and common purslane in check plots were dense enough to provide a complete canopy on September 28. Soybeans were almost completely crowded out. Weed control and percent stand evaluations were made on September 28. Sencor and Basagran treatments resulted in excellent control of Wright groundcherry. Prowl and Vernam gave good Wright groundcherry control. All herbicides tested gave good to excellent control of common purslane, except Tenoran. Cobex and R-40244 reduced soybean stands to unacceptable levels at the rates tested. Basagran controlled weeds, but some stand loss was apparent. Untreated check stand loss was due to extreme weed competition.

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Treatment	Rate lb/acre	Percent Weed Control*		Soybean % stand*
		Wright groundcherry	Common purslane	
Lasso	4.00	73 abc	59 bc	94 ab
Cobex	0.50	70 abc	93 a	48 c
Treflan	0.75	45 bcd	95 a	89 ab
Prowl	1.00	80 ab	83 ab	93 ab
Tolban	0.75	41 bcd	80 ab	88 ab
Vernam	3.00	88 a	91 a	90 ab
R-40244	0.75	40 bcd	85 a	5 d
Dacthal	10.00	67 abc	99 a	100 a
Sencor (Lexone)	0.50	90 a	97 a	94 ab
Surflan	1.00	33 cd	96 a	80 ab
Basagran	1.00	91 a	90 a	73 b
Tenoran	1.50	71 abc	39 c	78 ab
Untreated check	-	13 d	0 d	90 ab

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

The number of annual grassy weeds present was low so grass evaluations were difficult. All materials except Basagran and Tenoran appeared to adequately control this small amount of grass in this test. There was also a small amount of morning glory in the test area. Cobex, Vernam, Basagran and Sencor reduced morning glory 60% or more in this trial. Lorox, Modown and Hoelon were also tested on a smaller scale but no consistent results were apparent.