

Weed control in dry bean (2001)

Maverick pinto beans were seeded June 2 into 30-inch rows at 60 lb/A in a conventional tillage system. Individual plots were 10 x 30 ft and replicated three times. Treatments were applied preplant incorporated (PPI) or preemergence (PRE) on June 2, or postemergence (POST) on July 9 (0-2 lf), or July 23 (POST 2). The primary weeds were biennial wormwood (Biww) and kochia (Kocz).

Table 1. Control of biennial wormwood and kochia in dry bean.

Treatment ^a	Rate	Timing	Biww		Kocz		Yield	Test wt.
			Jul 5	Aug 15	Jul 5	Aug 15		
			———— % control ————				lb/A	lb/bu
Spartan	2.67 oz	PRE	87	70	97	96	1508	58.7
Spartan	5.33 oz	PRE	98	89	100	100	1407	57.5
Spartan	10.66 oz	PRE	100	97	100	98	1412	58.2
Broadstrike + Dual	2 pt	PPI	93	77	25	0	844	55.3
Python	1 oz	PPI	96	84	22	3	891	59.5
Sencor	0.33 lb	PRE	95	84	94	83	1420	58.0
Valor	3 oz	PRE	100	96	98	84	1367	57.6
Basagran / Basagran	1 pt / 1 pt	POST / POST 2		92		92	1907	58.0
Basagran	2 pt	POST		78		91	1638	57.3
Spartan + Sencor	5.33 oz + 0.25 lb	PRE	100	95	100	100	1589	57.8
Basagran + Raptor	1 pt + 4 fl oz	POST		73		80	1966	58.8
Treflan	1.5 pt	PPI		0		25	1078	58.7
Untreated			0	0	0	0	861	58.6
LSD			6	20	5	16	440	NS
CV			4	17	4	15	19	3

^aRaptor was applied with NIS at 0.25% and 28% N at 1 qt.

Table 2. Dry bean injury from soil-applied herbicides.

Treatment ^a	Rate	Timing	Soil pH		% Crop injury		Yield, lb/A	
			Rep 1 ^a	Rep 2&3	Rep 1	Rep 2&3	Rep 1	Rep 2&3
Spartan	2.67 oz	PRE	7.8	6.0	30	4	1158	1683
Spartan	5.33 oz	PRE	7.8	5.1	50	5	829	1696
Spartan	10.66 oz	PRE	7.9	5.1	70	8	689	1774
Sencor	0.33 lb	PRE	6.3	5.2	50	19	1292	1405
Valor	3 oz	PRE	7.0	6.0	35	15	1454	1403
Spartan+Sencor	5.33 oz + 0.25 lb	PRE	5.5	5.6	15	11	1387	1691

^a Rep = replication; each treatment is applied to three 10 by 30 ft blocks or replications.

Spartan, Broadstrike, Python, Sencor, Valor, and Raptor are not registered for use in dry bean as of late

2001. Spartan and Raptor are likely to be labeled for use in dry bean in ND in the future. In this study, Spartan, Sencor, Valor, and Basagran provided good to excellent kochia control. With the exception of Treflan, all treatments provided fair to excellent control of biennial wormwood.

We observed more crop injury in the 1st replication (rep) compared to reps 2 and 3. We found that the soil in rep 1 was higher in soil pH, which likely contributed to the higher crop injury. Spartan and Sencor will be more active as soil pH increases, thus increasing the chance of crop injury.