

Pinto Bean Variety Demonstration in Bonita, Graham County, 1989

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Abstract

Six pinto bean varieties were tested in the Bonita area of Graham county with excellent results, three of these varieties yielded over 3000 pounds per acre. These yields coupled with bean values above 30 cents per pound have created considerable interest in growing dry beans in Cochise and parts of Graham county.

Introduction

High bean prices brought on by demand exceeding supply continue to create interest in dry beans in southeast Arizona. The current series of tests (1) replace the variety trials conducted in the early 1980's by Sullivan, et.al. (2) because of the advent of new varieties in the intervening period.

A replicated small plot bean variety trial planted in Greenlee, which contained 14 pinto varieties and 8 pink varieties, was lost due to adverse weather conditions.

Materials and Methods

This demonstration was not replicated, however, one variety, Bill-Z was included twice to give some idea of field variability.

Crop History

Cooperator: Haas Farm
Soil type: Sandy loam
Planting date: 13 July 1989 Rate: 70 pounds per acre
Fertilizer: 140 lbs/ac 18-46-0 preplant
 150 lbs N and 20 lbs S through the sprinkler system
Herbicide: Treflan and eptam
Insecticide: None
Fungicide: Kocide 606 at early bloom
Irrigation: Center pivot
Plot size: 6-30 inch rows 2500 feet long
Harvest date: 26 October

Harvested plots were dumped into trucks which were weighed and sampled at certified scales. The samples were tested for moisture, percent cleanout and seed weights. A cleanout of 10% was used for all varieties.

Results and Discussion

From the data in Table 1, it appears that most of the varieties are very close to one another in yield potential, with Luna being a possible exception. The yields were very good and the bean moistures at harvest would not indicate any great differences in maturity. UI 126 and UI 114 appeared to have slightly smaller beans at harvest, but this was not considered detrimental.

An auxiliary fertility demonstration was conducted at the same site as the variety demonstration. One planter width was left without the 140 pounds of 18-46-0 at planting to evaluate its value. Adjacent plots with and without the 18-46-0 were then weighed. The results are found in Table 2.

The plots appearances were indistinguishable at harvest, even though the plot lacking the fertilizer treatment showed nitrogen deficiency symptoms just prior to the top dressing. The data is appealing, the increased fertility plot yielded more and the plot yielding less set less beans and so produced larger beans, but, without replicated results it is impossible to say the differences were due to the treatments and not just due to field variability.

References

1. Clark, L.J., E. DeRosa, E. Schwennesen, and R.E. Cluff. 1989. Pinto Bean Variety Trials in Graham and Greenlee Counties, 1988. Forage and Grain, A College of Agriculture Report, The University of Arizona, Tucson, AZ. Series P-79, pp. 71-73.
2. Sullivan, L.M., G. Cramer and D.K. Parsons. 1982. Pinto Bean Variety Trial. Forage and Grain, A College of Agriculture Report, The University of Arizona, Tucson, AZ. Series P-57, p. 46.

Table 1. Pinto bean yields, percent moisture and seed size by variety for bean varieties grown on the Haas farm in Bonita, 1989.

Variety	Yield ¹ (lbs/ac)	Percent Moisture	Weight per 1000 sds (lbs)
Bill-Z	3250	12.2	0.78
UI 126	3113	12.0	0.58
UI 114	3000	11.8	0.61
Olathe	2968	11.7	0.72
Bill-Z ²	2950	11.3	0.72
UI 129	2827	12.1	0.71
Luna	2259	11.8	0.70

Average	2910	11.8	0.69

1. Yields were corrected for dirt cleanout and then converted to 10% moisture.
2. The second Bill-Z was included to give an idea of crop variability across the demonstration plot.

Table 2. Yields, percent moisture and seed size for UI 126 grown with and without 140 pounds of 18-46-0 at planting on the Haas farm in Bonita, 1989.

Treatment	Yield ¹ (lbs/ac)	Percent Moisture	Weight per 1000 sds (lbs)
- 18-46-0	2635	11.8	0.83
+ 18-46-0	2798	11.8	0.61
Difference	163	--	--

1. Yields were corrected for dirt cleanout and then converted to 10% moisture.