

Results of 1985 Dry Bean Trials in Safford

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The Western Regional Dry Bean Nursery was planted to moisture at Safford, AZ (Safford Agricultural Center) on July 2, 1985 at a planting rate of 70,000 seeds/acre and side dressed with 110 lbs each of urea and ammonium phosphate. The experiment consisted of 4 replications x 44 treatments. Plots were 13.3' wide x 15' long (4 rows), with 5' alleys between plots.

Since salt is a problem at this location, alternate-row, furrow irrigation was practiced. Approximately 2 1/2 acre-feet/acre of water was applied during the growing season, including pre-irrigation. Also, 9.14 inches of precipitation fell during this period. Typical conductivity of this field ranged from 3-4 x 10³ mmhos.

The plots were harvested on December 19. The results summarized in Table 1 are an indication of a variety's tolerance to the interaction between heat stress, water stress, salt, and ashy stem blight (*Macrophomina* sp.).

The excellent yields of the tepary beans are particularly noteworthy. Unfortunately, the market for tepary beans is currently quite limited. The best of the common beans gave uneconomic yields and cannot be recommended where salt is a problem. The University of Arizona is currently developing common bean varieties which perhaps can overcome the unfavorable growth conditions encountered in Arizona's lower valleys.

*Table 1. Summarized data for W-150 Regional Bean Nursery,
Safford, AZ, 1985*

Entry	Type	Mean (lbs/ac)	Ranking*	Notes
Brown tepary		2409	A	
White tepary		1696	B	
ISB-459	pink	891	c	
4533	pink	727	cd	
P18	pink	689	cde	
VIVA	pink	490	cdef	
GH215	pinto	450	cdef	
Royal Red	d.r. kidney	386	cdef	
K-407	d.r. kidney	366	cdef	1)
UI114	pinto	359	cdef	
PI11	pink	342	cdef	
K-42	l.r. kidney	328	cdef	1)
ISB730	s.m. white	315	cdef	
EP-1	pinto	302	cdef	
Laker	s.m. white	300	cdef	2)
C012601	s.m. white	295	cdef	
K-279	l.r. kidney	290	cdef	1)
Aurora	s.m. white	247	cdef	
C-20	s.m. white	246	cdef	
D77196	s.m. white	241	cdef	3)
D81125	pinto	219	cdef	
80-1744	pinto	215	cdef	
UNS-117	pink	211	cdef	
C081-13197	pinto	166		
Fleetwood	s.m. white	157	def	
Monument	s.m. white	128	def	
ISB-1	s.m. white	121	def	
N81017	s.m. white	119	def	
81-12034	pinto	113	def	
D81122	pinto	104	def	
GH-196-2	pinto	90	def	
MRK 43	l.r. kidney	90	def	
Fleetwood	s.m. white	88	def	
Red Kloud	l.r. kidney	86	def	
PVD 023	d.r. kidney	66	def	
Pulsar	s.m. white	61	def	
Sacramento	l.r. kidney	55	def	
MRK44	l.r. kidney	51	def	
White Kidney	wh. kidney	33	ef	
D81123	pinto	18	ef	
D79054	s.m. white	12	ef	4)
6R-42	pink	10	ef	5)
D76125	s.m. white	4	ef	
GH760	red	0	f	6)

CV = 86.6%

* Upper case SNK (.01) lower case SNK (.05)

1) poor stand, good yield on survivors
2) good simultaneous podset
3) serious shattering

4) 2 of 4 plots all dead
5) very poor growth and high mortality
6) all plants died