

Silage Corn Variety Trial at the Rovey Farm in Glendale, AZ-1986

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INTRODUCTION

A silage corn variety trial was initiated to compare commercially available corn varieties. Only three of the eight hybrids had been entered in similar tests in the past (corn nuts 6862, Northrup King PX93, and Pioneer 3183).

CROP HISTORY

Previous crop: Cotton
 Planting date: March 5, 1986
 Seeding: John Deere 7100 plateless planter set 30,000 kernels/A
 Plant population: Recorded 20 days after emergence with 8 repeated 1/1000 acre counts
 Harvest date: June 20, 1986
 Fertilizer: 20 T/A manure plus 123 lbs N/A as UN32
 Harvested plot size: 9.5 ft x 1233 ft
 Formula for moisture correction:

$$\frac{100 - \text{harvest moisture} \times \text{harvest weight}}{100 - \text{desired moisture}}$$

RESULTS

Company	Entry	Harvested weights				Avg.	Yield ^{1/}
		Rep 1	Rep 2	Rep 3	Rep 4		
		------(lbs/plot)-----				(T/A)	
Corn nuts	6862	18360	21420	21300	21290	20593	28.08 a
Northrup King	PX93	16850	18660	17720	19490	18180	27.04 ab
Pioneer	3183	17990	15060	15030	19740	16955	25.22 bc
Funks	4858	17280	20140	19830	19750	19250	25.06 bc
DeKalb	1214	17420	14120	15880	19740	16790	22.89 cd
Pioneer	3055	16000	17430	18360	18340	17533	22.82 cd
Valley Seed	9886	17990	17380	17550	20360	18320	21.57 d
Paymaster	9990	17800	17030	18550	19260	18160	20.26 b

^{1/}Adjusted to 70% moisture. Means followed by the same letter are not significantly different according to FLSD.05

OBSERVATIONS AND COMMENTS

DeKalb 1214 was planted at too high a population which explains the light ear weight. It was the tallest variety in the trial.

None of the varieties had any lodging at harvest time even with the excessively high plant populations.

Northrup King PX93 probably should be planted at about 20,000 plants per acre in order to promote ear development.

Valley seed 9886 had the largest, heaviest ears, but this variety is subject to smut. Three out of 28 ears were infested.

Harvest moisture was very high for all varieties and none had reached physiological maturity. All lost considerable yield when corrected to 70% moisture. Example: Paymaster 9990, at 82% moisture, lost 7264 lbs per plot or 13.5 tons per acre when corrected to 70%.

The plant population in this test was too high except for Paymaster, Valley Seed, and Northrup King varieties. I have no evidence that shows this wide variation in population was due to germination or emergence problems except for NK PX93, which was old seed. All varieties were planted with a plateless planter set at 30,000 kernels/A.

No conclusions will be made from this study about the relative yielding ability of the entries tested due to the variation in harvest moisture, the non-optimum plant populations, and the fact that more testing is needed.

Company	Entry	Popu- lation (pl/A)	Plant height (in)	Harvest moisture (%)	Ear height (in)	Ear ² / number (#/10 ⁻³ A)	Ear weight (lbs/ear)	Ear yield (T/A)	Ear/ total yield (%)
Corn Nuts	6862	31,625	109	78	43	30	.47	7.05	25
Northrup King	PX93	19,875	109	76	42	31	.47	7.29	27
Pioneer	3183	34,500	105	76	40	30	.51	7.65	30
Funks	4858	35,000	96	79	40	27	.49	6.62	26
DeKalb	1214	36,500	129	78	56	30	.29	4.35	19
Pioneer	3055	33,125	104	79	46	28	.44	6.16	27
Valley Seed	9886	26,250	105	81	41	28	.56	7.84	36
Paymaster	9990	30,000	109	82	50	27	.27	3.65	18

²/ Corrected to a plant population of 30,000 plants/A