

# Corn Variety Trial in Greenlee County, 1988

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## ABSTRACT

*DeKalb 656 and a new Northrup King hybrid, NK 7759, were the leading hybrids in both yields and adjusted gross income per acre. However, yields were lower than anticipated. The top yield was 8161 pounds per acre, providing an adjusted gross income of \$480.30 per acre.*

## INTRODUCTION

Interest in corn as a cash crop is increasing in Greenlee county as interest in grain sorghum declines. The climatic conditions and cultural practices in the county are different from any other location in the University testing system, necessitating research in the county. A corn hybrid evaluation was set up to test commonly grown corn hybrids with several new hybrids.

## MATERIALS AND METHODS

Twelve commercial corn hybrids with maturity centering around 120 days were selected to test on the Henly Pelto farm south and east of Duncan. Plots were planted with a 4-row John Deere plateless planter in a randomized strip plot design, with a check variety every third pass.

### *Crop History*

Elevation: 3600 feet above sea level  
Previous crop: Corn  
Soil type: Hanz silty clay, 2-5% slope  
Planting date: 26 April 1988  
Rate: 30000 seeds per acre  
Fertilizer: 300 pounds of anhydrous ammonia and 200 pounds of  
11-53-0 per acre preplant  
Herbicides: Banvel  
Insecticides: None  
Harvest date: 27 September

Plots were harvested with a John Deere 6600 combine with a 4-row corn head. Plot weights were obtained, using weigh wagons at each end of the field. Samples were taken to obtain percent moisture and bushel weights. Plant counts were made just before harvest to determine plant populations, percent barren and percent lodged.

## RESULTS AND DISCUSSION

Table 1. Yields and other agronomic data for corn hybrids grown on the Henly Pelto farm in Greenlee county, 1988.

Variety	% M	Bu Wt (lbs)	Pl/ac	% Bare	% Ldg	Yield (lbs/ac)	BYld (bu/ac)	Adj Gross Income/ac (\$/ac)
DK 656	19.4	56	29948	6.1	0.0	8161	146	\$480.30
NK 7759	19.2	57	29948	9.1	6.3	7853	140	\$462.50
DK 672	18.2	56	28133	3.2	9.7	7326	131	\$433.30
Garst 8345	20.1	56	30855	0.0	2.9	7265	130	\$426.30
DK 636	17.8	58	32670	2.8	0.0	7167	128	\$424.60
Garst 4445	19.2	57	35393	0.0	2.6	6988	125	\$411.60
NK 9540	18.6	58	29948	6.1	9.1	6690	119	\$395.00
RX 892	18.8	58	26318	-13.8	20.7	6638	119	\$384.20
Pio 3377	17.0	58	28133	0.0	3.2	6389	114	\$379.80
Pio 3343	15.1	56	29040	3.1	6.3	6325	113	\$379.00
Pio 3168	19.2	57	29948	0.0	0.0	6031	108	\$355.20

Using the check rows, yields were normalized and were reported in pounds and bushels per acre, corrected to 15.5% moisture.

Adjusted gross income per acre was calculated using \$3.35 per bushel; 2.5 cents per point of moisture from the harvest moisture was deducted, to 15.5% moisture.

"% Bare" indicates the percent of barren stalks per acre. The negative number in the case of RX 892, indicated that 13.8% of the stalks had a second ear.

The top yields were lower than was expected. The field had a fairly steep slope; the irrigation water didn't penetrate enough to supply the crop with adequate moisture. By the time the problem was discovered, the crop had already been damaged and was not able to achieve its potential.

### ACKNOWLEDGEMENTS

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### REFERENCES

DeRosa, E. and L. Clark. 1988. Corn variety trial in Greenlee county, 1987. Forage and Grain, A College of Agriculture Report, University of Arizona, Tucson, AZ. Series P-74, pp. 135-6.