

# Corn Variety Trial in Greenlee County, 1990

*Lee J. Clark and Mike Schneider*

## *Abstract*

*DeKalb 656 and a new DeKalb hybrid, DK X979, were the leading yellow hybrids with yields above 10,000 pounds of grain corn per acre. The white hybrids had lower yields with Garst 8101W being the top producer with a yield of almost 8700 pounds per acre. Lower yields are offset to some extent by increased value per pound so the white hybrids produces almost as much income per acre as the yellow hybrids.*

## 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 the commonly grown corn hybrids with several new hybrids that have not been seen here before.

## Materials and Methods

Eleven yellow and four white 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. The following crop history is given:

Elevation: 3600 feet above sea level  
Previous crop: Corn  
Soil type: Pima silty clay, 2-5% slope  
Planting date: 13 April 1990                      Rate: 30000 seeds per acre  
Fertilizer:        200 lbs/ac Humagrow N  
                      100 lbs/ac Humagrow P  
Herbicides: Banvel and 2,4-D  
Insecticides: None  
Harvest date: 18 September

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

## Results and Discussion

Yields were about a ton per acre higher than reported in the corn variety trial in 1988 (1), some of that increase may have been due to the weather, the rest due to better crop management in 1990. DK 656 was the top yielding hybrid in both tests. Table 1 shows the yields and other agronomic values for the yellow corn test

and Table 2 shows similar information for the white corn hybrids. A value of \$5 per hundredweight was used for yellow corn and \$5.85 was used for the white corn. The tables show that the yellow hybrids generally out yield the white ones and that the white hybrids have a higher harvest moisture and drying costs, but with an \$0.85 value differential, the white corn hybrids have a value comparable to the yellow hybrids.

## Acknowledgements

Appreciation is expressed to DeKalb-Pfizer Genetics for providing an electronic weigh wagon to obtain plots weights for the test.

## References

L.J. Clark and Edith DeRosa. 1989. Corn variety trial in Greenlee county, 1988. Forage and Grain, A College of Agriculture Report, University of Arizona, Tucson, AZ. Series P-79, pp. 30-31.

Table 1. Yields and other agronomic data for yellow corn hybrids grown on the Henly Pelto farm in Greenlee county, 1990.

VARIETY	%M	BU WT lbs	CYLD lbs/ac	EAR HT in	PL/AC	% BARE	% SMUT	% LODG	GROSS VALUE	DRYING COST	NET VALUE
DK 656	17.2	58.5	10404	52.0	32674	0.0	2.8	16.7*	\$520	\$9.36	\$510.81
DK X976	21.4	56.0	10003	--	29043	0.0	0.0	9.4	500	17.01	483.14
PIO 3162	20.0	59.0	9286	39.5	27228	3.3	6.7	0.0	464	13.00	451.29
ASGR RX947	19.0	55.0	9149	56.0	30859	5.9	2.9	8.8	457	10.98	446.48
NK S7759	16.5	57.5	8990	55.5	25413	7.1	3.6	17.9*	449	7.19	442.30
NK 8505	16.5	55.5	8921	52.5	36304	5.0	2.5	2.5	446	7.14	438.91
GARST 8345	16.0	57.0	8876	51.0	33581	0.0	0.0	10.8	444	7.10	436.69
ASGR RX911	18.7	56.0	8715	52.0	29043	0.0	0.0	0.0	436	10.46	425.30
PIO 3379	15.2	56.0	8329	41.0	30859	0.0	2.9	5.9	416	6.66	409.77
NK N8318	19.6	54.0	8273	44.0	32674	8.3	0.0	2.8	414	10.76	402.90
GARST 8345	17.2	57.5	8026	52.5	34489	0.0	0.0	13.2*	401	7.22	394.07
AVERAGE	17.9	56.5	8994.7	45.1	31106	2.7	1.9	8.0			

Yields were normalized using the check rows and are reported in pounds per acre corrected to 15.5% moisture.

**Table 2. Yields and other agronomic data for white corn hybrids grown on the Henly Pelto farm in Greenlee county, 1990.**

VARIETY	%M	BU WT lbs	CYLD lbs/ac	EAR HT in	PL/AC	% BARE	% SMUT	% LODG	GROSS VALUE	DRYING COST	NET VALUE
GARST 8101W	21.8	57.0	8695	50.5	27228	0.0	6.7	0.0	\$509	15.65	\$492.99
CONLEE 113W	23.6	56.0	8630	59.0	29043	3.1	3.1	6.3	505	20.71	484.11
ASGR RS956W	21.5	58.0	8251	50.5	29951	0.0	6.1	9.1	483	14.03	468.66
DK 703W	19.2	58.0	7932	48.0	25413	0.0	0.0	0.0	464	10.31	453.68
AVERAGE	21.5	57.3	8376.7	52.0	27909	0.8	4.0	3.8			

Yields were normalized using the check rows and are reported in pounds per acre corrected to 15.5% moisture.