

Yield Requirements of Non-Premium Durum Wheat

Chuck Farr

Wheat growers were making inquiries about durum wheat variety yields before contracting with buyers in the late summer and fall of 1985. Early contracts began with a base of \$6.00 per hundredweight, with a premium of \$.75 per hundredweight added for one variety if protein content was 13 percent or above. Since agronomics were similar for the culture of two leading varieties, inputs were considered as equal even though some recommend more nitrogen for the variety with higher protein content.

A comparison of WPB 881 and Aldura was established on January 6, 1986 on a Glenbar clay loam in the Buckeye Irrigation District with Mrs. Etta Nichols where effluent has developed high fertility in most fields. A preplant application of 300 pounds of 16-20-0 and 15 gallons of 32 percent nitrogen solution was applied at the third irrigation in March. The seeding rate was 150 lbs/A. No herbicides or insecticides were applied.

The irrigation dates were Jan. 10, Jan. 29, March 1, March 25, April 19, April 22, and May 6 for a total of 27.6 acre inches. The plots of 24 ft X 630 ft were harvested on June 3, 1986. Soil analysis after harvest revealed high nitrate nitrogen content at 21, 33, and 22 ppm in the first, second and third foot of the soil.

Variety Aldura produced 7235 pounds of wheat with 7.94 percent moisture, while WPB 881 produced 5622 pounds of wheat, or 1613 more pounds for the non-premium wheat (Table 1). Production of a non-premium wheat requires 12.5 percent increase in yield in order to achieve a break-even point in gross income. A yield of 4000 pounds of the premium wheat would require a 500 pound increase by the non-premium wheat to provide equal income, whereas 750 pounds of increase would be required if the yield level of the premium wheat is 6000 pounds (Table 2).

Table 1. Durum Wheat Trial

Variety	Plot Weights				Yield Per Acre	Moisture %	Protein %
	1	2	3	4			
Aldura	2305	2680	2400	2665	7235	7.94	14.32
WPB 881	1910	1810	2010	2080	5622	8.37	16.02

Table 2. Break-Even Yield Levels

Premium wheat yield	4000	4500	5000	5500	6000
Non-premium wheat required	4500	5062	5625	6188	6750
Increase needed	500	562	625	688	750