

2007 Grain Corn Hybrid Variety Performance Strip Trial Powell Research and Extension Center

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The University of Wyoming, Powell Research and Extension Center in cooperation with local seed corn dealers conducted a study designed to evaluate the corn grain yield and quality characteristics of ten varieties. Varieties were planted in 0.64 acre strips and managed using the best management practices for the soil and growing conditions at the University of Wyoming Research and Extension Center in Powell, Wyoming during 2007.

Materials and Methods

The soil was a Garland clay loam (fine, mixed, mesic; Typic Haplargid) and had a cropping history of mixed grass and alfalfa hay (2006-1995). The study area was prepared for planting by fall plowing, disking, roller harrowing and leveling. Fertilizer was applied on 14 May, at the rate of 120 pounds N and 50 pounds P₂O₅ per acre, in the form of urea (46-0-0) and diammonium phosphate (11-52-0). On 15 May, ten corn varieties were established in plots 12 rows by 1280 ft feet using a John Deere Maximerge 7200 row crop planter with double disk openers set at a row spacing of 22 inches. Seeding depth was 1.5 inches, and the seeding rate was 34,000 plants per acre. Stand counts were taken on 22 June. Weeds were controlled by one post application of Glyphosate (Roundup) + AMS broadcast at 1 quart per acre on 9 June. A sidedress application of UAN 32% was applied at a rate of 100 pounds N per acre on 20 June. Furrow irrigations were 21 May, 29 June, 10 July, 18 July, 28 July, 13 August, 27 August and 24 September. Plots, 15 ft (8 rows) by 1263 ft were harvested using an IH 1440 Axial flow combine equipped with an 8 row 863 corn head on 8 November. Results are presented in Table 1.

Table 1. Agronomic Performance of Grain Corn Hybrid Varieties at Powell Research and Extension Center, 2007.

Variety	Company	Day	Units	Moisture	Yield	Test Wt	Stand
		RM	growing degree	%	bu/acre @15.5%	lb/bu	plants/acre
3975928 (DKC43-31)	Dekalb	93	2330	13.9	179	53.4	33864
3282238 (DKC41-64)	Dekalb	91	2300	14.8	166	53.0	33864
2801RB	Croplan	89	2300	13.3	156	51.7	33270
H-6347GT	Golden Harvest	86		12.5	155	53.6	33864
L-6H76Bt/RR	Golden Harvest	90		12.7	155	53.0	32676
229RR2-BT	Croplan	80	2000	13	152	56.8	33270
H-6480GT	Golden Harvest	89		12.6	151	51.6	33270
238RR2/BT	Croplan	85	2180	12.9	148	53.0	33270
294RR2/BT	Croplan	90	2310	14.7	138	52.3	33270
L-6H07RR	Golden Harvest	95		13.9	120	50.6	36241
Average				13.43	152	52.9	33686

Results and Discussion

Cool weather following planting delayed development for several weeks. The remainder of the growing season was excellent. A frost, 29 deg F, on 9 September killed the upper leaves of the plants. A significant amount of header loss was observed at harvest. This may be due to dryer than normal grain at harvest which averaged 13.4%.

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