

**Title:** 2024 Corn Strip Trial Performance Evaluation

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## **Introduction**

The University of Wyoming Powell Research and Extension Center (PREC) conducts a corn variety performance trial in cooperation with Big Horn Co-op (BHC) and Simplot as part of an ongoing variety development program.

## **Objectives**

The purpose of this trial is to observe and evaluate the performance of different corn varieties in the Big Horn Basin. BHC and Simplot use the data from this trial to perform an initial screening and demonstration of varieties they believe will perform well in the Big Horn Basin. Data on days to maturity, grain yield, moisture, and test weight are some of the variables used to choose the best suited varieties for this region.

## **Materials and Methods**

The experiment was located at PREC during 2024. Fertilizer was applied 16 April at the rates of 180 lb/ac of nitrogen (N), 160 lb/ac of P<sub>2</sub>O<sub>5</sub>, 55 lb/ac K<sub>2</sub>O, 50 lb/ac humic acid, 65 lb/ac Sulfur, 7 lb/ac zinc, and 4 lb/ac manganese based on a February soil test with an additional 100 units of N side dressed via liquid 32% UAN on June 13th. The trial was laid out in strips, where each variety was only planted in one 12 row strip (no replicates). On 1 May, 13 corn varieties from Simplot and 13 varieties from BHC were established in plots 245 feet long and 12 rows (22 ft) wide set at a row spacing of 22 inches. The seeding rate was 39,000 seeds per acre. Soil type was a Garland clay loam. Weeds were controlled by a post application of Roundup (36oz/acre), Status (5 oz/acre), Valkarie (32 oz/acre), and Kickerplus (5 oz/acre). The corn was also side-dressed on 13 June with 32% at 32 gal/acre. Flood irrigation was applied on 2 May, 9 May, 20 June, 3 July, 13 July, 23 July, 31 July, 10 August, 20 August, 29 August, and 9 September. Plots were harvested on 28 Sept using a Case IH 8010 combine with a 10 row header. Samples were collected from each plot and were used to ascertain moisture and test weight data for each plot by running the through a grain analysis moisture tester. After each sample was collected the plot was unloaded into a truck with scales to collect the plot weight that was then used to calculate yield.

## **Results and Discussion**

Results from 2024 are presented in Table 1. The highest yielding entry was X 22095 VT2P from BHC with a moisture-adjusted yield of 290.8 bu/ac.

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Table 1. Corn strip trial data collected at PREC (Powell, WY) in 2024.

Owner	Variety	Days to Maturity	Moisture (%)	Wet Test Weight (Bu/Acre)	Yield <sup>1</sup> (Bu/acre)	Test Weight <sup>2</sup> (lbs/Bu)
Simplot	B0243AAEZR	102	20.6	54.1	244.1	57.6
Simplot	B0012AAE2R	100	19.8	54.2	226.8	57.1
Simplot	A9811TRIB	98	17.5	55.3	223.2	56.6
Simplot	A9521VT2PRIB	95	17.6	55.1	241.5	56.5
Simplot	A9491VT2PRIB	94	16.6	55.2	246.1	55.9
Simplot	A9442VT2PRIB	94	15	56.8	256.1	56.5
Simplot	B92W94AM	92	16.5	55.7	239.6	56.4
Simplot	B91W35AM	91	16.8	56	230.2	56.9
Simplot	B89A44PCE	89	15.7	57.3	241.9	57.4
Simplot	A8901VT2PRIB	89	15.2	57.3	253.7	57.1
Simplot	B86J43AM	86	15.2	57.3	243.3	57.1
Simplot	A8402VT2PRIB	84	14.2	58.4	242.7	57.5
Simplot	A7883VT2PRIB	78	13.6	55.4	228.4	54.2
BHC	DKC 44-08 RIB	94	14.9	56.7	242.4	56.3
BHC	DCK 39-54 RIB	89	15.7	57.3	260.9	57.4
BHC	DKC 36-48 RIB	86	14.9	56.3	247.7	55.9
BHC	DKC 35-34 RIB	85	14.2	57.9	247.9	57.0
BHC	DKC 084-15 RIB	84	14	58.2	267.9	57.2
BHC	DKC 32-35 RIB	82	14.1	54.5	239.4	53.6
BHC	CP 3143 VT2P	91	17.5	56.4	265.5	57.8
BHC	CP 2585 VT2P	85	14.1	58.4	250.0	57.4
BHC	CP 2315 VT2P	83	17.5	55.6	216.4	56.9
BHC	CP 2324 VT2P	83	13.6	57.6	249.7	56.3
BHC	CP 2288 VT2P	82	14.3	58.4	235.4	57.6
BHC	X 22095 VT2P	82	14	57.9	290.8	56.9
BHC	CP 2180 VT2P	81	13.3	55.8	259.4	54.4
Average		88	15.6	56.5	245.8	56.6

<sup>1</sup> moisture adjusted to 15.5% with a standard Bushel weight of 56lbs/Bu

<sup>2</sup> Adjusted for moisture