



Field Corn Variety Trial Results

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Table 1 shows the results of the 2014 UCCE Delta field corn variety trial, located on Tyler Island. Three replicate blocks of nineteen varieties were planted on April 28th by air planter. The nineteen varieties included 16 varieties submitted by seed companies and three varieties submitted by the grower. Each replicate consisted of four 30-inch beds on an average row length of 1158 feet. Seed was planted two inches deep and six inches apart down the row, for an approximate planting density of 35,000 seeds per acre. The soil is a Rindge mucky silt loam with approximately 20 percent organic matter in the top 15 inches of soil. The Rindge series is a mucky peat soil down to 60 inches, and approximately 55,600 acres in the Delta are described by the Rindge classification. The previous crop in the field was corn, and subsurface irrigation by “spud ditch” was employed three times. Nitrogen was applied preplant (110 units/acre as NH₃), and 34 gallons/acre of 8-24-6 with ½% of zinc was knifed in at planting. Weed control was by cultivation and one glyphosate application, and no miticide was applied. The field was harvested on September 30th.

The table presents mean values for the three replicates. When interpreting the results, keep the following in mind. The mean is equal to the sum of values divided by the number of values, in this case, three replicates. The statistical method used to compare the means, called Tukey’s range test, compares all means against each other. Varieties were considered statistically different if their P value was less than 0.05, or 5 percent. What this means is that when differences between varieties exist, we are 95% certain that the two varieties are actually different; the results are not due to random chance. Differences between varieties are indicated by different letters following the mean. For example, a variety that has only the letter “a” after the mean yield value is different from a variety that is followed by only the letter “b”, but it is **not** different from a variety whose mean value is followed by both letters (“ab”). Similarly, a variety whose mean yield is followed by the letters “ab” is not different from a variety whose mean yield is followed by the letters “bc”. Eight varieties have a letter “a” following their mean yield, which means that those eight varieties all performed similarly in the trial. The numerical values of these eight varieties differ, but based on this research, we cannot attribute those numerical differences to variety differences. Among varieties, there were also differences in stand count, bloom date, head smut presence, ear height, grain moisture, and bushel weight.

The CV, or coefficient of variation, is the standard deviation divided by the mean, or a measure of variability in relation to the mean. For some measures, particularly the disease percentage, the variability between the three replicates was very high.

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Table 1. 2014 UCCE Delta field corn variety trial
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Initials	Entry Name	Company Name	Stand (Plants/A) ¹	Days to Bloom	Fusarium ear rot (%) ¹	Head Smut (%) ¹	Common Smut (%)	Plants Lodged (%)	Ear Height (in)	Moisture at Harvest (%)	Bushel Weight (lbs/bu) ¹	Yield ³ (lbs/A) ¹
DK	64-82	DeKalb/Grower	33106 ab	67 cde	1.3	0 b	0	0	51 abcd	13.1 ab	67.8 a	12361 a
ES	7443RR	Eureka Seeds	34703 ab	66 e	0	1.7 ab	0	0	50 abcd	12.2 b	66.8 abcd	12099 ab
INT	9642VT3PRO	Integra	34267 ab	68 bc	1.3	0.3 ab	0	0	49 abcd	13.6 a	66.1 abcde	11962 abcd
ES	7514VT2P	Eureka Seeds	35719 a	68 b	0.7	0 b	0	0	51 abcd	13.8 a	67.4 ab	11861 abcd
DG	D55VP77RIB	Dyna-Gro	34993 a	68 bcd	0.3	0.3 ab	0.3	0	48 bcde	12.7 ab	66.9 abc	11734 abcde
DK	63-07RIB	DeKalb	35429 a	66 de	0.3	0.7 ab	0	0	44 de	12.9 ab	64.1 ef	11443 abcdef
CP	7087VT2P/RIB	Croplan	36155 a	67 bcde	1	2 ab	0	0	47 bcde	13.6 a	66.3 abcd	11147 abcdefg
DK	62-08RIB	DeKalb	35429 a	70 a	0	0.7 ab	0	0	53 ab	13.5 a	64.7 def	10937 abcdefg
NK	N68B-3111	Syngenta	35284 a	66 e	0.3	7.7 a	0	0	41 e	13.3 ab	56.5 hi	10366 bcdefgh
DK	64-69	DeKalb/Grower	35574 a	68 bc	0.7	1.3 ab	0	0	51 abcd	12.8 ab	65.0 cde	10359 bcdefgh
BAG	SX5543RR	Baglietto Seeds	33686 ab	68 bcd	2	1.3 ab	0.3	0	45 cde	13.5 a	66.9 abc	10288 bcdefgh
DG	D57VP51RIB	Dyna-Gro	35066 a	68 b	0	0 b	0	0	52 abc	13.8 a	65.6 bcde	10256 bcdefgh
PI	1266AM ²	Pioneer/Grower	36155 a	67 bcde	0.5	2.5 ab	0	0	47 bcde	13.0 ab	65.5 abcde	10134 bcdefghi
INT	6709VT3PRO	Integra	34267 ab	68 bcd	0.3	2 ab	0	0	51 abcd	13.9 a	65.2 cde	10116 defghi
MY	2Y767	Mycogen	32283 ab	70 a	1.7	3.7 ab	0.3	0	53 ab	12.8 ab	61.4 g	10032 efghi
BAG	SX5409RR	Baglietto Seeds	34993 a	66 e	0	6.7 a	0	0	47 bcde	13.5 a	62.7 fg	9910 fghi
NK	N61X-3110	Syngenta	35864 a	67 bcde	0.3	0.3 ab	0	0	56 a	13.0 ab	64.9 cdef	9408 ghi
CP	6594SS	Croplan	34993 a	68 bc	0	0.6 ab	0	0	44 de	13.2 ab	58.7 h	8785 hi
MY	2J794	Mycogen	30347 b	68 bcd	0.7	3.3 ab	0	0	51 abcd	13.4 ab	55.2 i	8092 i
Average			34648	68	0.6	1.8	0	0	49	13.2	64.1	10594
Coefficient of Variation (%)			7	2	137	147	0	0	9	4	6	13
Significant variety effect (P value)			0.0045	<0.0001	0.1259	0.0009	0.6217	N/A	<0.0001	0.0004	<0.0001	<0.0001

¹ Data were transformed for analysis. Arithmetic means are presented.

² Average of only two replications.

³ Yield adjusted to 15% moisture.