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A supplement to the December 11, 2004, issue of Iowa Farmer Today

2004 Iowa Crop Performance Test—Corn District 3

Results of the lowa Crop Performance Test—Corn are published to aid lowa farmers in selecting corn hybrids. This is the 85th consecutive year for the test.

These data are first released on the Iowa Crop Improvement Association's homepage at http://www.agron.iastate.edu/icia/ usually around the end of November.

The next released format of these data is in the lowa Crop Management Database program. A description of this program and an order form can be found at http://extension.agron.iastate.edu/CMD/. A short description of how this program manages these data is provided in the "Other Reports" section of this report.

The final format is the printed version, which is printed and distributed by *Iowa Farmer Today* in its Dec. 11, 2004 issue. A few days later, the printed reports also are available from county extension offices.

The presentation of data for the hybrids tested does not imply approval or endorsement by the authors or the agencies sponsoring or conducting the test. Entries in Tables 1, 1A, and 2 are designated by brand name and variety.

Use of These Data in Advertisements

Iowa State University and the Iowa Crop Improvement Association desire to maintain the credibility of data from the Iowa Crop Performance Test—Corn. Misuse of these data in advertisements can have a negative effect on the perception of the value of these data. For advertising purposes, brand-to-brand comparisons should not be made unless more than one competitor brand is used in the ad and all entries of competitor brands in a reported table are included in the ad. Advertisement statements by an individual company about the performance of its entries can be made as long as they are accurate statements about the data as published with no reference to other companies' hybrids. A statement similar to: "See the official *Iowa Crop Performance Test—Corn* report, PM 660 (1–7) 04, for details," should be included in the ad.

2004 Procedure

Producers of seed corn and Iowa State University were eligible to enter hybrids in the Iowa Crop Performance Test—Corn. Each producer was allowed a maximum of 12 paid entries per district. All commercial entries had to be available in a quantity of at least 10 bushels of seed.







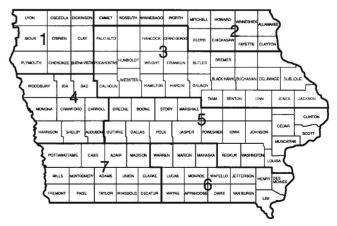
In 2004, data are reported on 170 entries in this district. Ten of the entries determined to be check hybrids were entered by the Iowa Crop Improvement Association. Survey cards were mailed to a random sample of corn growers in Iowa. Based on the survey results, the 10 hybrids grown on the most acres in the district were classified as check hybrids for the district. The check hybrids (\$ and !) in this report were determined by the 2003 survey. The Iowa Crop Improvement Association entered a maximum of three check hybrids of any given brand. These entries were given priority over the remaining 160 entries made by seed producers.

Each entry was replicated four times in four-row plots at a planting rate of 30,000 kernels per acre at each location. All locations were machine planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot and yields were corrected to 15.5 percent moisture for shelled corn.

Since 1988, data for protein, oil, and starch percentages have been included in the *Iowa Crop Performance Test—Corn* reports. Protein, oil, and starch were measured on an Infratec 1225 near-infrared transmittance analyzer calibrated against accepted chemical methods as done by Woodson-Tenant Labs, Des Moines, Iowa. Dr. Charles R. Hurburgh, Jr. of the ISU Department of Agricultural and Biosystems Engineering was responsible for analyzing the samples. Samples for nutrient analysis were collected from one field in each district. Data presented are averages of the four replicated plots in that field. To be consistent with the yield data, the protein, oil, and starch data were corrected to 15.5 percent moisture.

How Information Is Presented

The agronomic data presented are averages of three locations in 2002, 2003, and 2004. Yield in bushels per acre and percentages of moisture, root lodging, stalk lodging, dropped ears, stand, protein, oil, and starch are shown for all entries in 2004 and for those tested in 2002 and 2003 that were in the 2004 test.



Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values for yield shown in Tables 1, 1A, and 2 represent, in bushels per acre, the amount of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in Tables 1, 1A, and 2 are indications of maturity and natural drying rate. Maturity of varieties entered generally ranged from short to full season. Yield comparisons should be made among varieties of similar maturity.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years, Table 2, indicate stable performance. Also, starting in 2002, to increase the range of environmental conditions reported on in one year, 18 additional tables are provided electronically on the Iowa Crop Improvement Web page that merge data across districts. These tables double, and in some cases even triple, the number of locations reported on for hybrids entered in several districts. Supplemental yield and agronomic information about specific varieties may be obtained from seed corn dealers, crop consultants, and from neighbors who have grown these varieties.

The protein, oil, and starch percentage data (Tables 1, 1A, and 2) are quality traits important to different end-users of corn. For feed, protein is of primary interest; for wet-mill processing (ethanol and sweeteners), oil and starch content are important. Several firms have begun testing these characteristics on a routine basis. There are now more than 50 Iowa grain elevators with this testing capability.

Whole-grain near-infrared equipment measures composition of unground corn kernels in 1 to 1.5 minutes per sample. The equipment measures moisture simultaneously with composition. Using these instruments, country elevators can test and segregate grain as it is received. Obviously, all compositional factors cannot be high in the same hybrid. The grain market is expanding the production and marketing of certain hybrids for specific uses. This is an important change from the generic commodity approach widely used now.

The economic impact of compositional factors can be significant. Corn protein trades off with other protein sources in many feed rations. At \$200 per ton for 44 percent protein soybean meal, the value of a 1 percent increase (e.g., from 8 percent to 9 percent) in corn protein is about 12 cents per bushel of corn. Likewise, an additional percent of oil yields about 10 to 14 cents per bushel in increased oil output in a wet processing plant or when substituted for white grease in feed rations. The additional ethanol or sweetener from an extra percent of starch provides 8 to 10 cents per bushel more revenue. Producers feeding livestock are in the best position to capture immediate benefits from these composition data. Country elevators with feed mills also have the ability to capitalize on increased protein in corn. The Iowa Corn Growers Association has prepared a publication to aid growers in using the nutrient data in the Iowa Crop Performance Test—Corn reports: Nutrient Content and Feeding Value of Iowa Corn, Iowa Corn Growers Association, Des Moines, Iowa 50265.

Hybrids with similar yields and agronomic characteristics may not be identical in corn composition. Therefore, feed costs can be reduced by selecting higher protein hybrids from a group with similar yield potential. Weather and soil conditions affect composition, but the relative ranking of hybrids does not change greatly. A higher protein hybrid will be higher than average regardless of environmental conditions that raise or lower the averages. The protein percentages reported are measures of crude protein and may not give an accurate indication of feed value if feed rations are balanced on individual amino acids rather than crude protein content.

2004 Field Data

The District 3 test was planted on farms operated by John Schott near Pocahontas in Pocahontas County, Richard Bertram near Holland in Grundy County, and Dave Broghammer near Manchester in Delaware County. Field data are presented in Table A.

Table A. Field Data

		t Farm In Webstei	loam		am Farm a-Muscat		Broghammer Farm Kenyon loam					
Fertilizer applied, lb.	N	P ₂ O ₅	K ₂ 0	N	P ₂ O ₅	K ₂ 0	N	P ₂ O ₅	K ₂ 0			
Plowdown Preplant Starter Total	160 — — 160	80 — 80	100 — — 100	14 140 — 154	68 — 68	81 81	160 8 168		90			
2003 crop Row width Planting date Harvest date Average yield	Soybe 30 inc May 1 Oct. 8 205 b	hes		Soyb 30 in April Nov. 214 I	ches 29 3–5		Soybe 30 in May 4 Oct. 1 204 b	ches 4 19				

^{*}Field sampled for protein, oil, and starch percentage data

Other Reports

Separate reports are available for each district shown in Figure 1. A limited supply of these publications is available at your county extension office or from Extension Distribution Center, 119 Printing and Publications Building, Iowa State University, Ames, Iowa 50011. Also, these data are available along with a hybrid selection program as a part of the Iowa Crop Management Database program. Along with all of the information as it appears in these written reports, the section of the lowa Crop Management Database program that uses these data allows farmers to insert their own drying and shrink costs, expected price of corn, and final moisture percentage after drying. Using these specific criteria, the program calculates an adjusted economic value for each hybrid in the test. Farmers can then determine which hybrids might best fit their own production practices and provide the most profit. The computer program also can sort the hybrids by yield, moisture, adjusted value, root lodging, stalk lodging, dropped ears, protein, oil, starch, or brand and then print the data as sorted. It will also allow the user to tag selected hybrids and then list those selected hybrids as a new table for ease of viewing. A Pentium 1 computer or higher running Windows 95 or newer with a CD ROM drive and 30 megabytes of hard disk space are required to run the program. The cost of the program is a onetime purchase of \$100. Future years' data can be downloaded from the Web at no charge. If the user cannot access the Web to download the new data, the price will be \$25 for all seven districts' data. Order forms and a description of the program are available from Agribusiness Education Programs, telephone 515-294-6429 and on the Web at http://extension.agron.iastate.edu/CMD/.

The 2004 Iowa Crop Performance Test—Corn: PM 660 1 04 District 1 PM 660 2 04 District 2

PM 660 2 04 District 2 PM 660 3 04 District 3

PM 660 4 04 District 4

PM 660 5 04 District 5

PM 660 6 04 District 6

PM 660 7 04 District 7

File: Agronomy 2-2

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Prepared by Kendall R. Lamkey, W. H. Vinson, and C. J. Turnbull. Pioneer distinguished chair in maize breeding, technician, and graduate student.

Cooperating Organizations

Iowa Crop Improvement Association

Agriculture & Home Economics Experiment Station

Iowa State University Extension

Iowa Corn Promotion Board

U.S. Department of Agriculture

And justice for all . .

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Table 1A. 25 Top Yielding Hybrids Sorled by Harvest Moisture—Bistrict 3.	30,000 Planting Rate.	LSD for 2004 Yield in Bushels & 10, for 2003 is 9, and for 2002 is 11.	2004 Protein Pct LSD = 0.3.	2004 DII Pet LSD = 0.3.	2004 Starth Pt1 LSD = 0.5.

			,	field Bw	A		la usture i	Pel .	R.	set Ldg R	et	S	wit Lig	Pel	0	trop Ear I	Pt1		Stand P	ri .		Profess P	rl		Dit Po	Ü		Starch P	rt		
Brand	>Variety	line leg y	2002	2063	2064	2604	2403	2002	2904	2003	2002	2064	2003	2002	2004	2003	2002	2004	2003	2002	2004	2003	2002	2304	2003	2002	2004	2003	2002	>Variety	Brand
Thorsep work/MarTe els	>42127643	61		******	215	18.8			1			4			0			86			7.3			3.5			6.6			>4202YGCB	Thompson/Mu Tech
l Planter	> 201/2010	4	181	187	214	18.5	15.8	18.2			3	1	2	2	0			84	95	84	1.3	8.1	7.8	3.4	3.4	3.3	33.4	58.7	81.5	>34949	1 Pioneer
Jacobson	>.18-C353C8	61			216	16.5			8						0			82			7.8			1.2			OH. 6			>,D4389C8	Jacobson
\$Pioner	>251165	1			218	19.9						1			6			81			8.4			3.4			69.4			>35765	\$Pinneer
# Thompson My Tech	>44127608	61			226	21.2			2			4			0			62			7.9			1.6			50.8			>4412YECH	#ThempsoryMuTech
# DE KALB	>DKC60-18RAYG		216	191	221	21.6	18.9	20.5	1	a	1	1	1	2	0	0	0	92	94	9.2	7.4	7.2	8.5	1.3	3.3	3.4	86.5	61.3	81.9	>DKCMG-1 MIAYS	#DEKALB
MI/W Genetics	>670000	61			221	21.7									0			818			8.6			3.7			\$9.5			>CTOOMIN	# H/W Genetics
HighCyate by Fact.	> HE PRINTEEN	61			218	21.8			7			1			0			84			7.8			3.7			20.0			>HC7838YGC8	HistoCot is by Fast.
#Thompson/HaTook	>313	Ei			216	27.6			1			1			8			95			7.8			2.2			60.1			>212	#Thessaums/fileTech
# forger	> ED16YGCE	61		154	224	22.0	16.2			0		1	2		0	0		86	85		7.6	7.3		3.0	1.4		\$6.0	66.5		>8316YGCB	# Kruper
HighCycle by Treasy	>HC7743YE 08	61		185	229	22.1	17.7		3	0		4			ú	0		95	85		7.8	7.2		6.1	4.0		39.5	60.6		>HC7748YGCB	HighCycle by Treisy
# Middleks-ep	>2211	i .			220	22.1			ė.			2			0			84			7.2			3.6			10.2			>2211	# Histoliekano
1/2mpr	>344031	1			214	22.3			1						a			91			4.0			2.2			98.8			>34601	SPiencer
Moranh man	>1020103	61	212	180	217	22.3	18.9	\$8.1			14	1	1	11	1			84	95.	63	4.0	7.9	7.5	3.7	3.5	3.8	99.7	88.6	66.8	- M291 88	Mareabane
Senger .	>811117648	Ci .			217	22.4						1			0			-			7.8			3.7			10.7			>81111TECB	Erager
FEATEY	> COZZETY SCS	6			217	22.8						4			0			83			7.2			2.6			10.4			>EXTROYCCS	#Enter
KSC/Chailanger	>8212YGCB	61			215	22.0			4			-			0			84			7.3			3.6			80.2			>8212Y6C8	KSC/Clusi leager
Hohert	>4411	1			215	22.0			2			4			n			85			7.7			3.8			59.7			>4411	Hobert
PCorrection .	>CESTY'S	61	2300	187	216	22.0	17.8	19.6			2		1		n	0		80	96	94	7.1	7.8	6.6	34	1.5	3.6	-	61.1	61.7	>CM7Y6	#Cornelion
# 45 addings on	>331181	61		187	273	23.6	16.4		i i			- i	1		ō	ō		92	95		7.1	5.3		3.6	3.5		89.5	81.2		>331188	# Windelstown
Hebert	>4400	5	186	181	229	23.3	17.4	29.6	ŝ	ā	Z	ż	1	2	8		1	82	94	80	7.3	7.2	6.6	3.7	2.5	3.7	\$8.2	81.8	\$1.3	>4658	Manage
Thompson/MyTech	>2414HX	61			215	24.1			- 1			1			0			64			8.2			4.0			59.1			>241410	The mason MicTech
Rainbow	>210EYGCE	6	193	155	217	24.3	19.8	21.2	2	0		à	1	2	n	0		88	м	63	7.2	2.3	8.9	14	3.5	16	M B	61.5	61 4	>3100YECH	Reinbew
Rainsow	>X11E3YECE	6			227	24.7			5			ž			6			83			7.3			2.7			8G.Z			>X11ESYECH	Rainbay
Apacer	>M16YGCB	61			219	26.8			4			2			0			822			7.8			3.2			59.5			>9416YGCB	Senow:
Mark	>MREEKB1111#	64			215	24.0			- 1			- 1			0			800			7 %			2.6			69.1			>MREEDIN 11#	Herb
Channel Big Corp	>2111000	63			223	25.6			11			ź						86			7.7			2.0			59.8			>X11100t	#Charmel Bin Corp
Ag Source	>5273	6			215	25.2			8			á			0			94			7.6			3.7			30.0			>6273	Ag Saures
Hobari	>6412	ī.			218	25.6			1			ż			6			91			7.2			3.7			89.2			>4412	Healtoid
#SG/Oxal hanger	>8113YGCB	61			214	25.8			5			1			6			82			7.2			3.5			66.7			>8115YGCB	KSC/Challenger
Average of All Entries			194.9		207.8		17.0	16.8	4.3	0.0	6.5	1.6	2.0	1.4	6.0	0.0	0.1	81.7	94.6	\$3.6	7.7	7.5	7.2	3.6	3.5	3.6	66.0	64.7	61.1	Average of All En	ines

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1	\$508K 0 \$48 \$4828	Bi .	166	29 28 28	12 1	18.8	15.6		5	,		5 2 5 1 2		i	0		92 92	82		7.7	7.3		3.6	3.3		60.0	81.1		188081
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6	ISYMS IZEMARYGEN I	GI		21 20 21	2 2	8.05 9.05			0			2		0			91 68 91			6.0 6.2 7.4			3.4 3.7 3.8			59.5 90.1			AZSOBRRYECO BESS
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		DI Di		25 25 27	4 1	H.2						1		1			E .			7.8 8.8			2.6			50.1 50.6			ESTAYECE ESTARTOCE MIZYECE
	1261YGCB 127830E	61 61 201 61 198		20	1 2	21.3		18.3	7	1		1 2	٥	i	0	0	91 82	95 83	94 85	7.9 7.8	7.9	7.7	3.6 3.5 3.5	3.6	3.5	80.0 80.3	60.5	60.5	BZS1YGCS HC7B306 HC7ZYSZYGCS
relay il relay il a 3		6	199	21 21	11 2	H.4	10.4	19.4	2 2	•	,	; '	•	i	•	•	=		80	7.7	7.6	7.5	3.5 8.0	3.5	3.5	99.5 99.5	W.3	80.5	7847761 8467101 511076CB
1 5	1110 YG CB 688 7381 587 587	61 61 6	190	29 20 19	8 2	11.4	17.1		2 2 1	,				-	4		94 13	M		8.2 8.8 8.4	7.6		1.6 1.5	3.5		59.4 59.9 59.7	60.9		5110YGCB H0673B1 C578B1 H00-86
	762781 26206-100 RVS	6) 6) 6) 21(191	21 28 22	17 2	71.4 71.4	18,8	20.5	1		1	8 1	1	4			E .		ez	7.8	7.2	6.5	1.5 1.4	1.1	2.4	88.1	61.3	61.0	6792101 >DECEG-1002Y6
eds 6	CT1780			19	18 2	11.6			11 6				•	i		•	92		-	8.1 7.8	7.0	4.5	1.8	•••		99.6 59.7 59.5 80.2	•		911mg
4	1348MX1 I	61 61 63 63		22	19 2	21.7 21.7 21.7			2			1		i			90 82 83			8.8 7.8			2.7 2.8			30.5 39.5			4505YGCS US67YGCS >G78000H S36560T1
rds E		6 287 61 61	168	29 29 20	19 2	21.7 21.7	18.7	18.3	3 2	1	1	1 2	1	•			83 83	86	83	7.8	2.0	7.8	3.5 1.5	2.7	2.7	80.8 80.3 50.7	64.5	64.8	EXCEPTED STATES
Texts 6	120E	ř.	177	26 18 21	8 2 8 3	1.6	15.0		13	1		7 2		9	4		91 MB	97		8.1	7.9		1.5	1.5		59.7 59.7 59.8	66.5		222681 665 >HC7638YGCS
	GMF77191 (64 64 64	196	21 18 21	1 2	1.0	16.7		4			i		i			10			8.4			1.5			99.7 50.6	60.0		H007796 ST150781
Tesh >1	113 C	GI 204		21	4 2	22.0	17.5	18.4	1 2	1 1		1	1	8	0		20	E7		7.8	7.5 7.7 7.8	7.7	1.3 3.4	3.9	1.5	86.0 86.0 88.0	80.5 80.5	64.6	CAUSYS >313 CSEITE >4818TSCB
up 7		61 61		22 28 21	4 2	22,8	18.2		4			1 2		8	a		93 91	85		7.6 8.8 7.1			3.7 2.4	11		99.8 80.7			7624RRBI 8553RR
72	211	6 61 6 194	185	22 22 21	10 2	22.1	17.7	18.5	0	1 1	,	4 B	ž.	9	0		65 68	85 85	85	7.2	7.2	7.4	16	1.0	2.6	10.5 16.2	60.6 III.7	61.0	>HC7746Y6CB >2211
, I	MH77TGCB (6 198 61 61 216		29 21 21	17 2	21		18.1	12					ě			91	95		7.5	7.0	7.5	11	3.5	3.6	60.0 60.4 60.0 50.7	60.5	60.0	510781 RK877YGCB >344C1
7	551/T	61 216 81 81	166	21	4 2	2.4 2.4 2.4	16.0	18.3	3 3		•	6	3	4	9	•	31	83	23	7.3 7.6	7.9	7.9	1.4 3.7	3.5	3.6	50.4 50.7	60.5	60.9	>M20106 750107 >911176CB
	2712YGCB (6 61		19 29 28	16 2	2.4			18 12 17			1		8			84 91			8.4 8.0 7.9			15			68.0 68.2			X189181 5663 EX713YGCB
	MASTECR (6 211 61 187		26 26 20 21	35 2	22.4	17.5	18.5	5	1 1		1 2	1	0 0	1	1	91 82 95 97	96 96	97 93	8.1 8.0 7.3	7.7	7.6	2.6 4.1 3.6	3.5 3.5	2.7	50.5 50.2 61.4	60.5	60.5 61.4	3M5Y6C8
9	B12YGCB (Ri .	100	29	M 1	12,5 12.5			15 11	. ,	-	ì ì	•	0			\$7 92	~		7.9	,	4	12	u.d	0	60.Z	wd.8	44.5	101276CB 212576CB
	B11	6) 6)	191	29 29 29	24 2	12.5	18.0		15 8 4	1		2 2		8	a		90 91 84	22		7.4 7.0	7.3		3.6 3.7	3.5		60.2 50.4 50.8	62.9		5160CB 3120YGCB 9511
1 1		Si Si	189	21 21 29	14 2	22.7	18.1					; ;		9	Q		22 22	82		7.4 7.4 7.9	7.5		1.7 1.7 1.6	1.5		60.2 50.6	89.7		HEROTELE RESTAYSOR MISSING
		6 14		21 21 21	4 2	2.7		20.4	0	0	2	4 4	1	8	4	0	10 14 15	95	97	7.6 7.4 7.3	7.0	8.7	1.5 1.5	3.4	2.5	60.6 66.1 86.4	61.3	61.8	ENGAPYGEN B410YGEN >ENZZOYGEN
r 1	MINERAL C	6 61 64	166	20	25 2	22.8	17.4		7	1		1 4		9	0		N N	163		7.2	7.6		3.7 3.5	3.6		M.2	60.6		481191 8418YERW
	5885AE 6	G Gi		21 28 21	2 2	12.8 12.8 12.6			7			1 2		ě			91 83			7.2			2.6 1.7			00.4 00.4 M.0			Present Street Creety
	MISHX 6			18 21 21	15 2 15 2	22.0 22.0 22.0			0 4 2			1		0			M M			8.3 7.3 7.7			1.6 1.6			50.6 80.2 90.7			9616HX >BZ1ZYGCH
30	1411 2687 YG (1568 (13118)	61 284 61	187	28	8 2	22.8	17.4 16.6	18.6	13		2	1	9		8	0	65	BI	н	7.2 7.4 7.1	7.0 8.8	6.6	3.4 3.5	3.5 3.5	3.6	88.6 88.3	61.1 61.2	61.7	>C837YG 5163 >321181
2	MARKET I	61 61	190	21 21	4 2	23.0	18.5		7	,		1		0 0	9		84 93	84		8.1 7.3	7.4		1.7	3.5		50,5 50,4 85,4	60.2		4711YEPLUS 285681
relay 1	678443 512HU/YGCB (17188) 613YGCB/RR (188	21 21	2 2 12 2 12 2	D 2	18,1		15			1 1		1	¥		12	BL		7.4	7.4		2.7 2.6	2.5		10.4 40.2 10.3	89.9		HC75465 EE12RR/TGCB EE44CB
	771881 G 013YGCN/RR G	6) 6) 6) 144	186 185 190 161	18 21 21	1 2	23.1 23.1 23.5	18.1 17.5 17.8 17.8	20.0	7 6 5		2	2 1 3 2 2 3 2 1	2		9	1	86 80 97	84 94 94	90	7.5 7.5 7.3	7.4 7.5 7.4 7.2	6.6	2.6 3.8 3.7	3.5 3.5 3.6 3.5	3.7	10.2 39.8 80.2	60.9 60.9 60.7 61.0	41.5	6771681 8383 Y 6 CB/RH > 4850
m 7	ISSO HERON H	61 61		21 16 21 22 22 28 28 28 21 21	M 1	的建立注注50回的以外,以外的时间,但是注注10回的,但是注注10回的的,但是是注注5点,但是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是是			15 9 7 9 5 15 8 3	-	-	1 2	•	Í	•		2000年 1000年	-	~	7.7.7.7.7.7.7.7.8.2.4.2.2.2.4.2.2.2.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.7.7.8.2.2.2.2	1.4				y.,	89.2 19.3 50.2 50.2 60.1 60.1 56.1 56.1	-1.0	-1.0	ETTERATION
usp 7	PARTECE (6 6		28 20 21	7 2 5 2	24.0 24.1			13			3		8 0			87 82 84			7.8 8.2			1.6 1.5 4.0			86.1 50.1			3000YECS >2414HX
2	MIZARAYGES (61 6 182 64		21	12 2 17 2 12 9	24.2 24.3		LIS				1 1 1 3 0	2	9 9	4		84 86 80	94	82	7.4	7.3	6.9		3.5	3.6	80.0 88.5 90.2		61.4	B712RR/YECS >3100YECS MREEXILEM110
i	BESUTECE (196	185	20	11 2	N.4 24.5	19.8	21.3	1	0	4	3 0	5	Ĭ	*		80	95	#	7.2	7.1	1.0	3.4 4.1 3.5 3.5 3.9	3.5	3.6	60.0 60.5 60.5 60.2 60.2 60.2 60.2 60.2 60.2 60.2 60.2	81.8	61.3	MRIEKLLINI 18 EMANYECH M21
23	288376C8 MC1 2584 111G379C8 10031-45RRY6 111976C8 111984 111984 111984 111984 111984 111984 111984 111984 111984 111984 111984 111986 111986 111986 111986	6 61		26 22 21	7 2 17 2	24.7 24.7			5			2					80 21			7.4 7.3 6.0			3.7			16.2 16.9			EMBAYECE 1907 1584 1597 1598 1597 1597 1597 1597 1597 1597 1597 1597
20 20 20 20 20 20 20 20 20 20 20 20 20 2	MISTERNA (21 21 21	18 2	24.8 24.8 24.9			6			2 2 3		6			100 100 100 100 100 100 100 100 100 100			7.8 7.8 7.5			3.2 3.7 3.6			50.8 M.8 60.1			STREET STREET SHEEKEVERT 119
on 3	(11198) -000YGCB	G1 G1		22	7 2	25.0 25.0			11 17 1			2		i			100			7.7			3.6 3.7			59.8 59.3			>2111981 4-9007GCB
nda di Si Testa di	MITAL MITA MISAYGON	6) 6 61		21 21 21 21 22 20 20 21 29 21 20 21 20 21 20 21 20 21 20 21 21 20 21 21 21 21 21 21 21 21 21 21 21 21 21	10 2 15 2 16 2	25.2 25.6						2								7.5 7.5			3.3 3.8 3.7 3.6 3.7 4.0 2.7 3.7 3.7 2.7 2.7 3.5 3.6			50.0 50.9			61116X >6273 6313AYEGE
7	1412 112576CB	6 6) 6)	184	21 20	18 2	25.8 25.7	20.9		11	1		ž 1 3		9	4		11 12 17	æ		7.2	7.6		3.7 2.7	3.4		60.2 80.2	61.1		3135Y6CB
	PISYGCS	gi .		21	1 2	3.0			11 0 5			i		-			22			7.2			3.5			19.7			>2115Y6CB

C = Transgenic Hybrid. 1 = Use of insecticide Seed Trastment.
5 = Check Hybrid Entered by the lows Crop Improvement Association.
1 = Start Check Hybrid Grown in Short Becks.
1 = Start Check Hybrid Grown in Short Becks.
2 = Hybrid Entered as a Short Hybrid and Grown in Shiret Blooks.
3 = One of the Tap 25 Yatiding Hybrids.

Table 2. Averages of 2003-04 (2-Year) and 2002-04 (3-Year) of Varieties Tested in District 3. LSD for Yields Are 6 Bushels for 02-04 (3-Year) and 7 Bushels for 03-04 (2-Year).

3-Year Protein LSD = 0.2. 3-Year Oil LSD = 0.1. 3-Year Starch LSD = 0.3. 2-Year Oil LSD = 0.1. 2-Year Starch LSD = 0.3. 2-Year Oil LSD = 0.1. 2-Year Starch LSD = 0.3.

			Yield	d Bu/A	Moist	ıre Pct	Root	Ldg Pct	Stalk	Ldg Pct	Orop	Ear Pct	Stand	d Pct	Prote	in Pct	Oil	Pct	Starc	h Pct		
Brand	Variety	Notes	3 Year	2 Year	2 Year	3 Year	3 Year	2 Year	3 Үваг	2 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	3 Year	2 Year	Variety	Brand
SOI	103YGCB	GI		193	16.5			0		1		0		92		7.7		3.6		60.2	103YGCB	SOI
Jung	6580YGCB	GI	187	186	16.5	16.7	0	0	1	1	0	0	95	96	7.5	7.8	3.8	3.8	60.5	60.1	6580YGCB	Jung
Merschman	M21104	GI		190	16.6			4		1		0		91		8.2		3.5		59.8	M21104	#Merschman
#Middlekoop	1207	1	189	193	16.7	17.3	1	0	1	1	0	0	92	92	7.8	7.9	3.5	3.5	60.3	60.1	1207	#Middlekoop
Jung	6545YGCB	GI		200	17.0			0		0		0		96		7.3		3.5		60.7	6545YGCB	Jung
#Cornellus	C443YG	GI		194	17.3			0		0		0		95		7.6		3.5		60.3	C443YG	#Cornelius
!Pionear	36808	1	198	202	17.4	17.6	1	0	1	1	0	0	94	94	8.1	8.2	3.4	3.4	60.5	60.3	36B08	! Pionear
\$DEKALB	DKC53-32YGCB	GI		191	17.4			1		1		0		95		7.6		3.4		60.5	DKC53-32YGCB	\$DEKALB
\$Wyffels	W4828	1	182	183	17.7	17.8	1	0	1	1	0	0	92	92	7.8	7.9	3.5	3.6	60.2	60.0	W4828	\$Wyffels
Trisler	2949	Î.		185	17.7			3		3		G		92		7.3		3.4		60.9	2949	Trisler
Merschman	M10108	Î	186	186	18.1	18.2	9	4	3	4	0	0	93	93	7.3	7.4	3.3	3.4	60.9	60.7	M10108	Merschman
Middlekoos	1206	Ĭ.	183	190	18.5	18.4	4	2	1	1	ū	ō	93	94	7.1	7.2	3.6	3.6	60.9	60.6	1206	Middlekoop
SNK Brand	N59-Q9	i	194	197	18.5	18.3	1	8	2	1	Ō	ō	96	95	7.2	7.4	3.6	3.7	61.0	60.7	N59-Q9	SNK Brand
Middiekoop	3306Bt	Gi		186	18.8			1		Ó	7	G		92		7.2		3.5		60.6	3306Bt	Middlekoop
DEKALB	DKC57-04YGCB	GI		195	18.8			0		8		8		92		7.9		4.0		59.7	DKC57-84YGCB	DEKALB
#HighCycle by Trelay		GI	197	196	18.8	19.1	6	5	1	1	0	0	92	91	7.9	8.1	3.5	3.5	60.1	59.9	HC7782YGCB	#HighCycle by Trelay
Pfister	2326Bt	GI	0.00	192	18.8	10.000		1		1	0.0	0		94		8.0		3.5		60.1	2326Bt	Pfister
SDEKALB	DKC58-78YGCB	GI	200	197	18.8	18.6	0	0	1	2	0	ō	95	95	7.8	7.8	3.7	3.6	60.1	60.1	DKC58-78YGCB	\$DEKALB
#Kruger	9310YGCB	Gi		205	19.1		-	ō		1	-	ū		95		7.5		3.6		60.2	9310YGCB	#Kruger
Hobart	4140	1	193	193	19.1	18.8	2	ō	2	3	n	ñ	94	94	7.6	7.5	3.9	3.9	59.9	59.8	4140	Hobart
Renk	RK789YGCB	GI		198	19.2		-	ñ	_	1		ñ	•	92		7.4		3.6		60.5	RK789YGCB	Renk
Epley	E2490YGCB	G	201	198	19.2	18.9	6	3	1	4	'n	ň	93	94	7.9	8.1	3.6	3.6	60.3	60.1	E249DYGCB	Epley
#DEKALB	DKC60-19RRYG	Ği	209	206	19.3	19.7	1	1	1	4	ň	ň	93	93	7.0	7.3	3.3	3.3	61.3	60.9	DKC60-19RRYG	#DEKALB
Corn Belt	C578Bt	G	200	195	19.3	13.1		'n		4	•	ň	30	88	7.0	8.0	0.0	3.5	01.0	60.3	C578Bt	Com Belt
Comelius	C605YG	ĞI		198	19.3			4		À		ň		95		7.5		3.9		59.9	C605YG	Comelius
A+ Seeds	51078t	6	198	196	19.4	18.9		7		ň		ň	94	94	7.8	8.0	3.5	3.4	60.6	60.3	5107Bt	A+ Seeds
Renze	8261YGCB	GI	196	193	19.4	19.0	2	,		4	0		93	93	7.8	7.9	3.6	3.6	60.4	60.2	8261YGCB	Renze
Merschman	M20108	GI	205	203	19.4	19.1	9	2	- 1	4	Ů	Ü	94	95	7.8	8.0	3.6	3.6	60.4	60.2	M20108	Merschman
Comelius	C590YG	GI	202	200			5	-	4		Ü	Ü	94 95	93								
	33118t	GI	202		19.7	19.3	3	1	1	- 3	U	u	90		7.8	7.9	3.5	3.5	60.5	60.3	C590YG	Cornellus
#Middlekcop	531180 F3223	GI	400	206	19.9	40.7		ŭ	3	1				94		6.9		3.6		60.8	3311Bt	#Middlekoop
Epley			198	198	19.9	19.7	b	2	3	3	U	U	93	93	7.2	7.3	3.6	3.6	60.9	60.5	E3223	Epley
HighCycle by Trelay	HC7748YGCB	GI		202	19.9		-	2		5		U		95		7.5		4.0		60.0	HC7748YGCB	HighCycle by Trelay
Rainbow	3665YGCB	G	202	197	20.0	19.5	5	2	1	- 3	U	U	96	95	7.8	7.9	3.6	3.5	80.3	60.2	3065YGCB	Rainbow
#Cornellus	C637YG	GI	201	202	20.0	19.8	1	u	U	1	Ū	Ū	95	96	6.9	7.1	3.5	3.5	61.1	60.8	C637YG	#Cornelius
#Kruger	9410YGCB	GI	195	198	20.1	20.1	1	0	0	0	0	0	95	94	7.6	7.2	3.5	3.4	61.1	60.5	9410YGCB	#Kruger
Crows	4911Bt	GI		196	20.1			4		3		0		89		7.4		3.7		60.4	4911Bt	Crows
Rainbow	3120YGCB	G		200	20.3			4		2		0		92		7.4		3.5		60.6	3120YGC8	Rainbow
Renk	RK870YGCB	GI		203	20.4			4		3		0		92		7.4		3.6		60.5	RK870YGCB	Rank
M/W Genetics	G77168t	GI		192	20.4			3		3		0		90		7.5		3.6		60.5	G77168t	M/W Genetics
Renze	9363YGCB/RR	GI		197	20.6			5		3		0		93		7.4		3.7		60.3	9363YGCB/RR	Renze
Hobart	4650	1	198	200	20.6	20.4	2	2	2	2	0	0	92	93	7.0	7.2	3.6	3.6	60.9	60.6	4650	Hobart
Trisler	5244CB	GI		200	20.7			4		2		0		93		7.4		3.6		60.5	5244CB	Trisler
Pfister	2656B1	GI		202	20.8			4		2		0		93		7.3		3.5		60.6	2656Bt	Pfister
Rainbow	3100YGC8	G	199	202	22.1	21.8	3	1	1	1	0	0	92	92	7.2	7.3	3.5	3.5	61.0	60.8	3100YGCB	Rainbow
Epley	E3630YGCB	G	197	198	22.1	21.6	3	2	3	1	ū	0	93	92	7.1	7.2	3.5	3.5	60.9	60.7	E3630YGCB	Epley
Rainbow	3135YGCB	G		194	23.3			6		2		0		91		7.4		3.5		60.7	3135YGCB	Rainbow
											1=12										4-7000000000000	
Average of All Entries			195.9	196.4	19.2	19.1	3.1	1.6	1.3	1.7	0.1	0.0	93.6	93.2	7.5	7.6	3.6	3.6	60.6	60.4	Average of All Entr	
Average of Check Hyb	orius		193.5	194.3	18.0	18.1	0.9	0.3	1.5	1.4	0.1	0.0	94.1	94.4	7.7	7.8	3.6	3.5	60.5	60.3	Average of Check I	typria\$

G = Transgenic Hybrid. 1 = Use of insecticide Seed Treatment. \$ = Check Hybrid Entered by the lows Crop improvement Association. ! = Short Check Hybrid Grown in Short Blocks. # = Hybrid Entered as a Short Hybrid and Grown in Short Blocks.

District 3

Designations Identifying Brands in the Test

Designati	one recitarying branes in the rest
A+ Seeds	A+ Seeds, Elkader, IA 52043 563 245 1125
Access Seed	Access Seed. Dike, IA 50669 319 989 2531
Ag Source	Ag Source Seeds, Nevada, IA 50201 515 382 8880, www.AgSourceseeds.com
Channel Bio Corp	Channel Bio Corp, Kentland, IN 47951 219 474 6868
Corn Belt	Corn Belt Hybrids, St. Marys, OH 45885 800 977 3841, www.cornbelthybrids.com
Cornelius	Cornelius Seed. Bellevue. IA 52031 563 672 3463, www.corneliusseed.com
Crows	Crows Hybrid Corn Co., Kentland, IN 53711 608 274 8215, www.crowshybrid.com
	Dairyland Seed, Clinton, WI 53525-9728 608 676 2237, www.dairylandseed.com
	Monsanto, Coriland, il. 60112 815 754 4809, www.monsanto.com
	Epley Brothers Hybrids, Shell Rock, IA 50677 319 885 6293, www.epleyseed.com
	Garst Seed, Robins, IA 52328 319 373 7458
"Golden Harvest	J.C. Robinson Seed, Waterloo, NE 68069 402 289 6553, www.goldenharvestseeds.com
*Golden Harvest	Golden Harvest Seeds. Bloomington, IL 61704 800 610 7333, www.goldenharvestseeds.com
	Golden Seed Co., Cordova, IL 61242 800 421 1169, www.goldenharvestseeds.com
	Fontanelle, Fontanelle, NE 68044-2505 402 721 1410, www.fontanelle.com
HighCycle by Trelay	Trelay Livingston, WI 53554 608 943 6363, www.trelay.com
Hawkeye Hybrid	Hawkeye Hybrids, Pella, IA 50219 641 628 3827
Hobart	Hobari Bros. Seed, LLC, Lake City, IA 51449 712 464 7651
	Jacobsen Hybrid Corn Co., Lake View, IA 51450-0379 800 761 1024
	Jung Seed Genetics, Randolph, WI 53956 920 326 5891, www.JungseedGenetics.com
Kruger	Kruger Seed Co., Dike, IA 50624 800 772 2721
	KSC/Challenger Seed. Dike, IA 50624 515 294 7831
M/W Genetics	Midwest Seed Genetics, Carroll, IA 51401 608 274 8215, www.midwestseed.com
Mark	Mark Seed Co., Perry, IA 50220 515 465 2122, www.markseed.com
Merschnun	Merschman Seeds, West Point, IA 52656 319 837 6111 Ext 2311, www.merschmanseeds.com
Middlekoop	Middlekoop Seed Corn, Packwood, IA 52580 319 695 3266
*NK Brand	Syngenta Seeds, Ames, IA 50010 515 239 3505, www.NK.com
Pfister	Pfister Hybrid Corn, El Paso, IL 61738 309 527 6000, www.pfisterhybrid.com
*Pioneer	Proneer Hi-Bred Intl. Inc., Johnston, IA 50131 515 253 5889, www.pioneer.com
*Pioneer	Pioneer Hi-Bred Intl. Inc., Johnston, IA 50131-0454 515 253 5892, www.pioneer.com
PSA Genetics	Garst Seed, Slater, IA 50244 800 953 1016 Ext 348
Rambow	Rainbow Seeds, Oskaloosa, IA 52577 800 373 9401, www.rainbowseeds.com
	Renk Seed, Sun Prairie, WI 53590 608 837 7351, www.renkseed.com
Renze	Renze Hybrids, Carroll, IA 51401 712 669 3301, www.renzehybrids.com
SOI	Sand Seed Service, Inc., Marcus, IA 51035 712 376 4135, www.sandsofiowa.com
	Stine Seed, Adel. IA 50003 800 362 2510, www.stineseed.com
Thompson Seeds	. Thompson Seeds, Leland, IA 50453 641 567 3350
	. Thompson Seeds/NuTech, Ames. IA 50010 515 232 8236
Trisler	. Trisler Seed Farms, Inc., Fairmount, IL 61841 217 288 9301, www.trisler.com
Trisler	. Ag Com. Essex, IA 51638 712 379 3107
	. Wyffels Hybrids, Geneseo, IL 61254 800 369 7833, www.wyffels.com

^{*}Companies with one or more check hybrids entered by the Iowa Crop Improvement Association.