

2008 Ohio State Organic Corn Performance Test

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Interest in growing corn in organic cropping systems has been on the rise in recent years. In 2008, we continued evaluations of organic corn hybrids marketed for organic producers at the Hirzel Sustainable Systems site, a certified organic farm located near Bowling Green in Wood county (NW Ohio) and on certified organic land at the Ohio Agricultural Research and Development Center (OARDC) Badger Farm, near Apple Creek in Wayne county (NE Ohio). We had a new location this year near South Charleston in Clark county at the OARDC Western Agricultural Research Station (SW Ohio), which is a transitional site. The plots were planted in a randomized complete block design with three or four replications.

Twelve seed companies participated in the 2008 test (Table 1). The relative maturity ratings of the hybrid entries varied from 88 to 114 days. In addition to the organically produced hybrid entries, four open pollinated (OP) varieties and three OP varietal crosses were evaluated. Two conventionally produced, untreated hybrids were also included in the 2008 test.

Results for Bowling Green and South Charleston are not presented. At these sites, drought stress and variable field conditions contributed to inconsistent yields. At Bowling Green, yields averaged less than 40 bu/A. At South Charleston, a rain storm immediately after planting caused poor emergence and uneven stands. On September 14, record high winds associated with hurricane Ike caused severe root and stalk lodging at the test sites, especially South Charleston.

Table 2 includes test plot information and cultural practices used at Apple Creek. Growing season rainfall data is presented in Table 3. Performance results are shown in Table 4. Two and three year averages are presented in Tables 5 and 6.

Table 1. Seed sources and hybrid relative maturities, 2008 Organic Corn Performance Test.

Brand/Source	Address	Hybrid/Variety	Relative Maturity*
American Organic Seed & Grain	PO Box 385 Warren, IL 61087 815-266-4010 www.american-organic.com	vpD749	106
		vpX751	106
		vpD843	102
		E810	109
		E811	110
Blue River Hybrids	27087 Timber Rd Kelley, IA 50134 800-370-7979 www.blueriverorgseed.com	48B30	102
		49M37	102
		56M30	106
		57H36	107
		63H07	110
		66H54	112
		66P32	112
		69M30	113
		72H54	114

Table 1 (con't). Seed sources and hybrid relative maturities, 2008 Organic Corn Performance Test.

Brand/Source	Address	Hybrid/Variety	Relative Maturity*
Doebler's	202 Tiadaghton Ave Jersey Shore, PA 17740 570-753-3210 www.doebblers.com	N528	103
		N659	111
Great Harvest Organics	6803 E. 276 th St Atlanta, IN 46031 317-984-6685 www.greatharvestorganics.com	44X2E	104
		56V6	105
		59D9	109
		61G3	111
		61K7	111
Master Choice Hybrids	3010 State Route 146E Anna, IL 62906 618-853-6552 seedcorn.com	OG 515	98
		OG 530	105
		OG 550	110
Merit Seed Company	PO Box 205 Berlin, OH 44610 330-893-3996	O-345	88
		O-445	94
		O-514	105
		O-544	104
Pioneer	14171 Carole Drive Bloomington, IL 61704 800-950-3489 www.pioneer.com	34K77	107
		36B08	105
Prairie Hybrid Seeds	27445 Hurd Rd Deer Grove, IL 61243 800-368-0124	2241	102
		3081	104
		5157	109
		EX6359	110
		7861	112
Iowa State University	Dr. Linda Pollack Iowa State Research Foundation 310 Lab of Mechanics Ames, IA 50011 515-294-4740 www.techtransfer.iastate.edu	AR16026	NA
Michael Fields Agricultural Institute	Dr. Walter Goldstein W2493 County Rd ES PO Box 990 East Troy, WI 53120 262-642-3303 www.michaelfieldsagainst.org	GEM 52 X CH5N2	NA
		M73-2 X CH5N2	NA
		M632.M73 X CH5N2	NA
Ohio State	Dr. Richard Pratt 1680 Madison Ave Wooster, OH 44691 330-263-3701 www.oardc.ohio-state.edu	Cash	NA
		Greenfield-144	NA
		OhS5	NA
Welter Seed Co	17724 HWY 136 Onslow, IA 52321 563-485-2762 www.welterseed.com	WS 093	93
		WS EXP4528	100
		WS 4556	104
		WS 4557	105
		WS 4557 W/PROFIT	105

* Relative maturity ratings provided by companies; NA – not available

Table 2. Test plot location, cultural practices, soil test data and soil type for the 2008 Organic Corn Performance Test.

Location	Planting Date	Tillage	Weed Control	Soil Test	Harvest Date	Previous Crop	Plot Size	Soil Type
OARDC Badger Farm Near Apple Creek Wayne County Northeast Ohio	6/9/08	Plow Disc	Rotary Hoe 1X Cultivate 2X	pH: 6.0 P: 129 K: 189	11/5/08	Red Clover	10' X 25'	Canfield Silt Loam

Table 3. Precipitation data for the 2008 Organic Corn Performance Test.

Month	Wooster ----inches----
April	1.4 (3.3)
May	2.7 (3.9)
June	5.8 (3.9)
July	4.5 (4.1)
Aug	1.3 (3.6)
Sept	2.9 (3.1)
Total	18.6 (21.9)

* long term averages in parentheses

Table 4. Performance data for the 2008 Organic Corn Performance Test, Apple Creek, OH.

Brand/Source	Hybrid/Variety	Yield -bu/A-	Harv Moist -----%-----	Stk Ldg	Final Stand -plants/A-	Emergence -----%-----
AMERICAN ORGANIC SEED	vpD843	74.4	24.6	98	23075	71
AMERICAN ORGANIC SEED	vpD749	42.6	26.7	100	24700	79
AMERICAN ORGANIC SEED	E810	91.1	26.5	83	27400	87
AMERICAN ORGANIC SEED	E811	93.5	30.9	38	27000	78
AMERICAN ORGANIC SEED	vpX751	63.7	24.3	83	24600	74
BLUE RIVER HYBRIDS	48B30	92.8	20.5	39	21875	65
BLUE RIVER HYBRIDS	49M37	99.7	18.3	38	22850	70
BLUE RIVER HYBRIDS	56M30	112.5	23.9	50	25450	80
BLUE RIVER HYBRIDS	57H36	118.3	24.4	29	27225	83
BLUE RIVER HYBRIDS	63H07	134.3	25.1	21	20000	64
BLUE RIVER HYBRIDS	66H54	98.4	25.1	57	23825	78
BLUE RIVER HYBRIDS	66P32	101.5	26.5	5	15475	50
BLUE RIVER HYBRIDS	69M30	83.8	25.8	46	20225	64
BLUE RIVER HYBRIDS	72H54	104.6	28.8	38	26025	83
DOEBLER'S	N528	105.9	22.3	38	27625	86
DOEBLER'S	N659	100.0	29.9	32	25150	78
GREAT HARVEST ORGANICS	44X2E	105.4	21.4	18	23925	79
GREAT HARVEST ORGANICS	56V6	125.1	23.9	20	25000	79
GREAT HARVEST ORGANICS	59D9	130.8	25.3	15	20325	63
GREAT HARVEST ORGANICS	61K7	100.3	28.6	28	21125	72
GREAT HARVEST ORGANICS	61G3	123.7	26.2	29	22175	70
MASTER CHOICE HYBRIDS	OG 515	82.2	17.7	35	23125	71
MASTER CHOICE HYBRIDS	OG 530	96.3	29.2	15	19775	67
MASTER CHOICE HYBRIDS	OG 550	104.6	31.3	11	20525	68
MERIT	O-345	83.3	15.0	75	24275	76
MERIT	O-445	97.8	17.5	37	18925	64
MERIT	O-544	113.4	22.2	11	19450	65
MERIT	O-514	120.6	22.5	31	22225	70
PIONEER	34K77	135.9	22.6	45	25300	83
PIONEER	36B08	107.1	19.5	38	18775	71
PIONEER HAND WEEDED	36B08	107.7	19.5	21	22875	78
PRAIRIE HYBRID SEEDS	2241	85.0	22.3	49	20175	66
PRAIRIE HYBRID SEEDS	3081	104.6	22.7	36	21275	67
PRAIRIE HYBRID SEEDS	5157	93.1	28.2	78	26800	84
PRAIRIE HYBRID SEEDS	EX6359	89.6	30.3	20	23075	78
PRAIRIE HYBRID SEEDS	7861	120.6	25.4	38	25775	83
WELTER SEED CO	WS093	87.2	16.7	48	21100	74
WELTER SEED CO	WS EXP4528	97.2	22.6	23	23225	79
WELTER SEED CO	WS 4556	82.1	24.1	43	16600	55
WELTER SEED CO	WS4557	103.7	23.6	33	20350	64
WELTER SEED CO	WS4557 PROFIT	117.4	23.2	29	21425	70
MICHAEL FIELDS*	GEM 52 X CH5N2	71.9	22.8	73	24800	76
MICHAEL FIELDS*	M73-2 X CH5N2	60.0	25.3	90	25925	83
MICHAEL FIELDS*	M632.M73 X CH5N2	58.6	25.7	98	24050	78
OP/ISU**	AR16026	55.2	28.6	48	22525	71
OP/OSU**	CASH	55.2	32.8	43	17050	53
OP/OSU**	GREENFIELD-114	63.9	29.4	80	24225	81
OP/OSU**	OhS5	31.7	28.8	98	24075	76
HIGH		135.9	32.8	100	27625	87
AVERAGE		94.3	24.6	45	22766	73
LOW		31.7	15.0	5	15475	50
LSD (0.10)		15.4	2.4	23	4007	13

* Open Pollinated Varietal Cross

** OP – Open Pollinated Variety

Table 5. Two year performance data, Organic Corn Performance Test, Apple Creek, OH 2007-2008.

Brand/Source	Hybrid/Variety	Yield -Bu/A-	Harv Moist -----%-----	Stk	Final Stand -Plants/A-
				Ldg	
BLUE RIVER HYBRIDS	48B30	100.8	20.9	22	22205
BLUE RIVER HYBRIDS	49M37	92.8	19.9	21	23488
BLUE RIVER HYBRIDS	66P32	110.8	25.9	4	19005
DOEBLER'S	N528	101.0	21.6	21	22944
DOEBLER'S	N659	106.7	28.5	26	24052
GREAT HARVEST ORGANICS	44X2E	109.5	20.8	12	22685
GREAT HARVEST ORGANICS	56V6	119.9	22.7	13	22804
GREAT HARVEST ORGANICS	61K7	109.4	28.0	18	22161
MERIT	O-345	96.4	16.7	41	24243
PIONEER	34K77	138.7	22.4	24	25676
PIONEER	36B08	117.5	20.7	22	19859
PIONEER HAND WEEDED	36B08	130.3	20.7	12	22926
PRAIRIE HYBRID SEEDS	3081	112.1	22.1	21	19936
PRAIRIE HYBRID SEEDS	7861	118.7	24.7	22	24783
OP*	AR16026	59.9	27.7	29	21566
OP	CASH	63.3	29.9	27	16232
OP	GREENFIELD-114	60.9	27.7	71	21286
OP	OhS5	44.4	27.4	75	21713

* OP – Open Pollinated Variety

Table 6. Three year performance data, Organic Corn Performance Test, Apple Creek, OH 2006-2008

Brand/Source	Hybrid/Variety	Yield -Bu/A-	Harv		Final Stand -Plants/A-
			Moist -----%-----	Stk Ldg	
BLUE RIVER HYBRIDS	49M37	99.2	21.7	15	22985
BLUE RIVER HYBRIDS	66P32	106.3	26.9	5	19952
DOEBLER'S	N659	106.7	28.8	19	22959
MERIT SEED	O-345	96.7	17.7	29	22736
PRAIRIE HYBRID SEEDS	3081	123.1	22.8	15	20607
PRAIRIE HYBRID SEEDS	7861	111.6	25.0	22	24086

Acknowledgements. This study was supported by a 2006 USDA North Central Region Sustainable Agriculture Research and Education Grant.