

# West Central Research and Outreach Center (WCROC) - Morris, MN

## 2018 Organic Corn Performance Trial

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This trial was conducted at two sites, one at the West Central Research and Outreach Center (WCROC), Morris, and the other at the [Southwest Research and Outreach Center \(https://swroc.cfans.umn.edu/\)](https://swroc.cfans.umn.edu/), Lamberton, MN. At each location, there were two plots: one managed by organic practices and the other was in conventional production. The Morris conventional trial was corn in 2017 and received 160-75-75-15 of fertilizer in the fall 2017. The organic trial was planted in a field that had previously been alfalfa for two years; manure was applied in the fall of 2017.

Weed control was excellent at the Morris organic site. No differences in population were noted between plots. Weed control methods for the organic test at Morris included one pass of a flex tine harrow at three inches, followed by one pass of row cultivation. Weed control methods for the organic test at Lamberton was two passes of a rotary hoe followed by one pass of row cultivation and hand weeding.

Plots were four rows wide with 30-inch spacing, with a seeding rate of 35,000 seeds per acre. The Morris organic trial was planted May 21, 2018 and the conventional was planted May 17, 2018. The organic trial was harvested November 3, 2018 and the conventional trial was harvested October 27, 2018.

Both Lamberton trials were planted on May 18; the conventional trial was harvested on October 17, 2018 and the organic trial was harvested on October 1, 2018. Excessive rain fall during the growing year at Morris and Lamberton resulted in variable results and high LSD values.

Each trial was a randomized complete block test with three replications. Data was analyzed by using Statistx version 10 software.

### Morris Organic Trial

The ANOVA P value for yield was .002; LSD of .1 is reported. LSD .1 = 22.8 bu/acre.

Line	Maturity Day	Company	Yield Bu/Acre	LSD 0.1	Moisture %
O.73-87N	87	Viking	242.36	A	29.6
27B16	88	Blue River	238.12	A	23.4
21A10	85	Blue River	231.44	AB	24.0
O.77-85N	85	Viking	231.26	AB	24.0
O.31-92N	92	Viking	227.38	AB	26.0
O.24-95N	95	Viking	226.84	AB	25.3
33A16	92	Blue River	224.1	AB	26.9
35M70	94	Blue River	222.38	ABC	28.0
O.44-86N	86	Viking	209.63	BC	21.7
26A17	88	Blue River	200.47	C	22.0

## Morris Conventional Trial

The ANOVA P value for yield was .01; LSD of .1 is reported. LSD .1 = 27.9 bu/acre.

Line	Maturity Day	Company	Yield Bu/Acre	LSD 0.1	Moisture %
o.69-99	95	Viking	215.3	A	21.8
o.71-97	86	Viking	195.7	AB	19.1
27B16	92	Blue River	193.3	AB	21.0
o.58-85	87	Viking	174.5	BC	19.9
o.82-95	92	Viking	172.4	BC	20.0
33A16	85	Blue River	170.5	BC	18.9
o.51-04	85	Viking	167.9	BCD	17.5
34C17	88	Blue River	163.6	CD	21.9
40R73	88	Blue River	153.7	CD	20.6
38G54	94	Blue River	141.4	D	16.8

## Lamberton Organic Trial

The ANOVA P value for yield was .05 and a LSD of .1 is reported. LSD .1 = 27.1 bu/acre.

Line	Maturity Day	Company	Yield Bu/Acre	LSD 0.1	Moisture %
27B16	88	Blue River	165.6	A	27.1
O.24-95N	95	Viking	151.3	AB	23.9
21A10	85	Blue River	150.1	ABC	22.2
O.77-85N	85	Viking	147.0	ABCD	23.7
35M70	94	Blue River	135.2	BCDE	21.0
O.31-92N	92	Viking	134.7	BCDE	25.8
O.44-86N	86	Viking	131.5	BCDE	20.9
33A16	92	Blue River	123.3	CDE	21.2
O.73-87N	87	Viking	123.2	DE	21.8
26A17	88	Blue River	118.7	E	19.1

## Lamberton Conventional Trial

The ANOVA P value for yield was .004 and a LSD of .1 is reported. LSD .1 = 33.8 bu/acre.

Line	Maturity Day	Company	Yield Bu/Acre	LSD 0.1	Moisture %
O.73-87N	87.0	Viking	208.0	A	18.3
O.44-86N	86.0	Viking	191.6	AB	17.3
21A10	85.0	Blue River	190.1	AB	17.4
35M70	94.0	Blue River	189.3	AB	17.2
33A16	92.0	Blue River	176.6	BC	20.0
27B16	88.0	Blue River	173.4	BC	18.8
O.24-95N	95.0	Viking	172.1	BC	18.6
26A17	88.0	Blue River	163.1	C	19.2
O.31-92N	92.0	Viking	158.1	C	19.6
O.77-85N	85.0	Viking	157.8	C	17.7

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[Map to the WCROC](#)

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