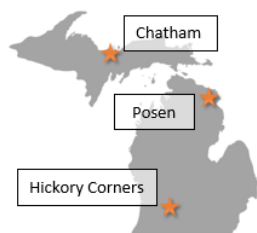


## SPRING OAT & BARLEY VARIETY TRIAL – 2020 YIELD RESULTS

J. DeDecker, D. Baas, B. Wilke, C. Kapp, & C. Tollini, with MCIA & Wilk Farms



Michigan State University conducted spring oat and barley variety trials in 2020 with support from the Michigan Crop Improvement Association (MCIA). Locations included Chatham, MI at the MSU Upper Peninsula Research and Extension Center, on-farm in Posen, MI and the W.K. Kellogg Biological Station in Hickory Corners, MI. These trials brought a national oat variety testing program to

Michigan called the Uniform Early Open Oat Nursery (USDA), as well as incorporating commercial oat and barley entries from MCIA, which we report on below. This new research represents an expanded effort to understand oat and barley adaptability and performance in Michigan for both traditional markets and emerging opportunities in craft malting, milling, and distilling. Grain quality results are forthcoming in the next few weeks, and will be reported when available.

**Table 1: MCIA Oat Performance at Chatham, MI**

Variety	Yield (bu/a @13.5%)	Sig.	TW (lbs/bu)	Heading Date	Height (in)	Disease (0-5)	Lodging (0-9)
Antigo	85.95	abcdef	38.90	3-Jul	26.67	2.67	3.33
Badger	96.39	abcd	35.57	3-Jul	25.00	3.00	5.33
Beta Gene	94.77	abcd	34.23	9-Jul	26.00	1.67	1.33
Deon	96.73	abcd	37.47	10-Jul	31.00	1.00	2.00
Esker	96.40	abcd	33.63	6-Jul	26.33	2.67	7.00
Esker 2000	107.13	a	34.33	5-Jul	30.00	2.67	4.00
Excel	94.86	abcd	34.87	6-Jul	26.67	2.00	7.67
Goliath	91.79	abcde	36.43	11-Jul	38.00	1.33	7.67
Hayden	90.66	abcde	36.47	10-Jul	29.33	2.00	7.33
Horsepower	91.10	abcde	33.50	6-Jul	27.33	2.67	9.00
Ida	77.93	bcdef	32.00	10-Jul	30.00	3.00	6.00
Jerry	73.24	cdef	36.90	2-Jul	30.67	3.67	8.33
Natty	97.70	abc	36.80	5-Jul	34.67	1.67	8.33
ND Heart	61.79	f	34.07	7-Jul	32.67	2.33	1.67
Newburgh	87.62	abcde	31.47	11-Jul	29.33	2.33	7.67
Ogle	86.08	abcdef	32.30	6-Jul	29.00	2.67	4.00
Pearl	89.59	abcde	36.07	10-Jul	29.33	2.00	6.00
Reins	97.31	abcd	37.17	5-Jul	22.67	3.00	3.67
Rockford	72.68	cdef	33.87	10-Jul	31.33	3.00	8.00
Rushmore	104.57	ab	38.37	10-Jul	29.67	1.00	6.00
Saber	87.84	abcde	34.87	3-Jul	27.00	3.00	4.33
Saddle	80.28	abcdef	35.20	1-Jul	23.33	2.00	0.33
Shelby 427	68.91	def	36.40	5-Jul	30.00	2.00	9.00
Souris	72.02	cdef	34.43	9-Jul	25.67	3.33	6.00
Streaker	49.58	g	48.23	9-Jul	33.67	1.33	7.00
Sumo	66.64	ef	36.83	30-Jun	28.00	2.33	0.00
Warrior	76.61	bcdef	33.10	6-Jul	26.33	2.00	0.33
<b>Average</b>	<b>85.04</b>		<b>35.68</b>	<b>6-Jul</b>	<b>28.88</b>	<b>2.31</b>	<b>5.23</b>

## TRIAL DETAILS

### Design:

Rectangular lattice with three replications

### Planting date:

Chatham – May 6<sup>th</sup>  
 Posen – April 27<sup>th</sup>  
 Hickory Corners – April 6<sup>th</sup>  
 Seeded at 28 seeds/ft<sup>2</sup>

### Fertility:

50 lbs/acre actual nitrogen and 21 lbs/acre sulfur across all locations at planting, plus 60 lbs/a potash at Hickory Corners.

### Herbicide:

1qt/acre Bromox 2E at Chatham  
 2 pt/acre Broclean at Posen  
 No herbicide at Hickory Corners

### Fungicide (barley):

8.2 oz/ac Prosaro at Chatham and Posen at 95% anthesis  
 13.7 oz/ac Miravis Ace at Hickory Corners a 95% anthesis

### Harvest Date:

Chatham – August 25-26<sup>th</sup>  
 Posen – August 20<sup>th</sup>  
 Hickory Corners- July 21<sup>st</sup> (barley), July 29<sup>th</sup> (oats)

### Pest Notes:

- Cereal leaf beetle, crown rust and lodging in Chatham oats
- Leaf disease in Posen oats
- Spot blotch in Chatham and Posen barley

**Table 2: MCIA Oat Performance  
at Posen, MI**

Variety	Yield (bu/a @13.5%)	Sig.	TW (lbs/bu)	Heading Date	Disease (0-5)
Antigo	15.77	ab	35.40	29-Jun	2.50
Badger	14.04	ab	26.23	1-Jul	3.50
Beta Gene	16.01	ab	28.33	6-Jul	2.50
Deon	22.11	ab	28.93	10-Jul	2.00
Esker	24.43	a	29.93	6-Jul	2.00
Esker 2000	23.32	ab	30.50	6-Jul	2.33
Excel	15.02	ab	26.90	5-Jul	1.67
Goliath	16.47	ab	23.27	12-Jul	2.17
Hayden	22.26	ab	31.47	8-Jul	1.83
Horsepower	20.72	ab	32.23	6-Jul	2.00
Ida	11.22	ab	23.80	11-Jul	2.67
Jerry	3.14	b	10.07	2-Jul	3.83
Natty	21.89	ab	31.50	6-Jul	2.50
ND Heart	15.70	ab	28.30	9-Jul	3.00
Newburgh	12.16	ab	24.73	8-Jul	2.00
Ogle	11.19	ab	29.05	6-Jul	2.67
Pearl	10.80	ab	24.30	15-Jul	3.67
Reins	15.64	ab	33.73	3-Jul	2.83
Rockford	7.77	ab	17.80	12-Jul	3.00
Rushmore	6.55	ab	17.67	11-Jul	3.33
Saber	16.83	ab	32.53	2-Jul	2.17
Saddle	15.84	ab	28.80	29-Jun	3.00
Shelby 427	25.56	a	33.70	6-Jul	2.00
Souris	15.16	ab	29.95	12-Jul	3.33
Streaker	6.87	ab	33.00	10-Jul	3.50
Sumo	10.58	ab	32.90	28-Jun	3.67
Warrior	11.12	ab	29.03	6-Jul	3.00
<b>Average</b>	<b>15.12</b>		<b>27.93</b>	<b>6-Jul</b>	<b>2.69</b>

**Table 3: MCIA Oat Performance  
at Hickory Corners, MI**

Variety	Yield (bu/a @13.5%)	Sig.	TW (lbs/bu)
Antigo	74.05	abc	34.80
Badger	86.20	ab	31.57
Beta Gene	78.20	abc	30.57
Deon	64.69	bcd	32.33
Esker	84.91	ab	29.50
Esker 2000	86.34	ab	30.53
Excel	72.29	abc	29.83
Goliath	82.10	abc	32.27
Hayden	75.90	abc	33.07
Horsepower	74.62	abc	30.70
Ida	74.57	abc	30.93
Jerry	76.83	abc	32.97
Natty	89.86	a	32.00
ND Heart	68.15	abcd	30.50
Newburgh	72.88	abc	30.87
Ogle	74.29	abc	28.93
Pearl	73.11	abc	33.50
Reins	83.51	ab	33.33
Rockford	52.28	de	32.97
Rushmore	91.05	a	34.47
Saber	74.71	abc	30.43
Saddle	84.70	ab	32.57
Shelby 427	75.89	abc	33.20
Souris	70.74	abc	32.33
Streaker	37.23	f	43.70
Sumo	69.73	abc	33.10
Warrior	60.17	cd	31.30
<b>Average</b>	<b>73.32</b>		<b>32.43</b>



**Table 4: MCI A Barley Performance at Chatham, MI**

Variety	Yield (bu/a @13.5%)	Sig.	TW (lbs/bu)	Heading Date	Disease (0-5)
Bowers	56.80	a	43.77	7-Jul	2.67
Innovation	57.97	a	44.17	4-Jul	2.67
LCS Odyssey	28.93	c	41.37	17-Jul	4.00
ND Genesis	45.89	abc	44.70	12-Jul	2.33
Rasmussen	50.44	ab	46.10	6-Jul	3.00
Spartan	34.66	bc	45.00	29-Jun	4.00
Tradition	48.21	abc	46.70	4-Jul	2.67
<b>Average</b>	<b>46.12</b>		<b>44.54</b>	<b>7-Jul</b>	<b>3.04</b>



Figure 1. Chatham MCI A barley plots

**Table 5: MCI A Barley Performance at Posen, MI**

Variety	Yield (bu/a @13.5%)	Sig.	TW (lbs/bu)	Heading Date	Disease (0-5)
Bowers	27.08	a	38.37	5-Jul	2.50
Innovation	36.60	a	42.10	2-Jul	2.83
LCS Odyssey	23.32	a	41.15	8-Jul	3.00
ND Genesis	37.25	a	41.57	3-Jul	2.83
Rasmussen	19.47	a	39.03	5-Jul	2.83
Spartan	42.21	a	42.57	4-Jul	2.67
Tradition	19.36	a	40.00	3-Jul	3.00
<b>Average</b>	<b>29.33</b>		<b>40.68</b>	<b>4-Jul</b>	<b>2.81</b>



Figure 2. Chatham MCI A oat plots

**Table 6: MCI A Barley Performance at Hickory Corners, MI**

Variety	Yield (bu/a @13.5%)	Sig.	TW (lbs/bu)	Heading Date	Disease (0-5)
Bowers	46.70	ab	41.97	NA	0
Innovation	47.25	ab	42.63	NA	0
LCS Odyssey	51.66	ab	44.80	NA	0
ND Genesis	56.88	a	38.47	NA	0
Rasmussen	57.68	a	44.37	NA	0
Spartan	43.89	b	45.60	NA	0
Tradition	43.93	b	41.90	NA	0
<b>Average</b>	<b>49.72</b>		<b>42.82</b>	<b>NA</b>	<b>0</b>



Figure 3. Harvesting barley plots in Chatham