

## Organic Oat Variety Trial, Fertile—Polk County

**Cooperator:** Jim and Pat Todahl  
**Nearest Town:** Fertile  
**Soil Type:** Flaming sandy loam  
**Tillage:** Fall chiseled, spring cultivated  
**Previous Crop:** Soybean  
**Variety:** See table  
**Planting Date:** May 1, 2003  
**Row Width:** 8 inches  
**Fertilizer:** 3 ton/a turkey manure, fall 2002  
**Weed Control:** Harrowing 3 times  
**Herbicide:** None, field is certified organic  
**Harvest Populations:** See table  
**Harvest Date:** August 13, 2003  
**Experimental Design:** Randomized complete block with 4 replications

### Purpose of Study:

To evaluate yield, test weight, crop height and 1,000-seed weight of oat varieties grown under a certified organic production system.

### Results:

Differences in yield, test weight, crop height and 1,000-seed weight were found in this study. The top four yielding varieties were significantly greater yielding than the four lowest yielding varieties. Buff, a hulless variety, had the highest test weight and the lowest seed weight.

Variety	Yield <sup>1</sup>	Test Weight	1,000-seed Weight	Plant Height	Plant <sup>2</sup> Population
	(bu/a)	(lb/bu)	(gram)	(inches)	(million/a)
Morton	112.4	36.5	17.4	44.4	0.63
HiFi	110.6	36.8	17.2	45.0	0.65
Youngs	107.6	35.9	22.0	45.0	0.66
Ebeltoft	107.2	35.3	18.2	38.9	0.68
Wabasha	97.4	35.1	15.6	42.1	0.64
Richard	93.4	35.0	17.4	42.7	0.56
Sesqui	92.3	36.7	15.6	40.3	0.61
Leonard	86.2	34.5	15.2	41.7	0.50
Hytest	72.9	39.2	18.2	44.5	0.63
Buff	65.5	42.6	13.4	38.5	0.58
LSD 0.05	10.2	1.5	1.4	2.1	0.10

<sup>1</sup> Corrected to 14% moisture.

<sup>2</sup> Stand counts were taken June 6, 2003.

## Organic Oat Variety Trial, Comstock—Clay County

**Cooperator:** Lynn Brakke  
**Nearest Town:** Comstock  
**Soil Type:** Fargo Clay  
**Tillage:** Fall chiseled, spring cultivated  
**Previous Crop:** Soybean  
**Planting Date:** The entire plot area was under seeded with alfalfa on April 28, 2003. Oat was seeded April 30, 2003  
**Row Width:** 9 inches  
**Fertilizer:** 900 lbs/a of “Cluck” 4-4-2 was applied fall 2002  
**Herbicide:** None, field is certified organic  
**Populations:** See table  
**Harvest Date:** August 12, 2003  
**Experimental Design:** Randomized complete block with 4 replications

**Purpose of Study:**  
 To evaluate yield, test weight, 1,000-seed weight, crop height and in-season alfalfa height of different oat varieties grown under a certified organic production system.

**Results:**  
 Differences in yield, test weight, 1,000-seed weight, crop height and alfalfa height were found in this study. Morton was significantly greater yielding than the four lowest yielding varieties. Buff, a hulless variety, had the highest test weight but the lowest seed weight. Although there were differences in alfalfa height during the season there is no correlation between the height of the alfalfa and the oat yield.

Variety	Yield <sup>1</sup> (bu/a)	Test Weight (lb/bu)	1,000-seed Weight (gram)	Plant Height (inches)	Plant <sup>2</sup> Population (million/a)	Alfalfa <sup>3</sup> Height (inches)
<b>Morton</b>	139.3	39.7	19.6	50.9	1.44	10.5
<b>Leonard</b>	138.3	37.5	17.6	45.4	1.55	12.0
<b>Sesqui</b>	135.7	39.7	18.2	44	1.46	11.5
<b>HiFi</b>	128.9	38.6	18.4	47	1.31	10.5
<b>Ebeltoft</b>	127.4	36.1	19.4	42.6	1.35	12.0
<b>Wabasha</b>	124.3	38.3	18.6	43	1.50	11.5
<b>Youngs</b>	116.5	36.2	21.2	50	1.35	12.0
<b>Richard</b>	115.8	38.0	19.4	47	1.36	10.0
<b>Buff</b>	114.5	47.1	15.4	42.8	1.44	11.0
<b>Hytest</b>	96.9	42.4	21.2	47.1	1.50	9.5
<b>LSD 0.05</b>	16.4	0.8	0.8	2.6	N.S.	1.6

<sup>1</sup> Corrected to 14% moisture.

<sup>2</sup> Stand counts were taken May 22, 2003.

<sup>3</sup> Alfalfa height was measured, in season, on June 25, 2003.