Source: 2004 On-Farm Cropping Trials Northwest and West Central Minnesota
U of MN Extension Service, published January 2005

Organic Oat Variety Evaluation, 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: April 30, 2004
Row Width: 8 inches
Fertilizer: 3 ton/a turkey manure, fall 2003
Weed Control: Harrowing 3 times
Herbicide: None, field is certified organic
Harvest Populations: See table
Harvest Date: September 1, 2004
Experimental Design: Randomized complete block with 4 replications

Purpose of Study:

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

Results:

Differences in yield, test weight, 1,000 seed weight, and plant height were found in this study. Ebeltoft significantly outyielded many of the other tested oat varieties, but did not differ significantly in yield from Sesqui, HiFi, and Leonard. Hytest and Buff, a hull-less variety, had the highest test weight. Buff had the lowest 1,000- seed weight (no hulls).

Variety	Yield[1] (bu/a)	Test Weight (lb/bu)	1,000-seed Weight (gram)	Plant Height (inches)	Plant[2] Population (million/a)	2003-2004 Yield[1] (bu/a)
Ebeltoft	130.9	34.0	30.3	35.1	1.20	119.1
Sesqui	123.2	34.5	28.5	39.4	1.32	107.8
HiFi	120.5	34.5	28.2	41.3	1.38	115.6
Leonard	115.9	31.3	28.7	38.6	1.24	101.1
Morton	114.9	33.3	30.5	41.3	1.29	113.7
Richard	113.6	33.1	28.6	40.6	1.38	103.5
Wabasha	112.9	34.2	26.7	36.3	1.42	105.2
Youngs	111.1	32.7	35.5	41.8	1.15	109.4
Hytest	91.0	39.7	32.4	42.5	1.45	82.0
Buff[3]	71.8	39.1	23.1	36.5	1.15	68.7
LSD 0.05	15.1	2.5	3.2	2.2	N.S.	

[1] Corrected to 14% moisture.
[2] Stand counts were taken after the third harrowing.
[3] Buff is a hull-less variety.

Partnership: NDSU
Funding: SARE Grant and Northwest Regional Partnership

For additional information:
Hans Kandel and Paul Porter

Source: 2004 On-Farm Cropping Trials Northwest and West Central Minnesota
U of MN Extension Service, published January 2005

Organic Oat Variety Evaluation, 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 24, 2004. Oat was seeded April 26, 2004
Row Width: 9 inches
Fertilizer: 900 lbs/a of "Cluck" 4-4-2 was applied fall 2003
Herbicide: None, field is certified organic
Populations: See table
Harvest Date: August 18, 2004
Experimental Design: Randomized complete block with 4 replications

Purpose of Study:
To evaluate spring oat varieties for yield, test weight, 1,000-seed weight, and plant height when grown under a certified organic production system.

Results:
Differences in yield, testweight, 1,000-seed weight and plant height were found in this study. Lenoard and Sesqui yielded significantly more than Richard, Youngs, Morton, Hytest and Buff. Buff a hull-less variety, had the highest test weight and lowest 1,000 seed weight.

Variety	Yield[1] (bu/a)	Test Weight (lb/bu)	1,000-seed Weight (gram)	Plant Height (inches)	Plant[2] Population (million/a)	Oat[3] Heads (million/a)	2003-2004 Yield[1] (bu/a)
Leonard	128.2	36.3	30.4	42.0	0.68	0.98	133.3
Sesqui	128.2	38.6	28.4	40.3	0.77	0.91	132.0
Wabasha	122.0	36.8	29.5	41.3	0.82	0.92	123.2
HiFi	117.9	37.7	30.4	42.6	0.79	1.24	123.4
Ebeltoft	111.9	35.0	33.3	37.8	0.62	0.84	119.7
Richard	107.8	37.2	33.4	43.9	0.72	0.92	111.8
Youngs	103.8	36.5	39.6	44.9	0.77	1.17	110.2
Morton	95.7	38.4	31.7	44.4	0.84	1.12	117.5
Hytest	90.1	41.7	35.3	42.0	0.82	1.03	93.5
Buff[4]	83.6	47.7	24.9	36.9	0.63	0.99	99.1
LSD 0.05	18.5	1.2	1.2	2.0	N.S.	N.S.	

[1] Corrected to 14% moisture.
[2] Stand counts were taken one month after seeding.
[3] Head count was taken on 7/14/04
[4] Buff is a hull-less variety.

Partnership: NDSU
Funding: SARE Grant and Northwest Regional Partnership

For additional information:
Hans Kandel and Paul Porter