

Organic Oats Variety Evaluation

Project duration: May 2021 – October 2021

Objective: To evaluate oat varieties for organic production.

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Background

Research suggests that selection of cereal crops specific to organic agriculture should be conducted on organically managed land [1,2]. Conventional management systems may mask or confound certain plant characteristics, resulting in selection of sub-optimal cultivars for organic production systems. The trial was grown on certified organic land belonging to a local organic producer.

Results

The majority of the entries in this test are unregistered varieties. The yield and plant heights (Table 1) are provided for reference and to allow interested producers to track the entries in the future. The low yields and short plant heights are due to low precipitation and high competition resulting from regrowth of the alfalfa green manure crop. The variability between replications was high and results should be interpreted with caution.

Table 1: Varieties, mean yield (bu/ac), mean height (cm), LSD and %CV

Variety	Mean (bu/ac)	Height (cm)
CDC Endure	11.43	34.33
17P01-BA	11.08	40.00
CDC Arborg	8.78	43.00
17P12-BT	8.70	36.67
16P02-AJ	8.18	38.67
17P12-AZ	8.04	39.00
AC Morgan	7.74	42.00
Summit	7.72	38.33
AAC Oravena	7.21	43.00
CS Camden	6.55	38.00
17P03-BJ	6.04	40.67
17P04-BL	5.89	37.33
17P12-BQ	5.60	35.67
17P12-BS	5.34	30.67
CDC Skye	5.25	35.67
17P03-BA	5.20	30.67
17P05-AU	4.97	39.33
17P03-BS	4.68	35.33
17P03-BL	4.56	40.33
17P03-BV	4.20	31.33
AAC Kongsore	4.05	41.67
17P12-BZ	4.01	36.00
17P04-BJ	2.89	33.00
13P13-AQ	2.55	32.67
16P02-AM	2.30	33.33
LSD	6.13	7.46
% CV	63.52	14.24

Materials and methods

Experimental Design: Random Complete Block Design
Entries: 25 varieties
Seeding: May 12
Harvest: Aug 26

Data collected Date collected
Height: Aug 20
Lodging: Aug 26
Yield: Aug 27
Moisture: Aug 27

Agronomic info
Previous year's crop: Alfalfa
Soil Type: Erickson Clay Loam
Landscape: Rolling with trees to the south
Seedbed preparation: Hoe tillage in fall and spring

Table 3: Spring 2021 Soil Test

	Available
N	103 lb/ac
P	16 ppm
K	305 ppm

References

- [1] Reid, T., Yang, R.-C., Salmon, D. and Spaner, D. (2009). Should spring wheat breeding for organically managed systems be conducted on organically managed land? *Euphytica* 169:239-252.
- [2] Dalhousie University, Organic Agriculture Centre of Canada. The crafting of organic oats.
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