

Organic Oats Variety Evaluation

Project duration: May 2019 – October 2019

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. Organic management conditions were used for the trial at PCDF, although the site was not certified organic.

Materials & Methods

Experimental Design: Random Complete Block Design

Entries: 25 varieties

Seeding: May 13

Harvest: Sept 14

Table 1: Varieties included at Roblin 2019

10P02-14-CH	11P15-15-MW	11P01-15-AS	11P10-16-KS	09P02-15-TM
11P06-15-KS	11P05-15-ML	AC Morgan	11P22-16-JM	OT8007
13P12A-AE	11P21-16-AS	11P22-16-FB	CS Camden	AAC Oravena
11P17-16-JM	CDC Dancer	11P20-15-TM	13P13-AQ	11P07-16-KS
Summit	09N021-13-MW	08P12-14-JD	11P19-16-FB	AAC Kongsore

Data collected

Maturity: Aug 19-26

Height: Aug 11-15

Yield: Sept 17

Moisture: Sept 17

Agronomic info

Previous year's crop: Summer fallow

Soil Type: Erickson Loam Clay

Landscape: Rolling with trees to the east

Seedbed preparation: Heavy harrowed twice

Table 2: Spring 2019 Soil Test

	Available
N	143 lb/ac
P	21 ppm
K	274 ppm

Results

Ongoing testing for oat performance under organic growing conditions has resulted in the development of two new varieties especially suited for organic cultivation, namely AAC Oravena and AAC Kongsore. AAC Oravena is the first oat cultivar developed under organic management. Both varieties have good yield and lodging resistance, and are licensed to Grain Millers Canada Corp.

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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