

Manitoba Agriculture Oat Seeding Rate

Project duration: May 2017 – August 2018

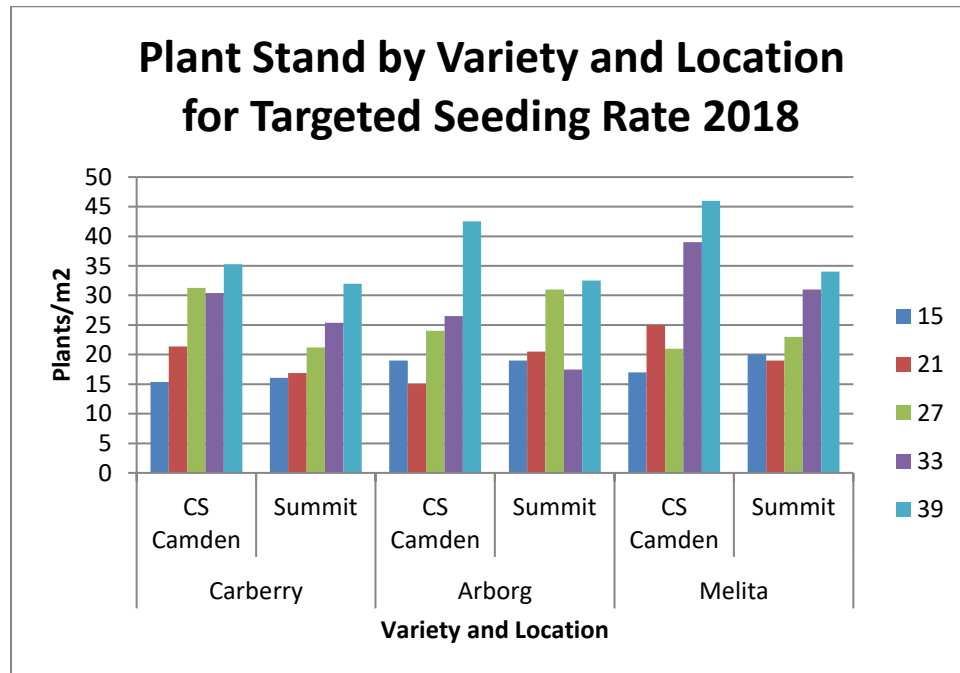
Objectives: To determine if optimum seeding rates differ by crop type and for individual varieties and to assist producers with the annual question of what target plant stands and seeding rates to aim for regarding newer spring cereal varieties. This project was conducted at four Manitoba Agriculture diversification centres in Manitoba including at Carberry, Arborg, Roblin and Melita.

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Results

The cumulative results of the two years for this project will be available at a later date. PCDF will post the link when it becomes available. This report concerns only the structure of the trial for 2018, but results are illustrated across the four Diversification Centres in Roblin, Carberry, Melita and Arborg.

Figure 1: Diversification Centres comparative oats plant stand by variety and by seeding rate in 2018



Note: Roblin data excluded from plant stand due to error in plant counting

Figure 2: Yield demonstrated for variety CS Camden by seeding rate in 2018

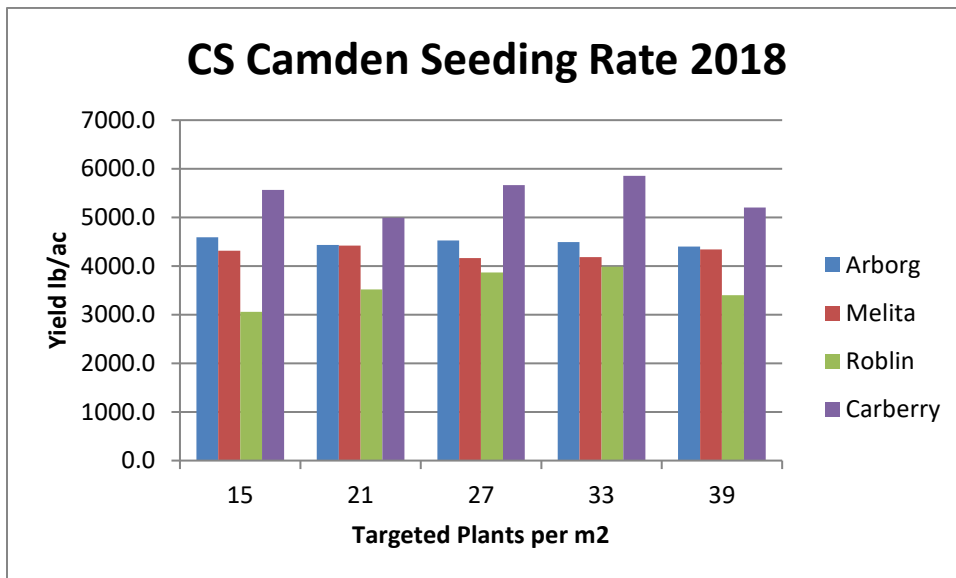
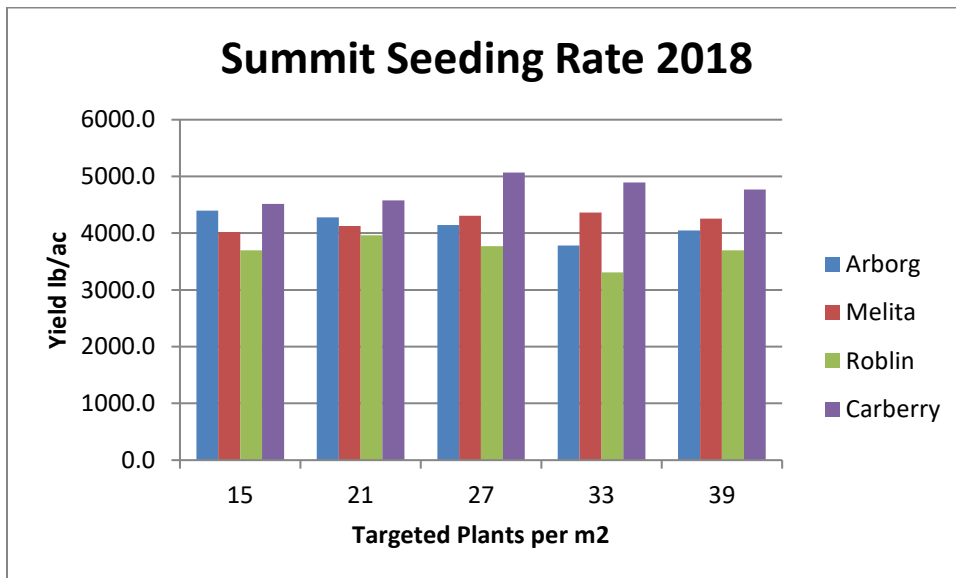


Figure 3: Yield demonstrated for variety Summit by Seeding Rate in 2018



Background

This project was developed and implemented by Manitoba Agriculture.

Experimental Design: Random Complete Block Design

Entries: 10 entries for each cereal

Seeding: May 15
 Harvest: Aug 24

Table 1: Target Plant Populations

| | | | | | |
|--------------------------|----|----|----|----|----|
| (Plants/m ²) | 15 | 21 | 27 | 33 | 39 |
|--------------------------|----|----|----|----|----|

Roblin Data collected and date collected

Emergence: May 22
 Emergence population: June 9
 % Seed mortality: June 9
 Heading (50%): July 5
 Head counts: July 11
 Lodging: Aug 24
 Yield: Aug 24
 Moisture: Aug 24

Roblin Agronomic info

Previous year's crop: Oat barley silage
 Soil Type: Erickson Loam Clay
 Landscape: Rolling with trees to the east
 Seedbed preparation: Heavy harrowed twice

Table 2: Roblin Spring 2018 Soil Test

| Available | |
|-----------|-----------|
| N | 54 lb/ac |
| P | 13 ppm |
| K | 228 ppm |
| S | 118 lb/ac |

Table 3: Roblin Added N and P

| Blend | Blend (actual lbs/ac) | Actual lbs N | Actual lbs P |
|-----------|-----------------------|--------------|--------------|
| 46-0-0 | 95.4 | 46 | 0 |
| 11-52-0-0 | 19.23 | 2.12 | 10 |
| Total | - | 48.12 | 10 |

N side-banded; P Banded with seed

Table 4: Roblin Pesticide Application

| Crop stage | Date | Product | Rate |
|-------------|---------|-------------|-----------|
| Pre-emerge | May 19 | RoundUp | 0.67 L/ac |
| | | Heat | 28.4g/ac |
| In-crop | July 13 | Prestige XC | 0.13 L/ac |
| Desiccation | Aug 17 | RoundUp | 0.94 L/ac |