

Agriculture Agri Food Canada Corn Variety Evaluation

Project duration May 2018 – November 2018
Objectives To develop and release early maturing cold tolerant corn inbreds with emphasis on the 1800-2000 CHU market.

Collaborators Lana Reid Ph.D – AAFC Research Scientist Ottawa Research and Development Centre
Manitoba Corn Growers Association

Results

This project is part of a long-term, multi-site study led by Lana Reid. Research findings will be made available by Lana Reid and team.

Background

The objective will be achieved using conventional corn breeding methodology enhanced by double haploid inbred production and specialized screening techniques for cold tolerance and disease resistance. The trial is being conducted at sites across five Canadian provinces. The anticipated impact of developing earlier maturing, cold tolerant corn will expand the acreage of corn production in Canada.

Project findings

These data were generated for AAFC; however, due to intellectual property issues pertaining to Plant Breeders' Rights, results for individual lines are not provided in this report. For more information on this variety trial

Materials & Methods

Experimental Design	Random Complete Block Design
Entries	30 varieties
Seeding	Jun 5
Harvest	Nov 7

Data collected	Date collected
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% Emergence	Jun 19
Tasseling Date	Jul 14 – Aug 9
Silking Date	Jul 22 – Aug 11
Ear Formation	Jul 27 – Aug 17
Heights	Aug 2
Lodging	Nov 7
Yield	Nov 7
Moisture	Nov 7

Agronomic info

Previous 2 years crop	Oat barley silage
Soil Type	Erickson Loam Clay
Landscape	Rolling with trees to the east
Seedbed preparation	No-till due to moisture concerns; direct-seeded into stubble

Table 1: Spring 2018 Soil Test

	Available	Needed
N	54 lb/ac	84 lb/ac
P	13 ppm	10 lb/ac
K	228 ppm	
S	118 lb/ac	

Table 2: Added N and P

Blend	Blend (actual lbs/ac)	Actual lbs N	Actual lbs P
46-0-0	178.01	81.88	0
11-52-0-0	19.23	2.12	10
Total	-	84	10

N banded with seed; P side-banded

Table 3: Pesticide Application

Crop stage	Date	Product	Rate
Pre-emerge	May 18	Heat	28.4g/ac
		Round-up	0.67L/ac
Pre-emerge	Jun 5	Heat	28.4 g/ac
		RoundUp	0.67 L/ac
In crop	Jul 30	Basagran	0.91 L/ac
		Centurion	0.15 L/ac