

## Agriculture Agri-Food Canada Corn Nursery

**Project duration:** May 2019 – October 2019

**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

### 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

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. For more information research by Lana Reid [see here](#).

### Materials & Methods

Experimental Design: 500-row observation nursery

Entries: 500

Seeding: May 17

Harvest: Oct 30

### Data collected

### Date collected

Tasseling Date: Aug 2 – Sept 12

Silking Date: Aug 12 – Sept 18

Ear Formation: Aug 6 – Sept 18

### Agronomic info

Previous year's crop: Green manure blend – oat, pea, Italian Ryegrass, Japanese Millet, Persian Clover, Common Vetch, Sugar Beet, Phacelia, Chickory, Turnip Rape

Soil Type: Erickson Loam Clay

Landscape: Rolling with trees to the east

Seedbed preparation: Tilled and harrowed

Table 1: Spring 2019 Soil Test

	Available	Needed
N	60 lb/ac	192 lb/ac
P	13 ppm	15 lb/ac
K	204 ppm	16 lb/ac

Table 2: Added N and P

Blend	Blend (actual lbs/ac)	Actual lbs N	Actual lbs P
46-0-0	280.07	128.83	0
11-52-0-0	28.85	3.17	15
Total	-	132	15

*N side-banded; P banded with seed*

Table 3: Pesticide Application

Crop stage	Date	Product	Rate
Pre-emerge	May 23	Heat	28.4 g/ac
		Round-up	0.64 L/ac
In crop	July 27	Sortan IS	30.4 g/ac
	2 <sup>nd</sup> week of August	Weed whacking between rows	-
	End of August	Tilling between rows	-

## 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 at the completion of the project in 2023. For general information related to corn research conducted by Lana Reid, see her [Agriculture and Agri-Food Canada webpage](#).