

Agriculture Agri-Food Canada Corn Variety Evaluation

Project duration: May 2021 – October 2021

Objectives: To develop and release early maturing cold tolerant corn inbreds with emphasis on the 1800-2000 CHU market.

Collaborators: Aida Kebede PhD – AAFC Research Scientist Ottawa Research and Development Centre; Manitoba Corn Growers Association

Background

The trial is year four of a five-year project, lead by Dr. Aida Kebede, AAFC-Ottawa (following Dr. Lana Reid's retirement in 2021). The project's 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 provinces. The anticipated impact of developing earlier maturing, cold tolerant corn will expand the acreage of corn production in Canada. AAFC will make research findings available at the conclusion of the project.

Materials and methods

Experimental Design: Random Complete Block Design

Entries: 30 varieties

Seeding: May 18

Harvest: Oct 20

Data collected Date collected

Yield: Nov 8

Moisture: Nov 8

Agronomic info

Previous year's crop: Oat Silage

Soil Type: Erickson Clay Loam

Landscape: Rolling with trees to the east

Seedbed preparation: Vertical tilled

Table 1: Fertility Information

	Available	Added	Type
N	93 lb/ac	100 lb/ac	46-0-0
P	46 ppm	20 lb/ac	11-52-0-0
K	709 ppm	N/A	N/A

Table 2: Pesticide Application

Crop stage	Date	Product	Rate
Pre-emerge	May 26	Heat LQ	30 ml/ac
		Sortan	30 g/ac
		Merge	300 ml/ac
In crop	Jun 22	Bentazon	0.91 L/ac
		Bromoxynil	0.40 L/ac

Agriculture Agri-Food Canada Corn Nursery

Project duration: 2018 – October 2023

Objectives: To develop and release early maturing cold tolerant corn inbreds with emphasis on the 1800-2000 CHU market.

Collaborators: Aida Kebede PhD – AAFC Research Scientist Ottawa Research and Development Centre; Manitoba Corn Growers

Background and project findings

The trial is year four of a five-year project, lead by Dr. Aida Kebede, AAFC-Ottawa (following Dr. Lana Reid's retirement in 2021). The project's 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 provinces. The anticipated impact of developing earlier maturing, cold tolerant corn will expand the acreage of corn production in Canada. AAFC will make research findings available at the conclusion of the project.

Materials and methods

Experimental Design: 500 row observation nursery

Seeding: May 18

Harvest: Oct 20

Data collected	Date collected
Tasseling Date:	Jul 21 – Aug 24
Silking Date:	Jul 25 – Sep 21
Ear Formation:	Jul 27 – Sep 26

Agronomic info

Previous year's crop: Oat Silage

Soil Type: Erickson Loam Clay

Landscape: Rolling with trees to the east

Seedbed preparation: Direct-seed

Table 1: Fertility Information

	Available	Added	Type
N	93 lb/ac	100 lb/ac	46-0-0
P	46 ppm	20 lb/ac	11-52-0-0
K	709 ppm	N/A	N/A

Table 2: Pesticide Application

Crop stage	Date	Product	Rate
Pre-emerge	May 26	Heat LQ	30 ml/ac
		Sortan	30 g/ac
		Merge	300 ml/ac
In crop	Jun 22	Bentazon	910 ml/ac
		Bromoxynil	400 ml/ac