# Agriculture Agri Food Canada Corn Nursery

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| **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 |

**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.

**Materials & Methods**

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|---|---|
| Experimental Design | 500 row observation nursery |
| Entries | 500 |
| Seeding | Jun 5 |
| Harvest | Nov 12 |

| **Data collected** | **Date collected** |
|---|---|
| Tasseling Date | Jul 12 – Aug 13 |
| Silking Date | Jul 16 – Aug 28 |
| Ear Formation | Aug 1 – Sept 4 |
| Heights | Aug 2 |
| Moisture | Nov 12 |
| Yield | Nov 12 |

**Agronomic info**

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|---|---|
| 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 |