

## National Industrial Hemp Fibre and Grain Variety Evaluation

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

**Objectives:** To evaluate industrial hemp varieties for grain, fibre and cannabinoid content for the National Industrial Hemp Variety Evaluation Trial

**Collaborators:** Canadian Hemp Trade Alliance

### Background

The industrial hemp industry has developed around grain and fibre use. With changes to Canadian legislation around industrial hemp in 2018, the CHTA trials enhanced their protocols around cannabinoid testing.

There were a number of new developments in Canadian legislation in 2018 which very directly affected Canadian hemp growers. The [CHTA website](#) outlines these new developments, specifically the changes in Cannabis legislation as well as Health Canada's revision of Section 56 of the Controlled Drugs and Substances Act (CDSA). These changes now allow hemp farmers to immediately collect and store industrial hemp flower, bud and leaf material, a vital piece that was previously prohibited. However, ongoing debate continues to discuss how to classify hemp cannabinoids in relation to the better known recreational cannabis and whether to classify and regulate it as a medical drug. CHTA and Canadian Health Food Association continue to call on the Canadian government to improve the legislation in to allow Hemp cannabinoids to legally fill the gap that [illegal sources are currently filling](#). Figure 1 shows the trichomes on leaf and bud material.

Figure 1: Hemp leaf and bud material showing trichomes.



### Materials & Methods

Experimental Design: Random Complete Block Design

Entries: 7 Grain entries and 7 Dual Purpose entries with 4 replications

Seeding: June 10

Harvest: Oct 2

Table 1: Hemp Varieties

Grain only	Dual Purpose (grain and fibre)
CFX-2	Anka
X59	Altair
Katani	CRS-1
Grandi	Petera
CRS-1 (check)	Rigel
Earlina	Santhica 27
Judy	Santhica 70

Data collected	Date collected
Emergence:	Jun 19-22
Mortality plant counts:	With emergence
Stem Elongation plant counts:	July 15
Flowering:	Jul 25 – Aug 6
Height:	Aug 22
Lodging:	Oct 2
Yield:	Oct 7
Moisture:	Oct 7

**Agronomic info**

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

Table 2: Spring 2019 Soil Test

	Available	Needed
N	79 lb/ac	120 lb/ac
P	13 ppm	40 lb/ac
K	222 ppm	10 lb/ac
S	42 lb/ac	5 lb/ac

Table 3: Added N and P Fertilizer

Blend	Blend (actual lbs/ac)	Actual lbs N	Actual lbs P
46-0-0	70.7	32.5	0
11-52-0-0	76.9	8.5	40
Total	-	41.0	40

*N side-banded; P Banded with seed*

Table 4: Herbicide Application

Crop stage	Date	Product	Rate
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Pre-emerge	May 19	Heat	28.4 g/ac
		Round-up	0.67 L/ac
In-crop	Jun 20	Brotex 240	0.5 L/ac
		Centurion	0.15 L/ac

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**Results**

Results for the 2019 will be made available through the [CHTA website](#) and shared on the Diversification Centres website when available.