



Yukon Agriculture Research Plan 2018 - 2023

Revised December 2018



This research plan was developed with the Yukon Agriculture Research Committee, an industry and government committee, funded under the Canadian Agricultural Partnership (CAP) program. This research plan lays direction for the Agriculture Industry and Agriculture Branch to follow when planning and conducting agricultural research.

Vision

Collaborative northern research to help inform Yukon agri-business.

Mission

To work collaboratively with industry, producers and funding agencies in the design and implementation of research projects that assist producers with crop management decisions, input alternatives, and adoption of appropriate technologies.

1. Guiding Principles

Research that is applicable to Yukon environmental and economic conditions

- test crops appropriate for Yukon conditions including short season, long day length and drought tolerant crop varieties
- develop soil to enhance nutrient cycling in our cold climate
- progressively test the edges of our environmental conditions
- work with farms to focus on economically viable crops, management practices and livestock

Production-oriented and cooperative

- examine methods to increase productivity
- examine methods to reduce costs
- focus on two-way dialogue
- provide opportunity for producer input to research

Applying knowledge

- share ideas to solve problems faced in farming
- ensure the dissemination and transfer of knowledge
- use qualitative and quantitative information for decision making
- work with other researchers to understand how results from other jurisdictions apply to Yukon

Supporting technological transfer

- be cognizant of and understand technology trends
- apply proven new technologies that conform to the needs of Yukon farmers

Generating empirical data to inform policy development

- use research data to direct policies on sectoral development

Small scale to field scale

- work on small plot trials, move successful projects to the field scale as requested.

2. Specific areas of research focus

Climate monitoring

Purpose: measure growing degree days and frost free periods in different locations to determine climate limitations on cropping. In certain circumstances also includes the capture and analysis of soil temperatures to better understand soil biological activity.

Low input forage production

Purpose: determine monoculture forage production and hardiness in Yukon conditions with and without irrigation. Find alternative low input/high yield forage species from other jurisdictions. Work with cooperators to determine varietal performance.

Greenhouse technologies

Purpose: develop guidelines for greenhouse buildings, high tunnel row covers, and energy efficiency. Work with Energy Solutions Center, the Yukon Research Center, and other interested parties to complete guidelines.

Alternate energy, energy efficiency and carbon footprint reduction

Purpose: understand the potential power and utility of a number of renewable power sources and passive energy systems for farm management.

Animal forages and finishing

Purpose: develop systems to enable year round or extended season livestock production, examine timing of forage grazing, and understand harvest, storage and feeding of silage and haylage to specific livestock selection. Target key livestock species, specifically - poultry, hogs, cattle, elk, sheep, goats, bison.

Livestock husbandry

Purpose: determine appropriate livestock species and management for our climate (year round and seasonal), available feed and economic conditions.

Maturing High Protein Grains for feed rations

Purpose: provide options for high protein feed grain that can be used in rations.

Alternate crop management and commercialization

Purpose: continue to examine production of crops and crop rotations suitable for Yukon markets.

Fruit production

Purpose: determine economics of fruit production and usefulness of various irrigation and crop management technologies and monitoring equipment.

Northern Soil Amendments and Management

Purpose: decide which amendments to use in Yukon with comparisons of various soil amendments including city compost, organic fertilizers, biochar, lime, wood chips and synthetic fertilizers.

Northern Variety Development

Purpose: develop and trial crop varieties suited to our climate and environment.

Value Added Processing

Purpose: test small scale processing, storage and transport equipment to add value to primary agricultural products.

3. Collection/Dissemination of Research

Ensure all research and information is available to producers.

Build a collaborative online database or website with YAA and GOOFY that will house all research publications online with associated data. Research will be available through the Yukon Agriculture Branch annual R&D publication and all archived research materials will be digitized.

4. Guiding of Research

The Agriculture Branch will undertake research as directed by this research plan with the research committee meeting at least twice annually to provide direction.

5. Data Quality

Research results need to be defensible based on the audience the researchers are targeting. When possible research designs should be statistically valid in order to understand data accuracy. Before undertaking research the specific data quality objectives should be outlined.

6. Living Document

This document is meant to be altered as time passes, during annual meetings and as priorities change by consensus of the Committee.

7. Prioritization

The Committee should examine the specific areas of research to focus on those research questions that are the most important for industry development.