

BETTER BEER STARTS HERE...



CMBTCTM
CANADIAN MALTING BARLEY TECHNICAL CENTRE

CANADIAN MALTING BARLEY TECHNICAL CENTRE

The Canadian Malting Barley Technical Centre (CMBTC) is an independent, not-for-profit research facility established in 2000 that serves the Canadian malting barley supply chain, providing high-quality technical services and marketing support to stakeholders including breeders, farmers, seed companies, exporters/importers, maltsters and brewers.

SPECIALIZED PROCESSING & EXPERTISE

State-of-the-art pilot malting and brewing facilities, staffed with specialists, are used to evaluate the quality and performance of Canadian malting barley in malting and brewing processes, simulating commercial scale processing. Results are communicated to members and end-users to help optimize the performance of Canadian malting barley, ensuring cost effective processing and high quality end products.

INDEPENDENT, MEMBERSHIP BASED

The CMBTC is an independent organization representing its Canadian and international membership. Funding for the CMBTC is provided through memberships as well as through contributions from the Government of Canada, provincial barley farmer associations, research funding programs and fee-for-service work.

DELIVERING VALUE ALONG THE SUPPLY CHAIN

The CMBTC delivers value to the entire supply chain through a variety of activities including annual new crop quality assessment, quality evaluation of new Canadian malting barley varieties, export cargo analysis, remote and on-site troubleshooting and technical support, and market development programming.

CURRENT MEMBERS



Canadian Grain Commission
www.grainscanada.gc.ca



Alberta
Barley



Agriculture and
Agri-Food Canada
Brandon Research & Development Centre

Agriculture et
Agroalimentaire Canada



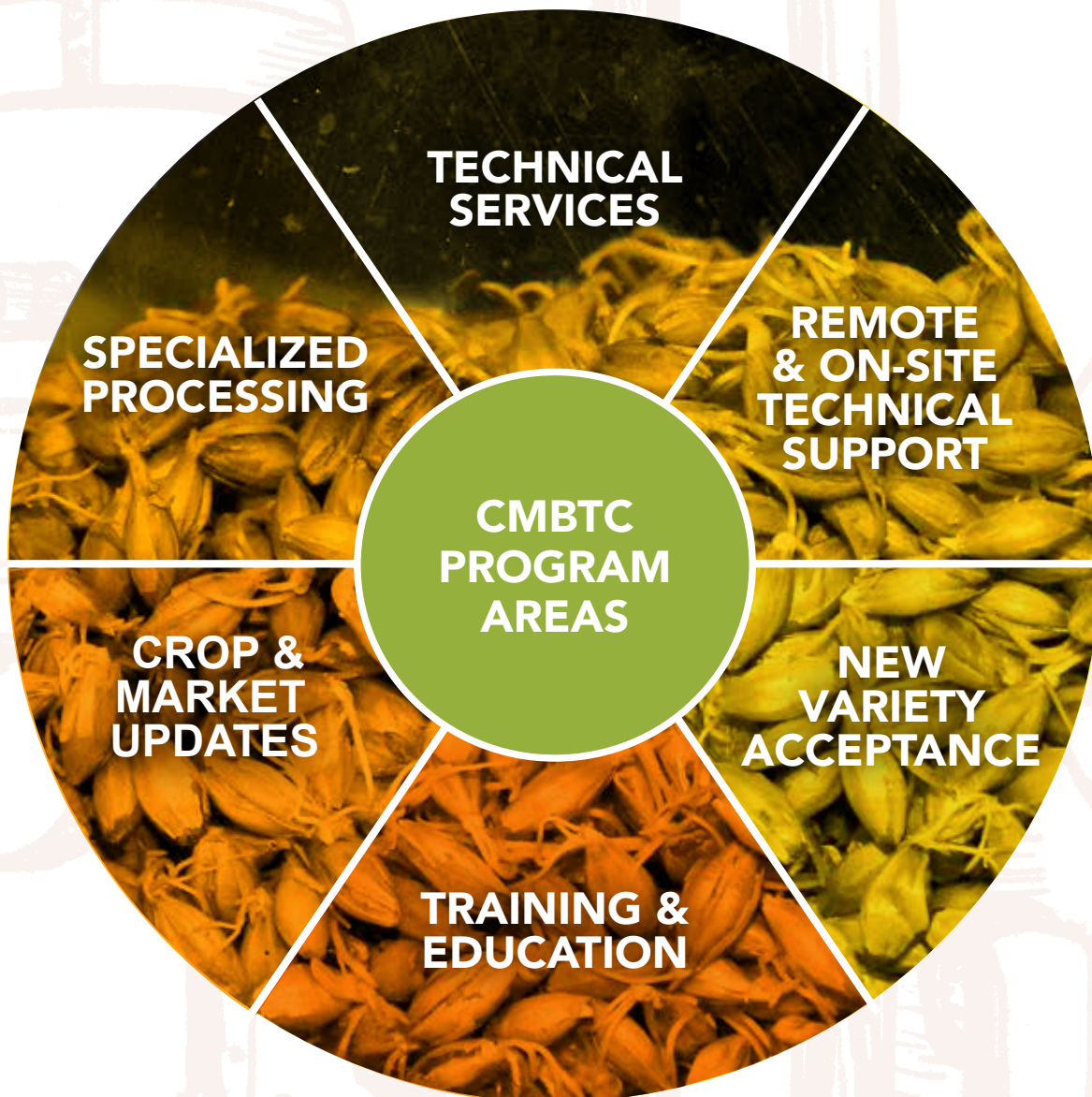
Dalian Xingze Malt Processing CO.





CMBTC™
CANADIAN MALTING BARLEY TECHNICAL CENTRE

OVERVIEW



CMBTC VALUE PROPOSITION

Adding value to the Canadian malting barley value chain through:

- Specialized processing
- Technical expertise
- Crop quality evaluation and performance optimization
- Remote and on-site troubleshooting
- Information on crop development and quality outlook
- Unique applied research capacity

VISION

In collaboration with our partners, our vision is to ensure Canada is a leader in supplying high-quality malting barley to the global malting and brewing industries, meeting the needs of customers around the world.



CMBTC™
CANADIAN MALTING BARLEY TECHNICAL CENTRE

ACTIVITIES

The CMBTC conducts a suite of activities to support the Canadian malting barley value chain.

New crop quality evaluation: A full quality assessment is conducted on new crop barley samples at harvest each year. Pilot malting and brewing trials are conducted with multiple samples of each variety. Results from the trials are communicated directly to members on a timely basis.

Remote and on-site technical support: Technical experts at the CMBTC provide members with remote and/or on-site technical support and problem-solving to maximize the performance of Canadian malting barley.

Cargo quality assessment: Full pilot scale malting and brewing is conducted on samples collected from commercial shipments. A comprehensive report is generated to provide end-users with an understanding of the quality of the cargo and how it will perform in the malt plant and brewery.

Crop and market updates: Timely reports on crop development, harvest quality and market information are communicated to members to enable industry players to make informed processing and business decisions.

Support for development of new malting barley varieties: The CMBTC works with breeders and seed companies to evaluate the quality and performance of malting barley varieties pre- and post-registration using our micro and pilot malting and brewing facilities.

New variety quality evaluation: Each year the CMBTC evaluates the quality attributes of newly registered Canadian malting barley

varieties and their suitability for particular end-user requirements in the malting and brewing industries. New variety quality and performance data is communicated to members.

New variety acceptance: The CMBTC works with end-users to communicate the attributes of new varieties. Samples are shipped to end-users for testing purposes each year. Where there is interest, the CMBTC works with suppliers and end-users to coordinate plant scale, production trials with new Canadian malting barley varieties.

Incoming, outgoing missions: Every second year, the CMBTC coordinates incoming and outgoing missions with members and customers to provide them the opportunities to visit Canadian farms and handling facilities.

Training & education: The CMBTC provides training and education programming for members and customers of the Canadian malting barley industry. Through the Malt Academy program, members can send staff to train and learn about malting and brewing with Canadian barley.

Producer services: The CMBTC generates an annual *Malting Barley Recommended List* that provides guidance to farmers regarding which varieties have the greatest potential for growing and marketing.

Research and development: Using micro- and pilot-scale malting and brewing facilities, the CMBTC conducts applied research projects in collaboration with members and other partners to address processing challenges and help optimize Canadian malting barley performance.

The CMBTC offers technical expertise to ensure customers of the Canadian malting barley industry are provided with data to optimize performance, leading to cost effective processing and high quality end products.



CMBTC™
CANADIAN MALTING BARLEY TECHNICAL CENTRE

FACILITIES

MALT PLANT

The CMBTC has malting facilities capable of processing anywhere from 100 kilograms (kg) to 250 grams of barley using any specified malting regime. The plant is equipped to simulate commercial malting conditions and different types of malting systems. Malt plant equipment includes:

- Pilot scale malt plant (capacity up to 100 kgs) with steeping vessel, germination vessel and kiln
- Unimalter, which can carry out steeping, germinating and kilning in the same vessel
- A Joe White Micro-Malting Unit, which can process 1 kg to 250 g samples, up to 20 samples at a time
- Two-roll malt mill
- Hammer mill

BREWERY

The CMBTC's state-of-the-art brewing facility is able to duplicate commercial brewing operations. The brewery is fully automated and possesses on-line and in-line sensors. The brewery equipment consists of:

- 3-hectolitre (hl) pilot scale brewery (capacity up to 300 litres) with mash mixer, cereal cooker, hot liquor tank, later Tun, kettle, whirlpool, 4 cylindroconical fermenters (Unitanks) and a Meura mash filter
- 15-litre micro-brewing system
- Sheet filter
- Diatomaceous earth (DE) filter
- Counter-pressure bottle filler
- Pasteurizer

CMBTC LABORATORY EQUIPMENT

- 1-CUBE Mashing Bath
- Unity Scientific Near-Infrared Scanner
- A&D Moisture Balance MX-50
- Carlsberg Seed Quality Analyzer
- Infratec 1241 Grain Moisture & Protein Analyzer
- Ellutia Gas Chromatograph & CTC Analytics Autosampler
- Anton-Paar DMA 5000 Density Meter & Alcohol Meter
- BioChrom Ultrospec 2100 Spectrophotometer
- Dr. Thiedig Digox Oxygen Analyzer
- Zahm & Nagel Direct DV-1 CO2 Analyzer
- Sigrist Labscat Process-Photometer
- Waters Autosampler & HPLC

