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Challenges Facing Barley Research Investment

- Numerous organizations involved in research funding
- Relatively low research funding dollars available
- Research is long term and expensive
Addressing Research Challenges

Barley Research Coalition

- Est. by the provincial barley commissions in January 2020
- Lead organization for large research initiatives (i.e. Core Breeding Agreements)

National Barley Research Strategy

- Facilitated by BMBRI and BCC
- “Resource” for the industry
- Completion December 2020
- Modelled after the Barley Development Council research document discontinued in 2011
National Barley Research Strategy

- Research priorities for malt, feed, food and industrial barley
- Active barley research in Canada (BCC)
- Research funding calls (dates and timelines)
- Barley researchers, area of expertise and contact information
- Position statements on behalf of the barley industry on barley research related issues
Preliminary Data from the Producer Research Survey

- Quantify the research issues of highest importance to producers
- 136 respondents from across Canada
- 75% completion rate
- 169 comments provided
- Survey is just one tool
In what province is your farm located?

- Alberta: 49%
- Saskatchewan: 33%
- Manitoba: 5%
- Ontario: 0%
- Quebec: 8%
- Maritime Provinces: 5%
How has your annual percentage of cropland seeded to barley changed over the past five years?

- Decreased: 14%
- Stayed about the same: 68%
- Increased: 18%
Producer Satisfaction with Malt Barley Varieties

- Legacy
- Celebration
- AC Metcalfe
- CDC Copeland
- Bentley
- Newdale
- CDC Platinum Star
- AAC Synergy
- AAC Connect
- CDC Bow

0% 20% 40% 60% 80% 100%

"Extremely Satisfied"  "Very Satisfied"
Producer Satisfaction with General Purpose Barley Varieties

- CDC Cowboy
- CDC Coalition
- Champion
- CDC Maverick
- Conlon
- Xena
- Brahma
- Claymore
- CDC Austenson
- Oreana

0% 20% 40% 60% 80% 100%

"Extremely Satisfied"  "Very Satisfied"
How important is ongoing improvement in the below production characteristics for barley?

- **Early maturity**
  - Extremely important: 40%
  - Very important: 60%

- **Drought tolerance**
  - Extremely important: 20%
  - Very important: 80%

- **Waterlogging tolerance**
  - Extremely important: 20%
  - Very important: 80%

- **Cold tolerance**
  - Extremely important: 20%
  - Very important: 80%

- **Lodging resistance**
  - Extremely important: 80%
  - Very important: 20%

- **Yield**
  - Extremely important: 60%
  - Very important: 40%
How important is ongoing improvement in the following types of disease for barley?

- **Fusarium head blight**: 80% Very important, 20% Extremely important
- **Ergot**: 40% Very important, 60% Extremely important
- **Leaf diseases/smuts**: 60% Very important, 40% Extremely important
- **Root rot**: 20% Very important, 80% Extremely important
How important is ongoing improvement in the below input and management factors for barley?

- Harvest and storeability
- Herbicide application
- Fungicide application
- Water use efficiency
- Nitrogen use efficiency

[Bar graph showing the importance of each factor with two categories: Extremely important and Very important]
How important is an ongoing improvement for the below market related traits in barley?

- Energy and nutritional value for livestock feed
- Role and performance in malting and brewing
- Organic production
- Reduced mycotoxins (e.g. DON)
- Pre-harvest sprout resistance

![Bar Chart](chart.png)

- Extremely important
- Very important
Have you, in the past five years, grown a six-row variety?

- Yes: 17%
- No: 83%

Should producer research dollars continue to be allocated to breeding new six-row varieties?

- Yes: 61%
- No: 39%
Have you, in the past five years, grown a six-row variety?

- Yes: 12%
- No: 88%

Should producer research dollars continue to be allocated to breeding new six-row varieties?

- Yes: 40%
- No: 60%
Comments from the Producer Survey

- Concern around the profitability of growing barley
- Importance of feed barley to the health of the industry
- Low acceptance of new malt barley varieties by maltsters was considered issue
- Concern around competition from corn in the feed industry
- Importance of regional breeding stations to developed adapted varieties
- Other research issues...lack of herbicide options for barley, herbicide tolerant weeds, head retention, tillering at harvest, and winter barley.
National Barley Research Cluster ($9.3M)

- Variety Development: 51%
- FHB & Other Diseases: 29%
- Crop Management: 10%
- Malting & Brewing: 5%
- Feed Barley: 5%
- Crop Management: 10%
- Variety Development: 51%
Timeline for the Barley Research Strategy

**Spring 2020**
- Draft research priorities for malt, feed, food and industrial barley through surveys, interviews and pre-existing strategies
- BCC to develop an inventory of active barley research

**Summer 2020**
- Feedback from barley stakeholders and researchers on research priorities and targets (if deemed important)
- Information on research funding calls, scientific expertise and contact information gathered and compiled

**Fall 2020**
- Draft version to the Canadian Barley Roundtable for comments