

FIELD NOTES

SPRING 2019 EDITION

An Early Start



An early update on what's happening in the barley world this year



This year we decided to publish our first bi-annual newsletter a little earlier than usual, in order to ensure you get your hands on the Canadian Malting Barley Technical Centre's Recommended Malting Barley Variety list for 2019/20 (see page 6). We hope this information will be useful to you as we head into another growing season.

We also hope you are including barley in your seeding plans again this year. In January Statistics Canada issued a report forecasting that Canadian barley acreage would increase 6% this year over last year, with a crop size of 8.9 million tonnes (compared to 8.4 million last year). If this is true, this will be the second year of increase for Canadian barley production.

We also wanted to give you an early head's up that

this is another election year for SaskBarley. Later this year we will be seeking nominations to fill two Director positions on our Board. Who should be interested in this? Anyone who has an interest in growing and strengthening our industry. We need producers who are passionate about the work we do, who can think strategically and creatively about how to grow our industry, and who are dedicated to trying to find

"[Value creation] is a very important subject, as the outcomes will impact the future of our industry significantly."

constructive solutions to the problems we face.

I hear from many people that they are too busy to get involved and I understand that. I myself am a busy person. There is a time commitment involved – our board meets approximately six times a year, with several other events throughout the year. But our organization works hard to accommodate our Directors' schedules, and, much of the Board work can be done remotely. Some people also believe



that previous board experience is required. Although it is beneficial, it is not a requirement and we encourage fresh new

voices to consider running as well. We have lots of industry veterans who can help with the steep learning curve, as well as a supportive staff. So if you or anyone you know is interested in getting involved please reach out for more information or see more details on page 2.

Finally, you may have heard some of the discussions taking place around the value creation issue in recent months. For those of you who haven't, late last year the federal

government began a consultation on the future of variety development funding in Canada for major crops such as wheat and barley. This is a very important subject, as the outcomes will impact the future of our industry significantly. SaskBarley has been participating in these consultations and discussions on behalf of barley producers in Saskatchewan and we have maintained a strong opinion on the topic. You can find an overview of our position on page 7.

As always if you have any questions or concerns, please feel free to get in touch with one of our board members anytime. Our contact info. is listed on Pg. 2 (as well as on our website).

Wishing you all a safe and early seeding season!

Jason Skotheim, Chair

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Upcoming SaskBarley events

**Ag in Motion 2019
(July 16-18)**

In partnership with Farm Credit Canada (FCC), SaskBarley will be hosting a farmer dinner and social event Wednesday July 17 as part of Ag in Motion 2019. The event will take place on the show grounds and SaskBarley Directors will be serving up local craft beer to guests! All show attendees are welcome to join the event. Watch our website and Twitter account in coming months for more details.

Field Days 2019

SaskBarley will be sponsoring the AgriArm 2019 Field Days across Saskatchewan this summer. Field days take place between July 10-July 24, 2019, at all eight AgriArm sites. Visit <http://agriarm.ca/events/> for dates, locations and complete details.

Malt Academy 2019

SaskBarley will be teaming up with the Canadian Malting Barley Technical Centre (CMBTC) to host a two-day Malt Academy in Saskatoon this fall. The course will aim to provide attendees with a complete overview of the Canadian malting industry, with a focus on each part of the value chain. SaskBarley will be opening the event up to local farmers with interest. Watch for more information from us in coming months or contact us for more information: info@saskbarleycommission.com.

CropSphere 2020

CropSphere 2020 will take place January 13-15, 2020, and will include SaskBarley's annual general meeting. Watch for more information about these events in coming months.

It's election year!

The SaskBarley Board will be looking to fill two positions this fall

Later this year, we will officially launch a call for nominations for SaskBarley's fall 2019 elections.

We will have three positions up for election this year, and will be looking to fill at least two of those positions with new Directors. Current Directors, Cam Goff and Zenneth Faye will both be completing their second consecutive term on the Board, which is the maximum term any Director can serve. Keith Rueve is completing his first four year term and is eligible for re-election.

We will officially launch the nomination process later this summer, but in the meantime here is a reminder of our election protocol.

Board purpose

SaskBarley's producer-elected and -directed Board ensures producers have the resources, leadership and provincial, national and international representation to strengthen Saskatchewan's competitive advantage and makes certain that producers' interests are protected.

Eligibility

To be eligible to sit on the Board, you must be a registered barley producer (i.e. have had a SaskBarley check-off deducted since August 1, 2016 and has not received a refund of check-off since August 1, 2016).

Director responsibilities include:

- Supervising the management of the business and affairs of

SaskBarley, including overseeing the management, strategic direction, and governance of the organization.

- Attending meetings approximately six times per year and conference calls as required.
- Representing SaskBarley at other meetings and events throughout the year.

Process

On June 13 2019, SaskBarley will officially issue a call for nominations to the Board. Specific nomination instructions will be given at that time and nomination forms will be available through our website or by contacting our office.

The nomination period will close on September 13, 2019 and a vote will be declared shortly after, if necessary.

If a vote is required, voting will open on October 18, 2019. Ballots will be mailed out to all Saskatchewan barley producers in the weeks leading up, as well as instructions on how to vote electronically or by mail. The voting period will end on November 29, 2019.

Election results will then be announced in December and officially presented at the SaskBarley AGM in January 2020.

If you have further questions about being a Director with SaskBarley, feel free to contact one of our board members.

Should you be growing feed or malt barley?

It's important for our industry to know the range of protein levels desired by the global marketplace

By: Mike Hall/ East Central Research Foundation and Parkland College

Producers must consider a number of factors when determining whether to grow a malt or feed variety of barley. These include the price and yield differentials between varieties and the likelihood of having a particular variety selected for malting.

AC Metcalfe is a preferred variety of maltsters but it yields considerably less than a feed variety like CDC Austenson. This means any field of AC Metcalfe not selected for malting would have generated more income if it had been seeded to CDC Austenson instead.

Once the decision to grow either a malt or feed variety has been made the producer must adjust management accordingly. It is typically recommended to seed malt barley early to increase yield potential, reduce protein and improve grain quality (i.e.: the crop is more likely to be harvested under ideal conditions). Seeding rates of 300 seeds/metre squared (m²), which typically produce 220 plants/m², are recommended for malt barley, according to Agriculture Canada. Lower plant stands tiller more, leading to uneven maturity and non-uniform kernels,

which is undesirable to maltsters. Increasing seeding rates to 300 seeds/m² may slightly reduce kernel plumpness but improves kernel uniformity, which is usually a better trade-off. Using a higher seeding rate also has the advantage of hastening maturity by two to three days and slightly lowers protein. For feed barley, the optimum seeding rate is considered to be somewhat higher than it is for malt. Nitrogen management for malt barley is extremely important, as maltsters generally don't select grain with a protein content below 11% or above 12.5%.

With an objective to demonstrate differences in management between malt and feed barley, numerous AgriARM sites participated in two different studies in 2017 and 2018. These studies were led by the East Central Research Foundation and supported financially by the Saskatchewan Ministry of Agriculture's ADOPT program and SaskBarley. In 2017, trials were established at Yorkton, Indian Head and Scott to evaluate the impact of seeding date and nitrogen rate on the malt variety AC Metcalfe and the feed variety CDC Austenson. In 2018, additional trial sites from Redvers, Melfort, Prince

Albert and Outlook were recruited and treatments were modified. AC Metcalfe was switched with the higher yielding variety CDC Bow and seeding rate was evaluated instead of seeding date. Differences between nitrogen rates evaluated were also narrower in 2018.

Though early seeding of

malt barley is typically recommended, no benefit from doing so was detected in our 2017 study. Barley yield did not significantly differ between seeding dates at any of the locations and protein was only lower with the earlier seeding date at Yorkton. Protein did

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Figure 1. Yield of AC Metcalfe vs CDC Austenson 2017, averaged over seeding date and nitrogen rate. **Overall Increase of 12.6%**

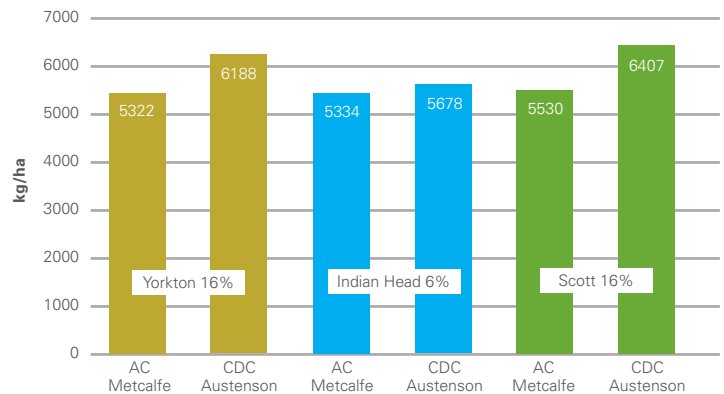
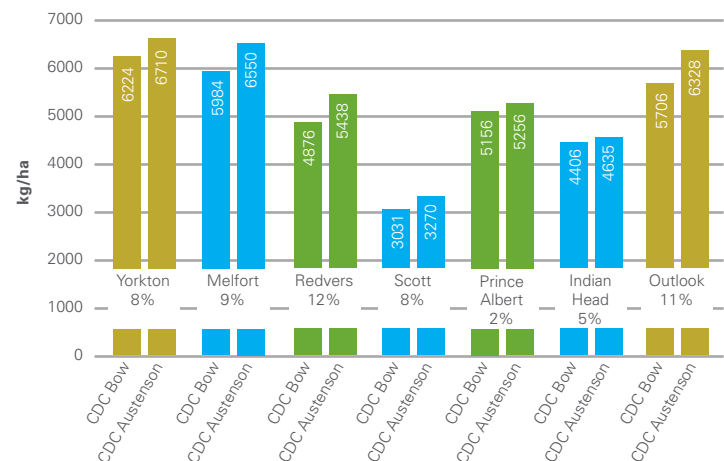


Figure 2. Yield of CDC Bow vs CDC Austenson 2018, averaged over seeding rate and nitrogen rate. **Overall Increase of 8%**



not differ between seeding dates at Indian Head and it was actually higher for the earlier seeding date at Scott. Rainfall may have been more timely for the late seeded barley, which could help to explain the unexpected result.

Barley yields were also expected to be maximized with a seeding rate of 300 seed/m², which did not occur at any of the seven dry land sites in 2018. Yield was actually increased as seeding the rate was reduced to 200 seeds/m² because of reduced inter-plant competition for limited soil moisture. Precipitation was limited across Saskatchewan in 2018 and the only site where yield increased in response to the higher seeding rate of 300 seeds/m² was Outlook because it was irrigated.

As anticipated, the feed variety was higher yielding than either of the malt varieties. On average, CDC Austenson yielded 12% more than AC Metcalfe in 2017. The yield difference varied from as low 6% at Indian Head to as high as 16% at Yorkton and Scott (Figure 1). In 2018, the yield difference between CDC Austenson and the

malt variety CDC Bow was less, averaging 8%. The difference between varieties varied from as low as 2% at Prince Albert to as high as 12% at Redvers (Figure 2).

While the yield potential differed between barley varieties, their response to added nitrogen was very similar when average across locations. In 2017, yield of CDC Austenson and AC Metcalfe increased 12% as nitrogen was increased from 40 to 120 pounds an acres (lb/ac) (Figure 3).

In 2018, yield of CDC Austenson and CDC Bow increased 20% in response to increasing rates from 50 to 100 lb N/ac (Figure 4). The magnitude of the yield response to added nitrogen did vary substantially between locations and so did protein. Malt barley will not be selected by maltsters if grain protein is not between 11% and 12.5%. The maximum rate of nitrogen where malt barley would still be acceptable to maltsters differed between location and year.

Economic comparisons for growing malt versus Feed barley were made at each location using the rate of nitrogen that did not push protein beyond the

Figure 3. Effect of Nitrogen Rate on Yield of AC Metcalfe and CDC Austenson, Averaged over Seeding Date, Scott and Indian Head 2017

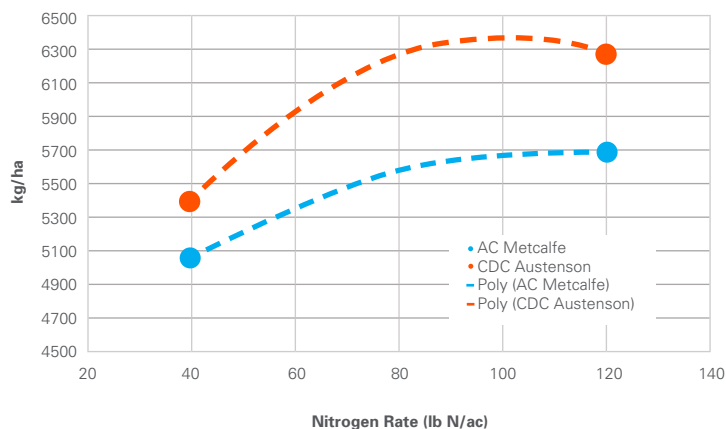
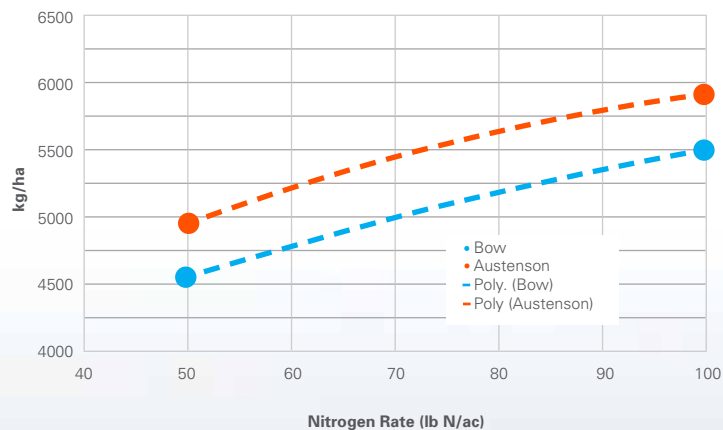


Figure 4. Yield Response of CDC Bow and CDC Austenson to Added Nitrogen Rate, Averaged over Seeding Rate and Location (2018)



acceptable level for malt (i.e.: 12.5%). In some cases this may have disadvantaged the feed barley within the comparison because further upside yield potential from higher rates of nitrogen may have been economical for the feed barley. However, in most cases further

applications of nitrogen did not provide an economic benefit for feed barley where it was possible to determine.

Using these criteria, Tables 1 and 2 were created to compare the economics between growing feed barley for feed and growing

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malt barley for either malt or feed. From these comparisons it was then possible to determine the chance of making malt that is required to justify growing a malt variety over the feed variety CDC Austenson. The calculations used \$5.44/bushel (bu) for malt and \$3.22/bu for feed, prices which were obtained from the 2017 Saskatchewan Crop Planning Guide. When averaged across location, the chance of being selected for malt needed to be 20% or better to justify growing AC Metcalfe or only 10% or better to justifying growing CDC Bow. The required probabilities double if the calculations use a tighter price differential of \$4.68/bu for malt and \$3.70/bu for feed, prices

which were used in the 2018 Saskatchewan Crop Planning Guide. The required probability of being selected for malt to justifying growing a malt variety is lower for CDC Bow because it is higher yielding than AC

Metcalfe. Of course all things being equal, the producer must also consider the relative preference of maltsters for AC Metcalfe and CDC Bow. However, there may be little

reason in the future to grow a feed variety, as newer malt varieties with comparable yields to feed are selected by maltsters.

Table 1. Economic Analysis for Growing AC Metcalfe for Malt over CDC Austenson for Feed (2017 Prices of \$5.44/bu of Malt and \$3.22/bu of Feed from Saskatchewan Crop Planning Guide)

Location	Yorkton	Indian Head	Scott	All sites
AC Metcalfe -80 lb N/ac (late may seeding date) (bu/ac)	---	101	107	---
CDC Austenson -80 lb N/ac (late may seeding date) (bu/ac)	---	110	121	---
AC Metcalfe -60 lb N/ac (early may seeding date) (bu/ac)	96	---	---	---
CDC Austenson -60 lb N/ac (early may seeding date) (bu/ac)	115	---	---	---
Gross \$ selling AC Metcalfe for malt (\$/ac)	\$522	\$549	\$582	\$236
Gross \$ selling AC Metcalfe for feed (\$/ac)	\$309	\$325	\$345	\$140
Gross \$ selling CDC Austenson for feed (\$/ac)	\$370	\$354	\$390	\$159
Value of selling AC Metcalfe for malt over CDC Austenson for feed (\$/ac)	\$152	\$195	\$192	\$77
Value of selling CDC Austenson for feed over AC Metcalfe for feed (\$/ac)	\$61	\$29	\$45	\$19
Percent chance of making malt that is required to justify growing AC Metcalfe over CDC Austenson	28.7%	12.9%	19.0%	20.0%

Table 2. Economic Analysis for Growing CDC Bow for Malt over CDC Austenson for Feed (2017 prices of \$5.44/bu of Malt and \$3.22/bu of Feed)

Location	Yorkton	Melfort	Prince Albert	Indian Head	Outlook	Redvers	Scott	All sites
CDC Bow -100 lb N/ac (averaged over seeding rate) (bu/ac)	123.1	123.8	100.8	87.7	119.5	101.8	---	---
CDC Austenson -100 lb N/ac (averaged over seeding rate) (bu/ac)	134.7	134.7	101.3	89.7	132.6	110.0	---	---
CDC Bow -50 lb N/ac (averaged over seeding rate) (bu/ac)	---	---	---	---	---	---	53.1	---
CDC Austenson -50 lb N/ac (averaged over seeding rate) (bu/ac)	---	---	---	---	---	---	56.7	---
Gross \$ selling CDC Bow for malt (/ac)	\$670	\$673	\$549	\$477	\$650	\$554	\$289	\$552
Gross \$ selling CDC Bow for feed (/ac)	\$396	\$399	\$325	\$283	\$385	\$328	\$171	\$327
Gross \$ selling CDC Austenson for feed (/ac)	\$434	\$434	\$326	\$289	\$427	\$354	\$183	\$349
Value of selling CDC Bow for malt over CDC Austenson for feed (/ac)	\$236	\$240	\$222	\$188	\$223	\$200	\$106	4202
Value of selling CDC Austenson for feed over CDC Bow for feed (/ac)	\$37	\$35	\$2	\$6	\$42	\$26	\$12	\$23
Percent chance of making malt that is required to justify growing CDC Bow over CDC Austenson	14%	13%	1%	3%	16%	12%	10%	10%

2019-2020 RECOMMENDED MALTING BARLEY VARIETIES

The Canadian Malting Barley Technical Centre (CMBTC) recommended list is designed to provide producers with an indication of which malting barley varieties have the greatest potential for selection and marketing. Each variety on the recommended list has been pilot scale tested at the CMBTC and all exhibit good malting and brewing characteristics. All varieties on the list are registered with the Canadian Food Inspection Agency (CFIA).

RECOMMENDED VARIETIES

VARIETY	TYPE	MARKET COMMENTS	SEED DISTRIBUTOR
CDC Copeland	2 Row	Established Demand	SeCan
AC Metcalfe	2 Row	Established Demand	SeCan
AAC Synergy	2 Row	Growing Demand	Syngenta
AAC Connect	2 Row	Growing Demand	CANTERRA SEEDS
CDC Bow	2 Row	Growing Demand	SeCan
Legacy	6 Row	Limited Demand	FP Genetics

- › Marketing opportunities remain for **Newdale** (FP Genetics) and **Bentley** (CANTERRA SEEDS) in certain regions. Contact Canada Malting in Calgary for contracting opportunities.
- › **CDC PlatinumStar** (CANTERRA SEEDS) is a closed-loop variety. Contact Prairie Malt/Cargill in Biggar for contracting opportunities.
- › Demand for six-row malting barley is limited. Contact Viterra in Regina for **Legacy** contracting opportunities. Contact Malteurop in Winnipeg for **Tradition** (FP Genetics) and **Celebration** (CANTERRA SEEDS) contracting opportunities.
- › In Eastern Canada, **AC Metcalfe**, **Newdale** and **AAC Synergy** have had the greatest success in selection in recent years.

VARIETIES IN DEVELOPMENT

VARIETY	TYPE	MARKET COMMENTS	SEED DISTRIBUTOR
CDC Fraser	2 Row	Undergoing seed propagation	SeCan
Lowe	2 Row	Undergoing seed propagation	SeCan

- › These newly registered varieties are undergoing seed propagation and commercial market development. Contact the seed distributor for opportunities to trial these promising new varieties.

The CMBTC and its members recommend:

- › Talk with your grain company representative, local elevator operators, malting companies, or the representative seed company about opportunities in your area to grow and market two-row and six-row malting barley varieties.
- › Use certified seed to ensure varietal purity, reduce disease incidence and increase the likelihood of selection for malt.

What is “value creation”?

We continue to be the voice of Saskatchewan barley producers in this conversation

In late 2018, Agriculture and Agri-Food Canada (AAFC) and the Canadian Food Inspection Agency (CFIA) proposed major changes to the way that new varieties of wheat, barley and other Canadian crops are developed in Canada.

The proposed changes included two options for reforming the current system, both of which aim to increase the incentive for private investment.

Both these proposed models have the potential to have a large financial impact on producers. Given the lack of detail presented by AAFC and CFIA it is impossible to quantify the impact to producers at this point. It is important to note that these models are not the only options for future funding of variety development.

OUR POSITION

1. Barley needs to be treated separately from other crops. Barley will be uniquely affected by proposed changes to value creation models so it is critical that the crop be evaluated individually instead of grouped with wheat and other crops.

“Barley will be uniquely affected by proposed changes to value creation models so it is critical that the crop be evaluated individually.”

UNDER THIS CONSULTATION, AAFC AND CFIA HAVE PROPOSED TWO MODELS FOR EVALUATION

End Point Royalties

- A Plant Breeders’ Rights Act (PBRA) underpinned national non-refundable royalty payable on all harvested material (i.e., grain)
- Leverages the existing provincial check-offs system to collect the non-refundable royalty
- Royalties to be distributed to breeders based on their respective market share
- Need for a mechanism to provide rebates/exemptions, ensuring royalties not collected on production from certified seed

Royalty Collection Enabled Via Contracts

- A Plant Breeders’ Rights Act (PBRA) underpinned mechanism allowing for contracts where producers agree to farm saved seed conditions
- Purchasers of certified seed for eligible varieties agree to extended contract on farm saved seed use (e.g., agreeing to a “trailing” royalty on farm saved seed)
- Participating producers report on their annual use of farm-saved as part of their contractual obligation
- Will require at least some degree of centralization in royalty collection and distribution

2. More analysis is needed before AAFC can proceed with the proposed models, especially regarding impact to producers. SaskBarley believes that before any new system for barley variety development in Canada is considered, there must be a thorough analysis of the projected impact of the proposed system on: farm businesses and current rights of farmers around seed use; future investment and innovation; check-off investment to date; and long-term quality and output of the system.

Top priorities of any new system should be providing value to producers, driving innovation and investment in the future of barley breeding in Canada, and honoring the significant investment farmers have made to-date in barley breeding through check-off investments.

SaskBarley also currently supports the right of farmers to use farm-saved seed and we need to better understand

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THE SASKATCHEWAN BARLEY DEVELOPMENT COMMISSION:

The Saskatchewan Barley Development Commission was established in 2013 under the Agri-Food Act, 2004

SASKATCHEWAN BARLEY DEVELOPMENT COMMISSION (SASKBARLEY)

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how proposed new models would impact this and other current practices around seed purchase and use.

Finally, another top priority should be ensuring that the quality and output of future breeding programs will continue to ensure Canada's position as a top supplier of high-quality barley to the world and a key contributor to the Canadian economy.

3. More consultations are needed before AAFC can proceed with proposed model. We strongly believe there has not been sufficient analysis or consultation from the government on the current proposed models for producers to make a decision surrounding this fundamental change.

4. Other models to increase investment in variety development must also be considered in further analysis. The currently proposed value creation models may not be the only options that can meet investment needs for Canadian variety development programs in the future. We should aim to consider all available options, and to analyze them each thoroughly in order to develop a made-in-Canada approach that meets the unique needs of Western Canadian producers.

For more information, please visit our website (see the "value creation" page under the "priorities" tab.)

Return undeliverable Canadian addresses to the below address

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