

# AAC CONNECT

## VARIETY HIGHLIGHTS:

- **11% higher yield than AC Metcalfe; 5% higher than CDC Copeland**
- **Moderate resistance to FHB with significantly lower DON accumulation than AC Metcalfe and CDC Copeland**
- **High enzyme activity**

AAC Connect is a spring two-row, hulled malting barley variety, registered in Canada in 2016. A cross of TR04282 and BM9831D-229; it was developed by Dr. Bill Legge at the Brandon Research Centre, Agriculture and Agri-Food Canada.

All barley varieties in Canada undergo a rigorous process of evaluation prior to registration, and are required to meet minimum agronomic, disease and quality standards established by check varieties. The following are highlights of the results of the Cooperative and Collaborative trials taken from the breeder's registration application.

## AGRONOMIC TRAITS:

- 11% higher yield than AC Metcalfe; 5% higher than CDC Copeland
- Shorter and stronger straw than AC Metcalfe and CDC Copeland
- Heavier and plumper kernels than AC Metcalfe and CDC Copeland
- Maturity date similar to AC Metcalfe
- Resistance to spot-form net blotch, surface-borne smuts and stem rust
- Moderate resistance to FHB with significantly lower DON accumulation than AC Metcalfe and CDC Copeland

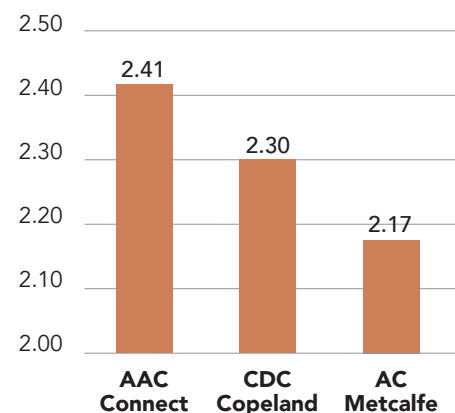
The tables below provide yield and disease comparisons of AAC Connect with control varieties. Producers should check their provincial seed guides for more information on new varieties.

## GENETIC DISEASE RESISTANCE

	AC Metcalfe	CDC Copeland	AAC Synergy	AAC Connect
Scald	MS-S	MS-S	S	S
Spot form net blotch	I	I	R	MR
Net form net blotch	S	I	MR	I
Spot blotch	I	S	R	MR
FHB	I	I	I	MR

S = susceptible; MS = moderately susceptible, I = intermediate resistance, MR = moderate resistance, R = resistant

## YIELD COMPARISON (TONNE/ACRE)



From breeder registration submission

## YIELD DATA (BUSHEL/ACRE)

2023 SaskSeed Guide			2023 Alberta Seed Guide		2023 Manitoba Seed Guide	
% of AAC Synergy	Area 1 & 2	Area 3 & 4	% of CDC Copeland*		% of AAC Synergy**	
AAC Synergy	100	100	AAC Synergy	106	AAC Synergy	100
AAC Connect	99	95	AAC Connect	101	AAC Connect	96
CDC Copeland	92	93	CDC Copeland	100	CDC Copeland	88
AC Metcalfe	87	86	AC Metcalfe	99	AC Metcalfe	87

\*Base CDC Copeland yield 110 bushels per acre; \*\*Base AAC Synergy yield 111 bushels per acre

## QUALITY & PERFORMANCE RESULTS FROM CMBTC 2020-2022 WESTERN CANADIAN FIELD TRIALS

Once varieties have been registered in Canada, the CMBTC collects samples annually to evaluate barley and malt quality differences between new and established varieties. These trials are performed to help support new varieties toward market acceptance. The data below represents 3-year averages from 2020-2022 of barley samples sourced from multiple sites across western Canada as part of the CMBTC's Western Canadian Field Trials.

**Table 1. Barley Quality Data**

AAC Connect shows malt barley quality similar to the controls. AAC Connect has a high 1,000 kernel weight, greater than AC Metcalfe and CDC Copeland. The water sensitivity of AAC Connect is not statistically different to the checks.

	AC Metcalfe	CDC Copeland	AAC Synergy	AAC Connect	p-value by variety*
n	70	70	70	70	
Protein %	13.5	12.9	12.7	13.1	0.0839
Germination Energy %	91.6	94.1	94.3	92.4	0.3955
Water Sensitivity %	74.7 b	83.2 a	82.2 ab	81.8 ab	0.0184
Thousand Kernel Weight, grams	43.9 b	44.7 b	45.9 ab	47.2 a	0.0005
Plumpness %	91.9	91.2	93.4	91.8	0.6084
SN RVU	116	128	122	112	0.5624

**Table 2. Malt Quality Data**

AAC Connect shows overall desirable malt qualities. Diastatic power is not statistically different from the controls, however, has higher  $\alpha$ -Amylase levels than CDC Copeland. Also of note is  $\beta$ -glucan levels of AAC Connect are higher than AAC Synergy.

	AC Metcalfe	CDC Copeland	AAC Synergy	AAC Connect	p-value by variety*
n	70	70	70	70	
Moisture %	4.1	4.0	4.1	4.1	
Friability %	76.6	83.2	83.2	82.4	0.0336
Protein %	13.47	12.94	12.70	13.14	0.5723
Fine Extract % db	80.0	79.6	80.7	81.0	0.0736
Diastatic Power °L	177 a	154 b	157 b	168 ab	0.0020
$\alpha$ -Amylase DU	84.3 a	69.0 b	81.1 ab	82.1 a	0.0077
Soluble Protein %	5.76	5.62	5.76	5.73	0.9468
S/T Ratio %	43.2	43.7	45.9	44.0	0.4758
FAN mg/L	227	207	222	208	0.3877
Colour SRM	3.11	2.68	2.94	2.86	0.8785
$\beta$ -Glucan mg/L	127 ab	146 ab	103 b	169 a	0.0554
Viscosity cP	1.48	1.47	1.45	1.46	0.3334

\*A p value <0.05 indicates statistical significance between values.

Letter display generated by Tukey's test. Varieties not connected by the same letter are significantly different.

For more information:  
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