Western Crop Innovations

AB STANDSWELL

Six-row general purpose barley

- Superior nitrogen use efficiency to protect yield under limited N conditions
- Smooth awn with high grain and forage yields
- Semi-dwarf with good lodging resistance

Strengths of AB Standswell

- Enhanced nitrogen use efficiency, 6% of Vivar and 10% of Amisk and AC Ranger. This tolerance can help stabilize yield in low N conditions.
- Grain yield is 3% of Vivar and Amisk and 5% of AC Ranger.
- Forage yield is 3% of the six-row semi-dwarf check Vivar.
- Resistant to lodging, similar to the best check Amisk.
- Plumper seed than AC Ranger and Vivar, Test weight better than all the checks.
- Smooth awn, short height, similar to the semi-dwarf checks Amisk and Vivar.
- Good disease resistance package with resistance or moderate resistance to surface-borne smut, stem rust, spot blotch, and the net form of net blotch, and intermediate reactions to spot-form net blotch.

AB Standswell was developed by Western Crop Innovations and is available through Mastin Seeds.

Table 1. Yield and agronomic traits of AB Standswell averaged over the 2018 and 2019 Western Cooperative Six-Row Barley Registration Trials.

Entry	Yield kg/ha	AC Ranger %	Heading days	Maturity days	Height cm	*Lodging 1-9	Test Wt kg/hL	Kernel Wt mg	Plump >6/64 %
AC Ranger	6597	100	53.5	93.2	76.6	3.6 (2.5)	60.8	45.5	88.9
Amisk	6706	102	54.9	93.1	72.4	3.2 (2.5)	59.2	44.7	94.9
Vivar	6761	102	54.8	92.9	72.2	3.5 (2.5)	60.3	46.2	90.5
AB Standswell	6947	105	53.6	93.8	72.0	3.1 (2.2)	61.3	40.5	92.9
Mean	6789		54.9	93.3	76.6	3.4	61.8	44.8	92.5
Station Years	28		23	27	30	6	20	24	24

*Lodging values in parenthesis exclude Lacombe 2019 data. The Lacombe site had 260 kg/ha available (soil N + applied) nitrogen, which combined with seasonal high moisture caused very high lodging. Lodging scored 1-9, where 9 is up to 100% lodged.

Table 2. Forage data for AB Standswell from the 2018 and 2019 Western Cooperative Forage Barley Registration Trials.

Entry	DM Yield kg/ha	Gadsby %	Starch %	CP %	NDF %	ADF %	IVTD %	NDF 30 %	ADG %	MPTI kg/tonne
CDC Austenson	13756	102	14.6	9.0	47.6	25.4	73.5	44.4	0.69	1051
CDC Cowboy	13714	102	12.3	8.2	49.3	27.3	71.8	42.8	0.62	963
Gadsby	13464	100	15.1	8.4	47.4	25.8	73.6	44.4	0.67	1045
Vivar	12609	94	13.5	8.8	48.3	25.8	73.2	44.7	0.67	1024
AB Standswell	12998	97	15.0	8.9	47.9	25.4	73.5	44.9	0.69	1055
Mean	13300		14.2	8.0	48.0	26.0	73.0	44.3	0.70	1034
Station Years	14		14	14	14	14	14	14	14	14

CP– Crude protein, NDF - neutral detergent fiber; ADF - acid detergent fiber; IVTD - in vitro true digestibility; NDF 30 - percentage of NDF that is digestible at 30h incubation period, ADG - average daily gain of a calf backgrounding for 100d on forage, MPTI - milk yield per tonne of forage in dairy cows.

Table 3. Nitrogen use efficiency and grain yield of AB Standswell evaluated under high and moderately low N regimes at Lacombe, AB.

Entry	Nitrogen Use Efficiency	Grain Yield kg/ha			
	kg/(kg/ha)	High Fertility Conditions	Moderately Low Fertility Conditions	Mean	AC Ranger %
AC Ranger	43.9	8079	6267	7173	100
Amisk	43.9	9481	5650	7566	106
Vivar	45.3	9232	6081	7567	107
AB Standswell	48.2	9076	6796	7936	111

Nitrogen use efficiency - grain yield (kg) per available N (kg/ha), where available N is soil N + applied; High fertility conditions - 100% of the N recommended by soil tests; Moderately low fertility conditions - 25% less N than is recommended by soil tests.

Table 4. Overall disease ratings of AB Standswell from the 2018 and 2019 Western Cooperative Six-row Barley Registration Trials.

Entry	Net Blotch		Scald	Spot Blotch	Covered Smut	Stem Rust	FHB	DON† (ppm)
	Net Form	Spot Form						
AC Ranger	R	I	MS	MR	R	R	S	16.8
Amisk	R	I	I	MR	R	I	S	19.8
Vivar	I	I	I	I	R	R	S	20.4
AB Standswell	MR	I	MS	MR	R	MR	S	17.8

R — resistant, MR – moderately resistant, I – intermediate resistance, MS- moderately susceptible, S—susceptible. FHB – fusarium head blight. †DON (deoxynivalenol) content averaged over 5 site years.