

Sundre

New 6-row feed barley



April 2006, Field Crop Development Centre

Sundre is a 6-rowed, smooth-awned, hulled feed barley developed by the Field Crop Development Centre (FCDC) in Lacombe and registered in 2005.

It has high grain and silage yields in central Alberta, with good kernel weight and seed plumpness. Sundre is marketed by Mastin Seeds Ltd., Sundre, Alberta.

Sundre was tested as BT 566 in the Western Cooperative Barley Trials from 2003 to 2004 and in FCDC trials as H92068001 from 2000 to 2004. Its pedigree is BT636/Tukwa. Morphological distinguishability: yellow aleurone, and a long rachilla with long hairs.

In FCDC silage trials, Sundre out-yielded the high yielding six-rowed varieties Vivar and AC Lacombe.

Sundre has multiple gene resistance to scald, as shown in multi-station, multi-year trials. It has resistance to covered smut and false loose smut.

End-use	Sundre is a desirable multi-purpose variety for the livestock industry.
Strengths	<ul style="list-style-type: none"> ▪ Overall yields similar to AC Rosser and exceeding AC Lacombe by 5%. ▪ Yields in the Western Black soils exceed AC Rosser by up to 7%. ▪ Out yields Vivar in all yield class environments. ▪ Sundre has multiple gene resistance to scald; it has shown resistance in Lacombe, Edmonton and CIMMYT / ICARDA (Mexico) nurseries. ▪ High test weight: 2% greater than AC Rosser, 3% greater than AC Lacombe. ▪ High % plump seed: 4% greater than AC Rosser, and 7% greater than AC Lacombe. ▪ High silage yield: 12% or greater than FCDC checks Vivar and AC Lacombe. ▪ Resistant to covered smut (<i>Ustilago hordei</i>) and false loose smut (<i>U. nigra</i>)
Neutral Traits	<ul style="list-style-type: none"> ▪ Straw strength equal to Coop checks. ▪ MR-MS for net blotch (spot form) and spot blotch. ▪ FHB levels equal to checks. ▪ Stem rust MR-MS rating.
Weaknesses	Susceptible to septoria, loose smut (<i>U. nuda</i>), net blotch (net form), and common root rot.

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WESTERN COOPERATIVE 6-ROW BARLEY TRIALS

Summary of Yield and Agronomic Data for all Stations Averaged for 2003 and 2004

Entry Name	Yield (kg/ha)	Days to Head	Days to Maturity	Height (cm)	Lodging (0-9 Scale)	Test Wt. (kg/hl)	Kernel Wt. (g)	% Plump > 6/64	% Protein
CDC Sisler	5594.9	59.2	93.4	93.0	4.6	61.8	36.1	90.7	13.3
Excel	5663.9	57.8	94.1	82.6	4.2	62.3	38.4	89.3	12.9
AC Lacombe	5995.9	57.8	93.1	85.9	4.6	60.8	39.8	79.8	12.5
AC Rosser	6331.4	58.0	94.4	83.1	5.4	61.3	39.5	83.4	12.5
Sundre	6319.2	59.7	94.7	87.7	5.5	62.5	39.1	87.4	12.8
# Station yrs	38	30	32	36	16	32	32	25	4

WESTERN COOPERATIVE 6-ROW BARLEY TRIALS – Yield (kg/ha) by Soil Zone 2003-2004

Entry	Eastern		Brown		Western		Grey	
	Black	% of AC Rosser	Brown	% of AC Rosser	Black	% of AC Rosser	Wooded	% of AC Rosser
CDC Sisler	5735.0	87	5281.3	87	6076.2	90	4855.0	94
Excel	5976.4	91	5168.2	85	6328.1	94	4325.0	83
AC Lacombe	6110.1	93	5670.6	94	6725.2	100	4893.4	94
AC Rosser	6585.2	100	6064.1	100	6734.1	100	5179.9	100
Sundre	6187.4	94	6115.0	101	7250.0	108	5496.4	106
# Stn Yrs	16		10		8		4	

FIELD CROP DEVELOPMENT CENTRE - Yield Data by Yield Class 2000-2004

Yield Class	Yield (kg/ha)				Overall	Overall % AC Lacombe
	< 4.0 t/Ha	4.0 - 6.0 t/Ha	6.0-8.0 t/Ha	>8.0 t/Ha		
AC Lacombe	3751.0	5327.2	6861.5	9424.7	5602.7	100.0
Vivar	3715.0	5348.5	7431.0	9566.1	5698.0	101.7
Sundre	4040.0	5966.5	7582.0	9867.7	6123.8	109.3
Station Yrs	15	13	10	5	43	

FIELD CROP DEVELOPMENT CENTRE - Agronomic Data 2002-2004

Entry	Maturity (days)	1000KWT (g)	Test Wt. (kg/hl)	Anthesis (days)	Height (cm)	%Plump	Lodging (0-9)	Lodging Stage Percent Scale
	AC Lacombe	94.8	41.3	61.1	56.1	83.3	42.6	2.3
Vivar	96.5	42.5	61.4	57.7	73.2	63.2	1.7	205
Sundre	98.6	42.0	63.7	58.4	82.7	70.8	2.7	235
Station Yrs	36	40	40	36	36	29	3	3

FIELD CROP DEVELOPMENT CENTRE - Silage Yield Data 2000-2004

Entry	Dry Silage Yield (kg/ha)	% AC Lacombe
AC Lacombe	8554	100
Vivar	8416	97.4
Sundre	9685	111.8
Station years	4	

DISEASE RATING FOR SUNDRE (BT 566)

PRRCG Barley & Oat Subcommittee - Based on 2003-2004 Cooperative Test data

Disease	Rating	Disease	Rating
Stem rust (MCC and QCC)	MRMS	Septoria	S
Spot-form of net blotch	MRMS	Fusarium head blight	S
Net-form of net blotch	MS	Common root rot	MS
Spot blotch	MRMS	Loose smut	MS
Scald	R	Surface-borne smuts	R