

Chigwell

Spring, 6-rowed, hulled, feed barley



Field Crop Development Centre, March 2008

Chigwell is a six-rowed, smooth-awned, hulled feed barley, developed by the Field Crop Development Centre, Lacombe. It is well-adapted to the Black, Brown, Black and Grey Wooded and Irrigated Soil Zones of western Canada. Chigwell combines both desirable traits of relatively high grain and forage yields similar or near to Vivar. These traits could make Chigwell a good grain and forage feed barley in western Canada.

Chigwell was tested as BT577 in the Western Cooperative Barley Trials from 2006 to 2007; it was also tested as FB418 in the Western Forage Barley Cooperative Trials from 2006 to 2007. The parentage of BT577 is Mahigan/H87020005.

End Use	<ul style="list-style-type: none"> Chigwell would make a good multi-use feed barley for western Canada.
Strengths	<ul style="list-style-type: none"> Grain yields comparable to checks and outyields Vivar under irrigation. Medium height and good lodging resistance similar to Vivar and better than AC Rosser. Percent plump comparable to Vivar and AC Rosser. Moderate resistance to scald, spot blotch and spot-form net blotch. Resistant to covered (<i>U. hordei</i>) and false loose smut (<i>U. nigra</i>). Biomass for greenfeed and potential for silage - higher than Vivar in FCDC tests.
Neutral Traits	<ul style="list-style-type: none"> Days to maturity and test weight comparable to the feed check Vivar. Intermediate reactions to stem rust (<i>Rpg7</i>). Crude protein higher than the check Vivar.
Weaknesses	<ul style="list-style-type: none"> Lower %plumps compared to Vivar. Susceptible to common root rot. FHB and DON, and common root rot reactions similar or lower than Vivar.

WESTERN COOPERATIVE 6-ROW BARLEY TRIALS Summary of Yield and Agronomic Data for all Stations Averaged for 2006 & 2007

Entry	Heading (days)	Height (cm)	Lodge (1-9)	Maturity (days)	1000K Wt. (g)	Test Wt	Plumps (%)	%Thin	%Protein
Vivar	54.6	82.2	3.3	86.3	39.1	60.4	79.4	11.0	12.2
AC Rosser	55.0	82.5	4.3	87.0	40.3	61.0	77.4	12.5	12.6
Chigwell	55.1	86.4	3.1	86.1	39.1	60.6	75.7	11.7	12.5
Station Years	34	37	9	30	27	28	20	15	4

WESTERN COOPERATIVE 6-ROW BARLEY TRIALS - Yield (kg/ha) by Soil Zone 2006-2007

Entry	Eastern Black		Irrigation		Brown Soils		Black Soils		Grey Wooded	
	kg/ha	% Vivar	kg/ha	% Vivar	kg/ha	%Vivar	kg/ha	% Vivar	kg/ha	% Vivar
Excel	5378.8	99	6842.6	86	4233.7	95	7289.9	91	3841.9	97
Vivar	5426.2	100	7980.2	100	4453.6	100	8027.2	100	3955.9	100
AC Rosser	5740.5	106	8862.1	111	4529.3	102	7460.4	93	4135.3	105
Legacy	5332.6	98	7610.5	95	4090.7	92	7270.3	91	3663.7	93
Chigwell	5257.7	97	8191.6	103	4338.4	97	7355.7	92	3891	98
Station Years	16		3		6		6		5	

Western Cooperative Forage Barley Test - Summary of results for 2006-2007

	Grain data:		Test wt (kg/hl)	Plump (%)	Frg Data:		%	Forage Quality					Ranger	
	Yield	%Ranger			Kwt (g)	CP		DM Yld	Viriden	CP	ADF	NDF		TDN
Viriden	5080.1	95.6	42.6	61.3	79.3	12.6	10070.2	100.0	9.4	37.2	57.5	50.5	97.0	99.3
Dillon	4257.8	80.7	36.4	53.2	82.9	11.8	9516.1	94.4	9.8	36.9	56.2	50.9	99.6	102.0
AC Ranger	5304.7	100.0	39.2	61.4	66.5	12.2	9977.7	99.7	9.3	37.4	56.9	50.3	97.7	100.0
Vivar	5501.4	105.6	39.4	60.7	68.6	11.6	10247.0	101.9	9.0	36.3	56.8	51.6	99.4	101.7
Chigwell*	5150.8	97.4	37.2	61.4	71.6	12.3	9870.7	97.8	9.6	36.4	56.2	51.4	100.2	102.5
Stn Yrs	11		11	11	10	4	10		10	10	10			
FB 418*	*BT 577 concurrently tested as FB 418 in Forage Barley Coop 2006 - 2007.													

Field Crop Development Centre - Yield Data by Yield Class 2003-2007

Entry	<4.0 t/Ha		4.0 - 6.0 t/Ha		6.0 - 8.0 t/Ha		> 8.0 t/Ha		Overall	
	Dry Yield (kg/ha)	% Check	Dry Yield (kg/ha)	% Check	Dry Yield (kg/ha)	% Check	Dry Yield (kg/ha)	% Check	Dry Yield (kg/ha)	% Check
Chigwell	3733.5	100	5614.4	97	7555.0	95	9945.6	97	7230.4	96
AC LACOMBE	3556.0	95	5380.6	93	7454.8	94	9378.9	92	6988.2	93
VIVAR	3738.0	100	5786.1	100	7959.6	100	10212.7	100	7508.2	100
Station Years	4		8		16		8		36	

Field Crop Development Centre - Agronomic Data 2003-2007

Entry	Maturity (days)	1000kwt (g)	Test Wt. (kg/hl)	Anthesis (days)	Height (cm)	Plump (%)	Lodge (1-9)
Chigwell	98.7	39.6	61.7	55.7	86.2	75.3	2.4
AC LACOMBE	98.0	42.0	61.0	54.5	90.4	65.3	2.7
VIVAR	99.3	42.4	61.9	55.6	80.9	76.1	1.8
Station Years	31	35	35	26	35	27	11

Field Crop Development Centre - Silage Yield Data

	Dry Silage Yield (kg/ha)	% Check
Chigwell	13205.5	100
AC Lacombe	13382.7	101
VIVAR	12728.9	96
Station Years	4	

Field Crop Development Centre - Feed Quality Data 2003-2007

Entry	Total Fibre (%)	Dig Energy (kcal/kg)	Protein Dig (%)	Starch (%)	Protein (%)	Lipid (%)	Lysine (%)	Pentosan (%)	Sol. Fibre (%)	B-Glucan (%)
Chigwell	18.8	3147.3	70.0	60.5	11.6	2.7	6.3	5.5	3.9	3.4
AC LACOMBE	20.9	2931.8	79.0	58.6	12.1	2.5	6.3	5.8	5.1	3.1
VIVAR	20.3	3101.3	70.3	58.9	10.8	2.4	5.8	5.9	3.9	2.9
Station Years	21									

DISEASE RATING FOR Chigwell (BT577)- Prairie Recommending Committee for Oat & Barley

Disease	Rating	Disease	Rating
Surface Borne Smuts	R	Spot Blotch, S-net Blotch, Scald	MR
N-net Blotch	MRMS	Loose Smut	MS
Stem Rust	I	Speckled Leaf Blotch, Septoria, Common Root Rot, FHB	S