Technical Bulletin

Genes that fit *your* farm.

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91
Progress Through Research
Le progrès grâce à la recherche

AAC Penhold

Canada Prairie Spring Red Wheat

Description:
AAC Penhold is a very short strong strawed CPS wheat that has high yield potential, improved protein content and good disease resistance. AAC Penhold is moderately resistant to FHB and has one of the best disease packages in a CPS wheat so it should be well adapted to all growing regions of western Canada especially those areas concerned with lodging and straw management.

Parentage: 5700PR/HY644-BW//HY469

Strengths:
- Grain yield 106% of 5700PR and 97% of 5701PR (average of all sites in 2010 to 2012 High Yield Wheat Registration trials)
- Improved lodging tolerance compared to 5700PR and 5701PR
- Significantly shorter than 5700PR and 5701PR
- Early maturing, 2 days earlier than 5700PR
- Very large seed size and heavy test weight
- Improved protein over 5700PR and 5701PR
- Moderately Resistant (good) to FHB
- Resistant to common bunt and leaf rust
- Moderately resistant to stripe rust and stem rust Ug99 and variants

Neutral Traits:
- Intermediate resistance to leaf spot and loose smut

Weaknesses:
- Response to yellow rust has not been consistent

Breeders:
Dr. Richard Cuthbert and Dr. Ron DePauw
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Agronomic Tip: AAC Penhold responds favorably to a heavier seeding rate especially in higher moisture areas. For CPS wheat, the optimum seeding rates ranged from 26 to 32 seeds/ft^2 in the Dark Brown soil zone to 33 to 42 seeds/ft^2 in the Black soil zone (this can be in the 180lb/ac range.)

The exceptionally strong straw of AAC Penhold can handle higher fertility – follow fertility recommendations for the target yield of your fields.

PBR 91 Protected

2010-2012 High Yield Wheat Cooperative Trials - Registration Data

Variety	Yield (% of Mean of Checks)	Maturity (days)	Lodging 1 = erect 9 = flat	Height (cm)	Test Weight (kg/kl)	Kernel Weight (mg/kernel)	Grain Protein (%)	Falling Number	FHB Resistance Rating
5700 PR	95	107.3	1.5	79.8	77.2	36.8	11.9	357	MS
5701 PR	105	105.7	1.8	81.4	75.6	37.5	12.3	413	MS
AAC Penhold	**101**	**105.3**	**1.3**	**72.3**	**78.4**	**42.9**	**12.9**	**445**	**MR**

2018 Seed Manitoba – CPSR Wheat Comparison

Variety	Site Years Tested	Yield bu/ac	Protein %	Maturity +/- 99 days	Height +/- 91cm	Spike Awned	Resistance to:								
							Lodging	Sprouting	Loose Smut	Bunt	Leaf Spot	Stem Rust	Leaf Rust	Stripe Rust	FHB
AC® Carberry	97	66	14.5	2	0	Y	VG	F	MR	R	MS	MR	R	MR	MR
AAC Foray VB	31	76	13.1	1	+5	Y	VG	P	MS	I	MS	MR	R	I	I
AAC Goodwin	20	74	14.3	2	0	Y	VG	---	MS	I	I	I	R	R	I
AAC Ryley	30	70	13.0	1	+3	Y	G	G	I	R	MS	R	R	S	MS
5702PR	30	70	12.8	1	+3	Y	VG	P	MS	I	I	I	MR	MS	MS
SY Rowyn	20	74	13.4	1	-5	Y	VG	---	I	S	I	R	R	MR	MR
AAC Penhold	**44**	**73**	**13.9**	**1**	**-10**	**Y**	**VG**	**VG**	**I**	**R**	**I**	**MR**	**R**	**MR**	**MR**

Lodging Ratings: F=Fair; G=Good; VG=Very Good Disease Ratings: R=Resistant; MR=Moderately Resistant; I=Intermediate; MS=Moderately Susceptible; S=Susceptible

2018 Varieties of Grain Crops for Saskatchewan – Wheat Comparison

Variety	Years Tested	Yield as % of Carberry			Protein	Resistance to:									Relative Maturity (days)	Head Awnedness	Seed Weight (mg)	Test Weight (kg/hl)	Height (cm)
		Area 1 & 2	Area 3 & 4	Irrigation		Lodging	Sprouting	Stem Rust	Leaf Rust	Stripe Rust	Loose Smut	Bunt	Leaf Spot	FHB					
AC® Carberry	6	100	100	---	14.6	VG	F	MR	R	MR	MR	R	MS	MR	99	Y	34.8	80.3	82
AAC Foray VB	5	116	121	---	-1.7	F	P	MR	R	I	MS	I	MS	I	0	Y	+7.6	-1.5	+6
AAC Goodwin	2	116	117	---	-0.5	G	G	I	R	R	R	MS	I	I	-1	Y	+1.2	+0.2	+1
AAC Ryley	5	103	110	---	-1.2	P	G	R	R	S	I	R	MS	MS	-2	Y	+6.6	-4.7	+2
5700PR	5	107	113	106	---	VG	F	R	I	S	MS	R	MS	MS	-1	Y	+5.5	0.0	-4
SY Rowyn	1	103	107	---	-1.1	F	F	R	R	MR	I	S	I	MR	-1	Y	-4.4	-0.4	-5
AAC Penhold	**5**	**108**	**111**	**---**	**-1.0**	**VG**	**VG**	**MR**	**R**	**MR**	**I**	**R**	**I**	**MR**	**-2**	**Y**	**+4.8**	**-0.1**	**-9**

G=Good; VG=Very Good; F=Fair; P=Poor; VP=Very Poor

2018 Alberta Seed Guide - CWRS Wheat Comparison

Variety	Overall Yield (1)		Test Yield Category (2)			Maturity Rating	Protein %	Test Weight (lb/bu)	Kernel Weight g/1000	Height (cm)	Resistance to:		Disease Resistance:				
	All Sites	Station years of testing	Low < 45 bu/ac	Med 45 - 70 bu/ac	High >70 bu/ac						Ldg.	Sprout	Loose Smut	Bunt	Stripe Rust	Leaf Spot	FHB
			Yield as % of AC Barrie														
AC Barrie bu/ac	**66**		**42**	**64**	**89**												
AC Barrie	100		100	100	100	M	13.8	63	40	90	G	G	MR	I	S	MS	I
AC® Carberry	106+		107+	107+	104+	L	0	63	40	79	VG	F	MR	R	MR	MS	MR
AAC Goodwin	123+	31	121+	126+	122+	M	-0.4	63	41	83	VG	G	MS	MS	R	I	I
AAC Foray VB	128+	41	XX	130+	120+	M	-1.7	63	51	85	G	G	MS	I	MR	MS	I
AAC Ryley	118+	37	XX	120+	114+	M	-0.6	60	48	82	G	G	I	R	S	MS	MS
5700PR	117+	117	XX	121+	113+	L	-1.9	62	42	75	VG	F	MS	R	MS	MS	MS
AAC Penhold	**118+**	**58**	**113+**	**123+**	**118+**	**M**	**-1**	**63**	**45**	**71**	**VG**	**G**	**I**	**R**	**MR**	**I**	**MR**

VG = Very Good; G = Good; F = Fair; P = Poor; VP = Very Poor Disease Ratings: R=Resistant; MR=Moderately Resistant; I=Intermediate; MS=Moderately Susceptible; S=Susceptible

For more information, call 1-800-665-7333 or visit www.secan.com

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