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Technical Bulletin

AC Andrew (SWS 241) Soft White Spring Wheat

AC Andrew is the highest yielding Soft White Spring variety presently registered in western Canada. It was selected for very high yield along with short, strong straw for production under irrigation in Southern Alberta and Saskatchewan.

Strengths of AC Andrew:

- Yield 118% of AC Reed
- Highest yielding soft white spring wheat variety presently registered
- Excellent lodging resistance
- Semi-dwarf with short straw
- Resistant to prevalent races of Stem rust, Stripe rust, Powdery mildew
- (Stripe rust was seen in Southern Alberta and Southern Saskatchewan in 2006)
- Moderately resistant to black point
- Shattering resistant

Weaknesses of AC Andrew:

- Susceptible to loose smut and bunt – seed must be treated for smut and bunt control
- Susceptible to pre-harvest sprouting – very little seed dormancy
- 4 days later maturing than the Check variety AC Reed in registration trials (112 days to maturity in Coop registration trials at sites in Southern Alberta and Saskatchewan)
- Moderate resistance to leaf rust and black point
- Due to its late maturity, AC Andrew may suffer from leaf rust in some years since leaves could still be green when leaf rust spores arrive from the USA

Observations on Soft White Spring Wheat:

- AC Andrew is traditionally thought to yield 35% more than AC Barrie
- Soft White Spring wheat is the lowest protein wheat class (usually 2 to 3% lower grain protein than CWRS)
- 2006 was the first year of with a significant acreage of AC Andrew grown on dryland. Because AC Andrew is a semi-dwarf that was developed for irrigated conditions, we are not sure how it will perform under drought stressed conditions which are often experienced on dryland production

Major risks for dryland production of AC Andrew:

- Delayed maturity under cool growing conditions
- Late maturity combined with early fall frost
- Substantially reduced yield and increased grain protein under drought stress conditions
- Pre-harvest sprouting under wet harvest conditions

Breeder:
R.S. Sadasivaiah
AAFC Lethbridge Research Centre
Lethbridge, Alberta

1997- 99 Soft White Spring Wheat Cooperative Test Data

Entry	Yield (% Reed)	Maturity (days)	Lodging 1=erect 9=flat	Height (cm)	Grain Protein (%)	1000 Kernel Weight (mg)
AC Reed	100	108	2.0	86	10.9	34.4
AC Phil	103	108	2.5	86	10.7	34.8
AC Nanda	99	112	1.9	95	11.6	33.9
AC Andrew	118	112	1.4	92	11.4	36.3

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Traditional Area Table

Variety	Yield as % of AC Andrew						Comp. Maturity (Days)	Test Wt. (lb/bu)	Kernel Wt. (g/1000)	Height (cm)	Resistance to:						Tolerance		
	Area 1	Area 2	Area 3	Area 4	Area 5&6	Irr					Ldg.	Shat.	Loose Smut	Bunt	Common Root Rot	Stripe Rust	Leaf Spot	Sprout	FHB
AC Meena	99	NS	NS	NS	NS	98	0	61	37	77	XX	XX	S	S	XX	XX	XX	F	XX
AC Nanda	99	NS	NS	NS	NS	92	5	64	35	76	EX	G	S	I	S	XX	XX	F	XX
AC Reed	85	NS	NS	NS	NS	84	0	61	39	72	EX	VG	S	S	S	XX	XX	F	XX
Bishaj	98	NS	NS	NS	NS	100	2	62	38	85	EX	VG	I	S	XX	XX	XX	F	XX
AC Andrew	100	NS	NS	NS	NS	100	0	62	38	77	XX	XX	S	I	XX	XX	XX	F	XX

Ldg.=Lodging; Shat.=Shattering; Irr=Irrigation
Test Wt.=Test Weight Kernel Wt.=Kernel Weight
NS=Denotes variety generally not suited for area.
XX=Denotes insufficient test data to describe.

Ex=Excellent; VG=Very Good; G=Good; F=Fair; P=Poor; VP=Very Poor
R=Resistant; I=Intermediate; S=Susceptible