

# Pintail

## Awnless, general purpose, winter wheat



Field Crop Development Centre, March 2011

Pintail is an awnless, general purpose winter wheat variety developed at the Field Crop Development Centre in Lacombe. Pintail is a high yielding variety with high winter survival. It has good resistance to stripe rust.

Pintail (00H050 or W460) was selected from the cross 98W049, which expands to 93W022/CDC KESTREL//CDC CLAIR/3/AC READYMADE/4/83W020007/5/CDC HARRIER. The 93W022 line was derived from a complex cross which has a genetic background from well adapted and winter hardy Canadian winter wheat varieties such as NORSTAR and NORWIN. The 83W020007 line is from a cross between a winter wheat composite selection (78W005002) and NORSTAR.

### Strengths

- High grain yield - 104% of the general purpose winter wheat checks over 3 years of testing.
- Particularly well adapted to the Parkland region (Area 2).
- Very good winter hardiness.
- Resistant to stripe rust (*Puccinia striiformis*).
- Moderate height.
- Good lodging resistance.
- Awnless spike which lends itself to improved silage palatability.

### Neutral Traits

- Moderate resistance to leaf spots and powdery mildew.
- Intermediate resistance to stem and leaf rust (*Puccinia graminis* and *P. tritricina*).
- Test weight similar to general purpose winter wheat checks.

### Weaknesses

- Susceptible to Fusarium Head Blight (*Fusarium graminearum*).
- Similar susceptibility to common bunt (*Tilletia tritici* and *T. laevis*) as general purpose checks.

**Table 1. Grain yield (t/ha) by area\* in the Western Winter Wheat Cooperative Registration Trial, 2008 – 2010.**

Entry	2 Year Mean Yield (t/ha)					3 Year Mean Yield (t/ha)				
	Area 1	Area 2	Area 3	Area 4	Mean <sup>†</sup>	Area 1	Area 2	Area 3	Area 4	Mean <sup>†</sup>
Pintail	5.97	5.5	4.3	6.28	<b>5.78</b>	6.22	5.35	4.3	6.2	<b>5.88</b>
General Purpose check										
CDC Harrier	5.98	5.11	4.53	6.24	<b>5.71</b>	6.13	5.03	4.53	6.18	<b>5.79</b>
CDC Falcon	5.81	4.98	3.62	5.7	<b>5.34</b>	6.09	4.97	3.62	5.75	<b>5.56</b>
CDC Ptarmigan	6.53	4.95	3.96	6.44	<b>5.86</b>	-	-	-	-	-
Red Winter check										
CDC Osprey	5.83	5.31	4.28	6.02	<b>5.61</b>	5.95	5.08	4.28	5.9	<b>5.63</b>
AC Bellatrix	5.39	5.39	4.17	5.87	<b>5.42</b>	5.65	5.21	4.17	5.87	<b>5.51</b>
Radiant	5.75	4.89	3.85	5.42	<b>5.24</b>	6.14	4.87	3.85	5.5	<b>5.5</b>
CDC Buteo	5.58	5.04	4.18	5.9	<b>5.41</b>	-	-	-	-	-
CWGP check Mean	6.1	5.01	4.04	6.13	<b>5.64</b>	6.11	5.0	4.08	5.97	<b>5.68</b>
CWRW check Mean	5.64	5.16	4.12	5.8	<b>5.42</b>	5.91	5.05	4.1	5.76	<b>5.55</b>
LSD	0.75	0.83	0.53	0.56	<b>0.37</b>	0.51	0.6	0.51	0.49	<b>0.29</b>
Location -years	6	4	2	6	<b>18</b>	10	5	2	8	<b>25</b>

\*Area 1 – Southern Alberta, including Lethbridge irrigated and dry, Warner, and Vauxhall. Area 2 – Parkland sites, including Lacombe, Olds, and Beaverlodge. Area 3 – Semi-arid prairie sites, including Swift Current. Area 4 – Rust area sites, including Saskatoon, Indian Head, Brandon and Carman. <sup>†</sup>All means are weighted by the number of location-years.

**Table 2. Seed characteristics in the Western Winter Wheat Cooperative Registration Trial, 2008 – 2010.**

Entry	Test Weight (kg/hl)		Seed Weight (mg)		Grain Protein (%)	
	2 Yr. Mean	3 Yr. Mean	2 Yr. Mean	3 Yr. Mean	2 Yr. Mean	3 Yr. Mean
Pintail	75.8	76.2	29.5	29.3	10.4	10.5
General Purpose check						
CDC Harrier	76.2	76.6	32.5	32.2	10.7	10.8
CDC Falcon	77.5	78.1	31.0	30.7	11.5	11.4
CDC Ptarmigan	74.9	-	35.1	-	9.9	-
Red Winter check						
CDC Osprey	77.3	77.9	31.6	31.2	11.6	11.7
AC Bellatrix	78.6	79.0	35.6	35.4	12.2	12.4
Radiant	78.2	78.6	35.2	35.2	11.7	11.8
CDC Buteo	79.6	-	33.6	-	11.8	-
General Purpose check Mean	76.2	77.3	32.9	31.4	10.7	11.1
Red Winter check Mean	78.4	78.5	34.0	33.9	11.8	12.0
LSD	0.5	0.5	1.0	0.9	0.3	0.4
Location - years	19	26	19	26	17	24

All means are weighted by the number of location-years.

**Table 3. Agronomic characteristics in the Western Winter Wheat Cooperative Registration Trial, 2008 – 2010.**

Entry	Survival (%)		Maturity (d)		Height (cm)		Lodging (1-9)	
	2 Yr. Mean	3 Yr. Mean	2 Yr. Mean	3 Yr. Mean	2 Yr. Mean	3 Yr. Mean	2 Yr. Mean	3 Yr. Mean
Pintail	87	90	220.2	220.1	91	90	3.0	3.2
General Purpose check								
CDC Harrier	84	87	219.9	219.4	99	97	2.9	3.2
CDC Falcon	80	84	216.7	216.1	77	77	2.2	2.6
CDC Ptarmigan	77	-	219.4	-	98	-	3.2	-
Red Winter check								
CDC Osprey	82	85	218.2	217.5	97	96	3.2	3.6
AC Bellatrix	79	84	220.4	219.8	96	95	2.24.0	4.2
Radiant	80	83	221.8	221.1	94	92	3.32.2	2.4
CDC Buteo	82	-	219.5	-	95	-	3.3	-
CWGP check Mean	80	86	218.7	217.7	91	87	2.8	2.9
CWRW check Mean	81	84	220.0	219.5	95	94	3.2	3.4
LSD	6	5	1.2	1.1	2	2	0.6	0.6
Location - years	15	20	14	18	17	23	10	13

Lodging score 1-9, 9 being up to 100%.

