



## APPLICATIONS UNDER EXAMINATION

## WHEAT

### WHEAT (*Triticum aestivum*)

**Proposed denomination:** 'SY985'  
**Application number:** 10-7015  
**Application date:** 2010/06/23  
**Applicant:** Syngenta Seeds Canada, Inc., Morden, Manitoba  
**Breeder:** Francis Kirigwi, Syngenta Seeds Canada, Inc., Morden, Manitoba

**Varieties used for comparison:** '5700 PR' and '5701 PR'

**Summary:** *The flag leaf of 'SY985' is longer than '5701 PR'. 'SY985' has a straight culm at maturity while it is strongly curved for '5700 PR' and strongly to very strongly curved for '5701 PR'. The spike glaucosity of 'SY985' is medium while it is strong for the reference varieties. 'SY985' has awns that are weakly spreading while they are strongly spreading in '5700 PR'. The hairiness of the convex surface of the apical rachis segment of 'SY985' is absent or very sparse while it is sparse in the reference varieties. 'SY985' has a very long beak on the lower glume while it is medium length for '5700 PR' and long for '5701 PR'.*

#### Description:

**PLANT:** spring type, common wheat, erect to semi-erect growth habit, medium frequency of recurved/drooping flag leaves  
**SEEDLING** (4-leaf stage): absent or very weak intensity of anthocyanin of the coleoptile, glabrous sheath and blade of the lower leaf

**FLAG LEAF:** glabrous sheath and blade, weak anthocyanin colouration of the auricles, strong glaucosity of the sheath

**CULM/NECK:** very weak to weak glaucosity, straight at maturity

**STRAW:** thin pith in cross-section, no anthocyanin colouration at maturity

**SPIKE:** tapering, medium density, erect attitude at maturity, medium glaucosity, white at maturity, absent or very sparse hairiness of the convex surface of the apical rachis segment

**AWNS:** present, long, slightly spreading attitude, white

**LOWER GLUME:** medium width, long, sparse pubescence, sloping to slightly sloping shape of the shoulder, very narrow to narrow shoulder, straight very long beak, sparse extent of internal hairs

**LEMMA:** slightly curved beak

**KERNEL:** medium red, large, long, midwide, elliptical, rounded cheek, short brush hairs, medium sized oval germ, midwide mid-deep crease

**AGRONOMICS:** good resistance to shattering

**QUALITY:** good bread making

**DISEASE RESISTANCE:** resistant to Common root rot (*Cochliobolus sativus*), Loose smut (*Ustilago tritici*), Leaf rust (*Puccinia triticina*) and Stem rust (*Puccinia graminis* f. sp. *tritici*), moderately resistant to moderately susceptible to Common bunt (*Tilletia caries*, *Tilletia foetida*) and moderately susceptible to Fusarium head blight (*Fusarium graminearum*)

**Origin and Breeding:** 'SY985' is a spring wheat originating from the cross N99-3098WL / N98-3080W made in Berthoud, Colorado in 2001. Individual head selections were made from an F2 population screened at the Syngenta Seeds Canada breeding nursery in Rosebank, Manitoba in 2002. Single seed descent method was used to advance these selections through the F3 and F4 generations in the greenhouse. In the summer of 2003, F5 head rows were individually bulked from a selection nursery at Rosebank, Manitoba. The individual bulks in the F6 generation were screened and selected from a two location observation nursery (Rosebank, Souris) in 2004. One of the bulk selections was designated 01S3020-16 and tested in Syngenta Seeds Canada research plots in 2005 and 2006. It was tested in the High Yield Bread Wheat Co-op as 'HY985'

during the 2007, 2008 and 2009 seasons. Selection criteria used to develop this variety included height, maturity, yield, quality and disease resistance.

**Tests and Trials:** Trials were conducted at the Viterra/Proven Seed Research Farm in Rosebank, Manitoba during the summers of 2009 and 2010. Plots consisted of 7 rows with a row length of 5 metres and a row spacing of 18 cm. There were 3 replicates arranged in a RCB design.

**Comparison table for 'SY985'**

	'SY985'	'5700 PR'*	'5701 PR'*
<i>Flag leaf length (cm)</i>			
mean (2009)	22.37	21.24	19.74
std. deviation	3.0	3.53	2.8
mean (2010)	24.80	18.32	20.08
std. deviation	2.03	1.68	2.63

\*reference varieties



Wheat: 'SY985' (HY985) (left) with reference varieties '5700PR' centre and '5701PR' (right)