



## APPLICATIONS UNDER EXAMINATION

## RAPESEED

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(*Brassica napus*)

**Proposed denomination:** 'PPS06-284'  
**Application number:** 08-6401  
**Application date:** 2008/07/14  
**Applicant:** Bayer CropScience Inc., Saskatoon, Saskatchewan  
**Breeder:** Hieronim Polewicz, Bayer CropScience Inc., Saskatoon, Saskatchewan

Note: The applicant has requested an exemption from compulsory licensing to allow time to multiply and distribute propagating material of the variety. If the exemption is granted, it may be allowed for two years from the date rights are granted for the variety.

**Varieties used for comparison:** 'PPS98-274', 'PPS02-364' and '5030'

**Summary:** 'PPS06-284' flowers later than 'PPS02-364' but earlier than 'PPS98-274'. The plant height at maturity of 'PPS06-284' is shorter than '5030'. 'PPS06-284' has a shorter petiole than '5030'. The silique and pedicel of 'PPS06-284' is shorter than in 'PPS98-274' and '5030'. 'PPS06-284' has higher erucic acid content than 'PPS98-274', 'PPS02-364' and '5030'. The oil content as a percentage in whole dried seed of 'PPS06-284' is higher than in 'PPS98-274' and '5030'.

#### Description:

**PLANT:** inbred restorer line, spring seasonal type, medium height at maturity

**COTYLEDON:** narrow to medium width, short to medium length

**LEAF:** dark green, medium number of lobes, rounded to sharp margin type, medium density of moderately deep indentations, short to medium length, medium to wide width, short to medium length petiole

**FLOWER PETALS:** yellow, medium length, narrow to medium width

**SILIQUE:** semi-erect to horizontal attitude, medium length, medium to wide, medium length beak, short pedicel

**SEED:** black

**AGRONOMIC CHARACTERISTICS:** fair to good resistance to lodging

**QUALITY CHARACTERISTICS:** erucic acid is 41.2% of total fatty acids, oil content is 51.4% of whole dried seed, protein is 26.6% of dried oil free meal, low glucosinolates (13.3 umol/gm)

**HERBICIDE RESISTANCE:** tolerant to glufosinate ammonium

**DISEASE RESISTANCE:** resistant to moderately resistant to Blackleg (*Leptosphaeria maculans* asexual stage: *Phoma lingam*) and resistant to White Rust (*Albugo candida*, races 7a & 2v)

**Origin and Breeding:** 'PPS06-284' is a high erucic acid restorer line used in F1 hybrid production. Backcrossing was done in Canada in 2003 and 2004 introgressing the Rf3 gene in the homozygous state. A doubled haploid was extracted from the F1 generation which became 'PPS06-284'. In 2005, 'PPS06-284' was selected on the basis of fertility restoration and expression of tolerance to glufosinate-ammonium herbicide. Other selection criteria included erucic acid content, height, vigour, maturity, blackleg resistance, oil content, fatty acid profile, glucosinolate content and combining ability.

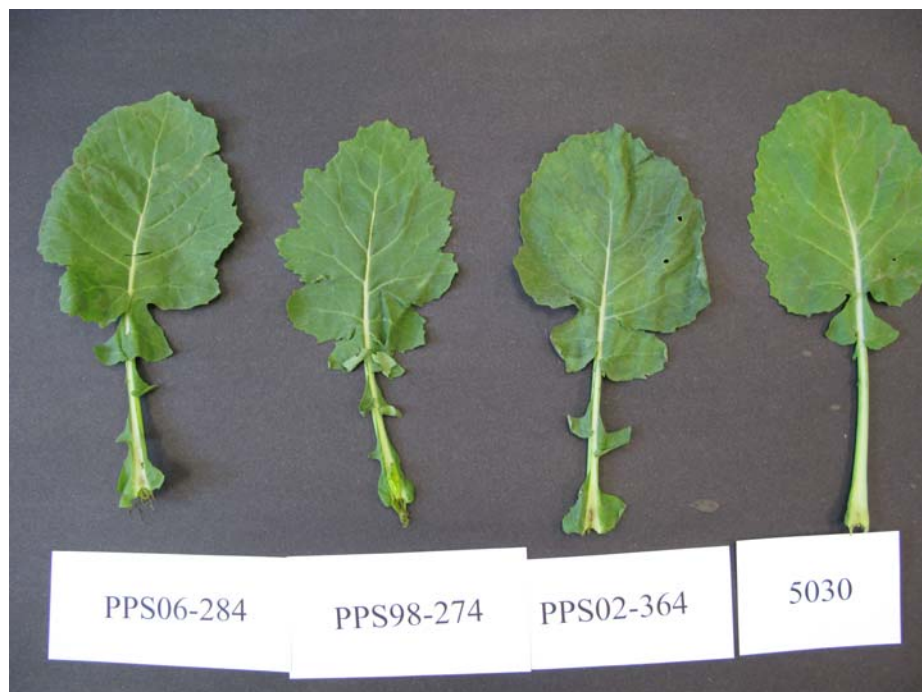
**Tests and Trials:** Tests and trials were conducted during the summers of 2007 and 2008 in Saskatoon, Saskatchewan. Plots consisted of 3 rows, with a row length of 6 metres and a row spacing of 40 cm. There were 2 replicates arranged in a RCB design.

**Comparison table for 'PPS06-284'**

	'PPS06-284'	'PPS98-274'*	'PPS02-364'*	'5030'*
<i>Days to flowering</i> mean	44.0	47.0	42.0	45.0
<i>Petiole length (mm)</i> mean (LSD=23)	105	115	103	136
std. deviation	15	21	20	19
<i>Silique length (mm)</i> mean (LSD=6.4)	53.6	62.6	58.7	60.5
std. deviation	4.8	4.2	5.2	5.2
<i>Pedicle length (mm)</i> mean (LSD=3.5)	17.0	21.9	17.5	20.5
std. deviation	1.8	2.4	2.0	1.8
<i>Plant height at maturity (cm)</i> mean (LSD=15)	118	132	113	138
std. deviation	5.1	7.4	5.3	8.9
<i>Erucic acid levels (% of total fatty acids)</i> mean	41.2	0.01	0.04	0.17
<i>Oil content (% in whole dried seed)</i> mean	51.4	47.2	49.1	47.4

Means are based on a two year average of 60 plant parts for petiole, silique, beak and pedicle characteristics. Differences are significant at the 2% probability level based on LSD values.

\*reference varieties



Rapeseed: 'PPS06-284' (left) with reference varieties 'PPS98-274' (centre left), 'PPS02-364' (centre right) and '5030' (right)