



APPLICATIONS UNDER EXAMINATION

CANOLA

CANOLA
(Brassica napus)

Proposed denomination: '1918'
Application number: 10-7089
Application date: 2010/10/27
Applicant: DL Seeds Inc., Morden, Manitoba
Breeder: The Governors of the University of Alberta, Edmonton, Alberta

Varieties used for comparison: 'Minot' and 'Reaper'

Summary: *The leaves of '1918' have medium to many lobes whereas there are very few lobes on 'Reaper'. The leaf margin of '1918' is sharp whereas it is rounded on 'Minot' and undulating on 'Reaper'. The depth of margin indentation on '1918' is shallow to medium whereas it is medium to deep on 'Minot' and very shallow to shallow on 'Reaper'. The silique and silique pedicel of '1918' are longer than those of both reference varieties.*

Description:

PLANT: open pollinated, spring seasonal type, medium height at maturity

COTYLEDON: medium to wide, medium length

LEAF: medium green, medium to many lobes, sharp margin, shallow to medium depth margin indentations, medium to long, medium width, long petiole

FLOWER PETALS: yellow, touching

SILIQUE: semi-erect attitude, long, medium width, medium to long beak, long pedicel

SEED: black

AGRONOMIC CHARACTERISTICS: good resistance to lodging, resistant to Glyphosate

QUALITY CHARACTERISTICS: erucic acid is 0.08% of total fatty acids, oil content is 48.316% of whole dried seed, low glucosinolates (10.406 µmol/g)

Origin and Breeding: '1918' (experimental designation 307236-C7) arose from the cross 'Prairie 719RR' x '9550' conducted in 2004 at the University of Alberta, Edmonton, Alberta. It was developed using the pedigree breeding method using selection criteria including vigour, flowering, plant height, maturity, seed yield, blackleg resistance and oil, protein, glucosinolate and saturated fatty acid contents.

Tests and Trials: The tests and trials for '1918' were conducted at the DL Seeds Sunvalley Research Farm in Morden, Manitoba during the summers of 2009 and 2010. Plots consisted of 3 replicates/variety arranged in a RCB design with each replicate consisting of 6 rows, measuring 6.0 metres in length with a row spacing of 17 centimeters. Plots were spaced approximately 0.3 meters apart. Measured characteristics were based on 40 measurements for cotyledon characteristics, 30 measurements for plant height and leaf characteristics and 60 measurements for silique, beak and pedicel characteristics.

Comparison table for '1918'

| | '1918' | 'Minot'* | 'Reaper'* |
|-----------------------------|--------|----------|-----------|
| <i>Number of leaf lobes</i> | | | |
| overall mean | 4.84 | 4.105 | 1.03 |

Siliqua length (mm)

| | | | |
|----------------|-------|-------|-------|
| overall mean | 66.24 | 60.10 | 54.35 |
| std. deviation | 6.05 | 7.49 | 4.11 |

Siliqua pedicel length (mm)

| | | | |
|----------------|-------|-------|-------|
| overall mean | 24.35 | 15.47 | 18.74 |
| std. deviation | 4.65 | 2.73 | 4.21 |

*reference varieties



Canola: '1918'



Canola: Reference variety 'Reaper'

Proposed denomination: 'Rugby'
Application number: 07-5835
Application date: 2007/04/03
Applicant: Norddeutsche Pflanzenzucht Hans-Georg Lembke KG, Holtsee, Germany
Agent in Canada: DL Seeds Inc., Morden, Manitoba
Breeder: Dietmar Brauer, Norddeutsche Pflanzenzucht Hans-Georg Lembke KG, Holtsee, Germany

Varieties used for comparison: 'Minot' and 'Reaper'

Summary: 'Rugby' has a medium number of lobes whereas 'Reaper' has very few. The depth of margin indentation of 'Rugby' is shallow whereas it is medium to deep on 'Minot'. The silique of 'Rugby' is longer than that of 'Reaper'. The silique beak of 'Rugby' is shorter than that of both reference varieties. The silique pedicel of 'Rugby' is longer than that of both reference varieties.

Description:

PLANT: open pollinated, spring seasonal type, medium to tall at maturity

COTYLEDON: wide, medium length

LEAF: medium to dark green, medium number of lobes, rounded margin, shallow depth of margin indentations, medium length and width, medium length petiole

FLOWER PETALS: yellow, touching to overlapping spacing

SILIQUE: semi-erect attitude, long, medium width, short to medium length beak, medium to long pedicel

SEED: black

AGRONOMIC CHARACTERISTICS: medium to good resistance to lodging, resistant to Glyphosate

QUALITY CHARACTERISTICS: erucic acid is 0.02% of total fatty acids, oil content is 51.862% of whole dried seed, low glucosinolates (10.739 $\mu\text{mol/g}$)

Origin and Breeding: 'Rugby' (experimental designation 30608-A5) is the result of the cross '6.017.026' x 'PF1857/95RR' conducted in Hohenlieth, Germany in 2002. It was developed using the pedigree breeding method using the selection criteria including quality traits, Glyphosate tolerance, blackleg tolerance and agronomic characteristics.

Tests and Trials: The tests and trials for 'Rugby' were conducted at the DL Seeds Sunvalley Research Farm in Morden, Manitoba during the summers of 2009 and 2010. Plots consisted of 3 replicates/variety arranged in a RCB design with each replicate consisting of 6 rows, measuring 6.0 metres in length with a row spacing of 17 centimeters. Plots were spaced approximately 0.3 meters apart. Measured characteristics were based on 40 measurements for cotyledon characteristics, 30 measurements for plant height and leaf characteristics and 60 measurements for silique, beak and pedicel characteristics.

Comparison table for 'Rugby'

| | 'Rugby' | 'Minot'* | 'Reaper'* |
|------------------------------------|---------|----------|-----------|
| <i>Silique length (mm)</i> | | | |
| overall mean | 65.50 | 60.10 | 54.19 |
| std. deviation | 6.15 | 7.49 | 4.11 |
| <i>Silique beak length (mm)</i> | | | |
| overall mean | 8.93 | 10.16 | 11.23 |
| std. deviation | 1.52 | 1.60 | 1.13 |
| <i>Silique pedicel length (mm)</i> | | | |
| overall mean | 21.67 | 15.47 | 18.74 |
| std. deviation | 3.93 | 2.73 | 4.21 |

*reference varieties



Canola: 'Rugby' (left) with reference varieties 'Minot' (centre) and 'Reaper' (right)
