



APPLICATIONS UNDER EXAMINATION

SOYBEAN

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(*Glycine max*)

Proposed denomination: '4599695'
Application number: 07-5851
Application date: 2007/04/05
Applicant: Monsanto Canada Inc., Guelph, Ontario
Breeder: Alejandro Hernandez Hernandez, Monsanto Canada Inc., Guelph, Ontario

Variety used for comparison: 'PS90NRR'

Summary: '4599695' flowers later than 'PS90NRR'. '4599695' is taller and matures later than 'PS90NRR'. The 100 seed weight of '4599695' is less than 'PS90NRR'.

Description:

PLANT: indeterminate growth type, grey coloured hairs on middle third of stem, weak anthocyanin colouration of the hypocotyl, heat unit rating 3175

LEAF: lateral leaflet rounded ovate shape

FLOWER: purple

POD: brown

SEED: spherical rounded shape, medium size, dull seed coat lustre, yellow testa, imperfect black hilum

AGRONOMICS: good resistance to shattering

DISEASE RESISTANCE: resistant to Phytophthora rot (*Phytophthora megasperma* f. sp. *glycinea*, races 1-3, 6-11, 13, 15, 17, 21, 23, 24, 26, 28, 29, 30, 32, 34, 36, 38), moderately resistant to soybean cyst nematode (*Heterodera glycines*)

HERBICIDE RESISTANCE: tolerant to glyphosate

Origin and Breeding: '4599695' (previously known as 31-53R) is the result of a cross made in 1999 between A3469 and DKB26-52 at Ames, Iowa. The F1 and F2 populations were grown at Isabella, Puerto Rico and advanced using modified single seed descent. The F3 population was grown in bulk at Ames, Iowa and advanced using modified single seed descent. F3 derived F4's were grown at Ames, Iowa in progeny rows and the variety '31-53R' was selected based on the agronomic characteristics, including, but not limited to, general plant health, lodging, early emergence, and general disease resistance.

Tests and Trials: Tests and trials were conducted during the summers of 2007 and 2008 in Guelph, Ontario. There were two replicates arranged in a randomized complete block design where first repetition in entry order was used. Each plot consisted of 216 seeds planted in two rows. Rows were spaced 80 cm apart and were 4 meters in length.

Comparison table for '4599695'

	'4599695'	'PS90NRR'*
<i>Days to flowering</i>		
mean	45	43
<i>Plant height (cm)</i>		
mean	86.7	79.1
std. deviation	0.317	0.889
<i>Seeds weight (grams/100 seed)</i>		
mean	13.7	17.3
<i>Days to maturity</i>		

mean	123.9	120.1
std. deviation	5.0	6.09

*reference variety



Soybean: '4599695' (left) with reference variety 'PS90NRR' (right)

Proposed denomination: 'D4201139'
Application number: 07-5852
Application date: 2007/04/05
Applicant: Monsanto Canada Inc., Guelph, Ontario
Breeder: Alejandro Hernandez Hernandez, Monsanto Canada Inc., Guelph, Ontario

Variety used for comparison: '32-52R'

Summary: 'D4201139' is shorter than the reference variety '32-52R'. The pod colour of 'D4201139' is dark brown whereas it is brown for '32-52R'. The seed shape of 'D4201139' is spherical rounded whereas they are spherical flattened in '32-52R'. 'D4201139' has moderate resistance to Soybean cyst nematode whereas '32-52R' is resistant. 'D4201139' has a higher % of protein than the reference variety.

Description:

PLANT: indeterminate growth type, grey coloured hairs on middle third of stem, weak anthocyanin colouration of the hypocotyl, heat unit rating 3250

LEAF: lateral leaflet rounded ovate shape

FLOWER: purple

POD: dark brown

SEED: spherical rounded shape, dull seed coat lustre, yellow testa, imperfect black hilum

AGRONOMICS: fair to good resistance to lodging

DISEASE RESISTANCE: resistant to Phytophthora rot (*Phytophthora megasperma* f. sp. *glycinea*, races 1-3, 6-11, 13, 15, 17, 21, 23, 24, 26, 28, 29, 30, 32, 34, 36, 38), resistant to moderately resistant to Sclerotinia stem rot (*Sclerotinia sclerotiorum*), moderately resistant to soybean cyst nematode (*Heterodera glycines*)

HERBICIDE RESISTANCE: tolerant to glyphosate

Origin and Breeding: 'D4201139' (previously known as 32-05R) is the result of a cross made in 2001 between A3244 and AG2705 at Isabelle, Puerto Rico. The F1 population was grown at Isabella, Puerto Rico and advanced using modified single seed descent. The F2 population was grown at Isabella, Puerto Rico and advanced using pod-pick. The F3 population was grown in bulk at Oxford, Indiana and advanced using single plant selection. The F3 derived F4's were grown in Chile in progeny rows and the variety '32-05R' was selected based on the agronomic characteristics, including, but not limited to, general plant health, lodging, early emergence, and general disease resistance.

Tests and Trials: Tests were conducted during the summers of 2006, 2007 and 2008 in Guelph, Ontario. There were two replicates arranged in a randomized complete block design where first repetition in entry order was used. Each plot consisted of 216 seeds planted in two rows. Rows were spaced 80 cm apart and were 4 meters in length.

Comparison table for 'D4201139'

	'D4201139'	'32-52R**'
<i>Days to flowering</i>		
mean	40	42
<i>Plant height (cm)</i>		
mean	83.4	94.4
std. deviation	3.77	3.77
<i>Seed weight (grams/100 seed)</i>		
mean	14.9	13.1
<i>Days to maturity</i>		
mean	115.0	117.5
std. deviation	5.66	3.54
<i>Protein (%)</i>		
mean	43.38	39.75
<i>Oil(%)</i>		
mean	19.90	22.23

*reference variety



Soybean: 'D4201139' (left) with reference variety '32-52R' (right)

Proposed denomination: 'D4923560'
Application number: 07-5850
Application date: 2007/04/05
Applicant: Monsanto Canada Inc., Guelph, Ontario
Breeder: Alejandro Hernandez Hernandez, Monsanto Canada Inc., Guelph, Ontario

Variety used for comparison: 'AG1901'

Summary: 'D4923560' has a shorter plant height than 'AG1901'. The seed shape of 'D4923560' is spherical rounded whereas it is spherical flattened in 'AG1901'. 'D4923560' has a heavier 100 seed weight than 'AG1901'. The plant maturity of 'D4923560' is earlier than 'AG1901'.

Description:

PLANT: indeterminate growth type, erect to semi-erect growth habit, tawny coloured hairs on middle third of stem, weak anthocyanin colouration of the hypocotyl

LEAF: lateral leaflet rounded ovate shape

FLOWER: purple

POD: brown

SEED: spherical rounded shape, very small size, dull seed coat lustre, yellow testa, black hilum

DISEASE RESISTANCE: resistant to Phytophthora rot (*Phytophthora megasperma* f. sp. *glycinea*, races 1-11, 13-15, 17-18, 21-24, 26, 27, 36, 37, 38)

HERBICIDE RESISTANCE: tolerant to glyphosate

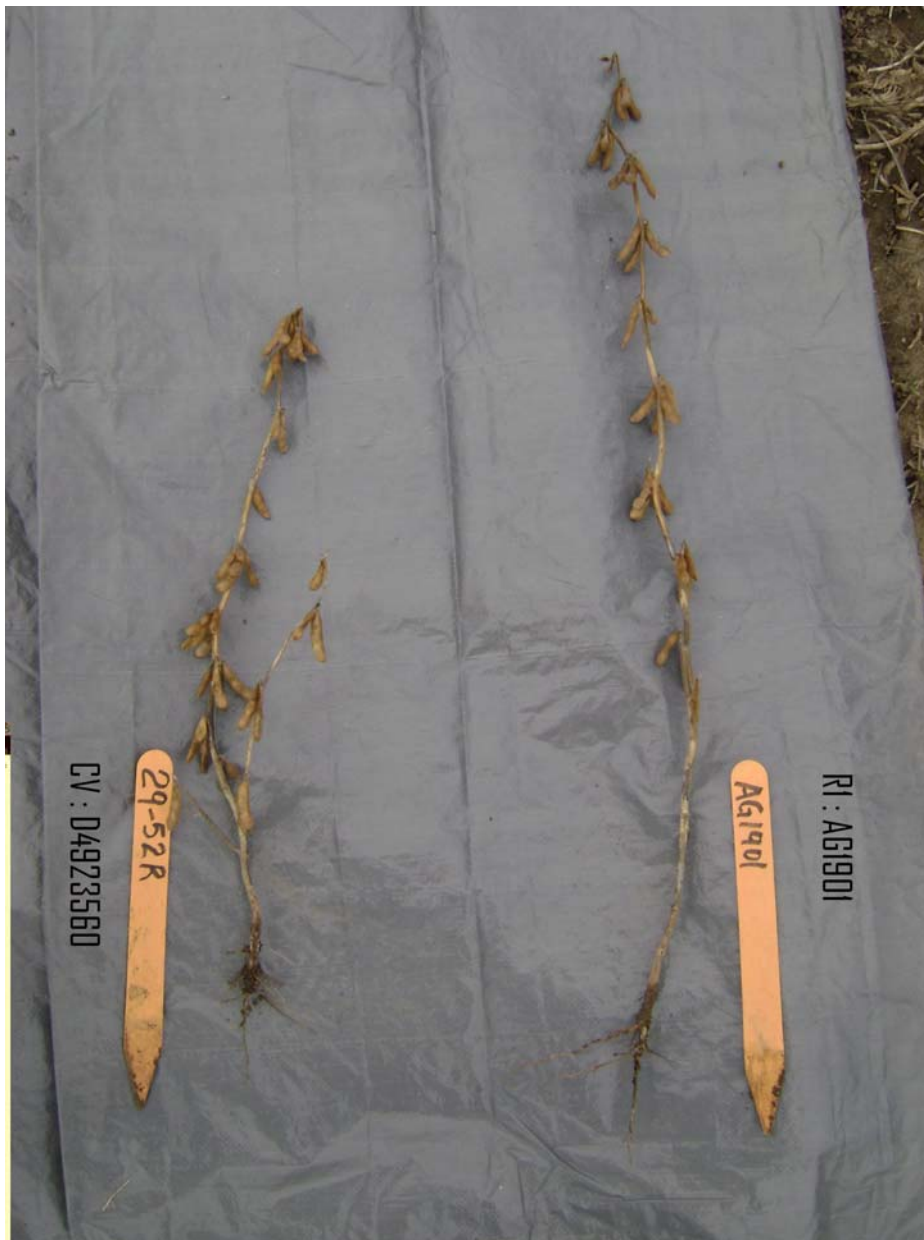
Origin and Breeding: 'D4923560' (previously known as 29-52R) is the result of a cross made in 2001 between AG1602 and AI2465/AG2101 at Redwood Falls, Minnesota. The F1 and F2 populations were grown at Keahi, Hawaii and advanced using modified single seed descent. The F3 population was grown in bulk at Redwood Falls, Minnesota and advanced using modified single seed descent. The F3 derived F4's were grown at Redwood Falls, Minnesota in progeny rows and the variety '29-52R' was selected based on the agronomic characteristics, including, but not limited to, general plant health, lodging, early emergence, and general disease resistance.

Tests and Trials: Tests were conducted during the summers of 2007 and 2008 in Guelph, Ontario. There were two replicates arranged in a randomized complete block design where first repetition in entry order was used. Each plot consisted of 216 seeds planted in two rows. Rows were spaced 30 inches apart and were twelve feet in length.

Comparison table for 'D4923560'

	'D4923560'	'AG1901'*
<i>Days to flowering</i>		
mean	42	44
<i>Plant height (cm)</i>		
mean 2007	83.82	93.98
std. deviation	2.4246	2.2780
mean 2008	83.82	93.98
std. deviation	2.5618	1.9731
<i>Seed weight (grams/100 seed)</i>		
mean	18.2	14.3
<i>Days to maturity</i>		
mean	125	128

*reference variety



Soybean: 'D4923560' (left) with reference variety 'AG1901' (right)