SOYBEAN
(Glycine max)

Proposed denomination: **'Castor R2X'**
Application number: 22-10853
Application date: 2022/03/16
Applicant: Sollio Agriculture, Saint-Hyacinthe, Quebec
Breeder: Jérôme Auclair, Sollio Agriculture, Saint-Hyacinthe, Quebec

Varieties used for comparison: 'Vidar R2X', 'Sunna R2X' and 'Woden R2X'

Summary: *The intensity of anthocyanin colouration on the hypocotyl of 'Castor R2X' is weak whereas it is of medium intensity for the reference varieties. When 50% of the flowers are open, the branching attitude of 'Castor R2X' is erect to semi-erect whereas it is semi-erect to horizontal for 'Sunna R2X'. On the middle third of the main stem, the pubescence of 'Castor R2X' is light tawny whereas it is tawny for 'Vidar R2X' and 'Sunna R2X'. When 95% of the pods are ripe, the plants of 'Castor R2X' are shorter than those of the reference varieties. The lateral leaflet of 'Castor R2X' is medium sized while that of 'Vidar R2X' is large and that of 'Sunna R2X' is small. The intensity of green colour on the leaf of 'Castor R2X' is light whereas it is medium for the reference varieties. The intensity of brown colour on the pod of 'Castor R2X' is light to medium whereas it is medium to dark for 'Vidar R2X' and 'Sunna R2X'. The hilum of the seed of 'Castor R2X' is imperfect yellow whereas it is black for 'Vidar R2X' and 'Woden R2X' and grey for 'Sunna R2X'. The plants of 'Castor R2X' mature earlier than those of the reference varieties.*

Description:
PLANT: oilseed type, indeterminate growth type, erect to semi-erect branch attitude, light tawny pubescence on middle third of main stem, begins flowering early to mid-season, matures early in the season

HYPOCOTYL: weak intensity of anthocyanin colouration

LEAF: medium sized pointed ovate lateral leaflet, light green

FLOWER: violet

POD: light to medium brown

SEED: small to medium sized, spherical flattened, light yellow ground colour of testa
HILUM: imperfect yellow

REACTION TO PHOTOPERIOD: very sensitive

Origin and Breeding: 'Castor R2X' (experimental designations C4M19342 XT and D1701-5) originated from a cross between 'Akras R2' and 'C411XK549.K01.K002 conducted in the summer of 2013 in Saint-Hyacinthe, Quebec. A modified single seed descent method was used to develop the variety. From 2013 to 2014, the F1 to F4 generations were grown in a nursery in Puerto Rico. In 2015, 'Castor R2X' was identified as a single plant at the F5 generation in Saint-Hyacinthe, Quebec. The selection criteria were based on a visual assessment of resistance to lodging, maturity date and yield. The variety was further tested in trials from 2015 to 2021. In 2020, 25 lines were selected and bulked to produce the breeder seed.

Tests and Trials: The comparative trials for 'Castor R2X' were conducted at Sollio Agriculture Research Farm in Saint-Hyacinthe, Quebec in 2022 and 2023. The 5 square metre plot trials were planted in a RCB design with 4 replicates per variety and each row measuring 4.5 metres long. In 2022, the plot consisted of 3 rows with a row spacing of 0.5 metres while in 2023, the plot consisted of 4 rows with a row spacing of 0.36 metres. The seeding density was such that it resulted in a total of 40 plants per square metre. For each variety, the plant height was based on 20 measurements per year. Mean differences were significant at the 5% probability level based on a Tukey test.

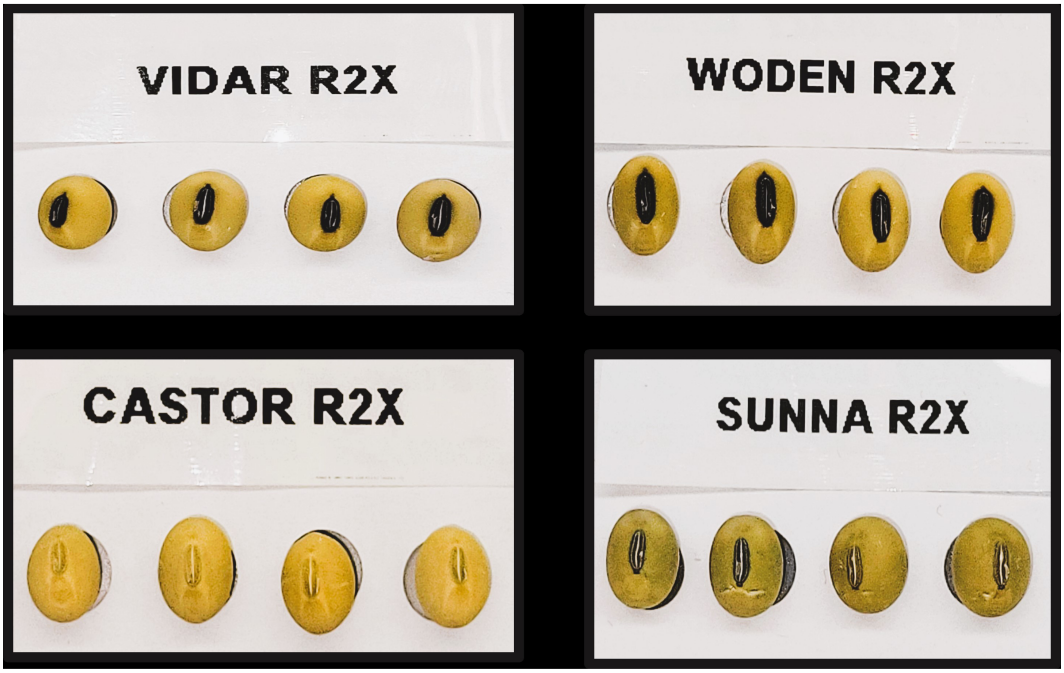
Comparison table for 'Castor R2X'

	'Castor R2X'	'Vidar R2X'*	'Sunna R2X'*	'Woden R2X'*
Plant height (when 95% of the pods are ripe) (cm)				
mean 2022	31.1	59	53.2	63.2
std. deviation 2022	3.1	3.3	3.6	3.3
mean 2023	76.5	99.2	105.9	109.3
std. deviation 2023	4.1	5.3	4.2	3.4
Time of maturity (number of days from planting to maturity)				
mean 2022	99	111	108	120
mean 2023	110	114	118	121

*reference varieties

Soybean: 'Castor R2X' (centre right) with reference varieties 'Vidar R2X' (right), 'Sunna R2X' (middle left) and 'Woden R2X' (left)

Soybean: 'Castor R2X' (bottom right) with reference varieties 'Vidar R2X' (bottom left), 'Sunna R2X' (top left) and 'Woden R2X' (top right)



Soybean: 'Castor R2X' (bottom left) with reference varieties 'Vidar R2X' (top left), 'Sunna R2X' (bottom right) and 'Woden R2X' (top right)

Proposed denomination: **'Hola'**
Application number: 22-11131
Application date: 2022/11/04
Applicant: Semences Prograin Inc., Saint-Césaire, Quebec
Breeder: Sylvain Legay, Semences Prograin Inc., Saint-Césaire, Quebec

Varieties used for comparison: 'Hakata' and 'Aya'

Summary: *On the middle third of the main stem, the pubescence of 'Hola' is light tawny whereas it is grey for both reference varieties. When 95% of the pods are ripe, the plants of 'Hola' are shorter than those of 'Hakata'. The lateral leaflet of 'Hola' is small while that of 'Hakata' is medium to large and that of 'Aya' is medium sized. The intensity of green colour on the leaf of 'Hola' is medium to dark whereas it is light to medium for that of 'Hakata'. The intensity of brown colour on the pod of 'Hola' is medium whereas that of 'Hakata' is light. The plants of 'Hola' begin flowering early to mid-season while those of 'Hakata' begin flowering mid to late season. The plants of 'Hola' mature earlier than those of the reference varieties.*

Description:
PLANT: oilseed type, indeterminate growth type, erect to semi-erect branch attitude, light tawny pubescence on middle third of main stem, begins flowering early to mid-season, matures mid-season

HYPOCOTYL: strong to very strong intensity of anthocyanin colouration

LEAF: small pointed ovate lateral leaflet, medium to dark green

FLOWER: violet

POD: medium brown

SEED: medium to large, spherical flattened to elongated flattened, yellow ground colour of testa
HILUM: yellow

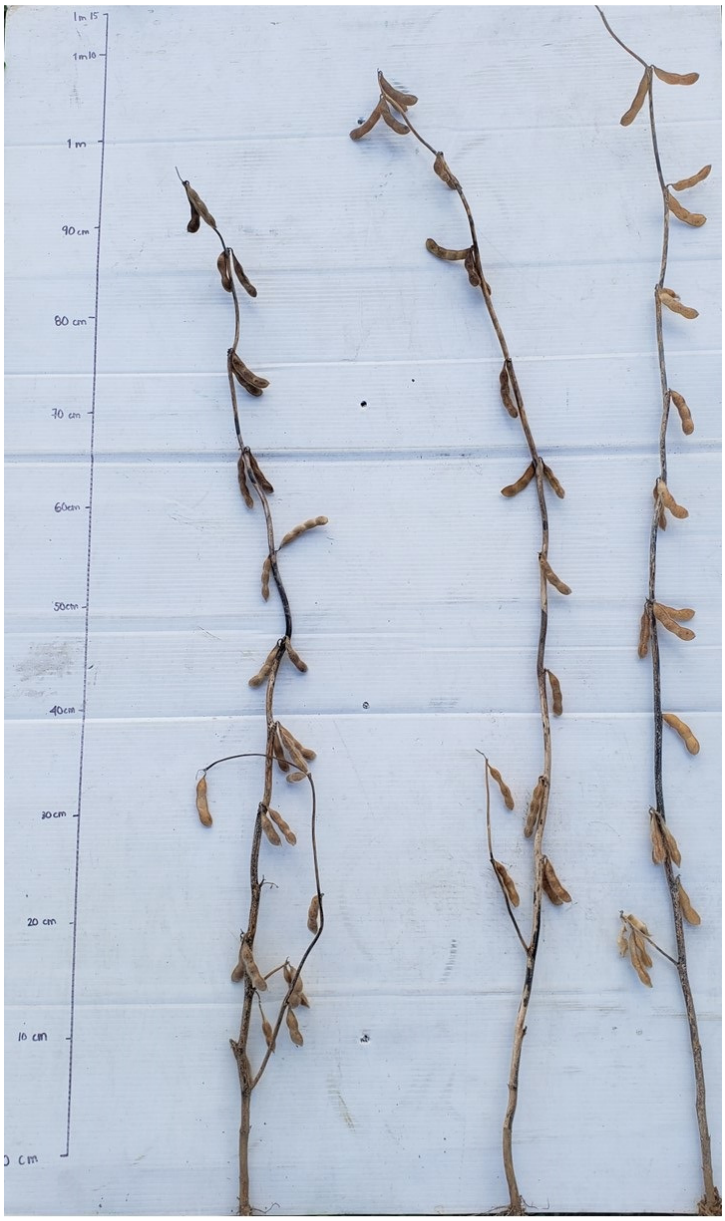
Origin and Breeding: 'Hola' (experimental designation PR130560Z-14-05) originated from a cross between 'PR1120646' and 'PSX 11C15G' conducted in 2013 in Saint-Césaire, Quebec. A modified single seed descent method was used to develop the variety from the F1 to F2 generation in Argentina and Canada from 2013 to 2014. In 2015, 'Hola' was identified as a single plant at the F3 generation in Saint-Césaire, Quebec. In 2020, the final selections were made in the F8 and F9 generations. The selection criteria were based on a visual assessment of resistance to lodging, maturity date, yield and disease resistance.

Tests and Trials: The comparative trials for 'Hola' were conducted at Semences Prograin Inc. in Saint-Césaire, Quebec in 2022 and 2023. The 7.2 square metre plot trials were planted in a RCB design with 2 replicates per variety and each row measuring 5 metres long. Each plot consisted of a row spacing of 0.76 metres. The seeding density was such that it resulted in a total of approximately 350 plants per variety. For each variety, the plant height was based on 20 measurements per year. Mean differences were significant at the 5% probability level based on a Students t-test.

Comparison table for 'Hola'

	'Hola'	**'Hakata'***	**'Aya'***
Plant height (when 95% of the pods are ripe) (cm)			
mean 2022	83.8	92.6	80.2
std. deviation 2022	4.25	3.63	4.15
mean 2023	106.6	111.6	105.9
std. deviation 2023	5.82	5.46	6.02
Time of maturity (number of days from planting to maturity)			
mean 2022	121	126	128
mean 2023	126	131	128

*reference varieties



Soybean: ‘Hola’ (center) with reference varieties ‘Aya’ (left) and ‘Hakata’ (right)

Soybean: 'Hola' (center) with reference varieties 'Aya' (left) and 'Hakata' (right)

Soybean: 'Hola' (center) with reference varieties 'Aya' (top) and 'Hakata' (bottom)

Proposed denomination: **'Jaguar R2X'**
Application number: 22-10855
Application date: 2022/03/16
Applicant: Sollio Agriculture, Saint-Hyacinthe, Quebec
Breeder: Jérôme Auclair, Sollio Agriculture, Saint-Hyacinthe, Quebec

Varieties used for comparison: 'BY Rundle XT' and 'Stingray R2X'

Summary: *The intensity of anthocyanin colouration on the hypocotyl of 'Jaguar R2X' is medium whereas it is strong for that of 'Stingray R2X'. When 95% of the pods are ripe, the plants of 'Jaguar R2X' are taller than those of 'BY Rundle XT'. The intensity of brown colour on the pod of 'Jaguar R2X' is medium whereas it is light for that of 'Stingray R2X'. The seed of 'Jaguar R2X' is small while that of 'BY Rundle XT' is medium sized. The plants of 'Jaguar R2X' mature later than those of 'BY Rundle XT' and earlier than those of 'Stingray R2X'.*

Description:
PLANT: oilseed type, indeterminate growth type, semi-erect branch attitude, tawny pubescence on middle third of main stem, begins flowering mid-season, matures mid-season

HYPOCOTYL: medium intensity of anthocyanin colouration

LEAF: medium sized pointed ovate lateral leaflet, medium green

FLOWER: violet

POD: medium brown

SEED: small, spherical flattened, light yellow ground colour of testa
HILUM: black

REACTION TO PHOTOPERIOD: very sensitive

Origin and Breeding: 'Jaguar R2X' (experimental designations C4M19346 XT and D1702-2) originated from a cross between 'Hydra R2' and 'AG2002-T3BAH' conducted in the summer of 2012, in Saint-Hyacinthe, Quebec. A modified single seed descent method was used to develop the variety. From 2012 to 2014, the F1 to the F4 generation were grown in a nursery in Puerto Rico. In 2015, 'Jaguar R2X' was identified as a single plant based on early maturity at the F5 generation in Saint-Hyacinthe, Quebec. The selection criteria were based on a visual assessment of lodging resistance, maturity date and yield. The variety was further multiplied in plots trials from 2015 to 2021. The variety was further tested in trials from 2015 to 2021. In 2020, 24 lines were selected and bulked to produce the breeder seed.

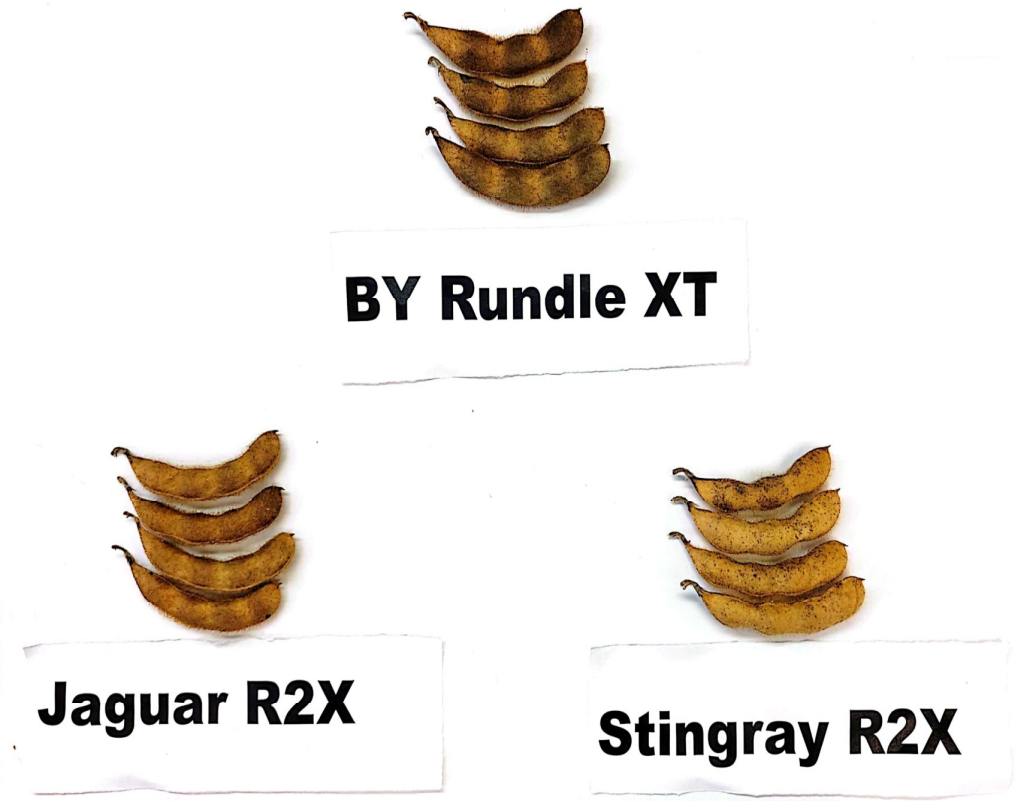
Tests and Trials: The comparative trials for 'Jaguar R2X' were conducted at the Sollio Agriculture Research Farm iin Saint-Hyacinthe, Quebec in 2022 and 2023. The 5 square metre plot trials were planted in a RCB design with 4 replicates per variety and each row measuring 4.5 metres long. In 2022, the plot consisted of 3 rows with a row spacing of 0.5 metres while in 2023, the plot consisted of 4 rows with a row spacing of 0.36 metres. The seeding density was such that it resulted in a total of 40 plants per variety per square metre. For each variety, the plant height was based on 20 measurements per year. Mean differences were significant at the 5% probability level based on a Tukey test.

Comparison table for 'Jaguar R2X'

	'Jaguar R2X'	**'BY Rundle XT'***	**'Stingray R2X'***
Plant height (when 95% of the pods are ripe) (cm)			
mean 2022	51.6	34.7	52.9
std. deviation 2022	2.0	2.5	2.7
mean 2023	97.9	83.9	104.7
std. deviation 2023	3.3	2.8	3.5
Time of maturity (number of days from planting to maturity)			
mean 2022	111	100	122
mean 2023	112	105	117

*reference varieties

Soybean: 'Jaguar R2X' (centre) with reference varieties 'BY Rundle XT' (right) and 'Stingray R2X' (left)



Soybean: 'Jaguar R2X' (bottom left) with reference varieties 'BY Rundle XT' (top) and 'Stingray R2X' (bottom right)

Proposed denomination: **'Koa'**
Application number: 22-11132
Application date: 2022/11/04
Applicant: Semences Prograin Inc., Saint-Césaire, Quebec
Breeder: Sylvain Legay, Semences Prograin Inc., Saint-Césaire, Quebec

Varieties used for comparison: 'Asahi' and 'Maya'

Summary: *The intensity of anthocyanin colouration on the hypocotyl of 'Koa' is strong to very strong whereas it is of medium to strong intensity for 'Maya'. When 50% of the flowers are open, the branching attitude of 'Koa' is semi-erect to horizontal whereas it is erect to semi-erect for the reference varieties. The lateral leaflet of 'Koa' is small while that of 'Maya' is medium sized. The intensity of green colour on the leaf of 'Koa' is light to medium whereas it is medium to dark for 'Asahi' and dark for 'Maya'. The intensity of brown colour on the pod of 'Koa' is light to medium whereas it is medium to dark for 'Asahi' and dark for 'Maya'. The plants of 'Koa' mature earlier than those of the reference varieties.*

Description:
PLANT: oilseed type, indeterminate growth type, semi-erect to horizontal branch attitude, tawny pubescence on middle third of main stem, begins flowering early to mid-season, matures very early to early in the season

HYPOCOTYL: strong to very strong intensity of anthocyanin colouration

LEAF: small triangular to pointed ovate lateral leaflet, light to medium green

FLOWER: violet

POD: light to medium brown

SEED: small to medium sized, spherical flattened, yellow ground colour of testa
HILUM: yellow

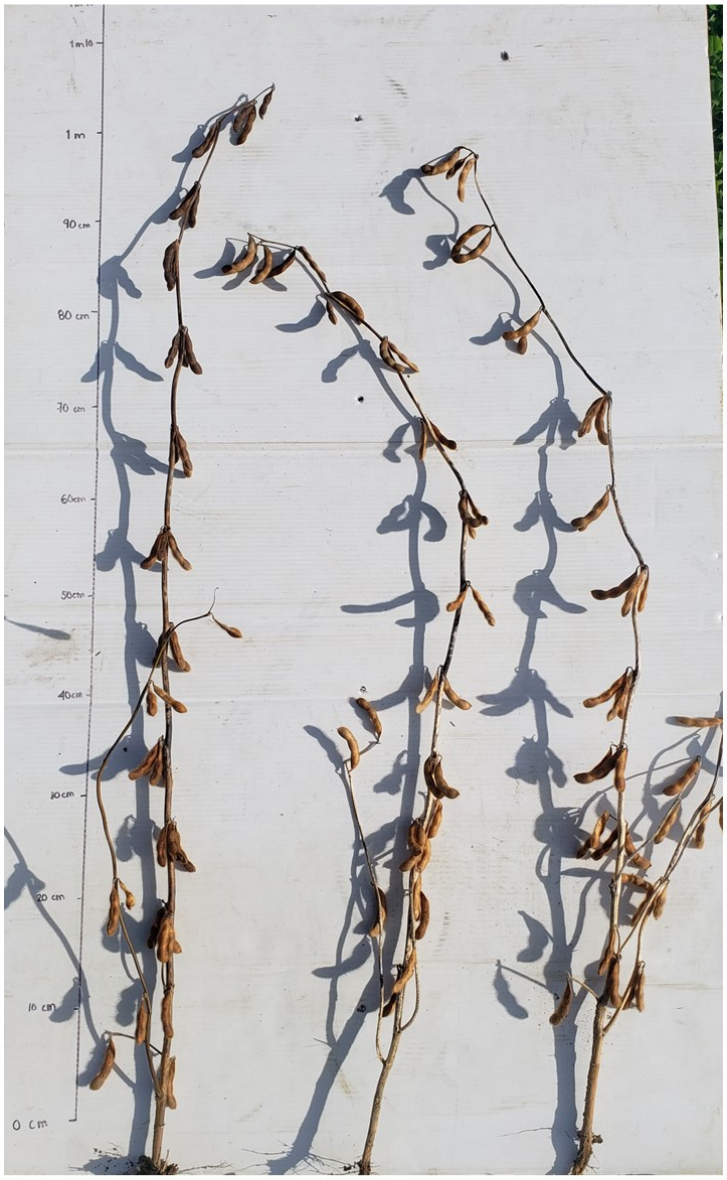
Origin and Breeding: 'Koa' (experimental designations PR130989Z-26 and SYN13098926) originated from a cross between 'S04192.53' and 'OAC Wallace' conducted in 2013 in Saint-Césaire, Quebec. A modified single seed descent method was used to develop the variety from the F1 to F3 generation in Argentina and Canada from 2013 to 2014. In 2015, 'Koa' was identified as a single plant at the F4 generation in Saint-Césaire, Quebec. In 2020, the final selections were made in the F8 and F9 generations. The selection criteria were based on a visual assessment of resistance to lodging, maturity date, yield and disease resistance.

Tests and Trials: The comparative trials for 'Koa' were conducted at Semences Prograin Inc. in Saint-Cesaire, Quebec in 2022 and 2023. The 7.2 square metre plot trials were planted in a RCB design with 2 replicates per variety and each row measuring 5 metres long. Each plot consisted of a row spacing of 0.76 metres. The seeding density was such that it resulted in a total of approximately 350 plants per variety. For each variety, the plant height was based on 20 measurements per year. Mean differences were significant at the 5% probability level based on a Students t-test.

Comparison table for 'Koa'

	'Koa'	**'Asahi'***	**'Maya'***
Time of maturity (number of days from planting to maturity)			
mean 2022	112	116	116
mean 2023	113	119	116

*reference varieties



Soybean: ‘Koa’ (center) with reference varieties ‘Asahi’ (left) and ‘Maya’ (right)

Soybean: 'Koa' (left) with reference varieties 'Asahi' (center) and 'Maya' (right)

Soybean: 'Koa' (center) with reference varieties 'Asahi' (top) and 'Maya' (bottom)

Proposed denomination: **'Lion R2X'**
Application number: 22-10854
Application date: 2022/03/16
Applicant: Sollio Agriculture, Saint-Hyacinthe, Quebec
Breeder: Jérôme Auclair, Sollio Agriculture, Saint-Hyacinthe, Quebec

Varieties used for comparison: 'BY Rundle XT', 'Stingray R2X' and 'Renuka R2X'

Summary: *The intensity of anthocyanin colouration on the hypocotyl of 'Lion R2X' is medium whereas it is strong for that of 'Stingray R2X'. On the middle third of the main stem, the pubescence of 'Lion R2X' is tawny whereas it is light tawny for 'Renuka R2X'. The lateral leaflet of 'Lion R2X' is large while that of 'BY Rundle XT' and 'Stingray R2X' are medium sized and that of 'Renuka R2X' is small. The intensity of brown colour on the pod of 'Lion R2X' is light whereas it is medium for that of 'BY Rundle XT' and 'Renuka R2X'. The seed of 'Lion R2X' is medium sized while that of 'BY Rundle XT' is large and that of 'Renuka R2X' is small. The hilum on the seed of 'Lion R2X' is imperfect yellow whereas it is black for 'BY Rundle XT'*

and 'Stingray R2X' and dark brown for 'Renuka R2X'. The plants of 'Lion R2X' mature later than those of the reference varieties.

Description:
PLANT: oilseed type, indeterminate growth type, semi-erect branch attitude, tawny pubescence on middle third of main stem, begins flowering late season, matures late season

HYPOCOTYL: medium intensity of anthocyanin colouration

LEAF: large pointed ovate lateral leaflet, medium green

FLOWER: violet

POD: light brown

SEED: medium sized, spherical, light yellow ground colour of testa
HILUM: imperfect yellow

REACTION TO PHOTOPERIOD: very sensitive

Origin and Breeding: 'Lion R2X' (experimental designations C4M19349 XT and D1704-5) originated from a cross between 'CS084.004.20.2' and 'AG2002-T3BAH' conducted in the summer of 2012 in Saint-Hyacinthe, Quebec. A modified single seed descent method was used to develop the variety. From 2012 to 2014, the F1 to F4 generation were grown in a nursery in Puerto Rico. In 2015, 'Lion R2X' was identified as a single plant at the F5 generation in Saint-Hyacinthe, Quebec. The selection criteria were based on a visual assessment of resistance to lodging, maturity date and yield. The variety was further tested in trials from 2015 to 2021. In 2020, 18 lines were selected and bulked to produce the breeder seed.

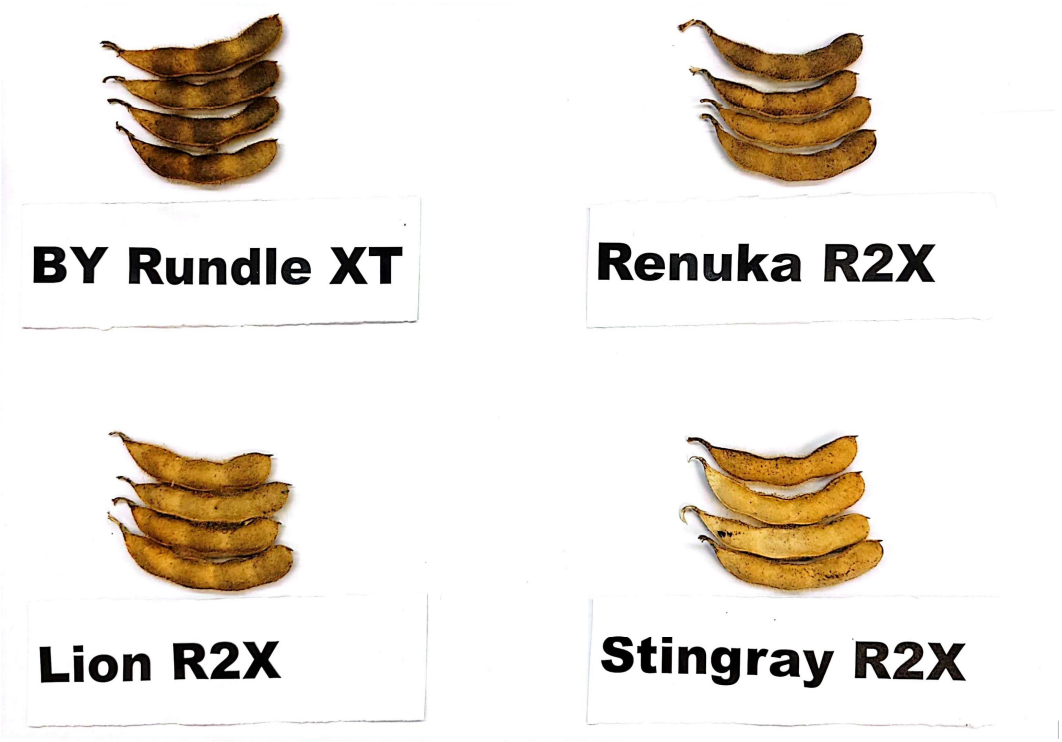
Tests and Trials: The comparative trials for 'Lion R2X' were conducted at the Coop fédérée Research Farm in Saint-Hyacinthe, Quebec in 2022 and 2023. The 5 square metre plot trials were planted in a RCB design with 4 replicates per variety and each row measuring 4.5 metres long. In 2022, the plot consisted of 3 rows with a row spacing of 0.5 metres while in 2023, the plot consisted of 4 rows with a row spacing of 0.36 metres. The seeding density was such that it resulted in a total of 40 plants per variety per square metre. For each variety, the plant height was based on 20 measurements per year. Mean differences were significant at the 5% probability level based on a Tukey test.

Comparison table for 'Lion R2X'

	'Lion R2X'	'BY Rundle XT'*	'Stingray R2X'*	'Renuka R2X'*
Time of maturity (number of days from planting to maturity)				
mean 2022	130	100	122	104
mean 2023	120	108	117	111

*reference varieties

Soybean: 'Lion R2X' (middle right) with reference varieties 'BY Rundle XT' (right), 'Stingray R2X' (middle left) and 'Renuka R2X' (left)



Soybean: 'Lion R2X' (bottom left) with reference varieties 'BY Rundle XT' (top left), 'Stingray R2X' (bottom right) and 'Renuka R2X' (top right)

Soybean: 'Lion R2X' (bottom right) with reference varieties 'BY Rundle XT' (top right), 'Stingray R2X' (top left) and 'Renuka R2X' (bottom left)

Proposed denomination: **'OAC Casey'**
Application number: 20-10113
Application date: 2020/03/04
Applicant: University of Guelph, Guelph, Ontario
Agent in Canada: BioFlora Inc., St. Thomas, Ontario
Breeder: Istvan Rajcan, University of Guelph, Guelph, Ontario

Variety used for comparison: 'OAC Drayton'

Summary: *When 50% of the plants are flowering, the terminal and lateral leaflets of 'OAC Casey' are wider than those of 'OAC Drayton'. When 95% of the pods are ripe, the plants of 'OAC Casey' are shorter than those of 'OAC Drayton'. At maturity, the seed of 'OAC Casey' is longer than that of 'OAC Drayton'. The seed weight of 'OAC Casey' is greater than that of 'OAC Drayton'. The hilum of 'OAC Casey' is imperfect yellow while that of 'OAC Drayton' is light brown.*

Description:
HYPOCOTYL: medium to strong intensity of anthocyanin colouration

PLANT: food-grade type, indeterminate growth type, erect to semi-erect branch attitude, tawny pubescence on middle third of main stem, begins flowering early in the season, matures mid-season

LEAF: weak blistering, medium green upper side
TERMINAL LEAFLET: ovoid, medium size
LATERAL LEAFLET: pointed ovate, medium size

FLOWER: violet

POD: light to medium brown
SEED: medium sized, spherical flattened, yellow ground colour of testa
HILUM: imperfect yellow, funicle same colour as testa

Origin and Breeding: 'OAC Casey' (experimental designation SeCan 15-16C) was developed at the University of Guelph in Guelph, Ontario using a single seed descent breeding method. The variety originated from a cross between the variety 'OAC Wallace' and the line DH20 conducted in 2010. The variety was advanced from the F1 to the F4 generation where a single plant was selected based on maturity and agronomic traits in 2011. The variety was designated SeCan 15-16C at the F8 generation in 2015 with breeder seed being established at the F4:10 generation in 2017.

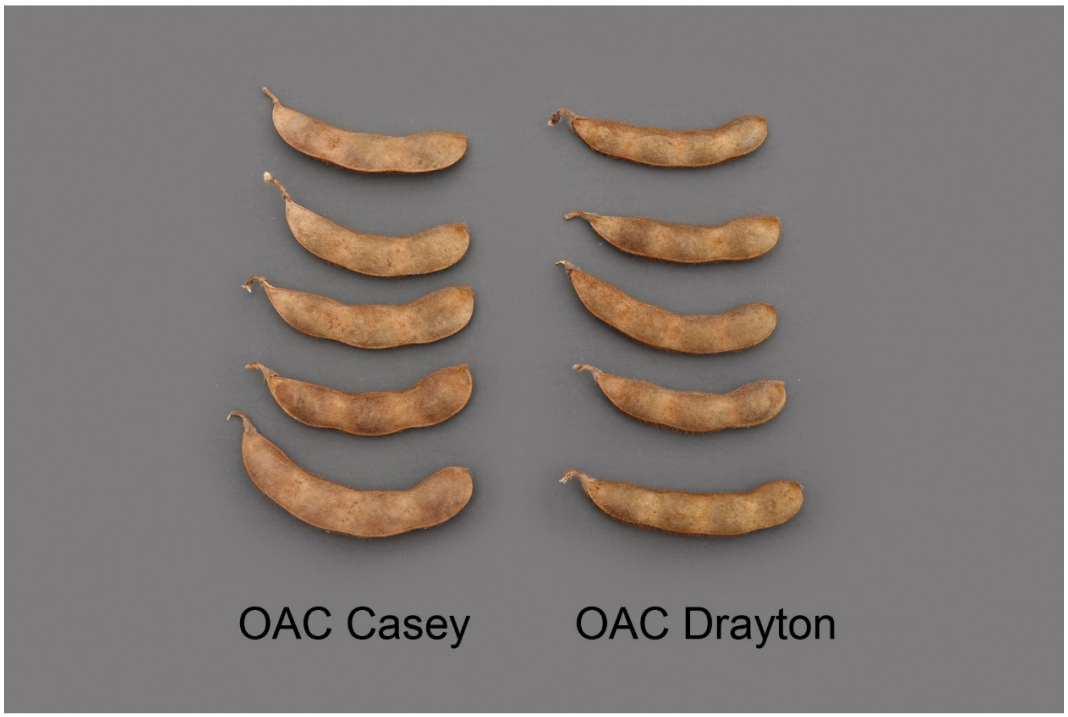
Tests and Trials: The comparative trials of 'OAC Casey' were conducted in St. Thomas, Ontario during the 2020 and 2022 growing seasons. The trial included 3 replicates per variety in an RCB design. Each plot consisted of a 9.14 meter row with approximately 180 plants spaced 5 cm apart resulting in approximately 500 plants per variety per year. Measured characteristics were based on 20 measurements per variety per year, except for seed weight which was based on a minimum of 3 measurements per variety per year. Mean differences were significant at the 5% confidence probability level based on a paired Student's t-test.

Comparison table for 'OAC Casey'

	'OAC Casey'	**'OAC Drayton'***
Terminal leaflet width (cm)		
mean (2020)	6.8	6.2
std. deviation (2020)	0.69	0.45
mean (2022)	7.0	6.0
std. deviation (2022)	0.66	0.50
Lateral leaflet width (cm)		
mean (2020)	7.3	6.2
std. deviation (2020)	0.89	0.51
mean (2022)	6.9	6.0
std. deviation (2022)	0.49	0.45

Plant height (when 95% of the pods are ripe) (cm)		
mean (2020)	47.5	57.9
std. deviation (2020)	7.00	3.06
mean (2022)	46.7	57.8
std. deviation (2022)	6.16	5.66
Seed length (mm)		
mean (2020)	7.9	7.2
std. deviation (2020)	0.27	0.19
mean (2022)	7.9	7.2
std. deviation (2022)	0.41	0.20
Seed weight (grams per 100 seeds) (g)		
mean (2020)	17.2	15.3
std. deviation (2020)	0.49	0.40
mean (2022)	18.8	15.4
std. deviation (2022)	0.53	0.19

*reference variety



Soybean: ‘OAC Casey’ (left) with reference variety ‘OAC Drayton’ (right)

Soybean: 'OAC Casey' (left) with reference variety 'OAC Drayton' (right)

Proposed denomination: **'OAC Elevation'**
Application number: 20-10115
Application date: 2020/03/04
Applicant: University of Guelph, Guelph, Ontario
Agent in Canada: BioFlora Inc., St. Thomas, Ontario
Breeder: Istvan Rajcan, University of Guelph, Guelph, Ontario

Varieties used for comparison: 'OAC Avatar' and 'OAC Eve'

Summary: *When the cotyledons are completely unfolded, the hypocotyl of 'OAC Elevation' has a medium to strong intensity of anthocyanin colouration while anthocyanin colouration is absent on the hypocotyl of 'OAC Eve'. When 50% of the plants are flowering, the hairs on the middle third of the stem of 'OAC Elevation' are tawny while those of 'OAC Avatar' are light tawny. Leaf blistering for 'OAC Elevation' ranges between a weak to medium and medium degree while it is very weak for 'OAC Avatar'. The flower of 'OAC Elevation' is violet while that of 'OAC Eve' is white. When 95% of the pods are ripe, the pod of 'OAC Elevation' is shorter and wider than that of 'OAC Eve'. At maturity, the seed of 'OAC Elevation' is longer than that of 'OAC Avatar' and wider than that of 'OAC Eve'. The seed weight of 'OAC Elevation' is greater than that of the reference varieties. The plants of 'OAC Elevation' mature earlier than the plants of 'OAC Avatar' and later than those of 'OAC Eve'.*

Description:
HYPOCOTYL: medium to strong intensity of anthocyanin colouration

PLANT: food-grade type, indeterminate growth type, erect branch attitude, tawny pubescence on middle third of main stem, begins flowering mid-season, matures mid to late in the season

LEAF: ranging between weak to medium and medium degree of blistering, medium green upper side
TERMINAL LEAFLET: ovoid, medium size
LATERAL LEAFLET: pointed ovate, medium size

FLOWER: violet
POD: medium to dark brown

SEED: large, spherical flattened, yellow ground colour of testa
HILUM: imperfect yellow

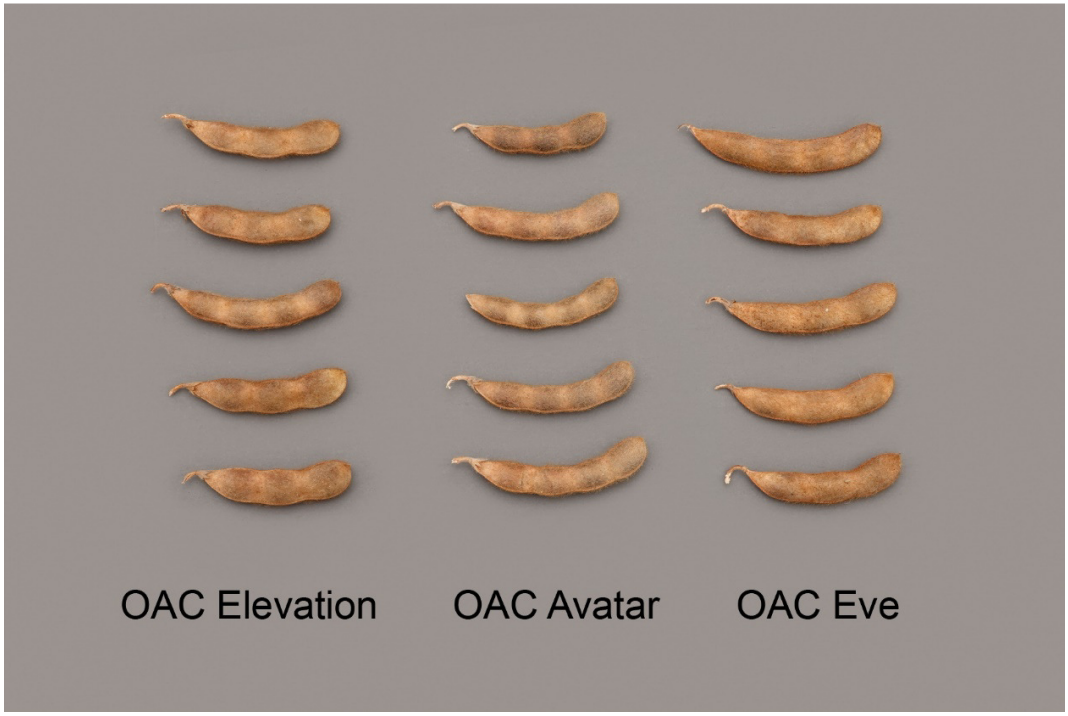
Origin and Breeding: 'OAC Elevation' (experimental designation SeCan 16-11C-Tof) was developed at the University of Guelph in Guelph, Ontario using a single seed descent breeding method. The variety originated from a cross between the varieties 'OAC 05-30' and 'Venus' conducted in 2010. The variety was advanced from the F1 to the F4 generation where a single plant was selected based on maturity and agronomic traits in 2012. The variety was designated SeCan 16-11C-Tof at the F8 generation in 2016 with breeder seed being established at the F4:10 generation in 2017.

Tests and Trials: The comparative trials of 'OAC Elevation' were conducted in St. Thomas, Ontario during the 2020 and 2022 growing seasons. The trial included three replicates per variety in an RCB design. Each plot was a 9.14 meter row consisting of approximately 180 plants spaced 5 cm apart resulting in approximately 500 plants per variety per year. Measured characteristics were based on 20 measurements per variety per year except for seed weight which was based on a minimum of 3 measurements per variety per year. Mean differences were significant at the 5% confidence probability level based on a paired Student's t-test.

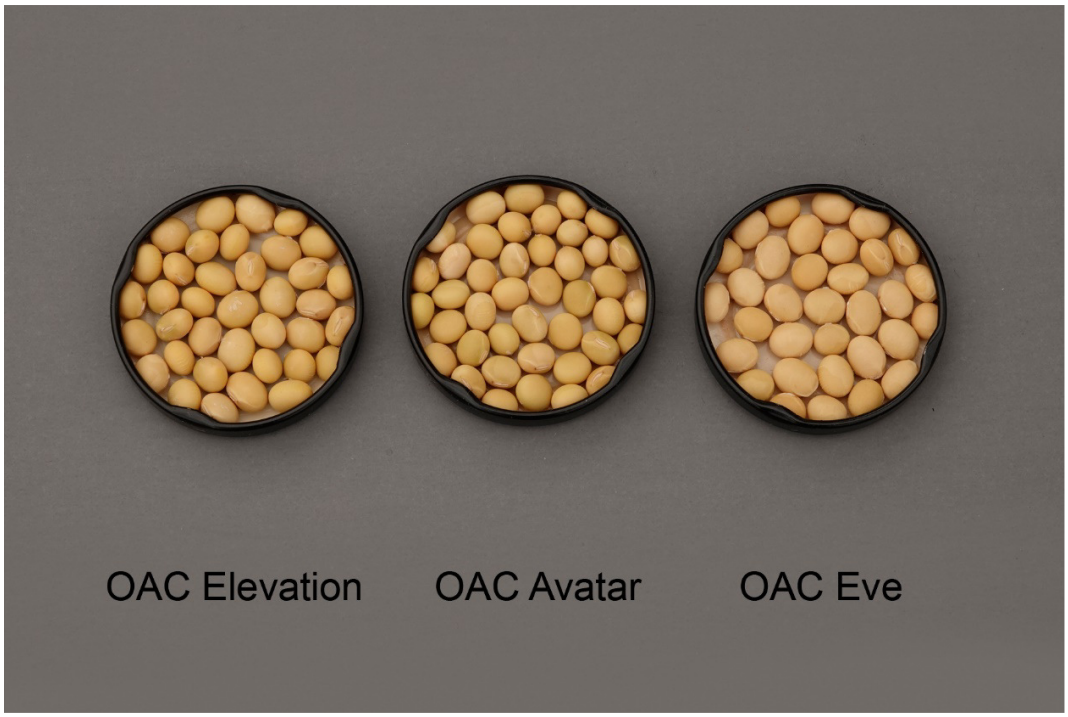
Comparison table for 'OAC Elevation'

	'OAC Elevation'	'OAC Avatar'*	'OAC Eve'*
Pod length (cm)			
mean (2020)	5.0	4.5	5.7
std. deviation (2020)	0.25	0.39	0.34
mean (2022)	4.7	4.6	5.3
std. deviation (2022)	0.36	0.49	0.41
Pod width (mm)			
mean (2020)	7.2	6.9	6.8
std. deviation (2020)	0.56	0.62	0.33
mean (2022)	7.6	7.2	7.0
std. deviation (2022)	0.38	0.81	0.40
Seed length (mm)			
mean (2020)	8.2	7.3	7.5
std. deviation (2020)	0.48	0.63	0.51
mean (2022)	8.4	7.7	8.3
std. deviation (2022)	0.52	0.40	0.35
Seed width (mm)			
mean (2020)	6.1	5.6	5.5
std. deviation (2020)	0.26	0.27	0.35
mean (2022)	6.3	6.1	6.0
std. deviation (2022)	0.55	0.20	0.20
Seed weight (grams per 100 seeds) (g)			
mean (2020)	20.3	15.6	17.6
std. deviation (2020)	0.92	0.40	0.69
mean (2022)	23.1	19.1	21.0
std. deviation (2022)	1.15	0.25	0.28
Days to maturity (days from planting to when 95% of pods are ripe)			
mean (2020)	121	131	118
mean (2022)	119	130	116

*reference varieties



Soybean: 'OAC Elevation' (left) with reference varieties 'OAC Avatar' (centre) and 'OAC Eve' (right)



Soybean: 'OAC Elevation' (left) with reference varieties 'OAC Avatar' (centre) and 'OAC Eve' (right)

Proposed denomination: **'OAC Hastings'**
Application number: 20-10116
Application date: 2020/03/04
Applicant: University of Guelph, Guelph, Ontario
Agent in Canada: BioFlora Inc., St. Thomas, Ontario
Breeder: Istvan Rajcan, University of Guelph, Guelph, Ontario

Varieties used for comparison: 'OAC Strive' and 'OAC Evolution'

Summary: *When the cotyledons are completely unfolded, the hypocotyl of 'OAC Hastings' has a medium intensity of anthocyanin colouration while that of 'OAC Strive' has a weak intensity of anthocyanin colouration. When 50% of the plants are flowering, the terminal and lateral leaves of 'OAC Hastings' are longer than those of 'OAC Evolution'. When 95% of the pods are ripe, the pod of 'OAC Hastings' is longer than the pod of 'OAC Evolution' and wider than that of 'OAC Strive'. At maturity, the seed of 'OAC Hastings' is smaller than that of 'OAC Strive'. The one hundred seed weight of 'OAC Hastings' is less than that of 'OAC Strive'. The plants of 'OAC Hastings' mature later than the plants of 'OAC Strive'.*

Description:
HYPOCOTYL: medium intensity of anthocyanin colouration

PLANT: food-grade type, indeterminate growth type, erect to semi-erect branch attitude, tawny pubescence on middle third of main stem, begins flowering early, matures mid-season

LEAF: weak to medium degree of blistering, medium green upper side
TERMINAL LEAFLET: ovoid, medium size
LATERAL LEAFLET: pointed ovate, medium size

FLOWER: violet

POD: medium brown
SEED: medium size, spherical flattened, yellow ground colour of testa
HILUM: imperfect yellow

Origin and Breeding: 'OAC Hastings' (experimental designation SeCan 16-12C-Tof) was developed at the University of Guelph in Guelph, Ontario using a single seed descent breeding method. The variety originated from a cross between the varieties 'OAC 05-30' and 'Venus' conducted in 2010. The variety was advanced from the F1 to the F4 generation where a single plant was selected based on maturity and agronomic traits in 2012. The variety was designated SeCan 16-11C-Tof at the F8 generation in 2016 with breeder seed being established at the F4:10 generation in 2017.

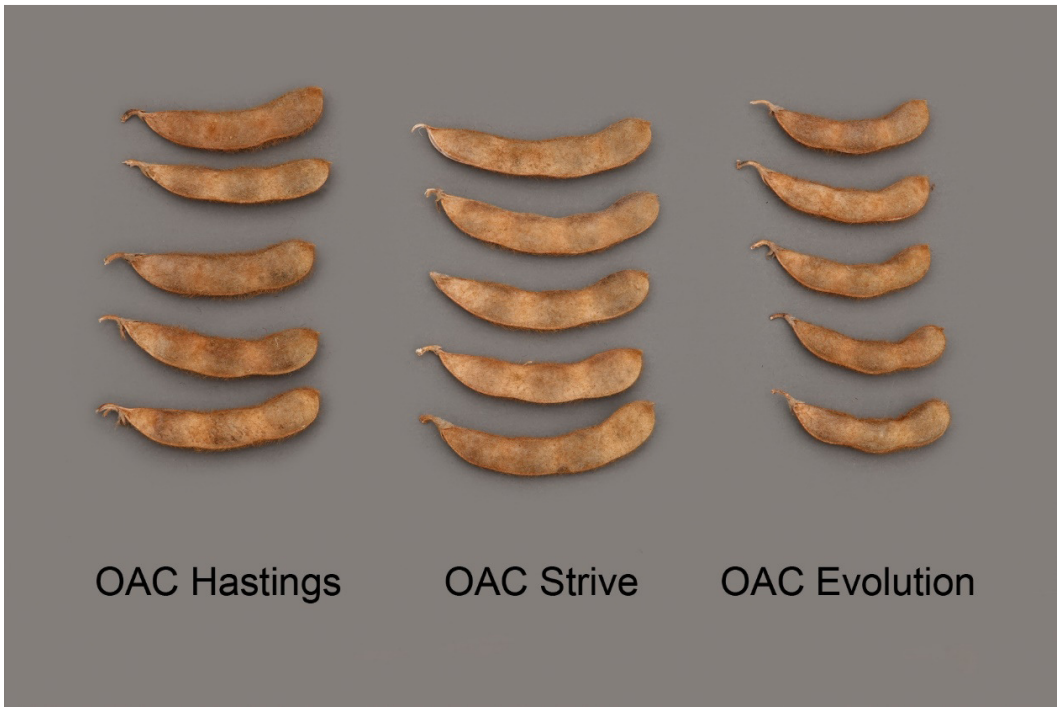
Tests and Trials: The comparative trials of 'OAC Hastings' were conducted in St. Thomas, Ontario during the 2020 and 2022 growing seasons. The trial included three replicates per variety in an RCB design. Each plot was a 9.14 meter row consisting of approximately 180 plants spaced 5 cm apart resulting in approximately 500 plants per variety per year. Measured characteristics were based on 20 measurements per variety per year except for seed weight which was based on a minimum of 3 measurements per variety per year. Mean differences were significant at the 5% confidence probability level based on a paired Student's t-test.

Comparison table for 'OAC Hastings'

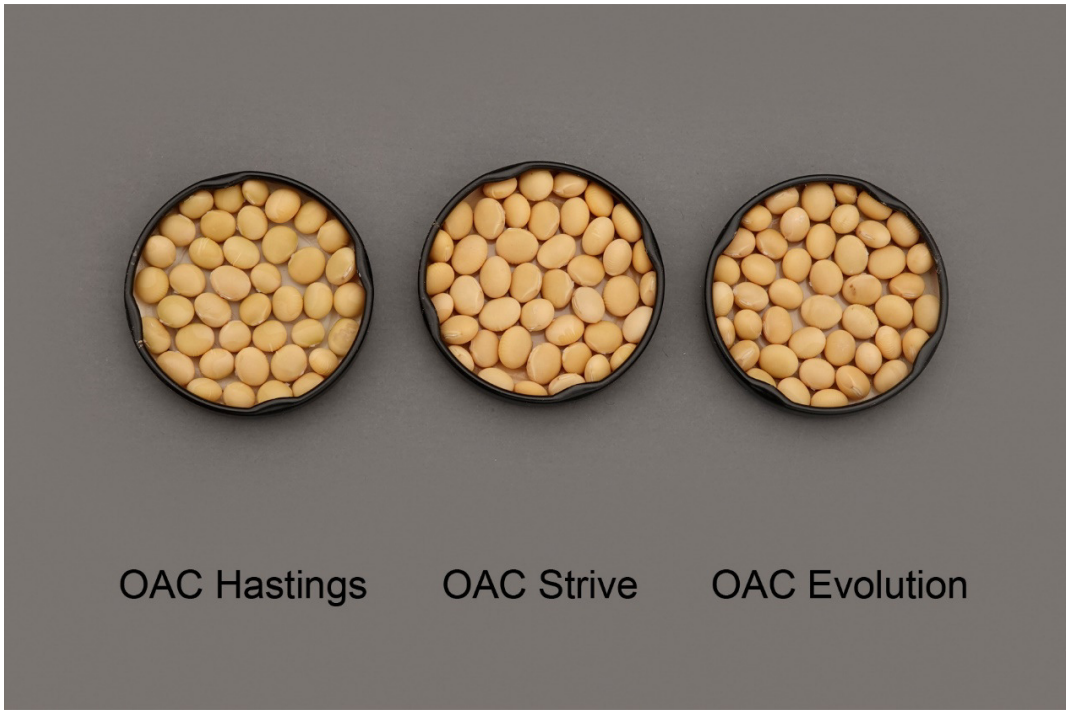
	'OAC Hastings'	'OAC Strive'*	'OAC Evolution'*
Terminal leaf length (cm)			
mean (2020)	10.7	10.3	10.1
std. deviation (2020)	0.95	0.93	0.77
mean (2022)	12.2	11.5	11.4
std. deviation (2022)	0.72	0.72	0.71
Lateral leaf length (cm)			
mean (2020)	9.6	8.9	8.8
std. deviation (2020)	0.85	0.79	0.90
mean (2022)	10.6	10.2	10.1
std. deviation (2022)	0.47	0.77	0.64

Pod length (cm)			
mean (2020)	4.8	5.1	4.4
std. deviation (2020)	0.32	0.35	0.31
mean (2022)	4.7	5.0	4.1
std. deviation (2022)	0.29	0.49	0.27
Pod width (mm)			
mean (2020)	6.8	6.5	6.8
std. deviation (2020)	0.39	0.39	0.60
mean (2022)	6.7	6.0	7.1
std. deviation (2022)	0.70	0.61	0.62
Seed length (mm)			
mean (2020)	7.3	8.2	7.6
std. deviation (2020)	0.49	0.46	0.52
mean (2022)	7.7	8.9	7.7
std. deviation (2022)	0.33	0.38	0.39
Seed width (mm)			
mean (2020)	5.4	5.7	5.7
std. deviation (2020)	0.22	0.26	0.27
mean (2022)	5.7	6.1	5.8
std. deviation (2022)	0.29	0.27	0.25
Seed weight (grams per 100 seeds) (g)			
mean (2020)	17.0	19.4	16.9
std. deviation (2020)	0.42	0.60	0.50
mean (2022)	17.9	22.4	16.9
std. deviation (2022)	0.35	0.49	0.42
Days to maturity (days from planting to when 95% of pods are ripe)			
mean (2020)	117	114	118
mean (2022)	115	111	115

*reference varieties



Soybean: ‘OAC Hastings’ (left) with reference varieties ‘OAC Strive’ (centre) and ‘OAC Evolution’ (right)



Soybean: 'OAC Hastings' (left) with reference varieties 'OAC Strive' (centre) and 'OAC Evolution' (right)

Proposed denomination: **'OAC Malory'**
Application number: 20-10114
Application date: 2020/03/04
Applicant: University of Guelph, Guelph, Ontario
Agent in Canada: BioFlora Inc., St. Thomas, Ontario
Breeder: Istvan Rajcan, University of Guelph, Guelph, Ontario

Variety used for comparison: 'DH530'

Summary: *When the cotyledons are completely unfolded, the hypocotyl of 'OAC Malory' has a medium intensity of anthocyanin colouration while that of 'DH530' has a weak intensity of anthocyanin colouration. When 50% of the plants are flowering, the hairs on the middle third of the stem of 'OAC Malory' are grey while those of 'DH530' are tawny. The leaf of 'OAC Malory' has a medium degree of blistering while that of 'DH530' has weak blistering. When 95% of the pods are ripe, the pod of 'OAC Malory' is light to medium brown while that of 'DH530' is dark brown. The pod of 'OAC Malory' is longer than that of 'DH530'. At maturity, the hilum of 'OAC Malory' is yellow while that of 'DH530' is imperfect yellow. The plants of 'OAC Malory' mature earlier than those of 'DH530'.*

Description:
HYPOCOTYL: medium intensity of anthocyanin colouration

PLANT: food-grade type, indeterminate growth type, semi-erect branch attitude, grey pubescence on middle third of main stem, begins flowering late in the season, matures mid to late in the season

LEAF: medium degree of blistering, medium green upper side
TERMINAL LEAFLET: ovoid, medium size
LATERAL LEAFLET: pointed ovate, medium size

FLOWER: violet

POD: light to medium brown
SEED: medium sized, spherical flattened, yellow ground colour of testa
HILUM: yellow

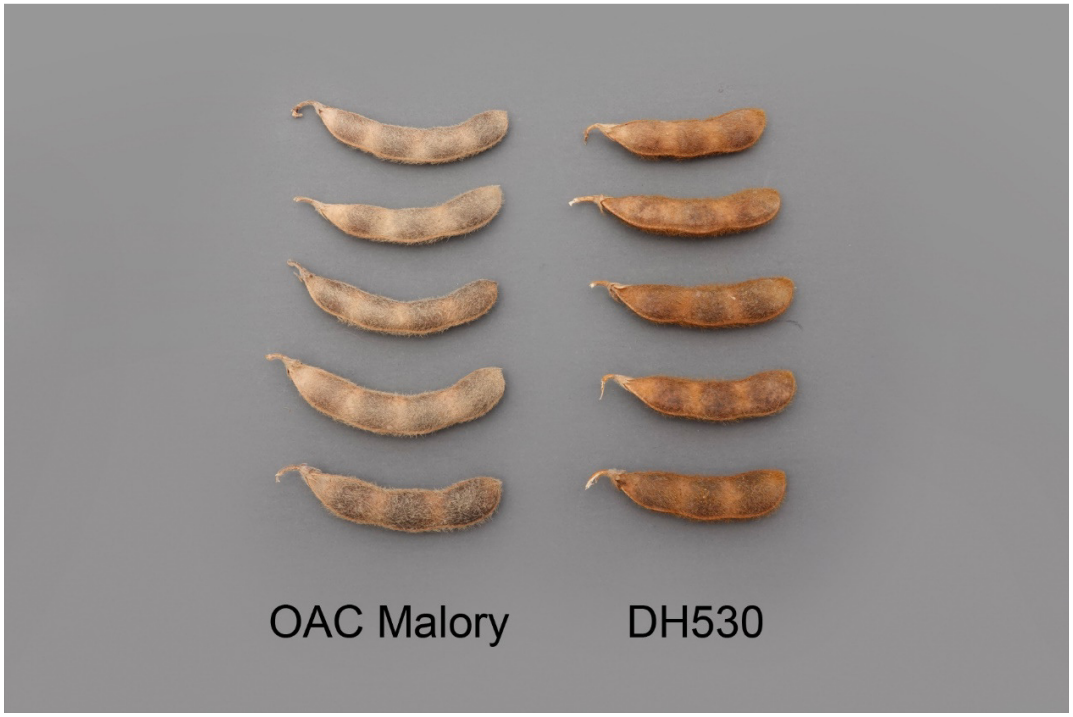
Origin and Breeding: 'OAC Malory' (experimental designation SeCan 15-29C-SCN) was developed at the University of Guelph in Guelph, Ontario using a single seed descent breeding method. The variety originated from a cross between the varieties 'Colby' and 'DH410' conducted in 2010. The variety was advanced from the F1 to the F4 generation where a single plant was selected based on maturity and agronomic traits in 2011. The variety was designated SeCan 15-29C-SCN at the F8 generation in 2015 with breeder seed being established at the F4:10 generation in 2017.

Tests and Trials: The comparative trials of 'OAC Malory' were conducted in St. Thomas, Ontario during the 2020 and 2022 growing seasons. The trial included three replicates per variety in an RCB design. Each plot was a 9.14 meter row consisting of approximately 180 plants spaced 5 cm apart resulting in approximately 500 plants per variety per year. Measured characteristics were based on 20 measurements per variety per year. Mean differences were significant at the 5% confidence probability level based on a paired Student's t-test.

Comparison table for 'OAC Malory'

	'OAC Malory'	**'DH530'***
Pod length (cm)		
mean (2020)	5.00	4.40
std. deviation (2020)	0.31	0.26
mean (2022)	4.81	4.17
std. deviation (2022)	0.35	0.32
Days to maturity (days from planting to when 95% of pods are ripe)		
mean (2020)	123	125
mean (2022)	121	124

*reference variety



Soybean: 'OAC Malory' (left) with reference variety 'DH530' (right)

Soybean: ‘OAC Malory’ (left) with reference variety ‘DH530’ (right)