



APPLICATIONS UNDER EXAMINATION

SOYBEAN

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(*Glycine max*)

Proposed denomination: 'Amirani R2'
Application number: 18-9655
Application date: 2018/12/03
Applicant: La Coop fédérée, Saint-Hyacinthe, Quebec
Breeder: Jérôme Auclair, La Coop fédérée, Saint-Hyacinthe, Quebec

Varieties used for comparison: 'Lono R2', 'Podaga R2' and 'S0009-M2'

Summary: *The anthocyanin colouration on the hypocotyl of 'Amirani R2' is of medium intensity whereas it is strong for 'Lono R2' and weak for 'S0009-M2'. The plants of 'Amirani R2' begin flowering very early while those of 'Podaga R2' begin flowering early in the season. When 95% of the pods are ripe, the plants of 'Amirani R2' are shorter than the plants of 'Podaga R2' and taller than those of 'S0009-M2'. The intensity of brown colour on the pod of 'Amirani R2' is of medium intensity whereas it is dark on the pods of 'Lono R2' and 'S0009-M2'. The plants of 'Amirani R2' mature earlier than those of 'Lono R2' and 'Podaga R2'.*

Description:

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

HYPOCOTYL: medium intensity of anthocyanin colouration

LEAF: pointed ovate lateral leaflet

FLOWER: violet

POD: medium brown

SEED: elongated, yellow ground colour of testa

HILUM: yellow

Origin and Breeding: 'Amirani R2' (experimental designation C4M17224) originated from a cross between two proprietary selections conducted in 2011, in Saint-Hyacinthe, Quebec. A modified single seed descent method was used to develop the variety. In 2012, the F1 generation, grown in Saint-Hyacinthe, was harvested in bulk and individual plants selected from the F2 generation in 2013 in Elm Creek, Manitoba. In Saint-Hyacinthe, Quebec, row plots of the F3 generation were grown and selected in 2014 followed by plot evaluations from 2015 to 2018. 'Amirani R2' was identified at the F5 generation in 2017. The selection criteria were based on a visual assessment of lodging resistance, number of pods per plant, pod density on the plant (internode length), absence of disease symptoms and protein content.

Tests and Trials: The comparative trials for 'Amirani R2' were conducted at a production farm in Saint-Simon, Quebec. The trials were planted in a RCB design with 4 replicates per variety during the 2019 and 2021 growing seasons. Each 6.0 square metre plot consisted of 4 rows, each 4.5 metres long with a row spacing of 0.38 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. Mean differences were significant at the 5% probability level based on a Tukey test.

Comparison table for 'Amirani R2'

	'Amirani R2'	'Lono R2''*	'Podaga R2''*	'S0009-M2''*
<i>Plant height (cm)</i>				
mean 2019	77.9	74.6	82.2	74.4
std. deviation 2019	3.4	4.4	4.2	3.5
mean 2021	62.1	61.5	68.7	57.3
std. deviation 2021	4.4	2.6	2.6	6.9

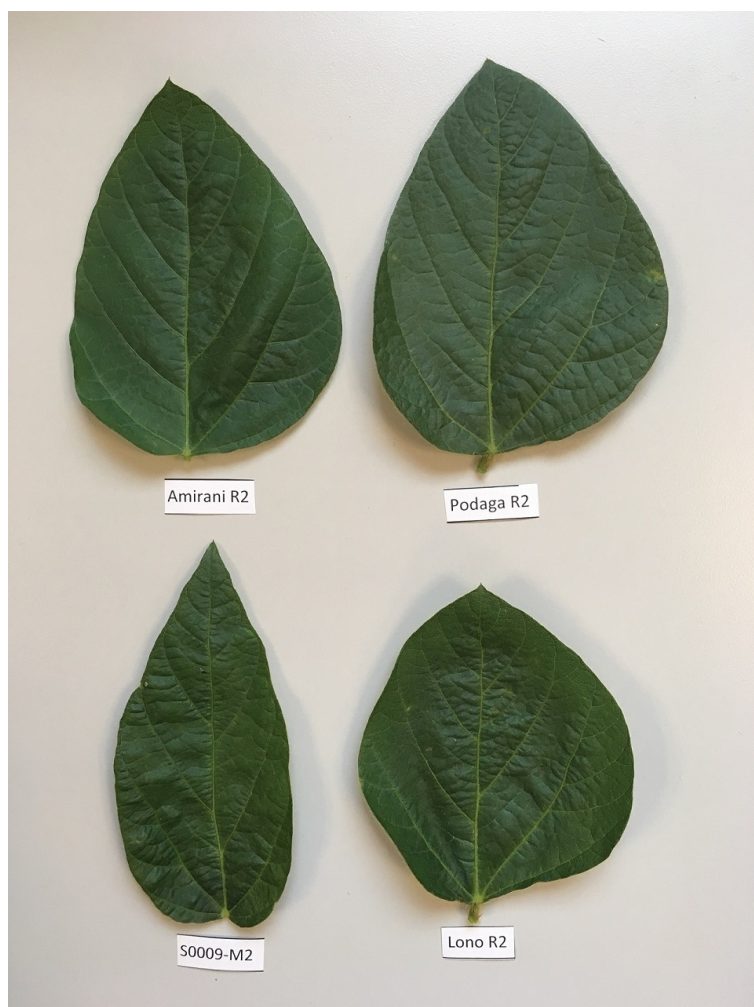
Number of days to maturity (from planting to maturity)

mean 2019	96	108	109	104
mean 2021	112	116	118	112

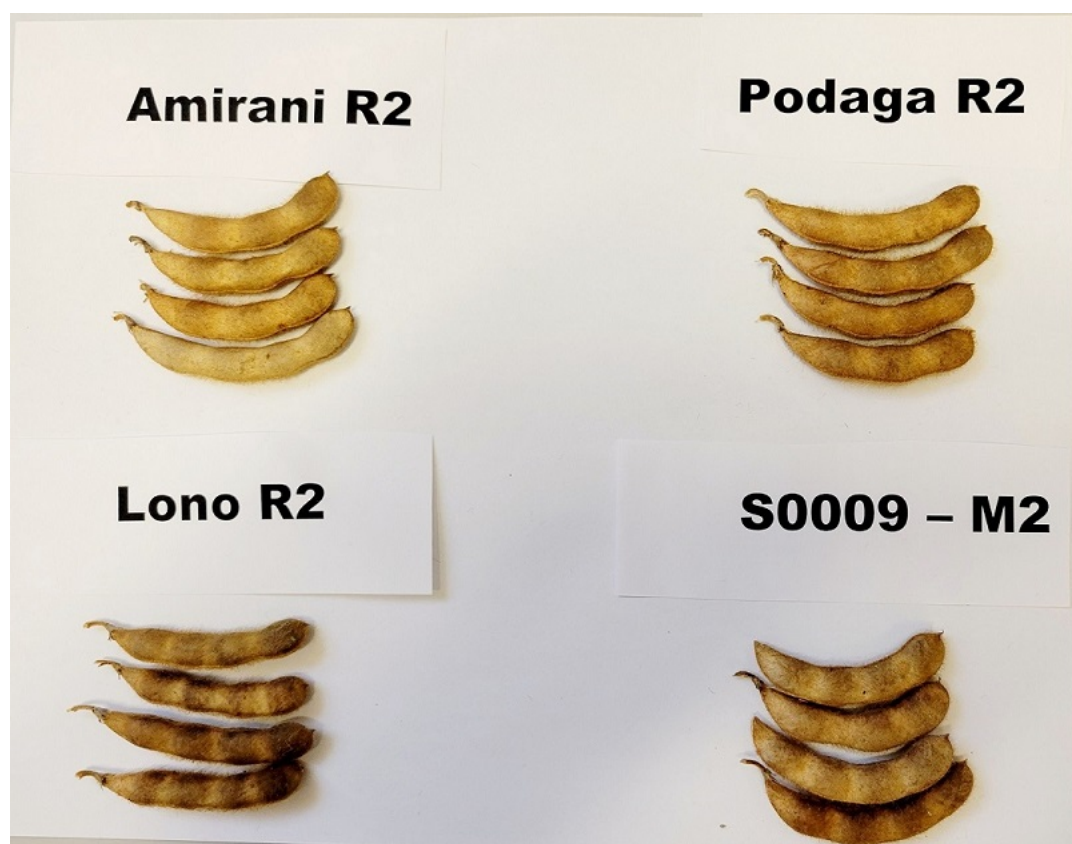
*reference varieties



Soybean: 'Amirani R2' (left) with reference varieties 'Podoga R2' (centre left), 'S0009-M2' (centre right) and 'Lono R2' (right)



Soybean: 'Amirani R2' (top left) with reference varieties 'Podaga R2' (top right), 'S0009-M2' (bottom left) and 'Lono R2' (bottom right)



Soybean: 'Amirani R2' (top left) with reference varieties 'Podaga R2' (top right), 'S0009-M2' (bottom right) and 'Lono R2' (bottom left)

Proposed denomination: 'Buffalo R2'
Application number: 18-9656
Application date: 2018/12/03
Applicant: La Coop fédérée, Saint-Hyacinthe, Quebec
Breeder: Jérôme Auclair, La Coop fédérée, Saint-Hyacinthe, Quebec

Varieties used for comparison: 'P005A27X', 'Dario R2X' and 'Salto R2'

Summary: *The intensity of anthocyanin colouration on the hypocotyl of 'Buffalo R2' is strong whereas it is of medium intensity for 'Salto R2'. The pubescence on the middle third of the stem of 'Buffalo R2' is tawny whereas it is light tawny on 'P005A27X' and 'Salto R2'. The plants of 'Buffalo R2' begin flowering early while those of 'Salto R2' begin flowering mid-season. When 95% of the pods are ripe, the plants of 'Buffalo R2' are shorter than the plants of the reference varieties. The intensity of brown colour on the pod of 'Buffalo R2' is light whereas it is of medium intensity on the pods of 'Dario R2X' and 'Salto R2'. The plants of 'Buffalo R2' mature earlier than the plants 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 early, matures very early to early

HYPOCOTYL: strong intensity of anthocyanin colouration

LEAF: pointed ovate lateral leaflet

FLOWER: violet

POD: light brown

SEED: spherical flattened, yellow ground colour of testa

HILUM: dark brown

Origin and Breeding: ‘Buffalo R2’ (experimental designation C4M17226 R2) originated from a cross between two proprietary selections conducted in 2012, in Tupperville, Ontario. A modified single seed descent method was used to develop the variety. In 2013, the F1 generation, grown in Tupperville, was harvested in bulk and individual plants selected from the F2 generation in 2014 in Saint-Simon, Quebec. In Saint-Hyacinthe, Quebec, row plots of the F3 generation were grown and selected in 2015 followed by plot evaluations from 2016 to 2018. ‘Buffalo R2’ was identified at the F5 generation in 2017. The selection criteria were based on a visual assessment of lodging resistance, number of pods per plant, pod density on the plant (internode length), absence of disease symptoms and protein content.

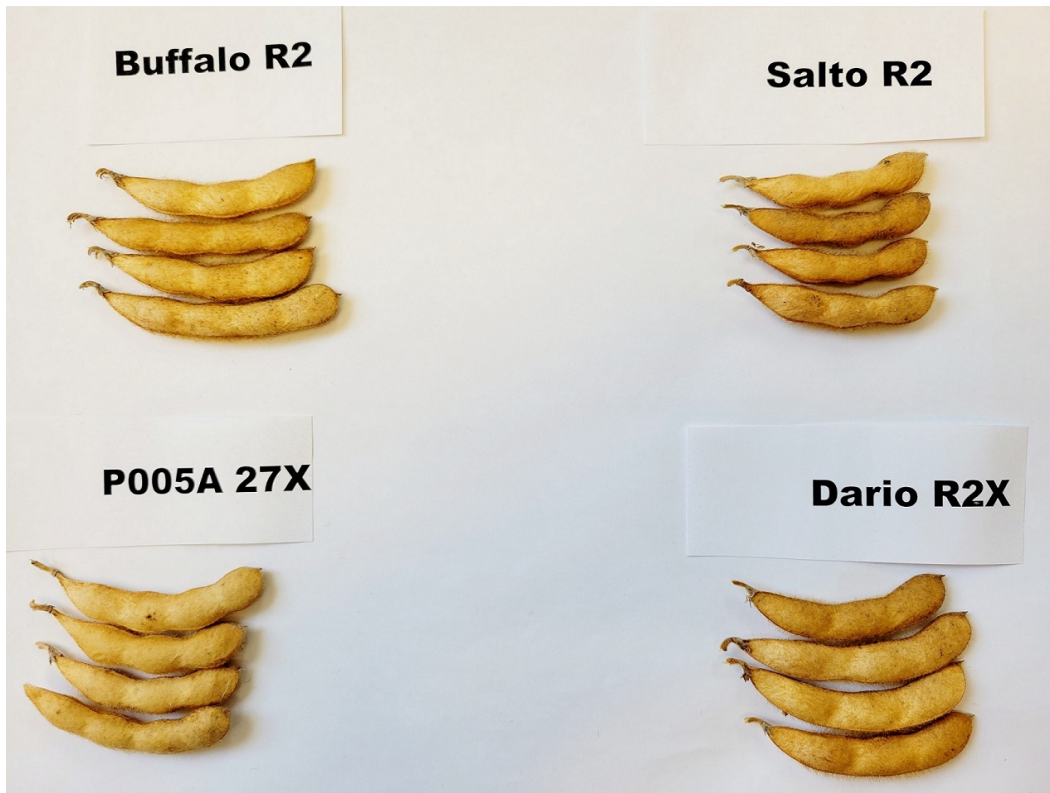
Tests and Trials: The comparative trials for ‘Buffalo R2’ were conducted at a production farm in Saint-Simon, Quebec. The trials were planted in a RCB design with 4 replicates per variety during the 2019 and 2021 growing seasons. Each 6.0 square metre plot consisted of 4 rows, each 4.5 metres long with a row spacing of 0.38 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. Mean differences were significant at the 5% probability level based on a Tukey test.

Comparison table for ‘Buffalo R2’

	‘Buffalo R2’	‘P005A27X’*	‘Dario R2X’*	‘Salto R2’*
<i>Plant height (cm)</i>				
mean 2019	62.8	66.6	77.4	74.6
std. deviation 2019	3.3	3.1	3.2	3.3
mean 2021	55.9	62.4	67.4	64.6
std. deviation 2021	3.3	3.2	3.8	3.7
<i>Number of days to maturity (from planting to maturity)</i>				
mean 2019	98	107	106	115
mean 2021	112	116	115	124
*reference varieties				



Soybean: 'Buffalo R2' (left) with reference varieties 'Salto R2' (centre left), 'Dario R2X' (centre right) and 'P005A27X' (right)



Soybean: 'Buffalo R2' (top left) with reference varieties 'Salto R2' (top right), 'P005A27X' (bottom left) and 'Dario R2X' (bottom right)

Proposed denomination: 'Chiba'
Application number: 18-9625
Application date: 2018/10/18
Applicant: La Coop fédérée, Saint-Hyacinthe, Quebec
Breeder: Jérôme Auclair, La Coop fédérée, Saint-Hyacinthe, Quebec

Varieties used for comparison: 'Ajico' and 'Etna'

Summary: *The intensity of anthocyanin colouration on the hypocotyl of 'Chiba' is of medium intensity whereas it is strong for the reference varieties. The plants of 'Chiba' begin flowering early while those of the reference varieties begin flowering mid-season. When 50% of the flowers are open, the branching attitude of 'Chiba' is erect to semi-erect whereas it is semi-erect to horizontal on 'Ajico'. When 95% of the pods are ripe, the plants of 'Chiba' are taller than those of the reference varieties. The intensity of brown colour on the pod of 'Chiba' is of medium intensity whereas it is light for 'Ajico' and dark for 'Etna'.*

Description:

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

HYPOCOTYL: medium intensity of anthocyanin colouration

LEAF: pointed ovate lateral leaflet

FLOWER: violet

POD: medium brown

SEED: spherical flattened, yellow ground colour of testa

HILUM: yellow

Origin and Breeding: ‘Chiba’ (experimental designations C4M17228 and T1603-2) originated from a cross between two proprietary selections conducted in 2009, in Tupperville, Ontario. A modified single seed descent method was used to develop the variety. In 2010, the F1 generation, grown in Saint-Simon, Quebec, was harvested in bulk and individual plants were selected from the F2 generation in 2011. In Saint-Hyacinthe, Quebec, row plots of the F3 generation were grown and selected followed by plot evaluations from 2013 to 2014. ‘Chiba’ was identified at the F5 generation in 2014. The selection criteria were based on a visual assessment of lodging resistance, number of pods per plant, pod density on the plant (internode length), absence of disease symptoms and protein content.

Tests and Trials: The comparative trials for ‘Chiba’ were conducted at the Coop fédérée Research Farm in Saint-Hyacinthe, Quebec. The trials were planted in a RCB design with 4 replicates per variety in 2019 and 2 replicates per variety in 2021. Each 6.0 square metre plot consisted of 4 rows, each 4.5 metres long with a row spacing of 0.38 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. Mean differences were significant at the 5% probability level based on a Tukey test.

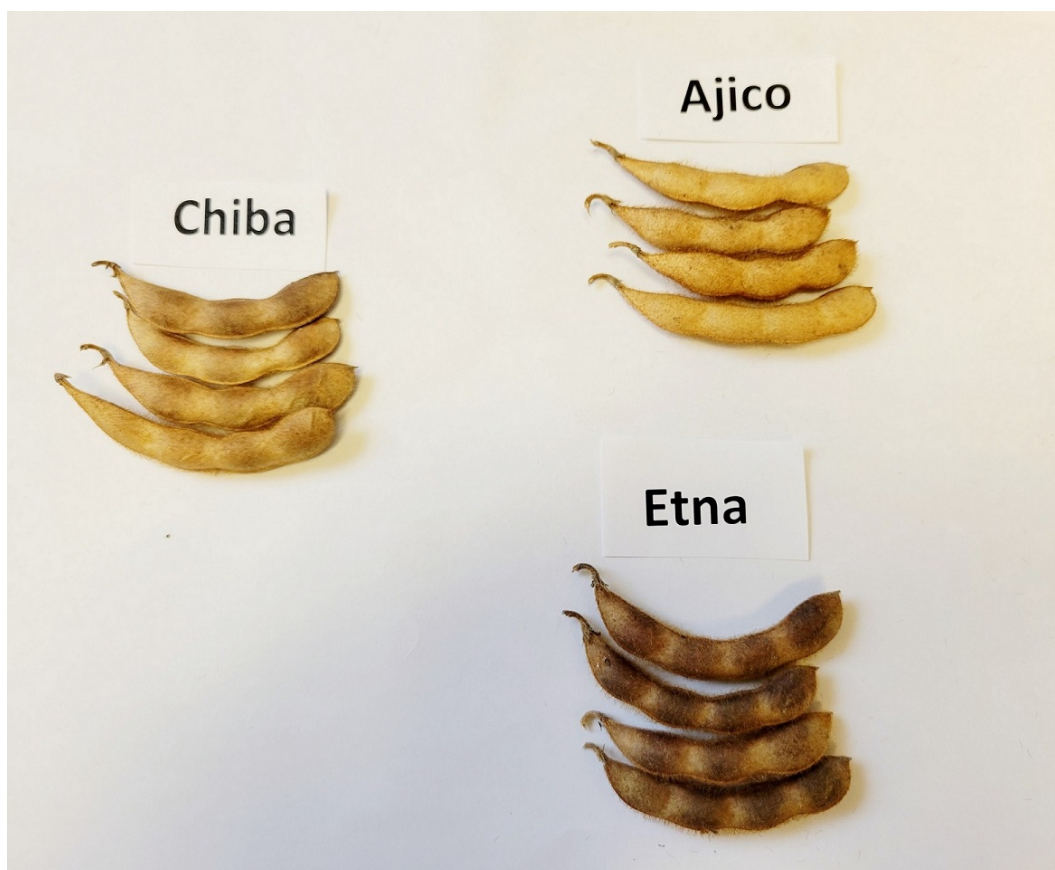
Comparison table for ‘Chiba’

	‘Chiba’	‘Ajico’*	‘Etna’*
<i>Plant height (cm)</i>			
mean 2019	101.8	83.9	88.9
std. deviation 2019	2.6	3.0	2.9
mean 2021	96.7	76.3	72.4
std. deviation 2021	4.6	2.3	3.7

*reference varieties



Soybean: 'Chiba' (left) with reference varieties 'Ajico' (centre) and 'Etna' (right)



Soybean: 'Chiba' (top left) with reference varieties 'Ajico' (top right) and 'Etna' (bottom right)

Proposed denomination: 'Komodo R2'
Application number: 18-9626
Application date: 2018/10/18
Applicant: La Coop fédérée, Saint-Hyacinthe, Quebec
Breeder: Jérôme Auclair, La Coop fédérée, Saint-Hyacinthe, Quebec

Varieties used for comparison: 'Amirani R2', 'Notus R2' and 'Sunna R2X'

Summary: *When 50% of the flowers are open, the branching attitude of 'Komodo R2' is semi-erect whereas it is semi-erect to horizontal on 'Notus R2' and 'Sunna R2X'. When 95% of the pods are ripe, the plants of 'Komodo R2' are shorter than the plants of 'Sunna R2X'. The intensity of brown colour on the pod of 'Komodo R2' is of medium intensity whereas it is dark on the pod of 'Notus R2'. The ground colour of the testa for 'Komodo R2' is yellow green whereas it is dark for 'Amirani R2'. The colour of the hilum on 'Komodo R2' is grey whereas it is yellow on 'Amirani R2' and black on 'Notus R2'. The plants of 'Komodo R2' mature earlier than the plants of 'Sunna R2X'.*

Description:

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

HYPOCOTYL: medium intensity of anthocyanin colouration

LEAF: pointed ovate lateral leaflet

FLOWER: violet

POD: medium brown

SEED: elongated, yellow ground colour of testa
HILUM: yellow

Origin and Breeding: ‘Komodo R2’ (experimental designation C4M17221 R2, R1601-12) originated from a cross between two proprietary selections conducted in 2010, in Centralia, Ontario. A modified single seed descent method was used to develop the variety. Seeds from the F1 generation were grown in Elm Creek, Manitoba, and individual plants were selected from the F2 generation in 2012. In Saint-Hyacinthe, Quebec, row plots of the F3 generation were grown and selected in 2013 followed by plot evaluations from 2014 to 2018. ‘Komodo R2’ was identified at the F5 generation in 2016. The selection criteria were based on a visual assessment of lodging resistance, number of pods per plant, pod density on the plant (internode length), absence of disease symptoms and protein content.

Tests and Trials: The comparative trials for ‘Komodo R2’ were conducted at a production farm in Saint-Simon, Quebec. The trials were planted in a RCB design with 4 replicates per variety during the 2019 and 2021 growing seasons. Each 6.0 square metre plot consisted of 4 rows, each 4.5 metres long with a row spacing of 0.38 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. Mean differences were significant at the 5% probability level based on a Tukey test.

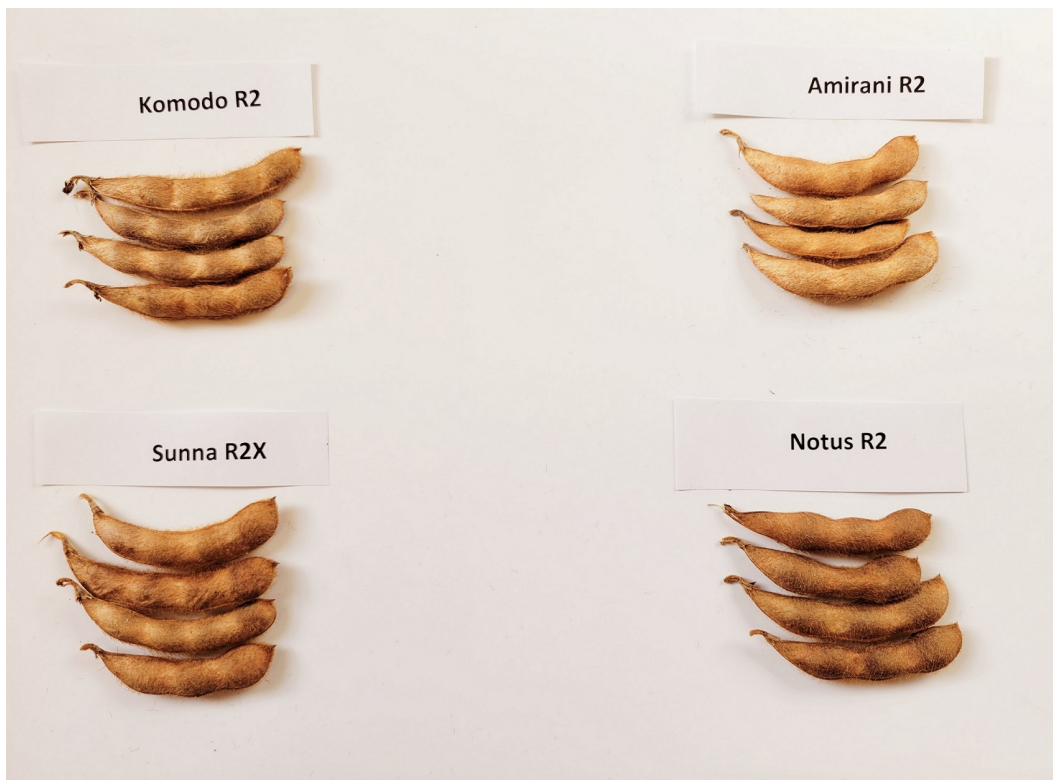
Comparison table for ‘Komodo R2’

	‘Komodo R2’	‘Amirani R2’*	‘Notus R2’*	‘Sunna R2X’*
<i>Plant height (cm)</i>				
mean 2019	71.0	79.6	61.3	79.6
std. deviation 2019	3.4	3.5	3.2	3.0
mean 2021	56.4	59.5	54.1	65.4
std. deviation 2021	3.2	4.5	4.0	3.7
<i>Number of days to maturity (from planting to maturity)</i>				
mean 2019	104	96	104	108
mean 2021	113	113	118	116

*reference varieties



Soybean: 'Komodo R2' (left) with reference varieties 'Notus R2' (centre left), 'Amirani R2' (centre right) and 'Sunna R2X' (right)



Soybean: 'Komodo R2' (top left) with reference varieties 'Amirani R2' (top right), 'Sunna R2X' (bottom left) and 'Notus R2' (bottom right)



Soybean: 'Komodo R2' (top left) with reference varieties 'Amirani R2' (top right), 'Sunna R2X' (bottom left) and 'Notus R2' (bottom right)