POTATO
(Solanum tuberosum)

Proposed denomination: **'AR2005-2'**
Application number: 08-6372
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: T. Richard Tarn, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Superior', 'Atlantic' and 'Kennebec'

Summary: *The tuber skin of 'AR2005-2' is light brown whereas it is light beige on all of the reference varieties. The colour of base of the tuber eye of 'AR2005-2' is brown whereas it is white on all of the reference varieties. The texture of the tuber skin of 'AR 2005-2' is netted whereas it is rough on 'Superior' and 'Atlantic' and smooth on 'Kennebec'. The tuber flesh of 'AR 2005-2' is cream whereas it is white on all of the reference varieties. The light sprouts of 'AR2005-2' are large whereas they are medium sized on 'Superior' and 'Atlantic'. The intensity of anthocyanin colouration on the light sprout base of 'AR2005-2' is strong whereas it is medium on 'Superior', weak on 'Atlantic' and absent or very weak on 'Kennebec'. The intensity of anthocyanin colouration on the light sprout tip of 'AR2005-2' is weak whereas it is absent or very weak on all of the reference varieties.*

Description:
PLANT: mid to late season maturity, upright to semi-upright growth habit, intermediate type foliage structure
STEM: weak anthocyanin colouration distributed mainly at the base, thin to medium thickness, absent or very low swelling of nodes

LEAVES: medium to dark green, closed silhouette, absent or very weak intensity of anthocyanin colouration on upper side of rachis, weak waviness of margin, weak to medium presence of secondary leaflets
TERMINAL LEAFLET: broadly ovate shape, cuspidate tip, cordate base, absent or very low frequency of coalescence with lateral leaflets
LATERAL LEAFLET: medium to large size, broadly ovate shape, acuminate tip, cordate base

INFLORESCENCE: high flowering profusion, medium to large size, medium intensity of anthocyanin colouration of flower bud
COROLLA: blue-violet, weak to medium anthocyanin colouration on inner surface, large, medium prominence of star, medium anthocyanin colouration on peduncle

TUBER: round
TUBER SKIN: light brown, brown at base of eye, netted
TUBER EYES: shallow
TUBER FLESH: cream, no secondary colour

LIGHT SPROUT: large, ovoid shape, medium number of root tips, short lateral shoots
BASE: strong anthocyanin colouration, absent or low proportion of blue in anthocyanin colouration, dense pubescence
TIP: smaller than base in size, closed habit, weak anthocyanin colouration, dense pubescence

Origin and Breeding: 'AR2005-2' originated through the hybridization of 'Atlantic' and 'ND860-2' conducted in Fredericton, New Brunswick in 1996. Initial selections were carried out in 1999. Selection criteria included adaptation, tuber type and chipping quality.

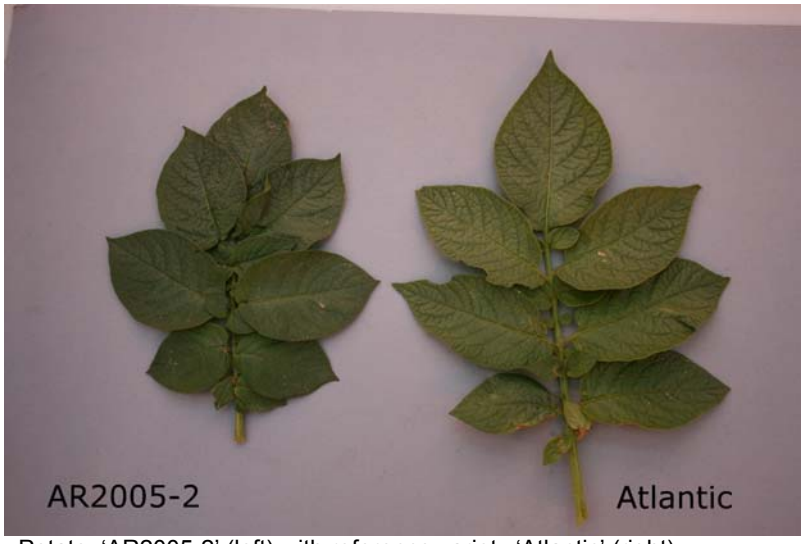
Tests and Trials: The tests and trials for 'AR2005-2' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety,

ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

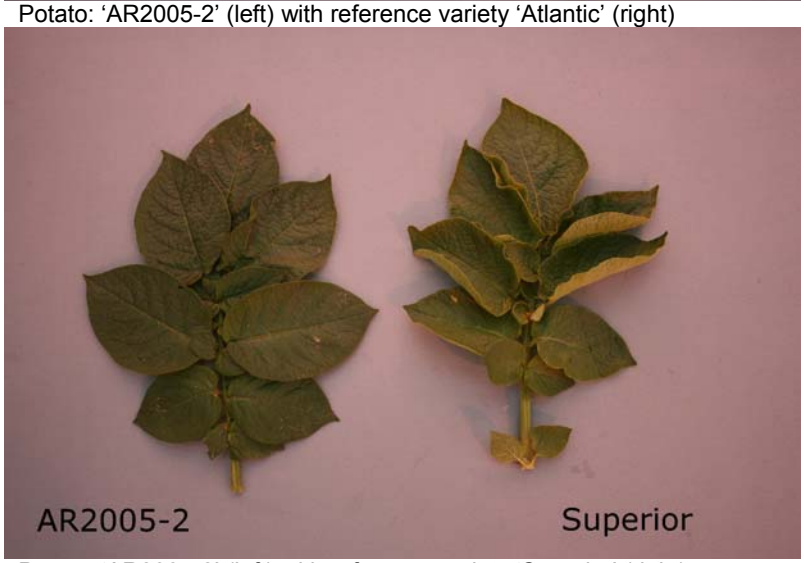
Comparison table for 'AR2005-2'

	'AR2005-2'	'Superior'*	'Atlantic'*	'Kennebec'*
Plant height (cm)				
mean	42	38	30	49
std. deviation	7.7	4.7	7.5	3.9
Colour of corolla (RHS)				
inner surface	85B	84A	77C	N155D

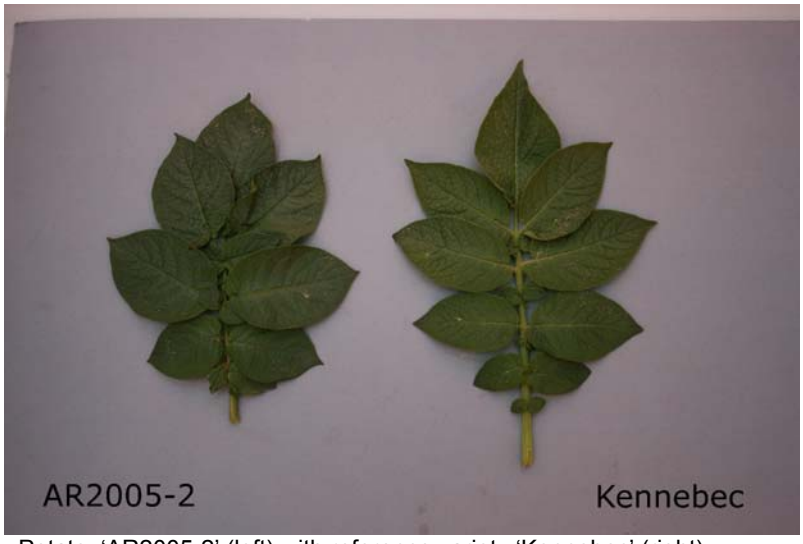
*reference varieties



Potato: 'AR2005-2' (left) with reference variety 'Atlantic' (right)



Potato: 'AR2005-2' (left) with reference variety 'Superior' (right)



Potato: 'AR2005-2' (left) with reference variety 'Kennebec' (right)

Proposed denomination: **'AR2005-7'**
Application number: 08-6371
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: Agnes Murphy, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Superior', 'Atlantic', 'Rochdale Gold-Dorée' and 'Kennebec'

Summary: *The terminal leaflet of 'AR2005-7' is narrowly ovate in shape whereas it is broadly ovate in 'Superior', 'Atlantic' and 'Kennebec' and medium ovate in 'Rochdale Gold-Dorée'. The inner surface of the corolla of 'AR2005-7' is blue-violet whereas it is white on 'Rochdale Gold-Dorée' and 'Kennebec'. The prominence of the star on the corolla of 'AR2005-7' is very weak whereas it is medium to strong on 'Superior' and strong to very strong on 'Rochdale Gold-Dorée'. The texture of the skin of 'AR2005-7' is smooth whereas it is rough on 'Superior' and 'Atlantic'. The main colour of the tuber flesh of 'AR2005-7' is medium yellow whereas it is white on 'Superior', 'Atlantic' and 'Kennebec'. The intensity of anthocyanin colouration on the light sprout base of 'AR2005-7' is strong whereas it is weak on 'Superior' and 'Atlantic' and absent or very weak on 'Kennebec'. The pubescence on the light sprout base of 'AR2005-7' is absent or very sparse whereas it is dense on 'Superior' and medium on 'Atlantic', 'Rochdale Gold-Dorée' and 'Kennebec'. The intensity of anthocyanin colouration on the the light sprout tip of 'AR2005-7' is medium whereas it is absent or very weak on all of the reference varieties. The pubescence on the light sprout tip of 'AR2005-7' is absent or very sparse whereas it is medium on 'Superior' and dense on 'Atlantic' and 'Rochdale Gold-Dorée'.*

Description:
PLANT: late season maturity, upright growth habit, intermediate type foliage structure
STEM: absent or very weak anthocyanin colouration, absent or very low swelling of nodes

LEAVES: medium green, closed to intermediate silhouette, absent or very weak intensity of anthocyanin colouration on upper side of rachis, weak waviness of margin, medium presence of secondary leaflets
TERMINAL LEAFLET: narrowly ovate shape, acuminate tip, cordate base, absent or very low frequency of coalescence with lateral leaflets
LATERAL LEAFLET: medium to large size, elliptical shape, acuminate tip, cordate base

INFLORESCENCE: medium flowering profusion, medium size, weak intensity of anthocyanin colouration of flower bud
COROLLA: blue-violet, weak to medium anthocyanin colouration on inner surface, medium size, very weak prominence of star, absent or very weak anthocyanin colouration on peduncle

TUBER: round

TUBER SKIN: yellow, yellow at base of eye, smooth
TUBER EYES: shallow
TUBER FLESH: medium yellow, no secondary colour

LIGHT SPROUT: medium size, ovoid shape, few root tips, short lateral shoots
BASE: strong anthocyanin colouration, absent or low proportion of blue in anthocyanin colouration, absent or very sparse pubescence
TIP: smaller than base in size, intermediate habit, medium anthocyanin colouration, absent or very sparse pubescence

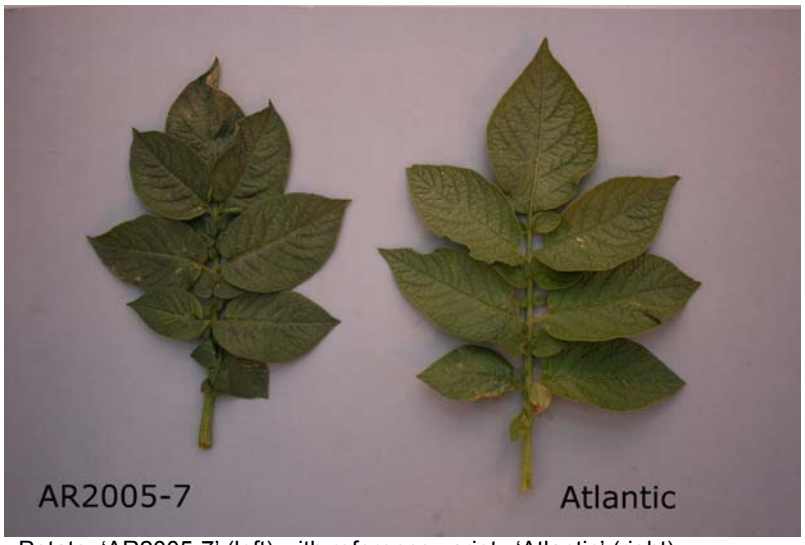
Origin and Breeding: 'AR2005-7' originated through the hybridization of 'N0585-6' and 'AC Chaleur' conducted in Fredericton, New Brunswick in 1997. Initial selections were carried out in 1999. Selection criteria included adaptation, tuber type and fresh market quality.

Tests and Trials: The tests and trials for 'AR2005-7' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

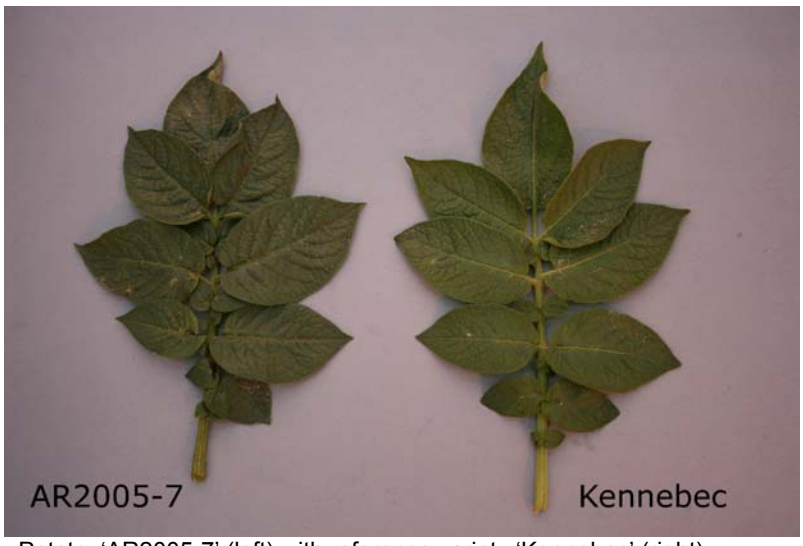
Comparison table for 'AR2005-7'

	'AR2005-7'	**'Superior'***	**'Atlantic'***	**'Rochdale Gold-Dorée'***	**'Kennebec'***
Plant height (cm)					
mean	32	38	30	38	49
std. deviation	8.0	4.7	7.5	5.1	3.9
Colour of corolla (RHS)					
inner surface	85B	84A	77C	155D	N155D

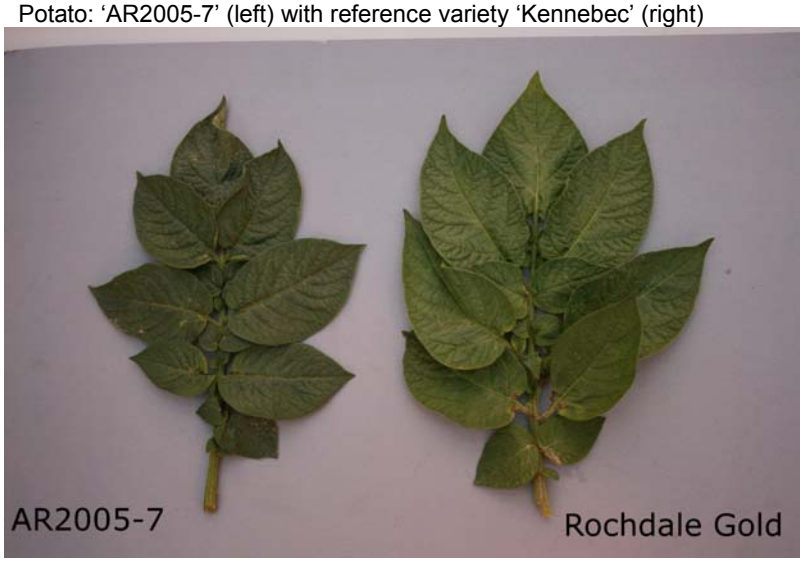
*reference varieties



Potato: 'AR2005-7' (left) with reference variety 'Atlantic' (right)



Potato: 'AR2005-7' (left) with reference variety 'Kennebec' (right)



Potato: 'AR2005-7' (left) with reference variety 'Rochdale Gold-Dorée' (right)

Proposed denomination: **'AR2006-1'**
Application number: 08-6370
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: T. Richard Tarn, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Shepody', 'Coastal Russet', 'Russet Burbank' and 'Kennebec'

Summary: *Flowering profusion of 'AR2006-1' is low whereas it is high on 'Shepody' and 'Coastal Russet' and medium on 'Kennebec'. The inner surface of the corolla of 'AR2006-1' is blue-violet whereas it is white on 'Russet Burbank' and 'Kennebec'. The tuber skin of 'AR2006-1' is yellow whereas it is light beige on 'Shepody' and light brown russet on 'Coastal Russet' and 'Russet Burbank'. The texture of the tuber skin of 'AR2006-1' is netted whereas it is smooth on 'Shepody' and 'Kennebec' and russetted on 'Coastal Russet' and 'Russet Burbank'. The pubescence on the light sprout base of 'AR2006-1' is absent or very sparse whereas it is dense on 'Shepody' and medium on 'Coastal Russet', 'Russet Burbank' and 'Kennebec'. The tip of the light sprout of 'AR2006-1' is smaller than the base whereas the tip is equal in size to the base on 'Shepody', 'Coastal Russet' and 'Russet Burbank'. The intensity of anthocyanin colouration on the light sprout tip of*

'AR2006-1' is weak whereas it is absent to very weak on all of the reference varieties. Pubescence on the light sprout tip of 'AR2006-1' is sparse whereas it is medium on 'Shepody' and strong on 'Coastal Russet' and 'Russet Burbank'. There are many root tips on the light sprout of 'AR2006-1' whereas there are few on 'Shepody', 'Coastal Russet' and 'Kennebec' and medium on 'Russet Burbank'.

Description:
PLANT: late season maturity, upright growth habit, intermediate type foliage structure
STEM: medium anthocyanin colouration distributed mainly at the base with some located between nodes, low swelling of nodes

LEAVES: light to medium green, closed to intermediate silhouette, absent or very weak intensity of anthocyanin colouration on upper side of rachis, absent or very weak waviness of margin, medium presence of secondary leaflets
TERMINAL LEAFLET: medium ovate shape, acuminate tip, cordate base, absent or very low frequency of coalescence with lateral leaflets
LATERAL LEAFLET: medium size, medium ovate shape, acuminate tip, cordate base

INFLORESCENCE: low flowering profusion, small size, weak intensity of anthocyanin colouration of flower bud
COROLLA: blue-violet, weak to medium anthocyanin colouration on inner surface, small size, weak to medium prominence of star, absent or very weak anthocyanin colouration on peduncle

TUBER: oblong
TUBER SKIN: yellow, white at base of eye, netted
TUBER EYES: shallow
TUBER FLESH: cream, no secondary colour

LIGHT SPROUT: medium size, ovoid shape, many root tips, short lateral shoots
BASE: medium anthocyanin colouration, medium proportion of blue in anthocyanin colouration, absent or very sparse pubescence
TIP: smaller than base in size, closed habit, weak anthocyanin colouration, sparse pubescence

Origin and Breeding: 'AR2006-1' originated through the hybridization of 'F89117' and 'ND6993-13' conducted in Fredericton, New Brunswick in 1996. Initial selections were carried out in 2000. Selection criteria included adaptation, tuber type and french fry quality.

Tests and Trials: The tests and trials for 'AR2006-1' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

Comparison table for 'AR2006-1'

	'AR2006-1'	**'Shepody'***	**'Coastal Russet'***	**'Russet Burbank'***	**'Kennebec'***
Plant height (cm)					
mean	35	41	28	45	49
std. deviation	5.8	3.3	6.5	4.6	3.9
Colour of corolla (RHS)					
inner surface	76A	76A	84B	155B	N155D

*reference varieties

Potato: 'AR2006-1' (top, left) with reference varieties 'Coastal Russet' (top, centre), 'Russet Burbank' (top, right), 'Kennebec' (bottom, left) and 'Shepody' (bottom, right)

Proposed denomination: **'AR2006-2'**
Application number: 08-6373
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: T. Richard Tarn, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Shepody', 'Coastal Russet' and 'Russet Burbank'

Summary: *The shape of the lateral leaflets of 'AR2006-2' are broadly ovate whereas they are medium ovate in 'Shepody' and 'Coastal Russet' and narrowly ovate in 'Russet Burbank'. The shape of the base of the lateral leaflet of 'AR2006-2' is asymmetrical cordate whereas it is truncate in 'Shepody' and 'Russet Burbank' and lobed in 'Coastal Russet'. The tuber skin of 'AR2006-2' is yellow whereas it is light beige on 'Shepody' and light brown russet on 'Coastal Russet' and 'Russet Burbank'. The tuber skin texture of 'AR2006-2' is rough whereas it is smooth on 'Shepody' and russetted on 'Coastal Russet' and 'Russet Burbank'. The tuber flesh of 'AR2006-2' is light yellow whereas it is white on all of the reference varieties. The pubescence at the base of the light sprout of 'AR2006-2' is absent or very sparse whereas it is dense on 'Shepody' and 'Russet Burbank' and medium on 'Coastal Russet' and 'Russet Burbank'.*

Description:
PLANT: late to very late season maturity, semi-upright to spreading growth habit, leaf type foliage structure
STEM: weak to medium anthocyanin colouration distributed mainly at the base, low swelling of nodes

LEAVES: medium to dark green, closed to intermediate silhouette, absent or very weak intensity of anthocyanin colouration on upper side of rachis, very weak waviness of margin, medium to strong presence of secondary leaflets
TERMINAL LEAFLET: broadly ovate shape, cuspidate tip, lobed base, absent or very low frequency of coalescence with lateral leaflets
LATERAL LEAFLET: medium size, broadly ovate shape, cuspidate tip, asymmetrical cordate base

INFLORESCENCE: medium flowering profusion, medium size, medium intensity of anthocyanin colouration of flower bud
COROLLA: blue-violet, weak to medium anthocyanin colouration on inner surface, medium to large, weak prominence of star, medium to strong anthocyanin colouration on peduncle

TUBER: oblong
TUBER SKIN: yellow, white at base of eye, rough

TUBER EYES: medium depth
TUBER FLESH: light yellow, no secondary colour

LIGHT SPROUT: medium size, ovoid shape, few root tips, short lateral shoots
BASE: weak anthocyanin colouration, absent or low proportion of blue in anthocyanin colouration, absent or very sparse pubescence
TIP: smaller than base in size, closed habit, absent or very weak anthocyanin colouration, dense pubescence

Origin and Breeding: 'AR2006-2' originated through the hybridization of 'Coastal Russet' and 'G11505-02' conducted in Fredericton, New Brunswick in 1998. Initial selections were carried out in 2000. Selection criteria included adaptation, tuber type and french fry quality.

Tests and Trials: The tests and trials for 'AR2006-2' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

Comparison table for 'AR2006-2'

	'AR2006-2'	**'Shepody'***	**'Coastal Russet'***	**'Russet Burbank'***
Plant height (cm)				
mean	30	41	28	45
std. deviation	10.3	3.3	6.5	4.6
Colour of corolla (RHS)				
inner surface	76A	76A	84B	155B

*reference varieties

Potato: 'AR2006-2' (top, left) with reference varieties 'Coastal Russet' (top, centre), 'Russet Burbank' (top, right) and 'Shepody' (bottom, right)

Proposed denomination: **'AR2006-4'**
Application number: 08-6374
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: T. Richard Tarn, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Superior', 'Coastal Russet' and 'Russet Burbank'

Summary: *The shape of the terminal leaflet base of 'AR2006-4' is lobed whereas it is cordate in 'Superior' and truncate in 'Russet Burbank'. The general shape of the light sprout of 'AR2006-4' is ovoid whereas it is broad cylindrical in 'Superior', conical in 'Coastal Russet' and spherical in 'Russet Burbank'. The intensity of anthocyanin colouration at the base of the light sprout of 'AR2006-4' is strong whereas it is medium on 'Superior' and 'Russet Burbank' and weak to medium in 'Coastal Russet'. The intensity of anthocyanin colouration at the tip of the light sprout of 'AR2006-4' is medium whereas it is absent or very weak on all of the reference varieties. The pubescence on the light sprout tip of 'AR2006-4' is medium in density whereas it is sparse on 'Superior and dense on 'Coastal Russet' and 'Russet Burbank'.*

Description:
PLANT: mid to late season maturity, semi-upright growth habit, intermediate type foliage structure
STEM: weak to medium anthocyanin colouration distributed mainly at the base, low swelling of nodes

LEAVES: medium to dark green, intermediate silhouette, absent or very weak intensity of anthocyanin colouration on upper side of rachis, very weak waviness of margin, weak to medium presence of secondary leaflets
TERMINAL LEAFLET: broadly ovate shape, cuspidate tip, lobed base, absent or very low frequency of coalescence with lateral leaflets
LATERAL LEAFLET: small to medium size, broadly ovate shape, cuspidate tip, cordate base

INFLORESCENCE: medium to high flowering profusion, medium size, medium intensity of anthocyanin colouration of flower bud
COROLLA: blue-violet, medium anthocyanin colouration on inner surface, medium to large, medium to strong prominence of star, white petal tips, very weak anthocyanin colouration on peduncle

TUBER: oblong
TUBER SKIN: light brown russet, white at base of eye, russetted
TUBER EYES: shallow
TUBER FLESH: cream, no secondary colour

LIGHT SPROUT: medium size, ovoid shape, medium number of root tips, short lateral shoots
BASE: strong anthocyanin colouration, high proportion of blue in anthocyanin colouration, medium pubescence
TIP: smaller than base in size, closed habit, medium anthocyanin colouration, medium density pubescence

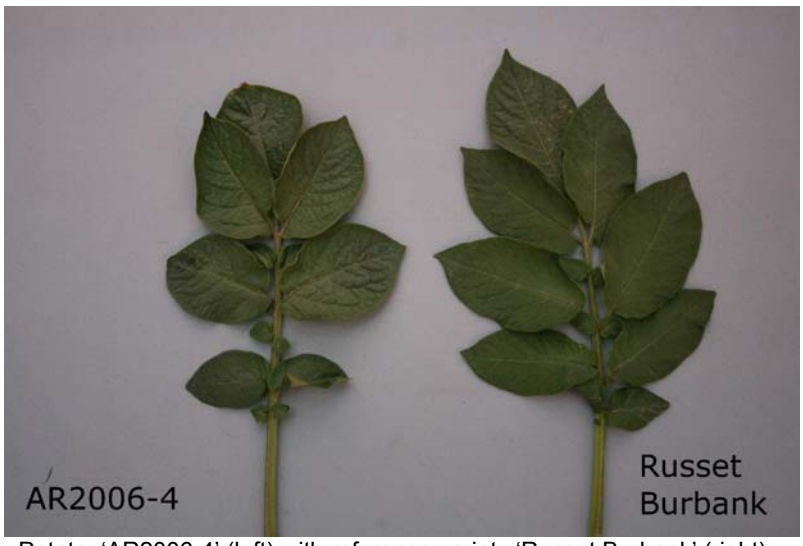
Origin and Breeding: 'AR2006-4' originated through the hybridization of 'Frontier Russet' and 'F87070' conducted in Fredericton, New Brunswick in 1996. Initial selections were carried out in 2000. Selection criteria included adaptation, tuber type and fresh market quality.

Tests and Trials: The tests and trials for 'AR2006-4' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

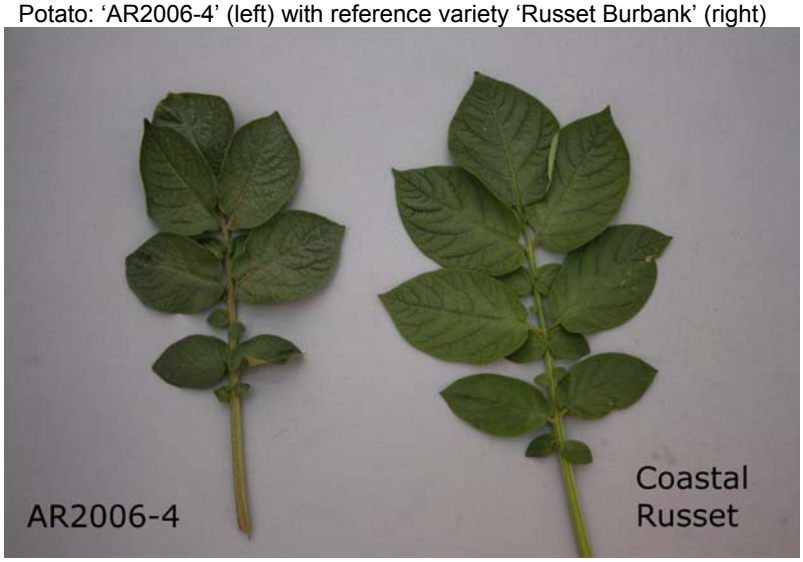
Comparison table for 'AR2006-4'

	'AR2006-4'	**'Superior'***	**'Coastal Russet'***	**'Russet Burbank'***
Plant height (cm)				
mean	35	38	28	45
std. deviation	4.9	4.7	6.5	4.6
Colour of corolla (RHS)				
inner surface	N82B	84A	84B	155B

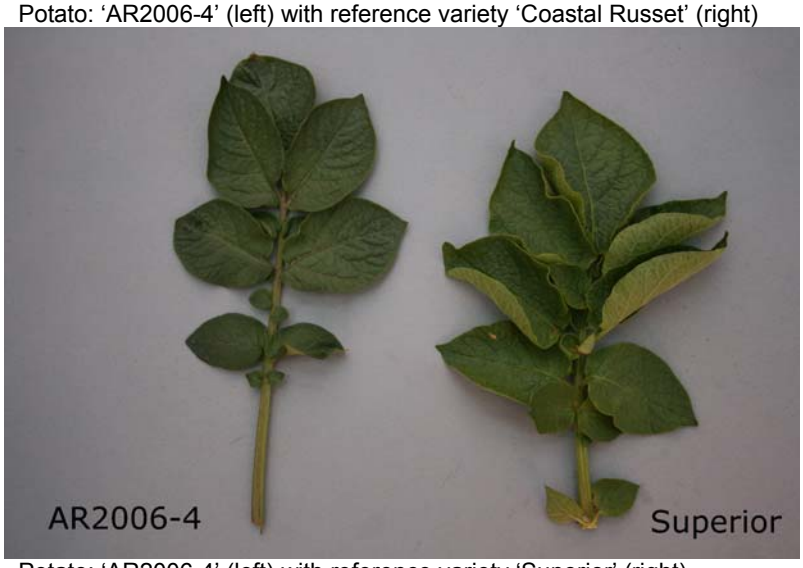
*reference varieties



Potato: 'AR2006-4' (left) with reference variety 'Russet Burbank' (right)



Potato: 'AR2006-4' (left) with reference variety 'Coastal Russet' (right)



Potato: 'AR2006-4' (left) with reference variety 'Superior' (right)

Proposed denomination: **'AR2006-5'**
Application number: 08-6375
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: Agnes Murphy, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Shepody', 'Russet Burbank' and 'AC Red Island'

Summary: *The leaf silhouette of 'AR2006-5' is open whereas it is closed in 'Shepody'. The terminal leaflet of 'AR2006-5' is broadly elliptical whereas it is broadly ovate in 'Shepody' and medium ovate in 'Russet Burbank' and 'AC Red Island'. The tuber skin of 'AR2006-5' is red whereas the skin of 'Shepody' is light beige and that of 'Russet Burbank' is brown russet. The tuber flesh of 'AR2006-5' is medium yellow whereas that of 'Shepody' and 'Russet Burbank' is white and that of 'AC Red Island' is cream. The light sprout of 'AR2006-5' is large whereas they are medium sized in 'Shepody' and Russet Burbank'. The general shape of the light sprout of 'AR2006-5' is broad cylindrical whereas it is ovoid in 'Shepody' and spherical in 'Russet Burbank' and 'AC Red Island'. The intensity of anthocyanin colouration at the base of the light sprout of 'AR2006-5' is strong whereas it is weak on 'Shepody' and medium on 'Russet Burbank' and 'AC Red Island'. Pubescence at the base of the light sprout of 'AR2006-5' is absent or very sparse whereas it is strong on 'Shepody' and 'Russet Burbank'.*

Description:
PLANT: late season maturity, upright growth habit, stem type foliage structure
STEM: strong anthocyanin colouration distributed along entire stem, thin, absent or very low swelling of nodes

LEAVES: light to medium green, open silhouette, absent or very weak intensity of anthocyanin colouration on upper side of rachis, weak waviness of margin, medium presence of secondary leaflets
TERMINAL LEAFLET: broadly elliptical shape, acuminate tip, cordate base
LATERAL LEAFLET: medium size, narrowly ovate shape, acuminate tip, truncate base

INFLORESCENCE: medium flowering profusion, small to medium size, medium to strong intensity of anthocyanin colouration of flower bud
COROLLA: blue-violet, strong anthocyanin colouration on inner surface, small, weak prominence of star, medium to strong anthocyanin colouration on peduncle

TUBER: oblong to oval
TUBER SKIN: red, red at base of eye, smooth
TUBER EYES: very shallow
TUBER FLESH: medium yellow, no secondary colour

LIGHT SPROUT: large, broad cylindrical shape, many root tips, short lateral shoots
BASE: strong anthocyanin colouration, absent or low proportion of blue in anthocyanin colouration, absent or very sparse pubescence
TIP: smaller than base in size, closed habit, absent or very weak anthocyanin colouration, medium density pubescence

Origin and Breeding: 'AR2006-5' originated through the hybridization of 'Torridon' and 'AC Red Island' conducted in Fredericton, New Brunswick in 1999. Initial selections were carried out in 2001. Selection criteria included adaptation, tuber type and french fry quality.

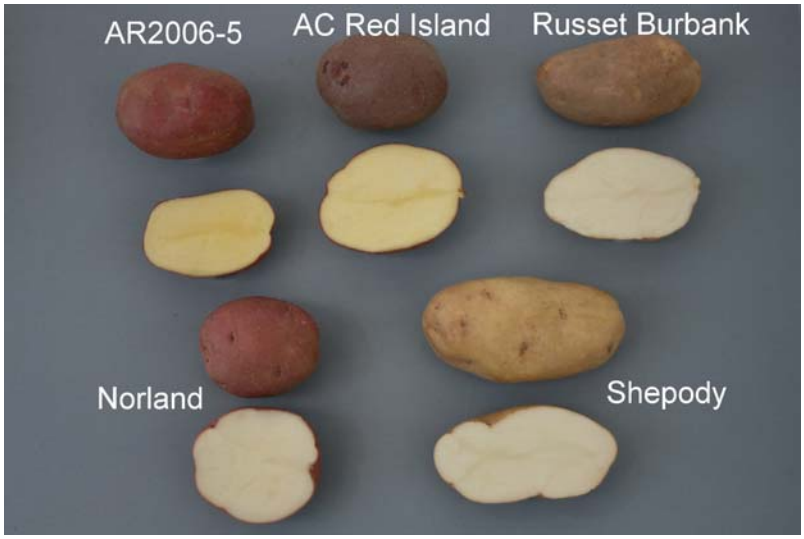
Tests and Trials: The tests and trials for 'AR2006-5' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

Comparison table for 'AR2006-5'

	'AR2006-5'	'Shepody'*	'Russet Burbank'*	'AC Red Island'*
Plant height (cm)				
mean	32	41	45	35
std. deviation	6.6	3.3	4.6	4.4

Colour of corolla (RHS)				
inner surface	84A	76A	155B	N87C

*reference varieties



Potato: 'AR2006-5' (top, left) with reference varieties 'AC Red Island' (top, centre), 'Russet Burbank' (top, right) and 'Shepody' (bottom, right)

Proposed denomination: **'AR2006-6'**
Application number: 08-6376
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: T. Richard Tarn, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Superior', 'Atlantic' and 'Rochdale Gold-Dorée'

Summary: *Flowering profusion of 'AR2006-6' is weak to medium whereas it is high to very high in 'Superior' and high in 'Atlantic'. The intensity of anthocyanin colouration on the flower bud of 'AR2006-6' is medium whereas it is absent or very weak on 'Rochdale Gold-Dorée'. The main colour of the tuber flesh of 'AR2006-6' is cream to light yellow whereas it is white in 'Superior' and 'Atlantic' and light yellow on 'Rochdale Gold-Dorée' . The general shape of the light sprout of 'AR2006-6' is spherical whereas it is broad cylindrical on 'Superior' and ovoid on 'Atlantic' and 'Rochdale Gold-Dorée'.*

Description:
PLANT: mid to late season maturity, spreading growth habit, leaf type foliage structure
STEM: absent or very weak anthocyanin colouration, low swelling of nodes

LEAVES: light to medium green, intermediate silhouette, strong intensity of anthocyanin colouration on upper side of rachis, absent or very low frequency of coalescence, weak waviness of margin, medium presence of secondary leaflets
TERMINAL LEAFLET: broadly ovate shape, acuminate tip, cordate base
LATERAL LEAFLET: small to medium size, broadly ovate shape, acuminate tip, truncate base

INFLORESCENCE: low to medium flowering profusion, small to medium size, medium intensity of anthocyanin colouration of flower bud
COROLLA: blue-violet, medium anthocyanin colouration on inner surface, medium size, very weak prominence of star, weak anthocyanin colouration on peduncle

TUBER: round

TUBER SKIN: yellow, white at base of eye, smooth
TUBER EYES: shallow
TUBER FLESH: cream to light yellow, no secondary colour

LIGHT SPROUT: medium size, spherical shape, medium number of root tips, short lateral shoots
BASE: weak anthocyanin colouration, absent or low proportion of blue in anthocyanin colouration, sparse pubescence
TIP: equal to base in size, intermediate habit, absent or very weak anthocyanin colouration, dense pubescence

Origin and Breeding: 'AR2006-6' originated through the hybridization of 'F87084' and 'Stirling' conducted in Fredericton, New Brunswick in 1999. Initial selections were carried out in 2001. Selection criteria included adaptation, tuber type and fresh market quality.

Tests and Trials: The tests and trials for 'AR2006-6' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

Comparison table for 'AR2006-6'

	'AR2006-6'	**'Superior'***	**'Atlantic'***	**'Rochdale Gold-Dorée'***
Plant height (cm)				
mean	34	38	30	38
std. deviation	6.6	4.7	7.5	5.1
Colour of corolla (RHS)				
inner surface	76B	84A	77C	N155D

*reference varieties

Potato: 'AR2006-6' (left) with reference varieties 'Rochdale Gold-Dorée' (centre), and 'Atlantic' (right)

Proposed denomination: **'AR2006-7'**
Application number: 08-6368
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: Agnes Murphy, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Superior', 'AC Red Island' and 'Kennebec'

Summary: *The tuber skin of 'AR2006-7' is red whereas it is light beige on 'Superior' and 'Kennebec'. The tuber flesh of 'AR2006-7' is light yellow whereas it is white in 'Superior' and 'Kennebec' and cream in 'AC Red Island'. The light sprout of 'AR2006-7' is broad cylindrical whereas it is spherical on 'AC Red Island' and 'Kennebec'. The intensity of anthocyanin colouration on the light sprout tips of 'AR2006-7' is medium whereas it is absent or very weak on all reference varieties.*

Description:
PLANT: mid to late season maturity, semi-upright growth habit, intermediate type foliage structure
STEM: weak anthocyanin colouration distributed at the base, medium thickness, nodes with low swelling

LEAVES: medium green, intermediate to open silhouette, weak to medium intensity of anthocyanin colouration on upper side of rachis, absent or very low frequency of coalescence with lateral leaflets, absent or very weak waviness of margin, weak to medium presence of secondary leaflets
TERMINAL LEAFLET: medium ovate shape, acuminate tip, cordate base
LATERAL LEAFLET: medium to large, broadly ovate shape, cuspidate tip, truncate base

INFLORESCENCE: medium flowering profusion, medium size, medium intensity of anthocyanin colouration of flower bud
COROLLA: blue violet, medium size, medium intensity of anthocyanin colouration on inner surface, medium prominence of star, very weak anthocyanin colouration on peduncle

TUBER: round
TUBER SKIN: light red, red at base of eye, smooth
TUBER EYES: very shallow
TUBER FLESH: light yellow, no secondary colour

LIGHT SPROUT: large, broad cylindrical shape, medium number of root tips, medium length lateral shoots
BASE: strong anthocyanin colouration, absent to low proportion of blue in anthocyanin colouration, dense pubescence
TIP: smaller than base in size, closed habit, medium anthocyanin colouration, medium pubescence

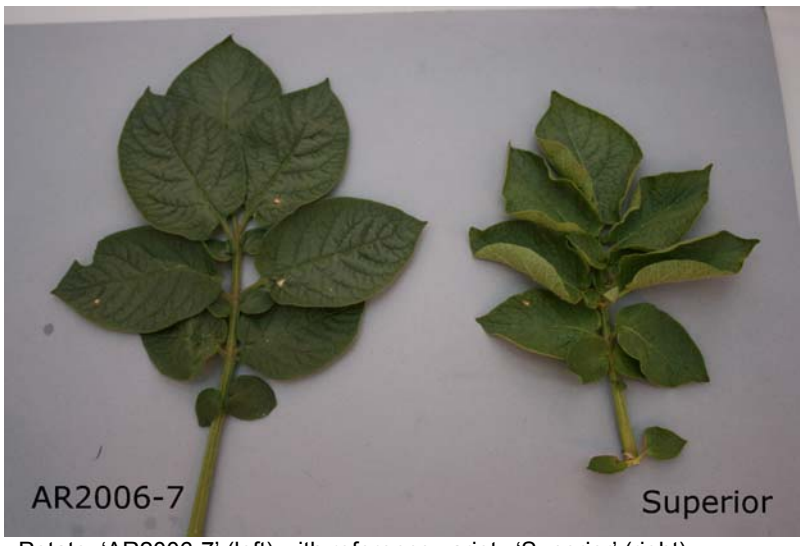
Origin and Breeding: 'AR2006-7' originated through the hybridization of 'AC Red Island' and 'F66011' conducted in Fredericton, New Brunswick in 1999. Initial selections were carried out in 2001. Selection criteria included adaptation, tuber type and fresh market quality.

Tests and Trials: The tests and trials for 'AR2006-7' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

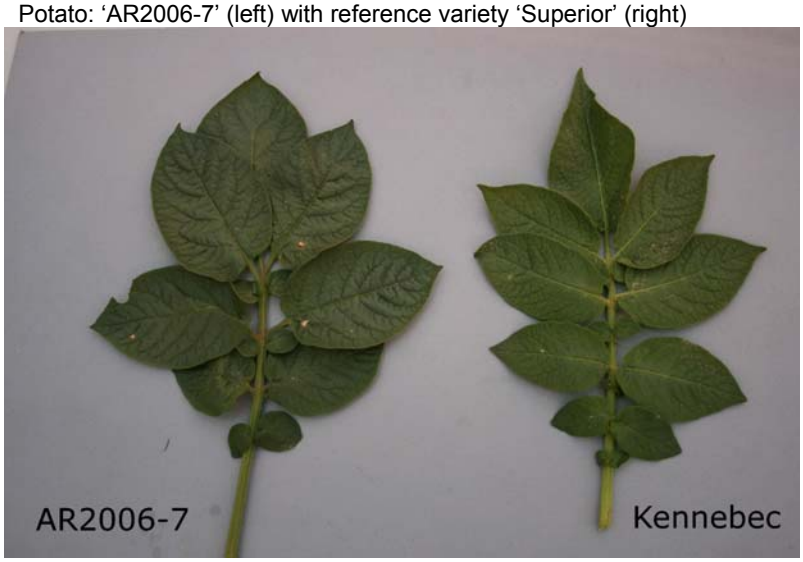
Comparison table for 'AR2006-7'

	'AR2006-7'	**'Superior'***	**'AC Red Island'***	**'Kennebec'***
Plant height (cm)				
mean	25	38	35	49
std. deviation	6.2	4.7	4.4	3.9
Colour of corolla (RHS)				
inner surface	N87C	84A	N87C	N155D

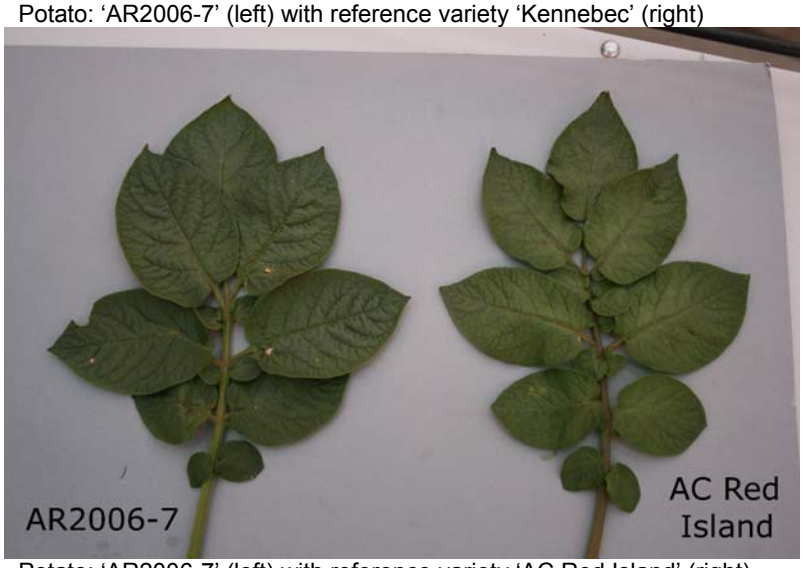
*reference varieties



Potato: 'AR2006-7' (left) with reference variety 'Superior' (right)



Potato: 'AR2006-7' (left) with reference variety 'Kennebec' (right)



Potato: 'AR2006-7' (left) with reference variety 'AC Red Island' (right)

Proposed denomination: **'Impact'**
Application number: 08-6369
Application date: 2008/06/09
Applicant: Agriculture & Agri-Food Canada, Fredericton, New Brunswick
Agent in Canada: Agriculture & Agri-Food Canada, Lacombe, Alberta
Breeder: T. Richard Tarn, Agriculture & Agri-Food Canada, Fredericton, New Brunswick

Varieties used for comparison: 'Shepody', 'Coastal Russet', 'Russet Burbank' and 'Kennebec'

Summary: *The corolla of 'Impact' is white whereas it is blue-violet on 'Shepody' and 'Coastal Russet'. The tuber skin of 'Impact' is netted whereas it is smooth on 'Shepody' and 'Kennebec' and russetted on 'Coastal Russet' and 'Russet Burbank'. The tubers of 'Impact' are oblong whereas they are long on 'Shepody' and cylindrical on 'Russet Burbank'. The tubers of 'Impact' have medium prominence of eyebrows whereas they have very slight prominence on 'Shepody' and 'Coastal Russet' and slight prominence on 'Kennebec'. The light sprouts of 'Impact' are spherical in shape whereas they are ovoid on 'Shepody' and conical on 'Coastal Russet'. 'Impact' has no pubescence at the base of the light sprout whereas it is dense on 'Shepody' and 'Russet Burbank' and medium in density on 'Coastal Russet' and 'Kennebec'. The tip of the light sprout of 'Impact' is larger than the base whereas it is equal in size in 'Shepody', 'Coastal Russet' and 'Russet Burbank' and smaller than the tip on 'Kennebec'.*

Description:
PLANT: mid to late season maturity, upright growth habit, intermediate type foliage structure
STEM: absent or very weak anthocyanin colouration on the stem, thin, absent or very low swelling of nodes

LEAVES: medium green, intermediate to open silhouette, absent or very low frequency of coalescence with lateral leaflets, absent or very weak intensity of anthocyanin colouration on upper side of rachis, absent or very weak waviness of margin, medium presence of secondary leaflets
TERMINAL LEAFLET: broadly ovate shape, acuminate tip, cordate base
LATERAL LEAFLET: medium size, medium ovate shape, acuminate tip, cordate base

INFLORESCENCE: medium flowering profusion, medium to large in size, absent or very weak intensity of anthocyanin colouration of flower bud
COROLLA: white, medium to large in size, strong prominence of star, absent or very weak anthocyanin colouration on peduncle

TUBER: oblong
TUBER SKIN: light beige, white at base of eye, netted
TUBER EYES: shallow, medium prominence of eyebrows
TUBER FLESH: white, no secondary colour

LIGHT SPROUT: medium size, spherical shape, few root tips, short lateral shoots
BASE: medium anthocyanin colouration, medium proportion of blue in anthocyanin colouration, absent or very sparse pubescence
TIP: larger than base in size, intermediate habit, absent or very weak anthocyanin colouration, sparse pubescence

Origin and Breeding: 'Impact' originated through the hybridization of 'Acadia Russett' and 'B6503-2' conducted in Fredericton, New Brunswick in 1990. Initial selections were carried out in 1992. Selection criteria included adaptation, tuber type and french fry quality.

Tests and Trials: The tests and trials for 'Impact' were conducted at the Potato Research Centre, Agriculture and Agri-Food Canada, Fredericton, New Brunswick during the summer of 2008. The trials consisted of 2 replicates per variety, ranging from 20 to 25 plants per replicate, measuring approximately 11 metres in length. Measured characteristics were based on 10 measurements. Colour determinations were made using the RHS colour chart, 4th edition, 2001.

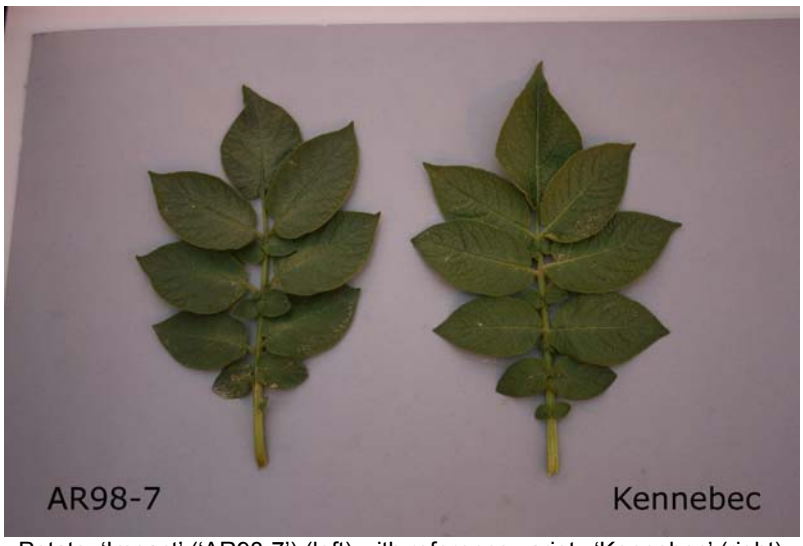
Comparison table for 'Impact'

	'Impact'	'Shepody'*	'Coastal Russet'*	'Russet Burbank'*	'Kennebec'*
Plant height (cm)					
mean	24	41	28	45	49
std. deviation	7.6	3.3	6.5	4.6	3.9
Colour of corolla (RHS)					
inner surface	155B	76A	84B	155B	N155D

*reference varieties

Potato: 'Impact' ('AR98-7') (left) with reference variety 'Coastal Russet' (right)

Potato: 'Impact' ('AR98-7') (left) with reference variety 'Russet Burbank' (right)



Potato: 'Impact' ('AR98-7') (left) with reference variety 'Kennebec' (right)

Proposed denomination: **'Lehigh'**
Application number: 07-5906
Application date: 2007/05/03
Applicant: Cornell University, Ithaca, New York, United States of America
Agent in Canada: La Patate Lac-St-Jean, Péribonka, Quebec
Breeder: Walter De Jong, Cornell University, Ithaca, New York, United States of America

Variety used for comparison: 'Yukon Gold'

Summary: *'Lehigh' has a shorter plant with a less upright growth habit than 'Yukon Gold'. The anthocyanin intensity of the main stem is weaker than the reference variety. The nodes of the stem of 'Lehigh' have less swelling than 'Yukon Gold'. The leaf silhouette of 'Lehigh' is closed to intermediate whereas it is intermediate to open in 'Yukon Gold'. 'Lehigh' has a terminal leaflet shape of broadly ovate with a cordate base whereas it is lanceolate with an acute base for 'Yukon Gold'. Lateral leaflets of 'Lehigh' are medium ovate and large in size whereas they are elliptical and medium in size in 'Yukon Gold'. 'Lehigh' has a low number of white flowers whereas there are numerous red-violet flowers in 'Yukon Gold'. The anthocyanin colouration on the peduncle in 'Lehigh' is weaker than the reference variety. The color of base of eye of 'Lehigh' is yellow whereas it is red in 'Yukon Gold'. 'Lehigh' has a rough skin texture whereas it is smooth in 'Yukon Gold'.*

Description:
PLANT: semi-upright growth habit, intermediate type foliage structure, mid-season maturity

STEM: absent or very weak anthocyanin colouration, medium thickness of main stem, low swelling at nodes

LEAVES: medium green, closed to intermediate silhouette, absent or very weak anthocyanin colouration in rachis and petiole, weak to medium presence of secondary leaflets
TERMINAL LEAFLET: broadly ovate, acuminate tip, cordate base, medium depth veins, weak to medium waviness, weak glossiness, no pubescence
LATERAL LEAFLET: large size, medium ovate, acuminate tip, cordate base, medium depth veins, weak to medium waviness, weak glossiness, no pubescence

INFLORESCENCE: low flowering profusion, medium size, moderate to long flower bud persistence
COROLLA: white, no anthocyanin colouration on inner surface, medium size, moderately prominent star, absent or very weak anthocyanin in peduncle

TUBER: round, medium yellow flesh with no secondary colour
TUBER EYES: shallow to intermediate depth, evenly distributed, medium prominence of eyebrows
TUBER SKIN: yellow, yellow at base of eye, rough texture

LIGHT SPROUT: ovoid shape, few root tips
BASE: strong anthocyanin colouration, high blue in anthocyanin colouration, sparse pubescence

Origin and Breeding: The potato clone 'Lehigh', initially evaluated as 'T2-2' and then 'NY126', resulted from a cross made in early 1994 between the yellow-fleshed clone 'Keuka Gold' (female parent) and the widely-grown chipping clone 'Pike' (male parent) at Cornell University. Seed from this cross was first sown in 1995 and transplanted on Mount Pleasant, near Ithaca, New York. Traits that were used for selection were intensity of yellow flesh color, ability to chip directly from cold storage, freedom from internal and external physical defects, resistance to scab, resistance to the golden nematode, specific gravity, maturity, and yield.

Tests and Trials: Tests and trials occurred during the summer of 2007 in Rawdon, Quebec. Sixty plants of each variety were in trial.

Comparison table for 'Lehigh'

	'Lehigh'	'Yukon Gold'*
Plant height (cm)		
Mean	65	75

*reference variety

Potato: 'Lehigh' (left) with reference variety 'Yukon Gold' (right)

Potato: 'Lehigh' (left) with reference variety 'Yukon Gold' (right)

Potato: 'Lehigh' (right) with reference variety 'Yukon Gold' (left)

Proposed denomination: **'NY129'**
Application number: 07-5907
Application date: 2007/05/03
Applicant: Cornell University, Ithaca, New York, United States of America
Agent in Canada: La Patate Lac-St-Jean, Péribonka, Quebec
Breeder: Walter De Jong, Cornell University, Ithaca, New York, United States of America

Variety used for comparison: 'Nordonna'

Summary: *'NY129' has a thicker main stem than the reference variety 'Nordonna'. The foliage structure type of 'NY129' is intermediate whereas it is a leaf type for 'Nordonna'. The flowering profusion of 'NY129' is medium whereas it is high for 'Nordonna'. The tuber skin of 'NY129' has a netted texture whereas 'Nordonna' has a smooth texture.*

Description:
PLANT: semi-upright to spreading growth habit, intermediate type foliage structure, mid-season to late maturity

STEM: weak to medium anthocyanin colouration, medium to thick thickness of main stem, medium swelling at nodes

LEAVES: medium to dark green, intermediate silhouette, very weak to weak anthocyanin colouration in rachis, medium anthocyanin colouration in the petiole, weak presence of secondary leaflets
TERMINAL LEAFLET: medium ovate, acuminate tip, obtuse base, medium depth of veins, weak waviness, weak glossiness of upper side, no pubescence
LATERAL LEAFLET: medium size, medium ovate, cuspidate tip, obtuse base, medium depth of veins, weak waviness, weak glossiness of upper side, no pubescence

INFLORESCENCE: medium flowering profusion, medium size, moderate to long flower bud persistence
COROLLA: red-violet, strong anthocyanin colouration on inner surface, medium size, moderately prominent star, weak anthocyanin in peduncle

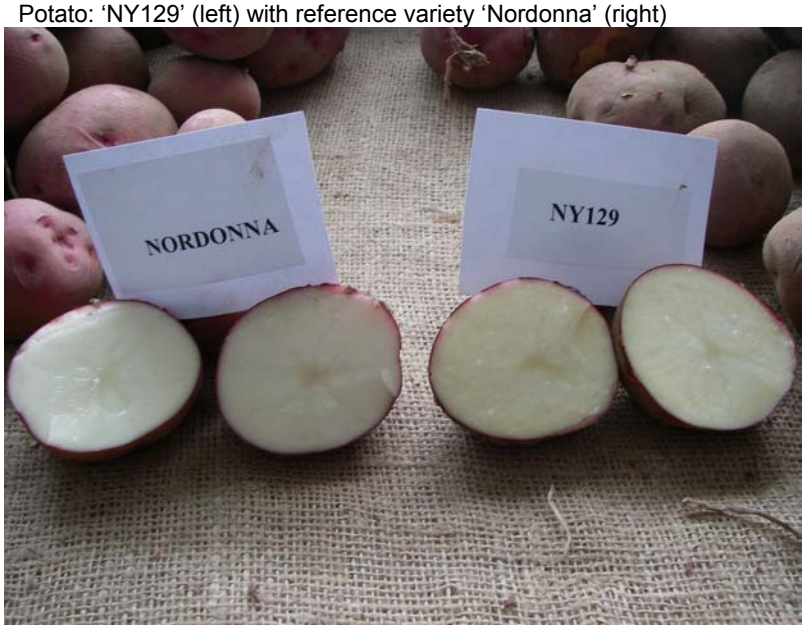
TUBER: round, white flesh with no secondary colour
TUBER EYES: intermediate depth, evenly distributed, medium to prominent eyebrows
TUBER SKIN: red, red at base of eye, netted texture
LIGHT SPROUT: ovoid shape, few root tips, long lateral shoots
BASE: very strong anthocyanin colouration, absent to low blue in anthocyanin colouration, medium pubescence
TIP: closed habit

Origin and Breeding: The potato clone 'NY129', initially evaluated as T11-2, resulted from a cross made in early 1994 between 'N38-1' (female parent) and 'ND2225-1R' (male parent). Seed from this cross was first sown in 1995 and transplanted on Mount Pleasant, near Ithaca, New York. Traits that were used for selection were intensity of red skin color, tuber shape, freedom from internal and external physical defects, resistance to scab, resistance to the golden nematode, and yield.

Tests and Trials: Tests and trials occurred during the summer of 2007 in Rawdon, Quebec. Sixty plants of each variety were in trial.

Potato: 'NY129' (left) with reference variety 'Nordonna' (right)

Potato: 'NY129' (left) with reference variety 'Nordonna' (right)



Potato: 'NY129' (right) with reference variety 'Nordonna' (left)

Proposed denomination: **'NY138'**
Application number: 07-5919
Application date: 2007/05/30
Applicant: Cornell University, Ithaca, New York, United States of America
Agent in Canada: La Patate Lac-St-Jean, Péribonka, Quebec
Breeder: Walter De Jong, Cornell University, Ithaca, New York, United States of America

Variety used for comparison: 'Snowden'

Summary: *'NY138' has a shorter plant than that of 'Snowden'. 'NY138' has intermediate type foliage structure while it is leaf type in 'Snowden'. The main stem of 'NY138' is thinner and has stronger anthocyanin colouration than 'Snowden'. The leaves of 'NY138' have a lighter green colour and stronger anthocyanin colouration on the upper side than the reference variety. The anthocyanin colouration of the petiole of 'NY138' is stronger than the reference variety. 'NY138' has a medium number of medium sized red-violet flowers whereas there are few and small sized white flowers in the reference variety. The*

anthocyanin colouration of the corolla and of the peduncle of 'NY138' is stronger than the reference variety. The tuber of 'NY138' is elliptical with a light beige smooth skin colour whereas it is round with a chamois rough skin colour for 'Snowden'.

Description:
PLANT: semi-upright growth habit, intermediate type foliage structure, mid-season to late maturity

STEM: weak anthocyanin colouration, medium thickness of main stem, low to medium swelling at nodes

LEAVES: light green, intermediate silhouette, weak anthocyanin colouration in rachis and petiole, very weak to weak presence of secondary leaflets
TERMINAL LEAFLET: narrow ovate, acuminate tip, obtuse base, absent or very weak frequency of coalescence, shallow to medium depth of veins, weak waviness, medium glossiness of upper side, no pubescence
LATERAL LEAFLET: medium size, narrowly ovate, acuminate tip, obtuse base, shallow to medium depth of veins, weak waviness, medium glossiness of upper side, no pubescence

INFLORESCENCE: medium flowering profusion, medium size, moderate to long flower bud persistence
COROLLA: red-violet, weak anthocyanin colouration on inner surface, small to medium size, strongly prominent star, weak anthocyanin in peduncle

TUBER: elliptical, white flesh with no secondary colour
TUBER EYES: shallow, evenly distributed, medium prominence of eyebrows
TUBER SKIN: light beige, white at base of eye, smooth texture
LIGHT SPROUT: ovoid shape, few number of root tips, long lateral shoots
BASE: medium anthocyanin colouration, medium blue in anthocyanin colouration, medium pubescence
TIP: closed habit

Origin and Breeding: The potato clone 'NY138', previously evaluated as Y18-16, resulted from a cross made in early 1998 between the chipping varieties 'Marcy' (female parent) and NY115 (male parent) at Cornell University. Seed from this cross was first sown in 1999 and transplanted on Mount Pleasant, near Ithaca, New York. Traits that were used for selection were the ability to chip directly from 44F cold storage, freedom from internal and external physical defects, resistance to scab, resistance to golden nematode, specific gravity, maturity, and yield.

Tests and Trials: Tests and trials occurred during the summer of 2007 in Rawdon, Quebec. Sixty plants of each variety were in trial.

Comparison table for 'NY138'

	'NY138'	'Snowden'*
Plant height (cm)		
mean	65	80

*reference variety

Potato: 'NY138' (left) with reference variety 'Snowden' (right)

Potato: 'NY138' (right) with reference variety 'Snowden' (left)

Proposed denomination: **'NY139'**
Application number: 07-5920
Application date: 2007/05/30
Applicant: Cornell University, Ithaca, New York, United States of America
Agent in Canada: La Patate Lac-St-Jean, Péribonka, Quebec
Breeder: Walter De Jong, Cornell University, Ithaca, New York, United States of America

Variety used for comparison: 'Snowden'

Summary: *The plants of 'NY139' have an intermediate foliage type structure whereas it is leaf type for 'Snowden'. The main stems of 'NY139' are thinner and have stronger anthocyanin colouration than 'Snowden'. 'NY139' has a lighter green leaf colour than the reference variety. The lateral leaflet of 'NY139' has a narrowly ovate shape with an obtuse base whereas it is medium ovate shape with a cordate base for the reference variety. 'NY139' has an medium number of red-violet flowers of medium size whereas the reference variety has few small white flowers. The colouration of the peduncle and on the inner*

surface of the corolla of 'NY139' is stronger than the reference variety. The colouration of the tuber of 'NY139' is light beige whereas it is chamois for 'Snowden'.

Description:
PLANT: semi-upright growth habit, intermediate type foliage structure, mid-season to late maturity

STEM: weak anthocyanin colouration, medium thickness of main stem, low to medium swelling at nodes

LEAVES: light green, intermediate silhouette, absent to weak anthocyanin colouration in rachis, absent to very weak anthocyanin colouration in the petiole, weak presence of secondary leaflets
TERMINAL LEAFLET: medium ovate, acuminate tip, obtuse base, medium depth of veins, weak waviness of margin, medium glossiness of upper side, no pubescence
LATERAL LEAFLET: medium size, narrowly ovate, acuminate tip, obtuse base, medium depth of veins, weak waviness of margin, medium glossiness of upper side, no pubescence

INFLORESCENCE: medium flowering profusion, medium size, moderate flower bud persistence
COROLLA: red-violet, strong anthocyanin colouration on inner surface, small to medium size, weak prominence of star, medium to strong anthocyanin in peduncle

TUBER: round, white flesh with no secondary colour
TUBER EYES: shallow to intermediate depth, evenly distributed, slightly prominent eyebrows
TUBER SKIN: light beige, white at base of eye, smooth texture
LIGHT SPROUT: ovoid shape, medium number of root tips, long lateral shoots
BASE: medium to strong anthocyanin colouration, medium blue in anthocyanin colouration, dense pubescence
TIP: closed habit

Origin and Breeding: The potato clone 'NY139', previously evaluated as Y18-9, resulted from a cross made in early 1998 at Cornell University between the chipping clones NY120 (female parent) and NY115 (male parent). Seed from this cross was first sown in 1999 and transplanted on Mount Pleasant, near Ithaca, New York. Traits that were used for selection were the ability to chip directly from 44F cold storage, freedom from internal and external physical effects, resistance to scab, resistance to the golden nematode, specific gravity, maturity, and yield.

Tests and Trials: Tests and trials occurred during the summer of 2007 in Rawdon, Quebec. Sixty plants of each variety were in trial.

Potato: 'NY139' (left) with reference variety 'Snowden' (right)

Potato: 'NY139' (left) with reference variety 'Snowden' (right)

Potato: 'NY139' (right) with reference variety 'Snowden' (left)