



APPLICATIONS UNDER EXAMINATION

POTATO

POTATO (*Solanum tuberosum*)

Proposed denomination: 'CV95002-1'
Application number: 04-4304
Application date: 2004/07/19
Applicant: Colorado State University Research Foundation, Fort Collins, Colorado, United States of America
Breeder: Dermot Lynch, Agriculture & Agri-Food Canada, Lethbridge, Alberta
David Holm, Colorado State University, Center, Colorado, United States of America

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

Summary: 'CV95002-1' has a more upright growth habit than 'Russet Burbank' and 'Shepody'. The plant of 'CV95002-1' is shorter and matures earlier than both reference varieties. The degree of swelling of the nodes of 'CV95002-1' is greater than the reference varieties. 'CV95002-1' has a darker green leaf colour than the reference varieties. 'CV95002-1' has smaller lateral leaflets than the reference varieties. The lateral leaflet of 'CV95002-1' has a medium ovate shape with a cuspidate tip and an obtuse base while it is elliptical in shape with an acuminate tip and obtuse base for 'Russet Burbank' and for 'Shepody' it is medium ovate with cuspidate tip and truncate base. The tuber of 'CV95002-1' is light beige with a smooth to netted texture while it is reddish brown with a russeted texture in 'Russet Burbank'. 'CV95002-1' has a larger light sprout than the reference varieties. The light sprout of 'CV95002-1' is spherical while it is ovoid in the reference varieties. The base of the light sprout of 'CV95002-1' has stronger anthocyanin colouration and weaker pubescence than the reference varieties. 'CV95002-1' light sprout tip has weak anthocyanin colouration and sparse pubescence while in 'Russet Burbank' it lacks anthocyanin colouration and has dense pubescence and in 'Shepody' it lacks anthocyanin colouration and has medium pubescence.

Description:

PLANT: semi-upright growth habit, leaf type foliage structure, early maturity

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

LEAVES: dark green, intermediate silhouette, no anthocyanin colouration in rachis and very weak anthocyanin colouration in the petiole, medium presence of secondary leaflets

TERMINAL LEAFLET: medium ovate, cuspidate tip, obtuse base

LATERAL LEAFLET: medium size, medium ovate, cuspidate tip, obtuse base

INFLORESCENCE: medium flowering profusion, medium size

COROLLA: red-violet, medium anthocyanin colouration on inner surface, medium size, prominent star, no anthocyanin in peduncle

TUBER: oblong, white flesh with no secondary colour

TUBER EYES: shallow to intermediate, evenly distributed, eyebrows not prominent

TUBER SKIN: light beige, white at base of eye, no anthocyanin colouration in reaction to light, smooth to netted texture

LIGHT SPROUT: large size, spherical shape, medium number of root tips, medium length lateral shoots

BASE: medium to strong anthocyanin colouration, no blue in anthocyanin colouration, sparse pubescence

TIP: smaller than base in size, intermediate habit, weak anthocyanin colouration, sparse pubescence

QUALITY: total glycoalkaloid content 3.9 mg/100 grams of fresh tuber, high specific gravity

Origin and Breeding: 'CV95002-1' is the result of the cross A81386-1 x AC84437-2 that was made in 1996 at the San Luis Valley Research Centre, Colorado State University. A81386-1 = A74341-4 x Ranger Russet and AC84437-2 = ATD75-2 x A7961-1. It was assigned to the AAFC-Lethbridge, Vauxhall Research Substation where the first 4 years (1997-2000) of

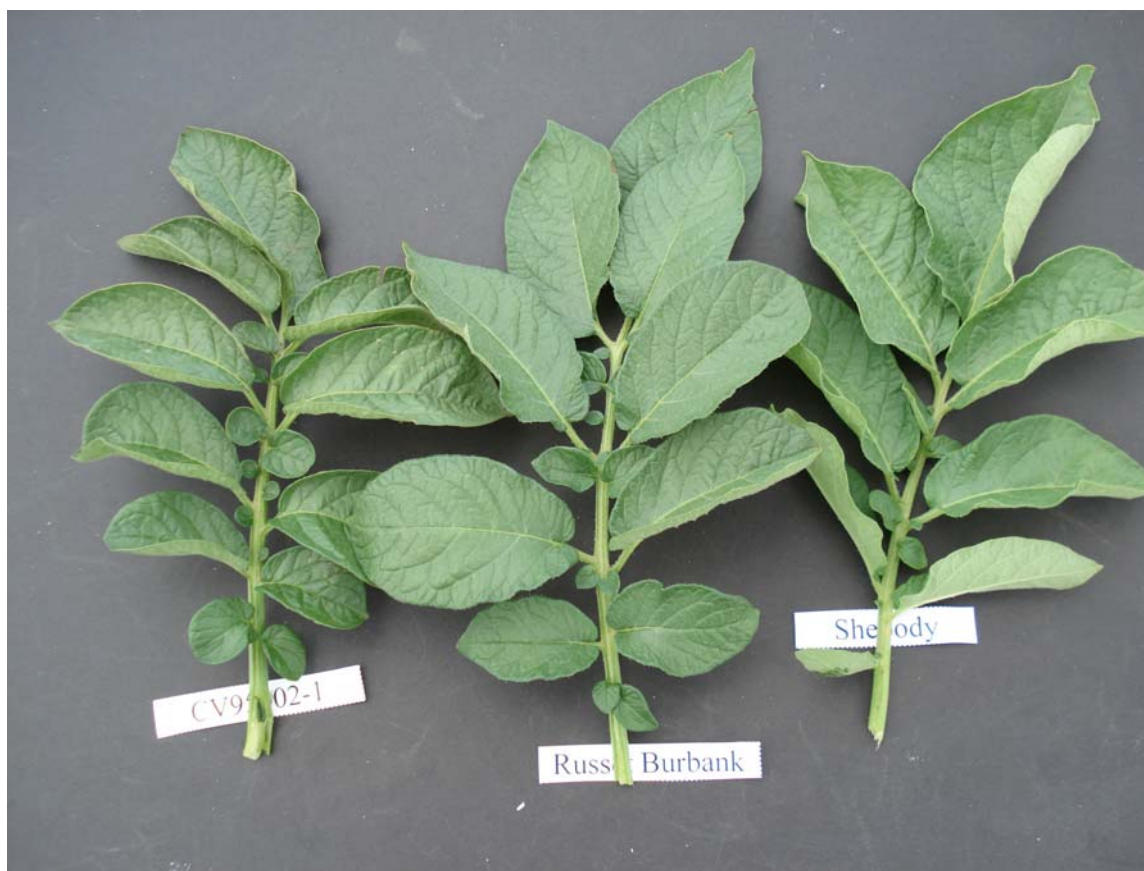
selection were carried out. Subsequent evaluation occurred in the Western Canadian Regional Potato Trials in 2001-2003, multi-harvest and long term storage trials in 2002-2003 at the Vauxhall Research Station. Selection criteria included tuber shape, tuber size, vine maturity, yield, incidence of tuber defects, fry colour and dry matter content (specific gravity).

Tests and Trials: Tests and trials occurred during the summer of 2007 in Vauxhall, Alberta. Plots consisted of a row 7.6 m long with plants spaced 30 cm apart within the row. Rows were spaced 91 cm apart. There were 3 replicates arranged in a Randomized Complete Block design.

Comparison table for 'CV95002-1'

	'CV95002-1'	'Russet Burbank**'	'Shepody**'
<i>Plant height (cm)</i>			
mean	56.4	82.8	72.2
std. deviation	7.4	5.1	8.1

*reference varieties



Potato: 'CV95002-1' (left) with reference varieties 'Russet Burbank' (centre) and 'Shepody' (right)

Proposed denomination: 'FV12228-5'
Application number: 04-4305
Application date: 2004/07/19
Applicant: Agriculture & Agri-Food Canada, Lethbridge, Alberta
Breeder: Dermot Lynch, Agriculture & Agri-Food Canada, Lethbridge, Alberta

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

Summary: 'FV12228-5' has a shorter plant with a more upright growth habit than 'Russet Burbank' and 'Shepody'. The nodes of the stem of 'FV12228-5' have a higher degree of swelling than the reference varieties. 'FV12228-5' has a darker green leaf colour than 'Russet Burbank'. The leaf silhouette of 'FV12228-5' is open while it is intermediate in 'Russet Burbank'. 'FV12228-5' has a terminal leaflet shape of narrowly ovate while it is elliptical in 'Russet Burbank' and broadly ovate in 'Shepody'. The flower colour of 'FV12228-5' is red-violet while it is white in 'Russet Burbank'. The anthocyanin colouration on the inner surface of the corolla of 'FV12228-5' is stronger than the reference varieties. 'FV12228-5' has a larger corolla than the reference varieties. The tuber of 'FV12228-5' is oblong with a light beige skin colour and a smooth to netted texture while it is elliptical with a reddish brown skin colour and a russetted texture for 'Russet Burbank'. 'FV12228-5' has a light sprout base with a strong to very strong anthocyanin colouration and a high proportion of blue in it while in the light sprout base of 'Russet Burbank' there is medium anthocyanin colouration with no blue colour in it and in 'Shepody' there is weak anthocyanin colouration with no blue colour in it. 'FV12228-5' has stronger anthocyanin colouration and more root tips of the light sprout tip than the reference varieties.

Description:

PLANT: semi-upright growth habit, intermediate type foliage structure

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

LEAVES: medium to dark green, open silhouette, no anthocyanin colouration in rachis and very weak to weak anthocyanin colouration in the petiole, medium presence of secondary leaflets

TERMINAL LEAFLET: narrow ovate, acuminate tip, obtuse base

LATERAL LEAFLET: medium to large size, elliptical, acuminate tip, obtuse base

INFLORESCENCE: medium flowering profusion, medium size

COROLLA: red-violet, medium anthocyanin colouration on inner surface, large size, prominent star, absent or very weak anthocyanin in peduncle

TUBER: oblong, white flesh

TUBER EYES: shallow, evenly distributed, eyebrows not prominent

TUBER SKIN: light beige, white at base of eye, no anthocyanin colouration in reaction to light, smooth to netted texture

LIGHT SPROUT: medium size, ovoid shape, many root tips, medium to long lateral shoots

BASE: strong to very strong anthocyanin colouration, high proportion of blue in anthocyanin colouration, medium pubescence

TIP: smaller than base in size, intermediate habit, strong anthocyanin colouration, dense pubescence

QUALITY: total glycoalkaloid content 4.7 mg/100 grams of fresh tuber, medium to high specific gravity

Origin and Breeding: 'FV12228-5' is the result of the cross F88051 x Wischip that was made in 1995 at the Agriculture & Agri-Food Canada Potato Research Centre, Fredricton, New Brunswick. F88051 = F72022 x Russette and Wischip = Wis 55.232.58 x Wis 231. It was assigned to AAFC-Lethbridge where the first 2 years (1996-1997) of selection were carried out at the Benton Ridge Research Substation. Subsequent evaluation occurred in the Western Canadian Regional Potato Trials in 2001-2003, multi-harvest and long term storage trials in 2002-2003 at the Vauxhall Research Station. Selection criteria included tuber shape, tuber size, vine maturity, yield, incidence of tuber defects, fry colour and dry matter content (specific gravity).

Tests and Trials: Tests and trials occurred during the summer of 2007 in Vauxhall, Alberta. Plots consisted of a row 7.6 m long with plants spaced 30 cm apart within the row. Rows were spaced 91 cm apart. There were 3 replicates arranged in a Randomized Complete Block design.

Comparison table for 'FV12228-5'

	'FV12228-5'	'Russet Burbank'*	'Shepody'*
<i>Plant height (cm)</i>			
mean	61.9	82.8	72.2
std. deviation	5.1	5.1	8.1

*reference varieties



Potato: 'FV12228-5' (left) with reference varieties 'Russet Burbank' (centre) and 'Shepody' (right)