



**SWEET POTATO**  
*(Ipomoea batatas)*

**Proposed denomination:** 'NCORNSP-028SCKL'  
**Trade name:** Sweet Caroline Upside Key Lime  
**Application number:** 23-11255  
**Application date:** 2023/03/27  
**Applicant:** North Carolina State University, Raleigh, North Carolina, United States of America  
**Agent in Canada:** BioFlora Inc., St. Thomas, Ontario  
**Breeder:** G. Craig Yench, North Carolina State University, Raleigh, North Carolina, United States of America  
Kenneth Pecota, North Carolina State University, Raleigh, North Carolina, United States of America  
Christopher Heim, Morrisville, North Carolina, United States of America

**Varieties used for comparison:** 'Sweet Caroline Light Green' and 'Balsotowlim' (Solar Tower Lime)

**Summary:** *The plants of 'NCORNSP-028SCKL' have an upright and climbing growth habit and are taller than those of 'Sweet Caroline Light Green' which have a growth habit ranging from semi-upright to spreading. The plants of 'NCORNSP-028SCKL' have many branches whereas those of 'Sweet Caroline Light Green' have few to a medium number of branches. The stem internodes of 'NCORNSP-028SCKL' are shorter than those of 'Balsotowlim'. The leaf blade of 'NCORNSP-028SCKL' is wider than that of 'Sweet Caroline Light Green'. The middle lobe of the leaf blade of 'NCORNSP-028SCKL' is narrower than that of both reference varieties. The leaf blade of 'NCORNSP-028SCKL' has deep lobing whereas that of both reference varieties has medium depth lobing.*

**Description:**

PLANT: upright and climbing growth habit, many branches

STEM: light green, medium thickness, medium internode diameter, medium intensity of anthocyanin colouration of internode, medium intensity of anthocyanin colouration at tip, strong intensity of anthocyanin colouration at node, absent or sparse pubescence on tip

LEAF BLADE (YOUNG): upper side light green

LEAF BLADE: deeply lobed margin

LEAF BLADE (UPPER SIDE): green, absent or very weak intensity of anthocyanin colouration, absent or very small extent of anthocyanin colouration along abaxial veins

LEAF BLADE (LOWER SIDE): light green (closest to RHS 145B)

PETIOLE: absent or very weak intensity of anthocyanin colouration

**Origin and Breeding:** 'NCORNSP-028SCKL' originated from a conventional cross between the two proprietary breeding lines 'NC7135-002ORN' as the female parent and 'NC2711-003ORN' as the male parent. The cross was conducted at North Carolina State University, Horticultural Field Laboratory Greenhouses, in Raleigh, North Carolina, USA between October 2006 and April 2007. The new variety 'NCORNSP-028SCKL' was selected from the progeny on September 25, 2008, at the Horticultural Crops Research Station in Clinton, North Carolina, USA based on growth habit, plant vigour, branching characteristics, overall plant architecture, leaf colour and leaf shape.

**Tests and Trials:** The comparative trial for 'NCORNSP-028SCKL' was conducted in a polyhouse during the spring of 2023 at Bioflora Inc. in St. Thomas, Ontario. The trial included a total of 15 plants each of the candidate and reference varieties. All plants were grown from rooted cuttings transplanted into 15 cm pots on April 17, 2023. Observations and measurements were taken from 10 plants, or 10 parts of plants, of each variety on June 6, 2023. The mean differences were significant at the 5% probability level based on a paired Student's t-test. All colour determinations were made using the 2015 Royal Horticultural Society (RHS) Colour Chart.

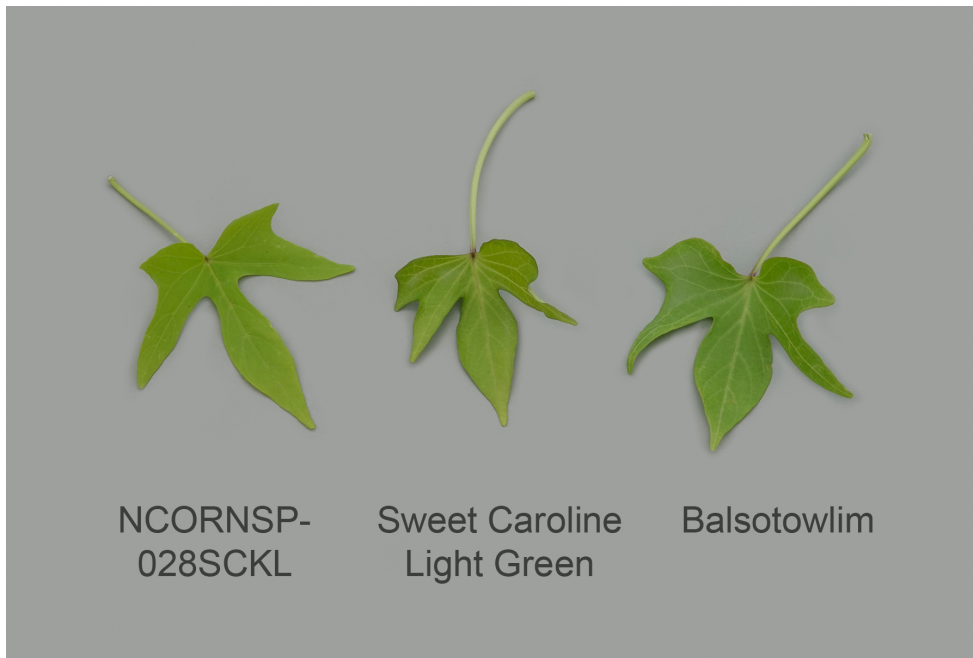
Comparison table for 'NCORNSP-028SCKL'

	'NCORNSP-028SCKL'	'Sweet Caroline Light Green'*	'Balsotowlim'*
<i>Plant height (cm)</i>			
mean	17.1	9.8	25.9
std. deviation	2.79	0.94	7.45
<i>Length of stem internode (cm)</i>			
mean	1.2	1.8	2.5
std. deviation	0.19	0.39	0.35
<i>Leaf blade width (cm)</i>			
mean	7.1	5.9	7.2
std. deviation	0.95	0.88	0.84
<i>Leaf blade middle lobe width (cm)</i>			
mean	2.3	2.9	3.1
std. deviation	0.23	0.18	0.48

\*reference varieties



Sweet Potato: 'NCORNSP-028SCKL' (left) with reference varieties 'Sweet Caroline Light Green' (center) and 'Balsotowlim' (right)



Sweet Potato: 'NCORNSP-028SCKL' (left) with reference varieties 'Sweet Caroline Light Green' (center) and 'Balsotowlim' (right)

**Proposed denomination:** 'NCORNSP-029SCBC'  
**Trade name:** Sweet Caroline Upside Black Coffee  
**Application number:** 23-11256  
**Application date:** 2023/03/27  
**Applicant:** North Carolina State University, Raleigh, North Carolina, United States of America  
**Agent in Canada:** BioFlora Inc., St. Thomas, Ontario  
**Breeder:** G. Craig Yencho, North Carolina State University, Raleigh, North Carolina, United States of America  
 Kenneth Pecota, North Carolina State University, Raleigh, North Carolina, United States of America  
 Christopher Heim, Morrisville, North Carolina, United States of America

**Varieties used for comparison:** 'Balsotowac' (Solar Tower Black) and 'NCORNSP-030ILPL' (Sweet Caroline Illusion Penny Lace)

**Summary:** *The plants of 'NCORNSP-029SCBC' are shorter than those of 'Balsotowac' and taller than those of 'NCORNSP-030ILPL'. The tip of the stem of 'NCORNSP-029SCBC' has absent or sparse pubescence whereas that of 'NCORNSP-030ILPL' has dense pubescence. The leaf blade of 'NCORNSP-029SCBC' is wider than that of 'Balsotowac' and narrower than that of 'NCORNSP-030ILPL'. The leaf blade margin of 'NCORNSP-029SCBC' is lobed whereas that of 'Balsotowac' is entire.*

**Description:**

PLANT: upright and climbing growth habit, many branches

STEM: purple, medium thickness, medium diameter of internode, strong intensity of anthocyanin colouration at internode, medium intensity of anthocyanin colouration at tip, strong intensity of anthocyanin colouration on node, absent or sparse pubescence on tip

LEAF BLADE (YOUNG): upper side medium green (closest to RHS 144A)

LEAF BLADE: very deeply lobed margin

LEAF BLADE (UPPER SIDE): black (closest to RHS N187A), strong intensity of anthocyanin colouration, very large extent of very strong intensity of anthocyanin colouration along abaxial veins

LEAF BLADE (LOWER SIDE): black (closest to RHS N187A)

PETIOLE: strong intensity of anthocyanin colouration

**Origin and Breeding:** ‘NCORNSP-029SCBC’ originated from a conventional cross between the two proprietary breeding lines ‘NC29ORN’ as the female parent and ‘NC6879-008ORN’ as the male parent. The cross was conducted at North Carolina State University, Horticultural Field Laboratory Greenhouses, in Raleigh, North Carolina, USA between October 2016 and April 2017. The new variety ‘NCORNSP-029SCBC’ was selected from the progeny on September 25, 2018, at the Horticultural Crops Research Station in Clinton, North Carolina, USA based on growth habit, plant vigour, branching characteristics, overall plant architecture, leaf colour and leaf shape.

**Tests and Trials:** The comparative trial for ‘NCORNSP-029SCBC’ was conducted in a polyhouse during the spring of 2023 at Bioflora Inc. in St. Thomas, Ontario. The trial included a total of 15 plants each of the candidate and reference varieties. All plants were grown from rooted cuttings transplanted into 15 cm pots on April 17, 2023. Observations and measurements were taken from 10 plants, or 10 parts of plants of each variety on June 6, 2023. The mean differences were significant at the 5% probability level based on a paired Student’s t-test. All colour determinations were made using the 2015 Royal Horticultural Society (RHS) Colour Chart.

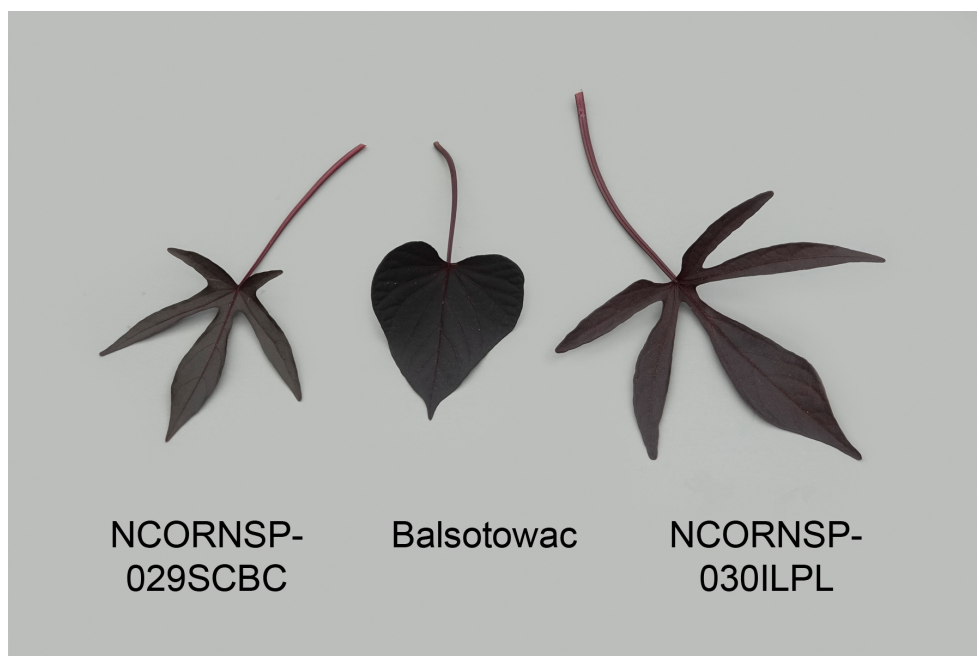
**Comparison table for ‘NCORNSP-029SCBC’**

	‘NCORNSP-029SCBC’	‘Balsotowac’*	‘NCORNSP-030ILPL’*
<i>Plant height (cm)</i>			
mean	20.1	45.4	14.5
std. deviation	4.23	7.10	0.70
<i>Leaf blade width (cm)</i>			
mean	6.6	5.5	9.8
std. deviation	1.10	0.47	0.91

\*reference varieties



Sweet Potato: ‘NCORNSP-029SCBC’ (left) with reference varieties ‘Balsotowac’ (center) and ‘NCORNSP-030ILPL’ (right)



Sweet Potato: 'NCORNSP-029SCBC' (left) with reference varieties 'Balsotowac' (center) and 'NCORNSP-030ILPL' (right)

<b>Proposed denomination:</b>	<b>'NCORNSP-030ILPL'</b>
<b>Trade name:</b>	Sweet Caroline Illusion Penny Lace
<b>Application number:</b>	23-11257
<b>Application date:</b>	2023/03/27
<b>Applicant:</b>	North Carolina State University, Raleigh, North Carolina, United States of America
<b>Agent in Canada:</b>	BioFlora Inc., St. Thomas, Ontario
<b>Breeder:</b>	G. Craig Yencho, North Carolina State University, Raleigh, North Carolina, United States of America Kenneth Pecota, North Carolina State University, Raleigh, North Carolina, United States of America Christopher Heim, Morrisville, North Carolina, United States of America

**Varieties used for comparison:** 'NCORNSP-011MNL' (Sweet Caroline Midnight Lace) and 'NCORNSP-028SCBC' (Sweet Caroline Upside Black Coffee)

**Summary:** *The plants of 'NCORNSP-030ILPL' have a growth habit ranging from semi-upright to spreading whereas those of 'NCORNSP-028SCBC' have an upright and climbing growth habit. The plants of 'NCORNSP-030ILPL' are shorter and wider than those of 'NCORNSP-028SCBC'. The primary shoots of 'NCORNSP-030ILPL' are longer than those of both reference varieties. The tip of the stem of 'NCORNSP-030ILPL' has dense pubescence whereas that of both reference varieties has absent or sparse pubescence. The young leaf blade of 'NCORNSP-030ILPL' is light green whereas that of 'NCORNSP-011MNL' is dark brown green and that of 'NCORNSP-028SCBC' is medium green. The leaf blade of 'NCORNSP-030ILPL' is wider than that of 'NCORNSP-028SCBC'. The petiole of 'NCORNSP-030ILPL' is longer than that of 'NCORNSP-028SCBC'.*

**Description:**

**PLANT:** growth habit ranging from semi-upright to spreading, many branches

**STEM:** purple, medium thickness, medium internode diameter, strong intensity of anthocyanin colouration at internode, absent or weak intensity of anthocyanin colouration at tip, strong intensity of anthocyanin colouration on node, dense pubescence on tip

**LEAF BLADE (YOUNG):** upper side light green (closest to RHS N144A)

LEAF BLADE: very deeply lobed margin

LEAF BLADE (UPPER SIDE): black (closest to RHS N186A), strong intensity of anthocyanin colouration, very large extent of strong anthocyanin colouration along abaxial veins

LEAF BLADE (LOWER SIDE): light green (closest to RHS 145B)

PETIOLE: strong intensity of anthocyanin colouration

**Origin and Breeding:** ‘NCORNSP-030ILPL’ originated from a conventional cross between the two proprietary breeding lines ‘NC8818-076ORN’ as the female parent and ‘NC8213-005ORN’ as the male parent. The cross was conducted at North Carolina State University, Horticultural Field Laboratory Greenhouses, in Raleigh, North Carolina, USA between October 2017 and April 2018. The new variety ‘NCORNSP-030ILPL’ was selected from the progeny on September 25, 2019, at the Horticultural Crops Research Station in Clinton, North Carolina, USA based on growth habit, plant vigour, branching characteristics, leaf colour and leaf shape.

**Tests and Trials:** The comparative trial for ‘NCORNSP-030ILPL’ was conducted in a polyhouse during the spring of 2023 at Bioflora Inc. in St. Thomas, Ontario. The trial included a total of 15 plants each of the candidate and reference varieties. All plants were grown from rooted cuttings transplanted into 15 cm pots on April 17, 2023. Observations and measurements were taken from 10 plants, or 10 parts of plants of each variety on June 6, 2023. The mean differences were significant at the 5% probability level based on a paired Student’s t-test. All colour determinations were made using the 2015 Royal Horticultural Society (RHS) Colour Chart.

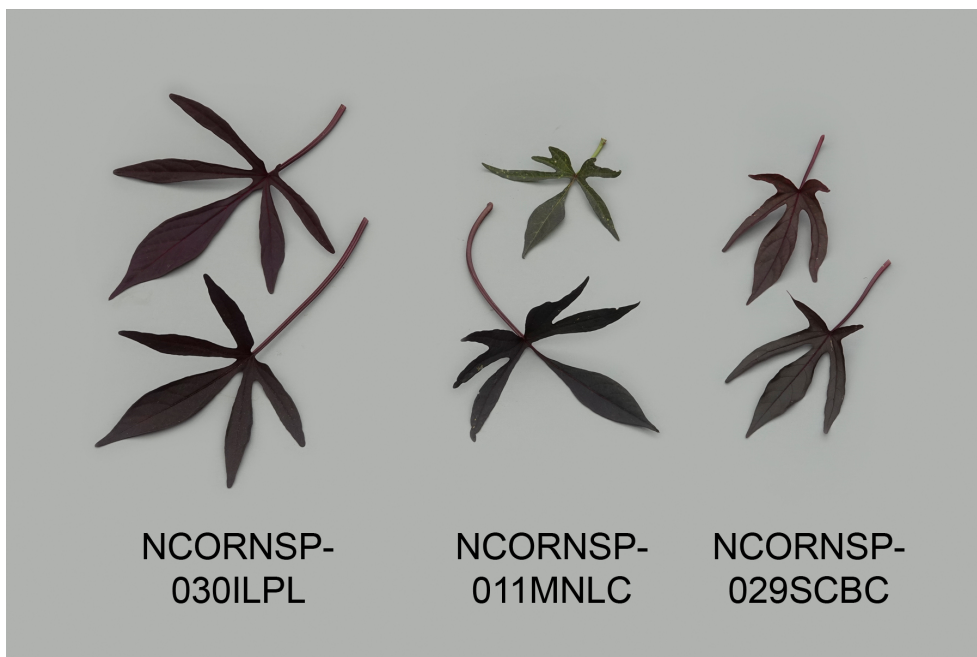
**Comparison table for ‘NCORNSP-030ILPL’**

	‘NCORNSP-030ILPL’	‘NCORNSP-011MNLC’*	‘NCORNSP-028SCBC’*
<i>Plant height (cm)</i>			
mean	14.5	14.1	20.1
std. deviation	0.70	0.63	4.23
<i>Plant width (cm)</i>			
mean	36.1	28.5	29.2
std. deviation	2.94	2.39	2.48
<i>Primary shoot length (cm)</i>			
mean	24.3	17.0	19.2
std. deviation	1.76	1.61	2.94
<i>Leaf blade width (cm)</i>			
mean	9.8	8.8	6.6
std. deviation	0.91	1.17	1.10
<i>Young leaf blade colour (RHS)</i>			
upper side	closest to N144A	closest to 146A	closest to 144A
<i>Petiole length (cm)</i>			
mean	7.2	6.8	4.8
std. deviation	1.07	0.71	1.30

\*reference varieties



Sweet Potato: 'NCORNSP-030ILPL' (left) with reference varieties 'NCORNSP-011MNL' (center) and 'NCORNSP-029SCBC' (right)



Sweet Potato: 'NCORNSP-030ILPL' (left) with reference varieties 'NCORNSP-011MNL' (center) and 'NCORNSP-029SCBC' (right)