



APPLICATIONS UNDER EXAMINATION

SWEET POTATO

SWEET POTATO (*Ipomoea batatas*)

Proposed denomination:	'NCORNSP-027SCMG'
Trade name:	Sweet Caroline Medusa Green
Application number:	20-10355
Application date:	2020/09/23
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

Variety used for comparison: 'NCORNSP-012EMLC' (Illusion Emerald Lace)

Summary: *The intensity of anthocyanin colouration of the tip and node of the stem of 'NCORNSP-027SCMG' is strong while it is absent or weak for that of 'NCORNSP-012EMLC'. The plant, leaf blade and terminal leaf lobe of 'NCORNSP-027SCMG' are smaller than those of 'NCORNSP-012EMLC'. The upper side of the young leaf blade of 'NCORNSP-027SCMG' is medium purple whereas that of 'NCORNSP-012EMLC' is yellow green to light green. The upper side of the leaf blade of 'NCORNSP-027SCMG' is medium green whereas that of 'NCORNSP-012EMLC' is light green. The leaf blade of 'NCORNSP-027SCMG' has moderate to deep lobes while that of 'NCORNSP-012EMLC' has very deep lobes. The upper side of the abaxial veins of the leaf blade of 'NCORNSP-027SCMG' has a medium to strong intensity of anthocyanin colouration while that of 'NCORNSP-012EMLC' has a very weak intensity of anthocyanin colouration.*

Description:

PLANT: semi-upright growth habit, medium to many branches

STEM: light green, absent to medium intensity of anthocyanin colouration at internode, strong intensity of anthocyanin colouration at tip, strong intensity of anthocyanin colouration of node, medium density pubescence of tip, medium thickness

PETIOLE: strong intensity of anthocyanin colouration where petiole meets base of leaf blade

LEAF BLADE (YOUNG): upper side medium purple

LEAF BLADE: five to seven lobes, moderate to deep lobing, lobed margin

LEAF BLADE (UPPER SIDE): medium green (closest to RHS 144A), medium intensity of anthocyanin colouration along the margins, small extent of medium to strong intensity of anthocyanin colouration along abaxial veins

LEAF BLADE (LOWER SIDE): medium brown green (closest to RHS 146C)

Origin and Breeding: The variety 'NCORNSP-027SCMG' originated from a conventional cross conducted by the breeders, Dr. G. Craig Yencho and Dr. Kenneth V. Pecota, employees of North Carolina State University in Raleigh, North Carolina, U.S.A. between October 2014 and April 2015. The cross was conducted at the Horticultural Crops Research Station in Clinton, North Carolina, U.S.A. between two proprietary lines, the female parent designated 'NC8720-027ORN' and the male parent designated 'NC8568-001ORN'. The resultant seed was bulked and sown in December 2015 and surviving seedlings were transplanted into 15 cm pots. Vegetative cuttings were taken from each plant and propagated in April 2016. The resulting young plants were planted in a field as part of a two plant unreplicated plot in June 2016. 'NCORNSP-027SCMG' was selected as a single plant on September 25, 2016, based on its plant growth habit and vigour, plant architecture, branching, leaf colour and leaf shape.

Tests and Trials: The comparative trial of 'NCORNSP-027SCMG' was conducted in a polyhouse during the spring of 2021 at BioFlora, Inc. in St. Thomas, Ontario. The trial included 20 plants each of the candidate and reference variety. All plants were grown from rooted cuttings and transplanted into 15 cm pots on April 16, 2021. Observations and measurements were taken from 10 plants, or 10 parts of plants, of each variety on June 2, 2021. All colour determinations were made using the 2015 Royal Horticultural Society (RHS) Colour Chart.

Comparison table for 'NCORNSP-027SCMG'

	'NCORNSP-027SCMG'	'NCORNSP-012EMLC'*
<i>Plant height (cm)</i>		
mean	16.2	24.7
std. deviation	1.11	2.17
<i>Plant width (cm)</i>		
mean	31.8	46.1
std. deviation	2.98	3.79
<i>Leaf blade length (cm)</i>		
mean	8.5	11.6
std. deviation	0.51	1.16
<i>Leaf blade width (cm)</i>		
mean	8.2	14.6
std. deviation	0.82	2.14
<i>Terminal leaf lobe length (cm)</i>		
mean	6.4	10.7
std. deviation	0.64	1.01
<i>Terminal leaf lobe width (cm)</i>		
mean	1.58	2.38
std. deviation	0.20	0.29
<i>Colour of leaf blade (RHS)</i>		
upper side	closest to 144A	closest to 144B

*reference variety



Sweet Potato: 'NCORNSP-027SCMG' (left) with reference variety 'NCORNSP-012EMLC' (right)



Sweet Potato: 'NCORNSP-027SCMG' (left) with reference variety 'NCORNSP-012EMLC' (right)