ORANGE -fleshed SWEETPOTATO FOR AFRICA

CATALOGUE 2010

Catalogue of orange-fleshed sweetpotato varieties for Sub-Saharan Africa

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During the annual sweetpotato crop meetings in Pretoria (2007) and Maputo (2008), various breeders made useful comments on the drafts which were the basis for the current contents and design of this catalogue.

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I N T R O D U C T I O N

This catalogue is a presentation of currently popular or promising orange-fleshed sweetpotato varieties (OFSP) for Sub-Saharan Africa (SSA). The majority of these varieties have been released in at least one country, and are being used by farmers, while a few others are advanced promising lines. A good number of the varieties are important parents in regional and national breeding programs to improve levels of β-carotene and root dry matter in sweetpotato in the region. Some of the varieties are landraces from African countries while others are introduced germplasm from the USA, South America, and Asia, and have been found to be adapted to particular environments in SSA. There are also improved varieties from different African countries. The catalogue is arranged in single pages of information and pictorials for each of the varieties. Each page covers the morphological characteristics, root attributes, and other major attributes as well as the consumer and processing qualities of a single variety. Additional information about the current status of each variety is presented at the end of the document.

The International Potato Center and its partners are promoting OFSP as a food-based approach to combating Vitamin A malnutrition and related health problems in SSA. Currently, about 32% of the population of SSA suffers from prevalence of Vitamin A deficiency. The opportunity is that sweetpotato is already part of people's diets, and recent studies have found OFSP to be highly acceptable to many rural African women and children. This catalogue should serve as a handy reference, providing summary information on some current important and popular OFSP varieties in SSA. The information will be relevant to different stakeholders, scientists, development practitioners/ extensionists, and donors.

For information on how to obtain varieties, please contact the CIP regional office for SSA in Nairobi, Kenya (cip-nbo@cgiar.org).

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Contents

CARROT C

Country of origin: Tanzania
Pedigree: Landrace

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GROWTH CHARACTERISTICS

Canopy or plant type	Spreading (> 100 cm vine length)
Leaf	Green when mature, 3-5 moderately deep lobes
Vine	Green, short (3-5 cm) internodes, thick (7-9 mm) diameter
Flowering ability and habits	Early (3 months) and profuse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	15.0 t/ha
Adaptability	Does well in low virus pressure zones
Resistance to pests	Moderately low to sweetpotato weevils
Resistance to diseases	Low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long irregular
Skin colour	Cream
Dry matter	33.0%
Flesh colour (CIP colour chart)	Deep orange, (30D: 29B)
β-carotene content	12390-14370 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to adults and children
Texture of boiled roots	Dry and floury mouth feel
Taste	Moderately sweet

EJUMULA

Country of origin: Uganda
Pedigree: Landrace

2

GROWTH CHARACTERISTICS

Canopy or plant type	Spreading (> 100 cm vine length)
Leaf	Green when mature, 3-4 moderately deep lobes
Vine	Green, short (3-5 cm) vine internodes, intermediate (7-9 mm) vine diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	14.7 t/ha
Adaptability	Does well in low virus pressure zones
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	High to Alternaria blight and low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long irregular
Skin colour	Cream
Dry matter	33.0%
Flesh colour (CIP colour chart)	Deep orange, (30D: 29B)
β-carotene content	7760 - 14370 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to adults and children
Texture of boiled roots	Dry and floury mouth feel
Taste	Sweet

JEWEL
(CIP440031)

Country of origin: USA
Pedigree: Centennial x nugget

3

GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Dark green when mature, triangular and no lobes
Vine	Green, short (3–5 cm) internodes, thick (7–9 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	21.0 t/ha
Adaptability	Widely adapted
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderately high to Alternaria blight and low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Copper brown
Dry matter	28.0%
Flesh colour (CIP colour chart)	Orange, (28A: 29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Moderately sweet

KAKAMEGA
(CIP441768)

Country of origin: Kenya
Pedigree: Landrace (SPK004)

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GROWTH CHARACTERISTICS

Canopy or plant type	Spreading (> 100 cm vine length)
Leaf	Green when mature, 5 very deep lobes
Vine	Green, short (3–5 cm) vine internodes, thin (4–6 mm) vines
Flowering ability and habits	Early (3 months) and profuse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	16.5 t/ha
Adaptability	Widely adapted
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long irregular
Skin colour	Purple red
Dry matter	32.0%
Flesh colour (CIP colour chart)	Intermediate orange, (28C: 18B)
β-carotene content	376.0-3760.0 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Intermediate orange, appealing to adults and children
Texture of boiled roots	Dry and floury mouth feel
Taste	Moderately sweet

K566632

Country of origin: Kenya
Pedigree: Unknown but SSR analysis suggests closely related to Resisto

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GROWTH CHARACTERISTICS

Canopy or plant type	Semi-erect
Leaf	Green when mature, purple when young, 5-6 moderately deep lobes
Vine	Green, short (< 3 cm) internodes, very thin (< 4 mm) diameter
Flowering ability and habits	Late and profuse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	15.0-20.0 t/ha
Adaptability	Widely adapted except in water stressed areas
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Intermediate pink
Dry matter	25.0-26.0%
Flesh colour (CIP colour chart)	Deep orange, (29A: 28D)
β-carotene content	700.0-800.0 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

MAYAI

Country of origin: Tanzania
Pedigree: Landrace

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, and purple when young, 3 moderately deep lobes
Vine	Green, short (3-5 cm) internodes, thin (4-6 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	3.5-4 months
Root yields	10.0 t/ha
Adaptability	Does well in low virus pressure zones
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long elliptic
Skin colour	Cream
Dry matter	32.5%
Flesh colour (CIP colour chart)	Intermediate orange, (29A: 28C)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to adults and children
Texture of boiled roots	Dry and floury mouth feel
Taste	Moderately sweet

CN-1424-9

(CIP440245, CN1424-9)

Country of origin: Taiwan

Pedigree: Uknown

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and erect
Leaf	Green when mature, purple when young, 5 deep leaf lobes
Vine	Green, short (3-5 cm) internodes, thick (7-9 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	20.0 t/ha
Adaptability	Does well at mid to high altitudes
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and very low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long elliptic
Skin colour	Brown
Dry matter	27.0%
Flesh colour (CIP colour chart)	Orange, (29A: 28C)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing mostly to children
Texture of boiled roots	Moderately dry mouth feel
Taste	Sweet

RESISTO
(CIP440001)

Country of origin: USA
Pedigree: W72 x OP

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, purple when young; 3 moderate deep lobes
Vine	Green, very short (< 3 cm) internodes, moderate (4-7 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	15.8 t/ha
Adaptability	Does poorly under drought conditions
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and very low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Ovate
Skin colour	Pink
Dry matter	24.0%
Flesh colour (CIP colour chart)	Deep orange, (30D: 29B)
β-carotene content	24900 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to adults and children
Texture of boiled roots	Soft mouth feel
Taste	Very sweet

NASPOT 9 O
(VITA)

Country of origin: Uganda
Pedigree: SPK004 OP

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, and slightly purple when young, 7 deep leaf lobes
Vine	Green, with purple tips, short (3-5 cm) internodes, thin (<4 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	16.5 t/ha
Adaptability	Does well in most agroecologies in Uganda
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and high to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Obovate with longitudinal grooves
Skin colour	Purple red
Dry matter	30.1%
Flesh colour (CIP colour chart)	Deep orange, (28A: 29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Moderately sweet

NASPOT 10 O
(KABODE)

Country of origin: Uganda
Pedigree: SPK004 OP

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, and slightly purple when young, 7 moderate deep lobes
Vine	Green, with purple tip, short (3-5 cm) internodes, thin (<4 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	16.0 t/ha
Adaptability	Does well in most agroecologies of Uganda
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long irregular
Skin colour	Purple red
Dry matter	30.5%
Flesh colour (CIP colour chart)	Deep orange, (28A: 29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Moderately sweet

TAINUNG 64
(CIP440189)

Country of origin: Taiwan
Pedigree: Uknown

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, deep purple young leaves, and no leaf lobes
Vine	Dark purple; short (2.5-3.0 cm) internodes, moderate (4-6 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	15.0 t/ha
Adaptability	Limited and sensitive to moisture stress conditions
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long irregular
Skin colour	cream
Dry matter	23.0%
Flesh colour (CIP colour chart)	Orange, (29A: 28D)
β-carotene content	3760-7230 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

W-151
(CIP440005)

Country of origin: USA
Pedigree: Uknown

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, with purple veins
Vine	Green, short (3.5-5.0 cm) internodes, and very thin (3-4 mm) diameter
Flowering ability and habits	Early and profuse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	3-4 months
Root yields	18.0 t/ha
Adaptability	Does well in mid-altitude areas
Resistance to pests	Low to sweetpotato weevil
Resistance to diseases	Low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Purple red
Dry matter	28.0%
Flesh colour (CIP colour chart)	Deep orange, (30D: 29B)
β-carotene content	10500-14370 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

ZAMBEZI

Country of origin: Zambia
Pedigree: TIS2537 x OP

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, deep purple young leaves, triangular with very slight lobes
Vine	Green with purple spots, short (3-5 cm) internodes, very thin (<4 mm) diameter
Flowering ability and habits	Early and moderate

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	15.1 t/ha
Adaptability	Does well in most areas except drought-prone ones
Resistance to pests	Moderately low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and very low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Pink
Dry matter	28.5%
Flesh colour (CIP colour chart)	Deep orange, (29A: 28D)
β-carotene content	10900 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to children
Texture of boiled roots	Moderately dry mouth feel
Taste	Moderately sweet

102027.02

Country of origin: Peru
Pedigree: CIP breeding population

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, 5 large moderately deep lobes
Vine	Green, short (2.5 cm) internodes
Flowering ability and habits	Early and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	12.5 t/ha
Adaptability	Does well in mid-altitude areas
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	Moderate to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Cream
Dry matter	25.0%
Flesh colour (CIP colour chart)	Dark orange, (28A: 29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to children
Texture of boiled roots	Moderately dry mouth feel
Taste	Sweet

102022.7

Country of origin: Peru
Pedigree: CIP breeding population

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, 5 large and slightly deep lobes
Vine	Green, short (2.5-3.0 cm) vine internodes, intermediate (5-8 mm) vine diameter
Flowering ability and habits	Moderate and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	15.0 t/ha
Adaptability	Not widely adapted
Resistance to pests	Moderately low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and very low to sweetpotato virus disease (SPVD)

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Orange
Dry matter	25.0%
Flesh colour (CIP colour chart)	Orange, (29A: 28D)
β-carotene content	3760-7230 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Deep orange, appealing to children
Texture of boiled roots	Moderately dry
Taste	Very sweet

10300.152

Country of origin: Peru
Pedigree: CIP breeding population

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and erect
Leaf	Green when mature with purple stalks, 4-5 very slight lobes
Vine	Dark purple short (3-5 cm) internodes, thin (4-6 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	25.0 t/ha
Adaptability	Not widely adapted
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	Low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Pink
Dry matter	26.0%
Flesh colour (CIP colour chart)	Orange (28D: 28C)
β-carotene content	4920 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

CAROMEX
(CIP440136)

Country of origin: USA
Pedigree: NC 228 x NC 234

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, purple young leaves; triangular and no leaf lobes
Vine	Green, with purple sections, very short (<2.5 cm) internodes, thick (5-7 mm) diameter
Flowering ability and habits	Early (3 months) and moderate

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	15.3 t/ha
Adaptability	Widely adapted
Resistance to pests	Moderately high to sweetpotato weevils
Resistance to diseases	Moderately high to Alternaria blight and sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long elliptic
Skin colour	Purple red
Dry matter	22.7%
Flesh colour (CIP colour chart)	Dark orange, (28A: 29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Dark orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

CN 1448-49
(CIP440181)

Country of origin: Taiwan
Pedigree: Unknown

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and erect
Leaf	Green purple mix on mature leaves, purple petioles, and 4-5 very deep lobes
Vine	Deep purple, short (3-5 cm) internodes, thin (4-7 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Root yields	15.7t/ha
Adaptability	Widely adapted
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Ovate
Skin colour	Pale purple
Dry matter	22.7%
Flesh colour (CIP colour chart)	Intermediate orange (28D; 28C)
β-carotene content	4470-4920 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

GABA GABA

Country of origin: Mozambique
Pedigree: CIP breeding line

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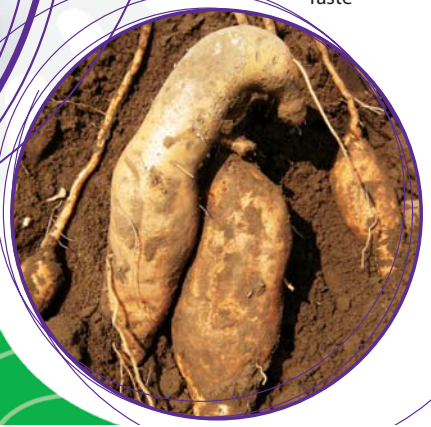

GROWTH CHARACTERISTICS

Canopy or plant type	Spreader (> 100 cm vine length) and semi-erect growth habit
Leaf	Green with purple margins, no leaf lobes
Vine	Purple, long (4-6 cm) internodes, thick (4-6 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Root yields	6.5 t/ha
Adaptability	Widely adapted
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long elliptic
Skin colour	Purple red
Dry matter	23.9%
Flesh colour (CIP colour chart)	Deep orange, (28A: 29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

KANDEE
(CIP440140)

Country of origin: USA
Pedigree: (Yellow Yam x Nancy Hall) x Porto Rico

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GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, purple young leaves, and no leaf lobes
Vine	Green, with purple on mature parts, very short (≤3 cm) internodes, thin (3-5 mm) vine diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Root yields	14.5 t/ha
Adaptability	Widely adapted
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	Low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Light purple
Dry matter	25.3%
Flesh colour (CIP colour chart)	Orange, (28A: 29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Very sweet

JAPONES TRESMESINO SELECT (CIP420009)

Country of origin: Peru
Pedigree: Japones Tres Mesino OP

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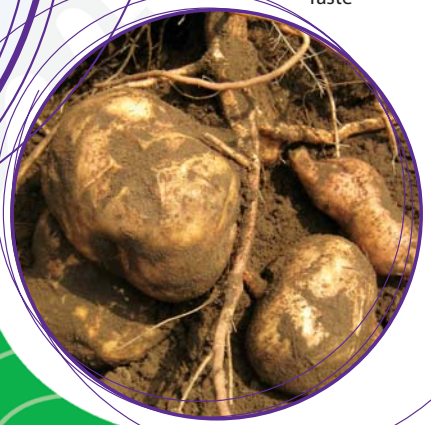


GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and erect
Leaf	Green with purple margins and stalks, 4-5 very deep lobes
Vine	Purple, moderate (3-5 cm) internodes, thick (4-7mm) diameter
Flowering ability and habits	Moderate

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Root yields	14.5 t/ha
Adaptability	Widely adapted
Resistance to pests	Low to sweetpotato weevils
Resistance to diseases	Moderately resistant to Alternaria blight and sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Round elliptic
Skin colour	Light purple
Dry matter	21.6%
Flesh colour (CIP colour chart)	Light orange, (29A: 28C)
β-carotene content	3760—7230 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Intermediate orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Sweet

LO-323
(CIP440185)

Country of origin: USA
Pedigree: Unknown

22

GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and erect
Leaf	Green with purple margins and stalks, 4-5 very deep lobes
Vine	Purple, moderate (3-5 cm) internodes, thick (4-7 mm) diameter
Flowering ability and habits	Late and sparse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Root yields	13.6 t/ha
Adaptability	Widely adapted
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	Low to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Ovate
Skin colour	Pale purple
Dry matter	21.0%
Flesh colour (CIP colour chart)	Intermediate orange, (28C; 18D)
β-carotene content	5490 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Intermediate orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Sweet

PERSISTENTE
(MGCL01)

Country of origin: Mozambique
Pedigree: Landrance

23

GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, 5 very deep lobes
Vine	Green when mature, long (4-7 cm) internodes, thin (3-5 mm) diameter
Flowering ability and abits	Moderate

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Root yields	5.0 t/ha
Adaptability	Does well in central Mozambique
Resistance to pests	High to sweetpotato weevils
Resistance to diseases	Moderately high to Alternaria blight and sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long irregular
Skin colour	Cream
Dry matter	37.0%
Flesh colour (CIP colour chart)	Dark orange, (28A:29A)
β-carotene content	11030 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Dark orange, appealing to adults and children
Texture of boiled roots	Floury and dry mouth feel
Taste	Very sweet

CORDNER

Country of origin: USA
Pedigree: Uknown

24

GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, whit triangular 3 slight leaf lobes
Vine	Green, moderate (3-5 cm) internodes, thin (3-5 mm) diameter
Flowering ability and habits	Moderate

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Root yields	14.9 t/ha
Adaptability	Widely adapted
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	Moderate to Alternaria blight and sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Elliptic
Skin colour	Orange brown
Dry matter	25.0%
Flesh colour (CIP colour chart)	Deep orange (29A: 28D) and cream secondary colour
β-carotene content	3760-7230 µg/100g fwb

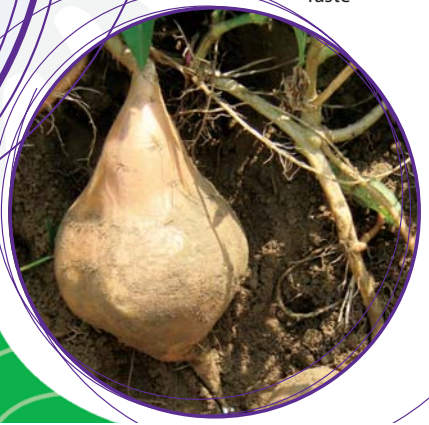
SENSORY CHARACTERISTICS

Colour of boiled roots	Dark orange, appealing to adults and children
Texture of boiled roots	Moderate dry mouth feel
Taste	Sweet

199062.1

Country of origin: Peru
Pedigree: SPV78.001.3xOP

25



GROWTH CHARACTERISTICS

Canopy or plant type	Non-twining and semi-erect
Leaf	Green when mature, 5 deep lobes; a large middle lobe
Vine	Green, moderate (3-6 cm) internodes, thin (3-5 mm) diameter
Flowering ability and habits	Moderate

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	25.0 t/ha
Adaptability	Widely adapted
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	Moderate resistance to sweetpotato virus

ROOT CHARACTERISTICS

Shape	Ovate/Obovate
Skin colour	Pale purple
Dry matter	24.0%
Flesh colour (CIP colour chart)	Intermediate orange, (29A; 28D) on new colour chart
β-carotene content	3760-7230 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Light orange, appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Sweet

CRI-Apomuden
(CIP440254)

Country of origin: Bangladesh
Pedigree: Uknown

26

GROWTH CHARACTERISTICS

Canopy or plant type	Spreading (> 100 cm vine length)
Leaf	Green when mature, purple young leaves, and no leaf lobes
Vine	Green, short (3-5 cm) internodes, thin (4-6 mm) diameter
Flowering ability and habits	Early (3 months) and moderate

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	20.0 t/ha
Adaptability	Widely adapted
Resistance to pests	Can be damaged by weevils after 4 months of age
Resistance to diseases	Moderate to sweetpotato virus disease

ROOT CHARACTERISTICS

Shape	Long irregular
Skin colour	Red orange
Dry matter	21.0%
Flesh colour	Orange with slight yellow stripes
β-carotene content	2000-4000 µg/100g fwb

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange, very appealing to children
Texture of boiled roots	Moist and soft mouth feel
Taste	Moderately sweet

IMPILO

Country of origin: South Africa
Pedigree: Unknown (Bred by ARC)

27

GROWTH CHARACTERISTICS

Canopy or plant type	Bush
Leaf	Green when mature, triangular, slight teeth 3-5 leaf lobes
Vine	Green, moderate (5 cm) internodes, thin (33.7 mm) diameter
Flowering ability and habits	Profuse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	13.8 t/ha
Adaptability	Not widely adapted
Resistance to pests	Moderate to sweetpotato weevils
Resistance to diseases	High to Sweetpotato feathery mottle virus; moderate to Alternaria blight, moderate to Fusarium wilt

ROOT CHARACTERISTICS

Shape	Round elliptic to elliptic
Skin colour	Pale yellow-orange
Dry matter	21.4%
Flesh colour (CIP colour chart)	Pale orange, (29A: 28D)
β-carotene content	5091 µg/100g fwb (2978 - 7034 µg/100 g)

SENSORY CHARACTERISTICS

Colour of boiled roots	Yellow orange, grey discoloration, but appealing to adults and children
Texture of boiled roots	Moderately dry mouth feel
Taste	Sweet

KHANO

Country of origin: South Africa
Pedigree: Unknown (Bred by ARC)

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GROWTH CHARACTERISTICS

Canopy or plant type	Slightly Spreading
Leaf	Green when mature, 3-5 moderate to slight lobes
Vine	Green, moderate (4.5 cm) internodes, very thin (3-3.6 mm) diameter
Flowering ability and habits	Profuse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	5 months
Roots yields	15.9 t/ha
Adaptability	Widely adapted in South African agro-ecologies
Resistance to pests	Moderate to insect infestation
Resistance to diseases	Very low to SPFMV, resistant to Alternaria blight

ROOT CHARACTERISTICS

Shape	Long elliptic to elliptic
Skin colour	Pale red Purple
Dry matter	18.2%
Flesh colour (CIP colour chart)	Deep Orange, (30D: 29B)
β-carotene content	14036 µg/100g fwb (11987 - 15565 µg/100 g)

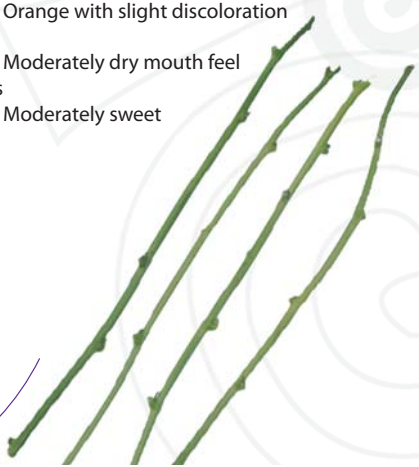
SENSORY CHARACTERISTICS

Colour of boiled roots	Dark orange, appealing to children and adults
Texture of boiled roots	Moderately dry mouth feel
Taste	Slightly sweet

W-119
(440004)

Country of origin: USA
Pedigree: Unknown

29



GROWTH CHARACTERISTICS

Canopy or plant type	Spreading
Leaf	Green when mature, 3 moderately deep lobes
Vine	Green, intermediate (5-7 cm) internodes, very thin (2.4-3 mm) diameter
Flowering ability and habits	Profuse

MAJOR AGRONOMIC ATTRIBUTES

Maturity period	4 months
Root yields	13.5 t/ha
Adaptability	Widely adapted in South African agro-ecologies
Resistance to pests	Low to moderate to sweetpotato weevils
Resistance to diseases	Low to sweetpotato feathery mottle virus disease and moderate to Fusarium wilt and Alternaria blight

ROOT CHARACTERISTICS

Shape	Long elliptic
Skin colour	Purple
Dry matter	25.8%
Flesh colour (CIP colour chart)	Orange, (30D: 29B)
β-carotene content	10464 µg/100g fwb (8806 - 12978 µg/100 g)

SENSORY CHARACTERISTICS

Colour of boiled roots	Orange with slight discoloration
Texture of boiled roots	Moderately dry mouth feel
Taste	Moderately sweet

IMPORTANCE

Additional Information

Variety	Importance
1. Carrot C	• Not released, but grown by farmers in Tanzania • Used as a parent to improve β-carotene and root dry matter in Uganda, Kenya, Mozambique, Rwanda, and Tanzania
2. Ejumula	• Released in Uganda and near release in Tanzania, Kenya, Rwanda • Used as a parent to improve β-carotene and root dry matter in Uganda, Kenya, Mozambique, Rwanda, Tanzania
3. Jewel	• Released and grown by farmers in Mozambique • Used as a parent in many countries to improve β-carotene content
4. Kakamega	• Released in Uganda, Kenya, Rwanda and widely promoted in Tanzania • Used as a parent to improve β-carotene and root dry matter content
5. K566632	• Near release in Kenya • Used as a parent in Uganda, Tanzania, Kenya to improve β-carotene levels
6. Mayai	• Grown by farmers in Zanzibar Island and coastal Tanzania • Used as a parent in Uganda, Kenya, Tanzania to improve β-carotene and root dry matter
7. CN-1424-9	• Released in Mozambique
8. Resisto	• Released in Mozambique, South Africa, Madagascar • Used as a parent to improve β-carotene content in Uganda, Kenya, Rwanda, Ghana, Mozambique, South Africa, Tanzania and Zambia
9. NASPOT 9 O	• Released in Uganda and also being tested in Kenya, Tanzania, Rwanda, Ethiopia, Mozambique
10. NASPOT 10 O	• Released in Uganda and also being tested in Kenya, Tanzania, Rwanda, Ethiopia, Mozambique
11. Tainung 64	• Released and grown by farmers in Mozambique
12. W-151	• Advanced and promising in Kenya
13. Zambezi	• Released in Zambia • Used as a parent to improve β-carotene content
14. 102027.02	• Advanced selected clone in Kenya from seed population introduced from CIP, Peru

IMPORTANCE

Additional Information

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Variety	Importance
15. 102022.7	• Advanced selected clone in Kenya from seed population introduced from CIP, Peru
16. 10300.152	• Selected in Kenya from seed population introduced from CIP, Peru
17. Caromex	• Released and grown by farmers in Mozambique
18. CN 1448-49	• Released and grown by farmers in Mozambique
19. Gaba Gaba	• Released and grown by farmers in Mozambique
20. Kandee	• Released and grown by farmers in Mozambique
21. Japones Tresmesino Select	• Released and grown by farmers in Mozambique
22. Lo-323	• Released and grown by farmers in Mozambique
23. Persistente	• Released and grown by farmers in Mozambique
24. Cordner	• Released and grown by farmers in Mozambique
25. 199062.1	• Released in Mozambique and near release in Madagascar, Ethiopia, Rwanda • Used as a parent to improve root yield performance
26. CRI-Apomuden	• Released and promoted in Ghana
27. Impilo	• Released and promoted in South Africa
28. Khano	• Released and promoted in South Africa
29. W-119	• Released and promoted in South Africa

Contact information for partners

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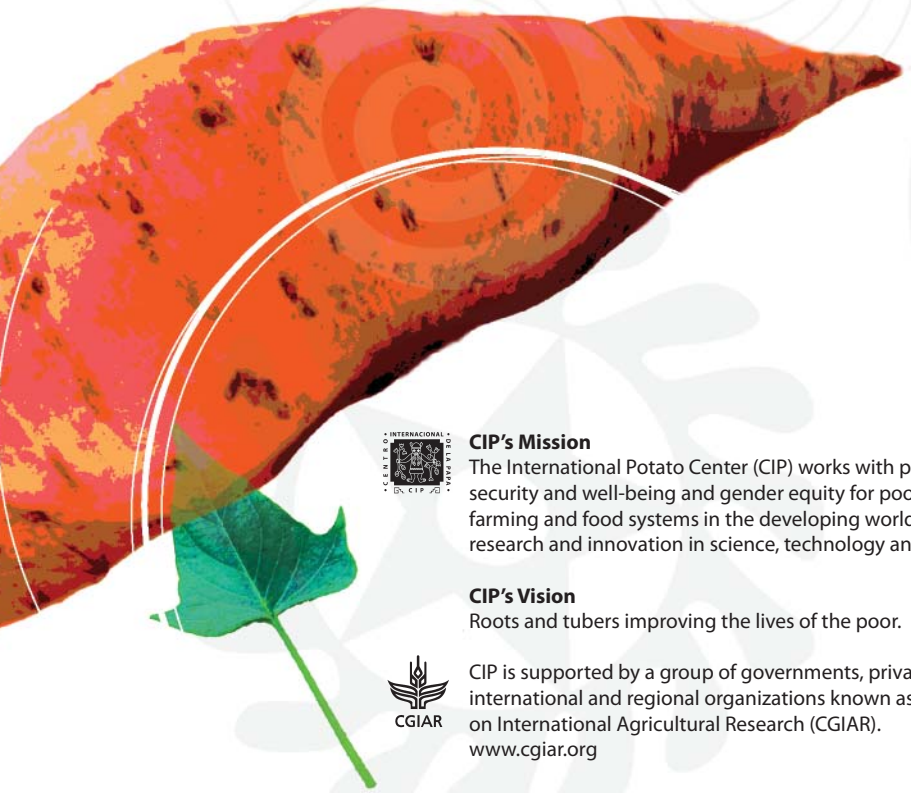

CIP's Mission
The International Potato Center (CIP) works with partners to achieve food security and well-being and gender equity for poor people in root and tuber farming and food systems in the developing world. We do this through research and innovation in science, technology and capacity strengthening.

CIP's Vision
Roots and tubers improving the lives of the poor.

CGIAR

CIP is supported by a group of governments, private foundations, and international and regional organizations known as the Consultative Group on International Agricultural Research (CGIAR).
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