

Alliance



APANTU

Classification

Ploidy: 3X
 Genome: AAB
 Subgroup: African Plantain
 Clone set: False Horn
 Type: Cooking
 Suspected country of origin: Ghana
 ITC code: ITC0223

Status

Apantu is a false horn plantain believed to originate from Ghana, rich in pro-Vitamin A carotenoids with at least **322 µg Retinol Activity Equivalent** per 100g when raw (on fresh weight basis). This is estimated to meet **80% of the daily recommended intake** of Vitamin A of children under 5 years.

It is being fast-tracked for potential adoption into the agri-food systems of Eastern Africa. It has been assessed on-station and on-farm in Burundi and Eastern Democratic Republic of Congo (DRC). On-station trials are also underway in Tanzania and Uganda.

Description

- * It has medium-sized plant stature. The underlying pseudostem has a predominantly green-red colour (fig 3)
- * The leaf petiole is straight with erect margins that are winged and not clasping the pseudostem. It has pink coloured margins. The petiole base has sparse brown blotches (fig 4,5)
- * The leaves have an intermediate habit with both sides of the base pointed (fig 6)
- * The male bud is ovoid in shape with bracts that have an intermediate apex shape. The bracts have an inner pink-purple colour and an outer purple colour (fig 7)
- * The flowers have a cream compound tepal tinted with pink and a yellow lobe. The free tepal is translucent cream with an oval shape. The style, filament and anthers are yellow (fig 8)
- * The fingers are long, curved, and slender with pronounced ridges. The fruit apex is lengthily pointed with a persistent style as the remains of the flower relicts. The peel of mature unripe fruit is green in colour (fig 9)
- * The pulp colour of a mature finger (unripe) is yellow-orange: RHS 9/3 7507U (fig 10)



Fig 1. Apantu Bunch



Fig 2. Whole plant



Fig 3. Pseudostem



Fig 4. Neck

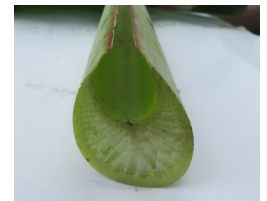


Fig 5. Petiole

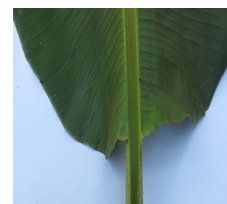


Fig 6. Leaf

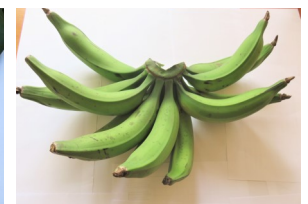


Fig 7. Hand



Fig 8. Male bud



Fig 9. Flower



Agronomic Traits (Average of 8-10 plants for 3 cycles)	Apantu
Time from flowering to harvest (days)	141.7
Plant height at flowering (cm)	275.0
Pseudostem girth at base at flowering (cm)	75.1
Number of functional leaves at flowering	8.6
Bunch weight (kg)	15.8
Number of hands	6.4
Number of fingers on bunch	59.7
Weight of hand (kg)	3.0
Fruit circumference (cm)	9.8
Fruit length (cm)	21.9



Fig 10. Finger

Agronomic Performance

- * Characteristics of Apantu to the left are based on agronomic data from on-station trials in Burundi, North and South Kivu in Eastern DRC
- * Values are *averages* of 8-10 plants evaluated from over 3 cropping cycles in each site: Burundi– 2 sites; South Kivu– 3 sites; and North Kivu-3 sites
- * Apantu takes approximately **4.7 months** from flowering to maturity
- * A bunch of Apantu can weigh up to **25 kg**

Pro-Vitamin A Carotenoid Content

- * Apantu contains **4,680 µg/100g** pro-Vitamin A carotenoids when **raw and unripe** (on fresh weight basis)
- * This yields **322 µg to 687 µg Retinol Activity Equivalent** per 100g when unripe and ripe which can be estimated to meet 80% to >100% of the daily recommended intake of Vitamin A of children under 5 years (400 RAE µg/day) and 46% to 98% of the daily recommended intake of Vitamin A of adult women (700 RAE µg/day)

Values are means of three individual samples on fresh weight basis, per ripening stage of bunches obtained from North Kivu, DRC¹. 100g of banana is approximately one finger.

- * The pro-Vitamin A carotenoid content increases as the banana ripens
- * As a plantain (cooking type banana), Apantu can be boiled, fried, roasted or steamed with or without the peel. It can be cooked when unripe or ripe
- * Apantu was preferred when roasted and fried in Burundi and Eastern DRC

References

1. Ekesa, B., Nabuuma, D., Kennedy, G., and Van den Bergh, I. 2017. Sensory evaluation of Provitamin A carotenoid-rich banana cultivars on trial for potential adoption in Burundi and Eastern Democratic Republic of Congo. *Fruits*, vol72, No 5, pages 261-272
2. Ekesa, B., Nabuuma, D., Blomme, G. 2015. Provitamin A carotenoid content of unripe and ripe banana cultivars for potential adoption in eastern Africa. *Journal of Food Composition and Analysis*, Issue 43, pages 1-6.
3. HarvestPlus carotenoid colour strips. 2007. Standardised using Royal Horticultural Society range of accepted colours and Universal Pantone colours.
4. IPGRI-INIBAP/ CIRAD. 1996. Descriptors for banana (*Musa* spp.). International Plant Genetic Resources Institute, Rome Italy; International Network for the Improvement of Banana and Plantain, Montpellier, France; Centre de coopération internationale en recherche agronomique pour le développement, Montpellier, France.

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