LAHI | Bananas rich in Pro-Vitamin A Carotenoids

Classification
Ploidy: 3X  
Genome: AAB  
Subgroup: Placific Pantain  
Clone set: Popo’ulu  
Type: Cooking  
Suspected country of origin: Hawaii  
ITC code: ITC1171

Status
Lahi is a Pacific plantain, believed to originate from Hawaii, rich in pro-Vitamin A carotenoids with at least 229 µg Retinol Activity Equivalent per 100g when raw (on a fresh weight basis). This is estimated to meet 57% 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
- Lahi has a tall stature. The underlying pseudostem has a predominantly green colour with a yellow tinge (fig 2)
- The leaf petiole is straight with erect margins that are winged and clasping the pseudostem. The petiole base has small brown blotches (fig 4,5)
- The leaves have an intermediate habit and are bright green with both sides of the base rounded (fig 6)
- The male bud is ovoid in shape with bracts that have an inner pink-purple colour and an outer purple-brown colour (fig 7)
- The compound tepal, and free tepals on the flowers are yellow as are the style and filament (fig 8)
- The fingers are cucumber shaped: short, straight, rounded and blunt. The fruit apex is also rounded without any flower relicts. The peel of mature unripe fruit is green in colour (fig 9)
- The pulp colour of a mature finger (with unripe) is light yellow: RHS 3/3 1205U (fig 10)
Agronomic Performance

- Characteristics of Lahi 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
- Lahi takes approximately 4.8 months from flowering to maturity
- A bunch of Lahi can weigh up to 30kg

Pro-vitamin A carotenoids Content

- Lahi contains 3,145µg/100g pro-Vitamin A carotenoids when raw and unripe (on fresh weight basis)
- This is estimated to yield 229 µg to 713 µg Retinol Activity Equivalent which could meet 57% to >100% of the daily recommended intake of Vitamin A of children under 5 years (400 RAE µg/day) and 33% to 100% of the daily recommended intake of Vitamin A of adult women (700 RAE µg/day)
- The pro-Vitamin A carotenoid content increases as the banana ripens
- As a plantain (cooking type banana), Lahi can be boiled, fried, roasted or steamed with or without the peel. It can be cooked when unripe or ripe
- Lahi was preferred when roasted in Burundi and Eastern DRC with a mean score of 4, a rating of good using a 5 point hedonic scale

References

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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