LAI | Bananas rich in Pro-Vitamin A Carotenoids

Classification

Ploidy: 3X
Genome: AAA
Subgroup: Red
Type: Dessert
Suspected country of origin: Thailand
ITC code: ITC0403

Status

Lai is a dessert banana believed to originate from Thailand, rich in pro-Vitamin A carotenoids, with at least 48 µg Retinol Activity Equivalent per 100g when raw (on fresh weight basis). This is estimated to meet 12% 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

* Lai has a tall stature. The underlying pseudostem has a predominantly re-purple colour (fig 3)
* The leaf petiole is open with spreading margins that are winged and undulating with pink coloured edges. The petiole base has large dark brown blotches (fig 4,5)
* The leaves have an intermediate habit and are green with both sides of the base rounded (fig 6)
* The male bud is ovoid in shape with an inner red-purple colour and an outer purple-brown colour. The apex of the bract is pointed (fig 7)
* The flowers have a yellow compound tepal with a translucent cream free tepal. The style and filament are yellow in colour (fig 8)
* The fingers are slightly curved and slightly ridged. The fruit apex is blunt tipped without any flower relics. The peel of mature unripe fruit is light green in colour (fig 9)
* The pulp colour of a mature finger (unripe) is dark yellow-orange: RHS 9/2 1355U (fig 10)
Agronomic Performance

* Characteristics of Lai 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
* Lai takes approximately 4.6 months from flowering to maturity
* A bunch of Lai can weigh up to 25 kg

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Pro-vitamin A carotenoids Content

* Lai contains 746 µg/100g pro-Vitamin A carotenoids when ripe (on fresh weight basis)
* This yields 48 µg Retinol Activity Equivalent per 100g which can be estimated to meet 12% of the daily recommended intake of Vitamin A of children under 5 years (400 RAE µg/day) and 7% 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 of bunches obtained from North Kivu, DRC. 100g of banana is approximately one finger.
* The pro-Vitamin A carotenoid content increases as the banana ripens
* Lai is a dessert banana that is mainly consumed when raw and fully ripe

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 recherché agronomique pour le développement, Montpellier, France.

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