PEACH PALM (*Bactris gasipaes*) FOR PALM HEART PRODUCTION

BY: RAJANAIDU, N; KUSHAIRI, A; ISA, M; SUBOH ISMAIL; BASRI, W; ARIFFIN DARUS and YUSOF BASIRON

JUNE 2004

230

MPOB TT No. 223

MPOB INFORMATION SERIES ISSN 1511-7871

Bactris gasipaes also known as peach palm or pejibaye is an important food crop in the humid lowlands of Central and South America. This species gives two edible products; starchy fruits and palm heart (salad). There is a great pressure to diversify the current plantation crops which are largely dominated by oil palm, rubber and cocoa. Demand for new exotic crops with new tastes, textures and nutritional qualities are increasing. In this respect, peach palm is a potential candidate as a new plantation crop for agroforestry (Mora-Urpi, 1984; Mood, 2000) and inter-crop.

Bactris gasipaes is considered for palm heart because it produces multiple stems and grows rapidly. The palm heart has excellent taste and texture, and low level of calcium oxalate which account for less browning of shoots.

BOTANY

It is distributed from Costa Rica to Peru. The spiny genotype occurs throughout Central and South America. The majority of peach palms are spiny type. There are two genepools of spineless type; *Benjamin Constan* from Brazil and *Yurimaguas* from Amazonian Peru. For palm heart, the spineless type is more suitable for cultivation. Normally these palms grow 6-24 m tall and 12-26 cm in diameter. Multiple stems form a *clump* at the base (*Figure 1*). Each stem has about 10-30 pinnate leaves.

The fruits are produced sexually and parthenocarpically. The cross-pollinated fruits are larger than parthenocarpic fruit. A single embryo is encased in a hard seed coat and the seeds are considered as recalcitrant.

CULTIVATION FOR PALM HEART (*umbut*)

Soils and Rainfall

Peach palm grows well in an area with an annual rainfall between 2000 mm and 5000 mm and annual mean temperatures exceeding 24°C. Well-drained soils (no water logging) are suitable for cultivation of peach palms.

Planting Materials, Field Planting and Harvest

The main source of planting material is from Yurimaguas, Peru. This source was proven to be less fibrous as compared to *Benjamin Constan* from Brazil. Seeds from Yurimaguas give nearly 95% spineless seedlings.

The seeds are germinated by sowing them (15 cm deep) in shaded seedbeds. It takes six to eight weeks for germination. The spiny seedlings are culled before potting (about 5%). The young seedlings are placed in the sun gradually for hardening. The seedlings are ready for field planting about six to nine

Figure 1. Mutiple stems form a clump at the base of Bactris *palm.*

ISSN 1511-7871

9 771511 787001

Malaysian Palm Oil Board, Ministry of Plantation Industries and Commodities, Malaysia
P. O. Box 10620, 50720 Kuala Lumpur, Malaysia. Tel: 03-89259155, 89259775, Website: http://mpob.gov.my Telefax: 03-89259446

months after germination with usually one to two true leaves.

The seedlings are laid down in two parallel rows; staggered 1 m apart and 1 m between trees in a row (*Figure 2*). The two planted rows are separated by a maintenance or harvest row with 2 m wide. This spacing will accommodate about 5000 plants ha^{-1}. The planting takes place during rainy reason only. The planting hole size is about 30 x 30 x 30 cm.

Figure 2. Bactris *seedlings are planted 1 m apart and 1 m between rows.*

It takes about 15-18 months after planting for the first harvest. Approximately 50% of trees are ready to harvest within six months. The minimum harvest size of the shoot is 1.3 m from ground to juncture of last leaf. The trees are first topped of leaves, severed at the base, and stripped of two to three sheaths (*Figure 3*). The hearts are then loaded on a cart and taken to the packing shed.

Post-Harvest Handling, Packaging and Storage

At the packing shed, one more sheath is removed, leaving one hard sheath for protection. The top undeveloped leafy section and bottom hard section is removed. The remaining edible part is cut into a 50 cm. A sharp knife is used for cutting.

Each piece is cleaned with a soft, dry towel and wrapped in commercial film. Special crush-proof boxes are used for packing of palm heart. It is always preferable to chill packed boxes as soon as possible. The product can be kept in ambient temperature for 48 hr without spoilage. Once chilled, shelf life is two to three weeks at 4°C-8°C.

Production and Cost Statistics for Palm Heart Cultivation

The estimated palm heart production is about 3.5 t ha^{-1}. Cost of edible heart production under trial condition was estimated at RM 2200 t^{-1} and the gross

Figure 3. Bactris *palm heart after removing the sheaths.*

income was RM 3000 t^{-1}. The net income was RM 2800 ha^{-1} (RM 800 x 3.5 t) (Au, 2001).

CONCLUSION

The peach palm has a great potential to cultivate for palm heart and fruits. The Malaysian plantation companies should consider this species for diversification, agroforestry and inter-cropping.

REFERENCES

AU, W F (2001). Evaluation of peach palm for palm heart production. *The Planter, 77(900)*:123-134.

MORA-URPI *et al.* (1984). The pejibaye palm (*Bactris gasipaes H.B.K.*). FAO, Rome.

MOOD, J D (2000). *Bactris gasipaes* for production of hearts and fruit. MPOB Seminar Notes.

For more information kindly contact:

Director-General
MPOB
P. O. Box 10620
50720 Kuala Lumpur, Malaysia.
Tel: 03-89259155, 89259775
Website: http://mpob.gov.my
Telefax: 03-89259446