Rattan cultivation, processing and transformation: New technologies and recent advances in West and Central Africa

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African Rattan Research Programme

• “The development and promotion of African rattans: an ecological and socio-economic approach”

• Funded by the Forestry Research Programme of the UK’s Department for International Development (2000-2003)

• Research focussed in Cameroon, Ghana, Nigeria & Equatorial Guinea (CIFOR)
Current activities

• Socio-economic surveys of rural rattan users and urban artisans;
• Development of management systems for wild stocks of rattan;
• Development of community-based cultivated systems;
• Introduction of applied new technologies in processing and transformation.
Rattans...

- Climbing palms, flexible stems used for furniture manufacture, weaving etc.
- Occur in Old World only;
- Significant contribution to household incomes throughout their range;
- 600 spp of rattan in SE Asia; 20 in Africa;
- Rattan research & development in Asia 20-30 years more advanced than in Africa.
Rattan Cultivation

• Long history of rattan cultivation in SE Asia (20,000ha in Malaysia alone);
• Heavy emphasis on plantation development;
• However, small-scale cultivation more profitable;
• Hence cultivation systems in Africa concentrating on development of community-based agroforestry systems;
Rattan cultivation in Asia
ARRP cultivation methodology

- Seed collection
- Seed cleaning
- Propagation trials
- Cultivation trials
- Seedling distribution
- Monitoring for ecological and socio-economic acceptability
Propagation results

• Experimentation with various seed treatments (scarification, soaking etc);
• No discernible differences in results;
• Mean germination percentage for commercial species:
  • *E. macrocarpa* = 44.9%
  • *L. robustum* = 37.4%
Results to date

- Establishment of series of agroforestry, provenance & silvicultural trials;
- Training courses in propagation & cultivation (Cameroon & Ghana);
- Community nursery establishment;
- Distribution of >2,000 seedlings to farmers;
Rattan processing & transformation

- Low technology methods long developed in SE Asia;
- Considerable scope for technology transfer in Africa & subsequent training;
New technologies...

- Oil curing of cane;
- Improved binding and finishing;
- Steaming and bleaching;
Oil curing of cane

- Raw cane boiled in diesel oil (time depends on diameter);
- Removes moisture, kills insects, adds durability avoids need for laborious stripping;
- Better end product!
Placing raw cane in oil....
Removing excess diesel and sheath residue...
Better binding and finishing...
Steaming and bleaching...
Training...

- Training & demonstration facility established in LBG;
- “Key” artisans trained in Cameroon (May 2001) by Malaysian expert;
- Future formal courses in Nigeria (April 2002) & Ghana (April 2003);
- New techniques & designs adopted by urban artisans.
In conclusion..

- New technologies need not be “high” (i.e. expensive) technologies;
- Learn from similar research & development initiatives; avoid “re-inventing the wheel”.
Please visit the rattan processing and transformation unit in the Limbe Botanic Garden
Thank you !!