

# The Potential of Under-utilized Fruit Trees in Central Sudan

J. Gebauer\*, K. El-Siddig\*\* and G. Ebert\*

\* Humboldt-University Berlin, Dept. of Fruit Science, Germany

\*\* Agricultural Research Corporation, Sudan

# Introduction

- 5.000 species with edible fruits in the tropics, 10% cultivated as crop plants
- Sudan includes different ecological zones
- Savanna occupy at least 37%
- Little attention has been paid to under-utilized fruit-trees

# Objectives of the study

- preliminary survey to variety, uses, importance, and future potential
  - field studies
  - meetings with foresters
  - availability on the markets
  - interviewing of local people



Fig. 1: Map of Sudan.

# Results

- intensive use/ over exploitation
- considerable died during famines and food shortages
- provide attitudes to agricultural food crops
- ‘multipurpose plants’
  - fruits, vegetable, fuel wood, building material, fibers, medicine, livestock feed ... , shad
- harvest by women and children
- source of income
- lack of scientific knowledge
- no plantations and no reforestation

Tab. 1: Under-utilized fruit species with future potential.

<b>species</b>	<b>family</b>
<i>Acacia nilotica</i>	Mimosaceae
<i>Adansonia digitata</i>	Bombacaceae
<i>Balanites aegyptiaca</i>	Balanitaceae
<i>Borassus aethiopum</i>	Palmae
<i>Cordia africana</i>	Boraginaceae
<i>Diospyros mespiliformis</i>	Ebenaceae
<i>Grewia tenax</i>	Tiliaceae
<i>Hyphaene thebaica</i>	Palmae
<i>Pithecellobium dulce</i>	Mimosaceae
<i>Sclerocarya birrea</i>	Anacardiaceae
<i>Tamarindus indica</i>	Caesalpiniaceae
<i>Ximenia americana</i>	Olacaceae
<i>Ziziphus spina-christi</i>	Rhamnaceae



Fig. 2: 'Gunguleiz', *Adansonia digitata*.



Fig. 3: 'Aradaib', *Tamarindus indica*.





Fig. 4: 'Tamarhindi', *Pithecellobium dulce*.



Fig. 5: 'Dom', *Hyphaene thebaica*.



Fig. 6: 'Dalaib', *Borassus aethiopum*.



Fig. 7: 'Higlig', *Balanites aegyptica*.



Fig. 8: Different fruit types of 'Higlig', *Balanites aegyptica*.





Fig. 9: Under-utilized fruits on a market in Wad Medani (Sudan).

# Causes for endangering

- intensive use (people, livestock)
- mechanized crop production
- slow growth of the species
- missing wildlife (breaking dormancy)

species are well adapted to harsh conditions

# Conclusion

- There is great potential for under-utilized fruit species in Sudan and more research and development efforts are needed for a better understanding and utilization of these species!



We are grateful to  
'Studienstiftung des deutschen Volkes'  
for providing a research grant.

---

Thank you very much for your attention!