

# Tanzania

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Tanzania, officially the United Republic of Tanzania, is a country in East Africa bordered by Kenya and Uganda on the north, Rwanda, Burundi and the Democratic Republic of the Congo on the west, and Zambia, Malawi and Mozambique on the south. To the east it borders the Indian Ocean.

The coconut palm is an important perennial cash and subsistence oil crop along the coastal belt of Tanzania. About 25 million coconut palms are cultivated on approximately 252,000 ha. The crop supports the livelihood of more than 300,000 rural households, with an average farm size of 0.5 to 1 ha.

The Government of Tanzania decided to initiate the National Coconut Development Programme (NCDP) in 1979 with the mandate to promote coconut production and utilization, and to improve the productivity of the coconut sector in the country. The inception of the NCDP marked the beginning of the process of institutionalizing coconut R&D in the country, which led to the establishment of the Mikocheni Agricultural Research Institute (MARI) in 1996.

Some of the major constraints to coconut cultivation in Tanzania include the presence of serious pests and diseases such as the lethal yellowing disease, poor crop husbandry practices as a result of inadequate extension services to growers, lack of improved planting materials, ageing coconut palms and sub-optimal climatic conditions. Twenty-three varieties and 22 hybrids have been tested on 4 different sites with different disease and climatic pressures: Kifumangao, Chambezi, Sotele and Pongwe. All the cultivars tested in Tanzania have been attacked by lethal disease with a lethality varying from 14 to 65% (Schuiling 1992). In an attempt to identify the local sources of resistance, 29 Tall accessions have been collected in Tanzania and Kenya and have been planted in performance fields. Since 1981, 2 seedgardens with an area of 166 ha have been established progressively on the islands of Mafia and Zanzibar, free of diseases at that time. In 1989 about 550,000 hybrid seednuts have been produced, but production ceased a few years later.

## References

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- Kullaya AK. 2005. Status of coconut genetic resources research in Tanzania. In: Batugal P, Ramanatha Rao V, Oliver J, editors. *Coconut Genetic Resources*. International Plant Genetic Resources Institute – Regional Office for Asia, the Pacific and Oceania (IPGRI-APO), Serdang, Selangor DE, Malaysia. pp. 670-681. Available from: URL: <http://www.cogentnetwork.org/index.php?page=books>

## East African Tall (EAT)

Mkumbo KE, Kullaya A.

### Conservation

East African Tall (EAT) is conserved ex situ in germplasm blocks totalling 58 ha at Chambezi in Tanzania. In situ conservation is under farmers' fields all over the coconut growing area. It is also conserved in India.

### History

The written reference to coconut in Tanzania dates back to AD 60. This reference has been taken as an evidence of introduction of coconut to Tanzania by Indian merchants. By the year 1890, Tanzania had an estimated the total number of coconut palms at 955,000. During 1888-1916, German administration strongly stimulated coconut growing by distributing seednuts and seedlings to smallholder farmers. This happened along the whole coast of mainland Tanzania. To date coconut palms are found not only along the Indian Ocean coastal belt but deep in the mainland too. The main coconut variety of economic importance grown in Tanzania is the East African Tall.

### Identification

East African Tall has a close resemblance to Mozambique Tall (MZT) and probably to other Talls found in the Indian Ocean Islands like Madagascar, Comoros and Mauritius. The distinctive identity of EAT is the fruit shape and fruit components. EAT is heterogeneous because of allogamy. Fruits weigh 750–1450g, the colour of fruits is variable: red, yellow, green and brown; but most of EAT palms bear green or brown fruits. Fruits are generally oval shaped with a thick husk. Nuts are oblong, thick shelled (26-37%) and with meat thickness ranging from 47-58%. The palm normally bears a bole with a very thick stem and can be very tall. Crown shapes are variable: X, V, semi-circle or circular. Youngest leaves are erect; older ones vary with crown shape: erect for V-shaped, reflexed petioles for circular and X-shaped while for semi-circle crowns petioles are straight. Peduncles are long, taking the fruit and petiole colour. Often, the stem is narrower just above the bole and progressively thicker above. EAT has numerous subpopulations.

### Yield and production

East African Tall produces medium-sized, oval nuts with excellent composition. The average fruit weight is 1100g. First bearing occurs 6-8 years after field planting. Palm yield per year range between 40-80 nuts under rain-fed conditions. Higher yields can be obtained under more favourable moisture regimes. EAT is mainly grown for copra production and fresh nuts consumption (source of fresh vegetable oil for domestic use). The palm is drought tolerant.

### Other information

EAT is moderately tolerant to Lethal yellowing disease (LYD), sensitive to *P. wayi* and mite attacks. It has been extensively used for search of LYD resistant genes through production of breeders' test materials; used as a seed or father palm with Malayan Yellow Dwarf (MYD), Malayan Red Dwarf (MRD), Cameroon Red Dwarf (CRD), Pemba Red Dwarf (PRD), Rennell Island Tall (RIT), Polynesian Tall (PYT), Malayan Green Dwarf (MGD), the hybrid PB121. The resulting progenies are still under field trials at various locations within Tanzania. As a predominant variety in Tanzania and in East Africa, EAT is being improved for yield and disease resistance through selection. Selected materials are then used as seed sources for distribution to farmers.

### Reference

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