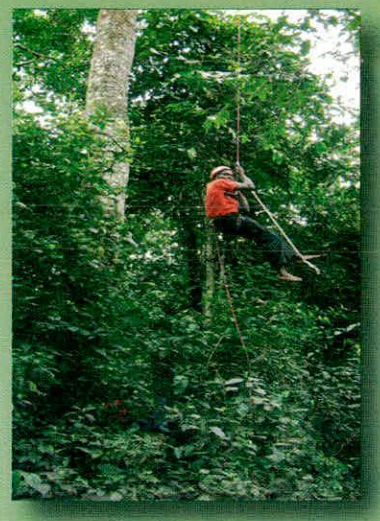
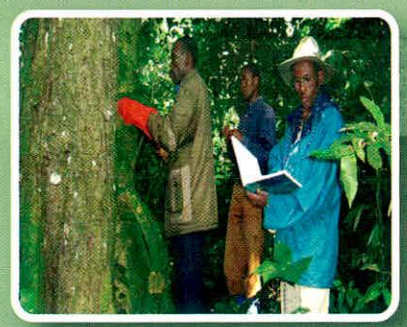
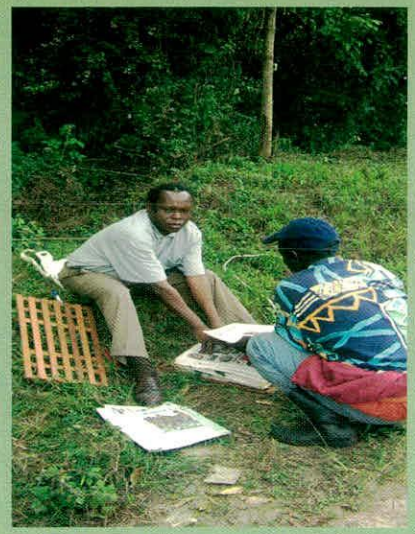


The results of the chemical and genetic analysis will show us which Prunus populations are superior in both chemical composition of the active ingredients and genetic diversity.

The superior populations will be used to establish (through grafting to reduce the flowering period) a Prunus mother garden of superior germplasm for availing high quality planting materials to farmers for on-farm propagation.



Collecting bark samples for chemical analysis



Scientists pressing voucher specimens

NaFORRI

Bioversity International

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NaFORRI

DEVELOPMENT OF STRATEGIES FOR THE CONSERVATION AND SUSTAINABLE USE OF PRUNUS AFRICANA TO IMPROVE THE LIVELIHOODS OF SMALL-SCALE FARMERS

NARO

MINISTRY OF AGRICULTURE, ANIMAL INDUSTRY AND FISHERIES (MAAIF) UGANDA

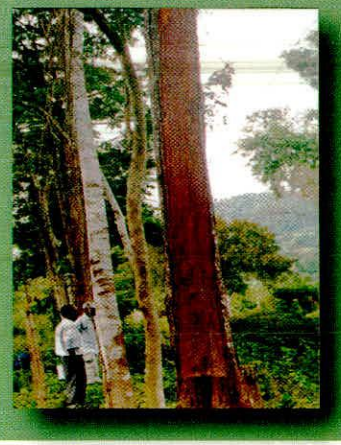
THE REPUBLIC OF UGANDA

Background

Prunus africana (Hook.) kalkman is a common forest tree in uganda.
Locally it is known by the names. Ntasesa (Luganda) or Ngwabuzito/ Gyabazitto (Luganda Buddu dialect); Omugote (Runyankole); Omumba (Rukiga); Ngoli (Rutoro/Rukonzho); Gulumati/ Chirama Gumwirumari/ Chirumandi/ Namwini (Lumasaba); and Oromoti (Kupsabiny). In Uganda it grows up to 40m high and at altitudinal ranges of 1000m to 2800m.

Traditionally, it has been used for its heavy duty timber in the construction industry, as well as on a smallscale as a medicine. Recently its commercial significance has increased due to the increased demand for its bark mainly in European markerts where it is used in the manufacture of medicine for treatment of prostate cancer and benign prostate hypertrophy, ailments commonly afflicating men aged over 40 years.

Although p. Africana bark harvesting has opened up economic opportunties for local people, recent surverys indicate that its current exploitation is unsustainable. Therefor there is need to develop alternative sources of P .africana bark preferably as a cash crop by small scale farmers.



Recommended method for debarking prunus without killing it.

To ensure sustainable harvesting, is recommended that de-barking is donein two longitudinal quarters (leaving not less than 50% of the bark) and not going beyond the first lateral branch. The bark grows allover and covers the entire tree, then the bark left during the first harvesting can be harvested during the second harvest and the process of bark re-growth continues.

Although there is an increase in demand for prunus seedlings by farmers in different parts of uganda to supply the much needed bark to the international market, the origin of the planting material is un known.

Preliminary research however, has proved that there is a variable distribution of the active ingredients (Docosanol and sistosterol) in the different populations in Uganda, as well as a variation in their genetic diversity.

The NationalForestry Resources Research Institute (NaFORRI) is implementing the Uganda chapter of a regional project aimed at establishing mother gardens to provide high quqlity planting stock of prunus africana for improved incomes and livelihoods of Ugandan framers

Project Objectives:

To improve incomes and livelihoods of rulal communities through planting of improved germplasm

To support national and trans-boundary in-situ and ex-situ conservation strategies by establishmenet of gene reserves

To strengthen capacities of nationals for management of forest genetic resources

Work done under the project

A reconnaissance survey has been completed in Kibale national park, Kalinzu Forest reserve, Bwindi Impenetrable national park, and Mabira forest reserve. Leaf and bark samples for chemical and gentic analysis have been collected and are currently being analysed at the Austrian Federal Research and Training Centre for Forests Department of genetics (BFW).