

Forestry-Fruit trees-Coffee-Cocoa & Tea

NARO

NATIONAL AGRICULTURAL RESEARCH ORGANIZATION

Coordinating, Overseeing and Guiding Agricultural Research in Uganda

National Agricultural Research Organisation
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Regional Centre of Excellence in Agricultural Research

e National Agricultural Research Organisation has the mandate to carry out applied nd basic research in Uganda, and generate, develop and disseminate technology and methods to enhance production and quality of agricultural produce. This has seen NARO at the forefront of measures geared towards the sustainable management of our crop and forestry resources in order to not only reap socio-economic benefits from them but also counter the day's environmental challenges of population pressure and climate change.

With coffee and tea still major sources of livelihood, NARO has helped introduce the following:

- Coffee varieties that are not only high yielding but also resistant to the traditional and emerging diseases, like coffee wilt, brown eye spot and red blister. This has been through good field management, and the use of resistant materials.
- Development of an Integrated Pest Management System that has seen, for example, the creation of a trap for the Black Coffee Twig Borer with the use of the 'Mugavu' tree as a shade tree.
- For tea, progress has been made on pest and disease resistance, value addition and product diversification with the introduction of more made teas alongside the orthodox/oolong. They include black, white/silver, green and brick teas. At present over 250 clones and seedling teas are being tested.

Our outreach activities with farmers include:

- Field activity training on aspects like tipping, pruning and pegging.
- Nursery establishment and management.
- Seed and seedling multiplication and production e.g. through the introduction of Screen Home Technology.
- Advice on Climate-Smart agriculture for sustainable production.
- Proper post-harvest handling.
- There was also experimentation with calcium bentonite for reduced moisture stress and higher crop yields. This was in the semi-arid cattle corridor districts of Katakwi, Nakasongola and Ngora.

NARO has also greatly engaged in the promotion of new crops, including temperate ones. This has seen us:

- Increase the availability of apple planting materials in the South-Western highlands, in tandem with the establishment and management of orchards.
- Introduce the Calliandra seed, geared towards the production of supplementary fodder.
- Develop bamboo as a commercial product.
- Involved in the management of cocoa diseases, including witches broom and pod rot.

Efforts in forestry were geared towards research for improved livelihoods, economic growth and natural resource conservation. In this aspect:

- There was introduction of the parasitic wasp, Psyllaephagus bliteus, to counter the spread of the red gum lerp syllid, which has been attacking eucalypts.
- There was also the development of clonal eucalypts.
- Development of hydrogels for improving tree establishment in moisture-stressed environments.
- The introduction of fertilizer trees e.g. sesbania sesban and faidherbia albida.
- Research into energy alternatives, and this included on leaf biomass production and the production of biogas (through fixed and floating digesters).
- There were forestry conservation efforts geared towards saving a number of species, including the Desert Date and the Acacia Senegal.

Also of importance were inroads in medicinal applications, including:

- o Medicinal plant introduction and cultivation e.g. with the Uganda greenheart tree (Warburgia ugandensis), for the treatment of malaria, candidiasis and other ailments.
- o Clinical trials to test the efficacy of an herbal extract for treating non-healing wounds, like those that affect diabetics.