

REGIONAL SEED CENTER HOLDS FIRST  
TRAINING WORKSHOP

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A regional tree seed centre, first reported in ISTF Newsletter 5(2), was set up in 1984 in Harare, Zimbabwe to serve the countries of eastern and southern Africa. It operates under the direction of the Research Division of the Zimbabwe Forestry Commission (ZFC) with financial support from the International Development Research Center (IDRC) of Canada. Membership by national governments in the work of the seed centre is informal. Its main function is to assist regional forest services overcome problems of obtaining quality tree seed of known origin, an important first step in planning national planting programs. Part of this assistance is also directed to supporting individual national seed centers by providing reference and technical literature and organizing training workshops.

Three Australian tree genera, Eucalyptus, Acacia and Casuarina, play an important role in afforestation programs, especially for the establishment of fuelwood plantations. Eucalypts in particular, have become extremely popular in Africa because many species on infertile soils and in low rainfall areas are capable of fast growth rates when compared with native species. However, in spite of the several hundred species from which to choose, perhaps no more than 15 are being planted on a large scale. Australia also has more than 600 species of acacias of which only a few have been introduced in trial plantings. These species along with the 40 or 50 Australian casuarinas can fix atmospheric nitrogen, thereby improving impoverished soils. There are, therefore, excellent opportunities to select the best possible species for national planting programs if more information were available.

Because of the increasing interest in these genera and their potential as the basic wood energy source in many countries, the first workshop of the new regional seed center was organized to provide training in taxonomy as well as to update and standardize seed collection, handling, testing and storage

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methodologies of Australian species.

Three internationally-known scientists from C.S.I.R.O's Division of Forest Research were supported by the Australian Center for International Agricultural Research (A.C.I.A.R.) to organize and present a series of seminars in a 5-day workshop at Harare, Zimbabwe in July, 1985. Foresters and national seed center personnel from Ethiopia, Kenya, Malawi, Mozambique, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe were sponsored by IDRC to attend. David Gwaze of the Zimbabwe Forestry Commission and Dr. Ron Ayling, IDRC forestry program officer in Nairobi, Kenya, were co-chairmen.

Participants presented brief overviews of the current and potential importance of Australian species in their national planting programs. The introduction on a limited scale of Australian species, especially the eucalypts, began in parts of eastern and southern Africa in the early 1900's and even earlier in some countries, Eucalyptus globulus in Ethiopia around 1895 for example, and E. grandis in the early 1890's in Zimbabwe. A number of species were introduced into Kenya in the mid-1900's to provide firewood for the Kenya-Uganda railroad.

The identification of Australian species in overseas plantations is not an easy task particularly for stands of uncertain history. Plantations may originate from seed collected from plantations of a number of species, several or all of which may hybridize. Furthermore, according to Ian Brooker, a CSIRO scientist from Perth, large plantations may sometimes be derived from a small natural stand whose seed may perform in various ways differently from the normal. He gave the example of apparent terminal inflorescences of some plantation-grown E. camaulensis compared with normal axillary bud and fruit arrangements. In spite of the complexity of the subject, he treated participants to a series of clear, concise lectures, and later on several field trips, practiced their newly acquired dendrological skills.

A point made by many national delegates was the need to develop a systematic approach to species selection. Doug Boland and Dr. Ken Eldridge from CSIRO-Canberra noted that it may take decades to correct mistakes, hence it is important to obtain quality seed from a broad genetic base to initiate species trials. The choice of species may become easier in future with the development of models based on natural range parameters for growth and used to determine equivalent environmental sites overseas. Workshop delegates concluded that species trials and eventually seed banks might be established with C.S.I.R.O. and A.C.I.A.R. assistance in several countries participating in the work of the regional seed center. It might also be possible that provenance collections of species of special interest could be initiated, patterned after the highly successful work of the Zimbabwe Forestry Commission with E. grandis, E. camaldulensis and E. tereticornis.

