

## Plant Genetic Resources - A Key To More Food

The study of plant genetic resources enables researchers to understand and draw on the immense biological diversity in domesticated and wild varieties of many plants. That research helps produce new crop varieties with improved yields and/or the ability to better withstand pests and extremes of weather.

This work is an international challenge. The genetic traits needed to create an improved variety of rice or wheat may come from many sources around the world. This underlines the value of multilateral approaches to the sustainable use of these resources.

The International Plant Genetic Resources Institute (IPGRI) is a network of base collections of major food crops within which Canada is responsible for preserving the world base collections for barley and oats. Canada also maintains the duplicate base collections for pearl millet, a staple in much of Africa, and Brassica oilseeds, such as canola.

These collections of genetic resources also make international co-operation simpler by permitting scientists to pursue research and breeding.

Farmers in Burkina Faso are seeing the benefits of Canadian co-operation on plant genetic resources. Didier Balma, a Burkinabe PhD student at Laval University in Quebec, used the pearl millet collection in Canada to find varieties that had disappeared from his country. He used repatriated varieties that now enable farmers in his homeland to improve their harvests.

Canada believes in building on that kind of co-operation. The development of a global strategy for co-operation in this field should be based on a process for exchanging information and genetic material freely. This would enable the world to benefit from an important element of its biodiversity.



## Canada Bids for Biodiversity Secretariat

Canada has proposed Montreal as the site for the Permanent Secretariat for the Convention on Biological Diversity.

The Secretariat supports the work of the convention that was finalized at the 1992 Earth Summit in Rio de Janeiro. With the co-operation of the Quebec government and the City of Montreal, Canada is offering a substantial package of benefits for the new secretariat.

For example, the federal government has pledged to provide US\$4 million over five

years to support the work of the Secretariat. The Secretariat would also benefit from free office space during its first five years, as well as contributions in cash, furnishings and equipment.

Montreal has become home to about 45 international organizations. The number has grown quickly because of low operating costs, high quality of life and convenience to other major cities.

The site will be chosen at the next Conference of the Parties to the Convention to be held in Jakarta in November.

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## Facts and Stats

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From earliest times, people have made use of extracts from wild plants and animals. Nowadays, when we go to the pharmacy to have a prescription filled, few of us think about the connection between our medicine and biodiversity. For instance, did you know that:

- ☛ an active ingredient in aspirin comes from the white willow;
- ☛ the rosy Periwinkle, a flower found in Madagascar, could help treat childhood leukemia;
- ☛ bee venom could be used to treat arthritis;
- ☛ the Purple Foxglove, a flower native to Western Europe and Morocco, helps treat heart disease;
- ☛ several algae have antibiotic and anti-carcinogenic properties;

- ☛ corals, sea anemones, sponges and molluscs all include species exhibiting antibiotic activity;
- ☛ of the 134 native tree species of Canada, about one third have one or more recorded pharmaceutical or medical uses ascribed by Aboriginal, folk or modern medical sources;
- ☛ the porcupine fish and the puffer fish have yielded substances that ease the pain and discomfort of those with terminal cancer;
- ☛ research on black bears during hibernation has provided clues to curing human kidney disease.

Source: *Canadian Biodiversity Strategy, Report of the Biodiversity Working Group, and Biodiversity, A Guidebook for Canadian Businesses, November 1994.*

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