

ECOVAR DEVELOPMENT IN WESTERN CANADA

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Ducks Unlimited Canada

Ecovar Development Program

Native plant species provide attractive wildlife cover. Once established, native species are long-lived, self-propagating and inexpensive to maintain. Revegetation using native species is consistent with DU's philosophy of promoting biodiversity.

Ducks Unlimited launched Canada's first ecovar program in 1991. The goal is to obtain, through the development of ecovars, adequate commercial seed supplies of native species to meet the growing demand for reclamation and revegetation.

Cultivars and Ecovars

A cultivar (cultivated variety) is a group of plants selectively bred over many plant generations to achieve uniformity and enhance production. Most of the current agricultural crops grown, including tame grasses, are cultivars.

An ecovar (ecological variety) is an intermediate step between the true native population and a cultivar. Ecovars are the progeny of native plants gathered from their area of adaptation and contain the natural genetic diversity of the species. The ecovar selection process is short. Plants are gathered and seed sent for commercial production in as little as four years.

The Selection Process

Plants are gathered from sites across western Canada within the natural eco-region of each species. The plants are then transplanted or seeded at several locations within the eco-region. Agronomic and seed production data is collected to describe the population and discard plants unsuitable for an ecovar.

The plants are established in a pattern that allows for the natural pollination pattern of the species which maintains the biodiversity within the population. The main criterion for the plants included in the ecovar is to be able to produce sufficient viable seed to be economical for commercial seed growers.

Care is taken to maintain most, if not all, of the characteristics of the native species. Therefore, other traits such as biomass production is a much less important criterion to select plants for ecovar development. The concern is more to maintain a biologically diverse ecology than with increasing forage production.

Seed produced from the plants within the population becomes the ecovar for that species and is released to seed growers to supply reclamation and revegetation needs.

Partnerships Make It Work

Monsanto became the founding sponsor of the ecovar development program with their generous contribution of \$100,000 in 1993.

Agriculture and Agri-Food Canada participates in the program at research facilities at Brandon, Manitoba; Swift Current and Saskatoon, Saskatchewan and at Lethbridge, Alberta. Development of ecovar shrubs is taking place at the Prairie Farm Rehabilitation Administration's shelter belt centre at Indian Head, Saskatchewan.

The US. Natural Resources Conservation Service, the University of Manitoba in Winnipeg and University of Saskatchewan in Saskatoon, are also partners in the ecovar development program. Ecovar development is also underway at the Alberta Environmental Centre at Vegreville.

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Ecovars Currently Under Production

The following list shows ecovars which are currently under development from Canadian collections.

Spangletop
June Grass
Little Bluestem
Needle-and-Thread
Porcupine Grass
Green Needlegrass
Plains Rough Fescue
Blue Grama
Prairie Sandreed
Prairie Cordgrass
Awned Wheatgrass
Western Wheatgrass
Northern Wheatgrass
Purple Prairie Clover
White Prairie Clover
Winterfat
Snowberry
Woods Rose
Shrubby Cinquefoil
American Hedysarum
Reed Grass
Canada Wildrye
Hookers Oatgrass
American Vetch
Indian Rice Grass



CANADIAN LAND RECLAMATION ASSOCIATION

ASSOCIATION CANADIENNE DE RÉHABILITATION DES SITES DÉGRADÉS

*Conservation and Reclamation:
An Ecosystem Perspective*

Canadian Land Reclamation Association's
21st Annual Meeting

Calgary, Alberta
September 18-20, 1996

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