

Dorena Genetic Resource Center

Background:

Dorena Genetic Resource Center, located near Cottage Grove, Oregon, is unique to the USDA Forest Service. Dorena is a regional center providing forest genetic services to national forests and cooperators in Oregon and Washington. The Center offers a bridge between research and production, and plays a key role in the Region's genetic resource program.

Dorena GRC is administratively attached to the Umpqua National Forest.

From the Center, a resident team of geneticists, foresters, associated specialists, and highly skilled technicians provide many diverse services with a focus on ecosystem management and forest health. Our cooperators include geneticists, pathologists, and other resource professionals with the Forest Service, BLM, and other organizations in Oregon, Washington and elsewhere.

Dorena is especially active in its work relating to non-native invasive pathogens. Both the February 6, 2004, draft of the National Invasive Species Strategy and the National White Pine Blister Rust Report (2003; <http://www.fs.fed.us/foresthealth/pubsindex.shtml>) stress the importance of genetic resistance in dealing with non-native invasive pathogens.

A Steering Committee was established in 2002 to help provide guidance on budget and program activities. This committee includes both Forest Service (RO and SO level) and cooperators (BLM, Oregon Dept. of Forestry) and meets once or twice a year.

Program Highlights:

Dorena works with others to help ensure biodiversity through restoring and sustaining five-needle pines in ecosystems by developing blister rust disease-resistant pine. Seed orchards developed using parents from the resistance program are the principal source of rust-resistant seed for all land owners in Oregon and Washington.

Dorena is developing a highly progressive, forest tree resistance-breeding program for Port-Orford-cedar. Containerized seed orchards of populations resistant to the non-native pathogen, *Phytophthora lateralis*, have been established at Dorena and seed is being produced for use in restoration and reforestation by federal and non-federal landowners.

Raising awareness to the decline of whitebark pine in high elevation ecosystems has been a high priority for Dorena.

The Region's genetic resource seed stores are managed at Dorena; these stores represent a tremendous genetic resource from natural stands.

As a training and coordination center to the national tree climbing program, Dorena provides annual certification training, hosts the national climbing website (<http://www.fs.fed.us/treeclimbing/>) and serves as a clearinghouse for national issues.

Dorena works with the international community establishing cooperative projects with China, Germany, and Canada relating to invasive species; hosting meetings relating to five-needle pines and blister rust resistance; and presenting at meetings.

Dorena personnel have provided genetic and disease resistance expertise to other projects outside of Region 6 (such as *Acacia koa* and koa wilt disease in Hawaii), served as invited speakers at conferences, and have served as reviewers for journals such as Theoretical and Applied Genetics, and Canadian Journal of Plant Pathology.

Dorena is developing propagation protocol on several northwest native grass, forb, and shrub species for restoration projects such as Federal Highway road projects and forests with areas of ground disturbance.

Providing education on forest health, genetics and biodiversity is an integral part of the Center's program. Through tours, a website (<http://www.fs.fed.us/r6/dorena/>), posters and presentations information is disseminated to students, professional and public groups.

Cooperators/Stakeholders:

- ❑ Regions 5 & 6 (FS)
- ❑ BLM
- ❑ Oregon Dept. of Forestry
- ❑ Quinalt Indian Nation
- ❑ Josephine County
- ❑ Bangor Naval Station
- ❑ British Columbia Forest Research
- ❑ Moore Mills Co.
- ❑ PSW, PNW, RM Research Stations
- ❑ Oregon State University
- ❑ National Park Service
- ❑ Washington DNR
- ❑ Confederated Tribes of Warm Springs
- ❑ Coos County
- ❑ Canadian Forest Service
- ❑ Plum Creek Corp.
- ❑ Menasha Corporation
- ❑ various non-industrial private landowners

Contact Person:

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