



# Montana DNR Forestry Division

## FORESTRY ASSISTANCE

Biomass Utilization

Forest Pest Management

Forest Practices

Forest Stewardship

Montana Conservation  
Seedling Nursery

Urban and Community  
Forestry

# Montana Conservation Seedling Nursery

*Providing Locally Adapted  
Seedlings for Conservation  
Practices in Montana*



**Montana Department of Natural Resources and Conservation  
Forestry Division  
Forestry Assistance Bureau  
Montana Conservation Seedling Nursery**

**D**NRC's Conservation Seedling Nursery produces and distributes seedlings for conservation plantings such as fire and logging reforestation, farmstead windbreaks, stream stabilization, wildlife habitat, and other conservation uses. The nursery provides seedlings to private landowners, state and federal agencies, tribal agencies, Conservation Districts, and conservation organizations. Over 906 landowners in 52 counties planted state-grown seedlings in FY 2008. The nursery produces seedlings of 67 species of shrubs, trees, and grasses, and continually works to update species selection and to develop plant materials adapted to Montana environments. DNRC nursery plants are produced strictly for conservation uses, and are not sold for ornamental or landscaping purposes.

**N**ursery staff members work closely with county Conservation Districts and Montana State University Extension Service offices to assist Montana landowners in implementing planting programs. Nursery staff members also produce educational materials to help cooperators in tasks such as the design of conservation plantings, seedling handling and planting, and subsequent care.

**T**he nursery is a proprietary fund program. All nursery activities are funded by revenue generated from the sale of seedlings. Operating costs are minimized to ensure an affordable supply of high quality, locally adapted seedlings for Montana landowners.

/// **Goal** ///

Produce high quality, locally adapted, source identified seedlings for use in conservation practices in Montana.

**Affordable Seedlings Adapted to Montana Environments Contribute to the Success of Conservation Projects**

**T**he Montana Conservation Seedling Nursery is the only nursery in the country whose sole focus is the production of seedlings specifically suited for conservation practices in Montana. Montana environments can be variable and harsh; seedlings that are adapted to local environmental conditions have high survival and growth rates, increasing the likelihood of success for conservation projects.

**W**hether the customer is a state agency seeking to reforest hundreds of acres, a conservation group working on a stream restoration project, or a rancher planting a shelterbelt, all hope to see their investment in time, money, and resources produce successful conservation results. The DNRC nursery strives to develop and deliver the best plant materials possible to help attain their customers' goals.

**Accomplishments  
FY 2008**

|  |         |
|--|---------|
| Conservation seedlings delivered                   | 944,050 |
| Trust Land Management Division seedlings delivered | 67,820  |
| Number of landowners served                        | 906     |



## Seedling Types Available

**D**NRC's nursery produces 67 species and 217 varieties, stock types, or seed sources of grass, shrub, deciduous tree, and coniferous tree seedlings. The nursery regularly updates its selection of species and varieties to reflect changing conservation requirements in Montana and as new and improved varieties are developed. Production of larger container types was recently begun in response to requests from organizations installing riparian habitat improvements.



*Left: Containerized seedling  
Right: Bundle of bareroot seedlings*

## Continuous Improvement of Nursery Stock

Many of the DNRC nursery's seedlings are produced from seed derived from the Montana Interagency Tree and Shrub Improvement Study (MITOSIS). The study was a cooperative effort to evaluate the performance of various species of plants in established Northern Great Plains plantings. The selected plantings were evaluated for over 10 years and the best-performing plants were chosen for seed orchard establishment at the nursery. The nursery's on-site orchards provide seeds for many shrub and tree species. The quality of available stock is improved through continued development of these seed production stands.

Nursery staff members also work closely with the Natural Resource Conservation Service's Bridger Plant Materials Center to develop plants specifically adapted to Montana environments. Work includes developing plant varieties that are adapted to thrive in a wide range of environmental conditions, as well as varieties that are adapted to very specific environmental conditions.

## Seedling Production and Distribution

**T**he nursery currently produces 310,000 bareroot and 776,000 containerized seedlings annually, and has the capacity to produce an additional 1,000,000 bareroot seedlings annually. Seedlings that are ready for planting are harvested, packaged, and transported to 31 distribution centers around the state, typically Conservation District or Extension Service offices. The nursery staff continually researches and develops cost-efficient nursery production practices.



*Frost protection fabric increases seed germination.*



*Greenhouse seedling production.*



*Beds of bareroot deciduous tree seedlings.*



*Harvesting bareroot spruce seedlings for distribution.*

## Educational Outreach and Technical Assistance

Nursery staff members provide technical assistance to help landowners with conservation planting programs. Staff members assist landowners with tasks such as species selection, planting design, proper site preparation, long-term seedling care, and pest identification and treatment. The nursery also provides referrals to other natural resource agencies and to private consultants who can help landowners complete their planting programs. When possible, staff members try to provide a referral to a specialist in the landowner's area who can provide on-the-ground assistance. The nursery has a strong working relationship with the Montana Nursery and Landscape Association, and cooperates with the association to provide technical assistance to private nurseries and strengthen the industry.

## Montana Conservation Seedling Nursery Seedling Use in FY 2008

| Conservation Practice | Number of Seedlings | Number of Landowners |
|-----------------------|---------------------|----------------------|
| Reforestation         | 544,372             | 112                  |
| Wildlife habitat      | 61,133              | 66                   |
| Windbreaks            | 154,330             | 504                  |
| Shelterbelts          | 33,425              | 84                   |
| Stream stabilization  | 88,637              | 39                   |
| All other uses        | 62,153              | 101                  |
| <b>TOTAL</b>          | <b>944,050</b>      | <b>906</b>           |

The nursery tries to closely match its annual production of seedlings to expected demand, and is prepared and ready to respond with increased production when higher levels of seedling demand are anticipated, such as after major wildfires.

## Examples of Conservation Plantings with DNRC Nursery Seedlings

### Upper Clark Fork Basin Restoration: Silver Bow Creek

The Montana Department of Justice, Natural Resource Damage Program is responsible for oversight of the restoration and replacement of public resources damaged by decades of mining activity in the Upper Clark Fork Basin. This restoration is funded through a 1999 partial settlement with Atlantic Richfield Co. Restoration efforts target improving fish, wildlife, vegetation, groundwater, rivers and streams, and the public's use and enjoyment of these natural resources. A large component of the restoration efforts is occurring along the length of Silver Bow Creek through the removal of contaminated tailings and the construction of a new riparian system. The nursery is producing seedlings for the revegetation of this restored system.



### Wildlife Habitat: Pheasants Forever

Pheasants Forever is a non-profit organization dedicated to the protection and enhancement of habitat for pheasants and other wildlife. The organization has local chapters in Montana that work with private landowners on habitat protection, restoration, and improvement projects. Projects include using seedlings from the DNRC nursery to plant farm shelterbelts that, when mature, will provide woody cover and food for pheasants and other wildlife.



### Reforestation: DNRC Trust Land Management Division

Each year the nursery produces a large number of tree seedlings for DNRC's Trust Land Management Division (TLMD), for use in reforestation after timber harvests or fires on Montana State Trust Lands. The TLMD provides seeds to the nursery, which uses the seeds to grow seedlings adapted to the specific conditions at the reforestation sites.



### Additional Examples of Conservation Plantings:

- Fisheries habitat improvements on private lands in the Blackfoot Valley with the Nature Conservancy and Blackfoot Challenge
- Fire restoration efforts on the Northern Cheyenne Reservation, Bitterroot Valley, Gallatin Valley, and many other areas across Montana
- Arctic Grayling recovery efforts in the Bighole Valley with the U.S. Fish and Wildlife Service and in the Centennial Valley with the Nature Conservancy

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