



PLANT MATERIALS TODAY

A Quarterly Newsletter of the Montana-Wyoming Plant Materials Program

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This is a quarterly field office newsletter to transfer plant materials technology, services, and needs. The plant materials personnel will be featuring short articles on project results, new cultivar releases and establishment techniques, seed collection, and field planting needs, etc. All offices are encouraged to submit articles about plant material-related activities relative to plant performance, adaptation, cultural and management techniques, etc.

Plant Materials Training Session a Success

On June 29 through noon July 1, the PMC sponsored a training session for Montana NRCS employees. The class was well attended and 15 participants from across the state received instruction from State Office specialists and the staff at the Center. Technical subjects included seedbed preparation; seeding methods; drill calibration; plant and cultivar use; windbreak planning, design and establishment; and transplanting and management strategies for woody species. The different classes of seed certification and field office responsibilities to the Plant Materials program were discussed.

Thanks to all the students for their terrific participation and to Ken Kaul, Larry Holzworth, Bob Logar, Rick Fasching, and Leslie Marty for their contributions. Many thanks to Gay Copenhaver and Renae Grantier for assembly and timely completion of the weighty "monster" training handbook!

President Signs Executive Order on Invasive Species

President Clinton released an Executive Order (EO) on Invasive Species on February 3, 1999. The five-page EO directed Federal Agencies to prevent, control, and minimize the economic, ecological, and human health impact of invasive plant and animal species. The EO begins with inclusion of ten definitions, and the following three are important due to the potential impact on the function and operation of the NRCS:

- "Alien species" means, with respect to a particular ecosystem, any species that is not native to that ecosystem. Exotic, non-native, non-indigenous, and introduced species are synonyms for alien species.
- "Invasive species" means an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

For example, noxious weeds are extremely invasive species.

- "Native species" means, with respect to a particular ecosystem, a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem.

A presidential-appointed Invasive Species Council (ISC) was established to provide national leadership, and to oversee the implementation of the EO. The ISC will be responsible for the development of a national Invasive Species Management Plan and associated guidelines. The first phase of the Management Plan will recommend performance-based goals and objectives with specific measures of success for efforts by Federal agencies concerning invasive species.

The strength of the Plant Materials Program is selecting and testing plant materials to solve conservation problems and development of techniques for their culture, establishment, and management. Evaluation trials of native and non-native species, in cooperation with partners and stakeholders, has resulted in effective resource management systems. If the choice of plant materials for testing and application becomes restricted, there will be many questions before us:

- Can we continue to work with non-native species?
- What about those already recommended in the Technical Guides and other references?
- Who will be responsible for monitoring areas previously planted in introduced species?
- How will local, indigenous, native plant material be collected, processed, and produced?
- Who will pay for the high cost of producing and planting such material?

Many of these questions will eventually be answered as the Management Plan unfolds. Stay tuned for future developments.

Susan R. Winslow

"Source Identified"--A New Option for Certified Seed

In the past, the only commercially available seed was either a released cultivar or native harvest. The

cultivar material could be made available as **certified** or **registered** seed, with a guarantee of source of origin, specific purity and germination standards, and limits on weeds and other crops. Native harvested material carried no guarantee of source of origin and less than 2% weed seed was required for sale in of Montana or Wyoming. Now both Montana and Wyoming Seed Certification agencies are recognizing the **Source Identified** seed certification class. This is a process whereby the respective state seed certification agency documents the source of origin by inspecting the native seed harvest site just prior to harvest. The inspector documents approximate latitude, longitude, elevation, and associated plant community. This is all done without revealing the actual whereabouts of the collection site for those who wish to keep their collections sites anonymous. Upon cleaning, the certifying agency will document seed quality (purity, germination, and other crops or weeds). This certification method also allows seed from a native harvest to be planted on a farm and a second generation produced as **Source Identified** certified seed. This certification process adds extra value to native harvested seed because of the documented origin and quality. The ultimate consumers of this type of native harvest are people who want not only native seed, but seed that is indigenous to their area of use. This will include such government agencies as Forest Service, Bureau of Land Management, and U.S. Fish and Wildlife, as well as private reclamationists (coal mines, hard-rock mines, pipelines, etc.), and State Highway Departments. With exceptional soil moisture in eastern and northern Montana, this year there is a lot of interest in making native seed harvests. It may be of benefit to these native seed harvesters to utilize the **Source Identified** seed certification opportunities to realize a better return on their efforts. The certification process can be initiated by contacting your state seed certification agency [Montana (406) 994 5121 or Wyoming (307) 754-9815].

Mark Majerus

Woody Plant Selection Tools

Selecting a woody plant for a particular site or use depends on many factors. There are, however, some tools available to assist with this process. The simplest guide for choosing plants for a landscape situation is the USDA Hardiness Zone map. The map is based on the long-term average minimum winter temperatures that correlate with a plant's winter hardiness in a given area. The map only indicates the minimum temperature that can be expected in a given geographic area. You'll need to reference horticultural or forestry literature to determine the hardiness zone rating of a particular plant. If a plant is Zone 3 hardy, it is likely to do well in warmer zones, such as Zones 4 and 5, although at some point it will become too warm for it to survive. If you cannot find the hardiness of a particular plant, you can sometimes make generalizations based on

the genus level or related species, but that's only a crude tool. There are limitations with this approach resulting from microsite conditions that are not accounted for by this system. The map actually works best at depicting what will probably not grow in a particular place. It should be noted that there are other hardiness zone maps developed by arboreta, universities, and foreign countries that are not compatible with the USDA system. Remember, landscape recommendations generally assume a cultivated situation with good soil moisture and nutrition. Do not assume that a landscape recommendation for a Zone 3 hardy plant means that it will necessarily do well in a dryland windbreak situation in Zone 3. This is where other, more sophisticated tools are needed.

In Montana, we have two handy tools to help us select woody plants for conservation plantings, especially windbreak systems. The first is the Plant Adaptation Zones map in Windbreaks for Montana that generally follows Major Land Resource Areas (MLRAs), and hence, represents relatively uniform environmental conditions throughout the area, or the environmental relationships are consistent in regard to changes in aspect and elevation. The recommendations only apply to valleys and foothills within mountainous areas of the state. Specific microsite information, i.e., salinity, precipitation, shade tolerance, etc., can be found in tables in the back of the publication. The second tool is the Conservation Tree/Shrub Suitability Groups (CTSG) guide (formerly Windbreak Suitability Groups). This guide is currently being revised by Bob Logar, SSF, and will be published in Section II of the FOTG under Soil and Site Information-Windbreak Interpretation subsection. This system utilizes both the Plant Adaptation Zones map for Montana and CTSG's based on soil properties and site conditions. This is a two-tiered system with broad Group criteria and more detailed Subgroup criteria based on national parameters. To use this guide, field office personnel will need to first determine in which CTSG a given planting site falls. These CTSGs are based on a soil mapping unit that is present at the site. These CTSGs can be generated by the National Soil Information System (NASIS) available to the resource soil scientist. Future soil surveys will also list these CTSGs for each map unit.

The last and best tool for selecting woody plants is real-world experience in your service area. Take a visual inventory of what has or has not performed well in your area. Initially, try new cultivars or species on a small, test scale to determine their hardiness. If you are unfamiliar with the planting site, make a visit and assess as many environmental factors as possible before making a recommendation. If you're still not sure, call the SSF, PMC, PM Specialist, Extension Horticulturist, or local County Extension agent.

Joe Scianna and Bob Logar

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