

Regional Native Plant Strategies

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Abstract—Because of increasing public interest in native plants, regional groups have been cooperating to develop native species. The Federal Native Plants Initiative was formed in 1994 to coordinate and encourage the development and use of native plants. The program they developed includes public involvement, organizational structure, technical work groups, implementation plans, and followup. The implementation plan addresses native seed development by private industry, grower contracts, and agency cooperation. Public and private agencies can work together during the planning stages and provide the technical information necessary for development of native plant materials for a given region.

Public agencies were directed by Presidential Executive Memorandum in 1994 to use more regional native plants and to implement landscape practices that conserve water and prevent pollution on Federal projects. The agencies have developed or are developing policies and procedures to encourage the use of native plants.

Programs should serve the wide range of expectations of land managers and provide a variety of native plant species and ecotypes for reseeding and restoration projects. The Northern Great Plains Native Plant Committee, which has been functioning for 4 years, includes members from North and South Dakota and parts of Montana, Wyoming, Nebraska, and Canada. The Northern Great Plains Committee meets semiannually, conducts surveys, and publishes newsletters, brochures, and technical information.

Over the past 10 years the Natural Resource Conservation Service and the National Park Service have been cooperating on a plant materials program for development, testing, and establishment of native species on disturbed sites in National Park Service units. The materials tested and technology developed will apply to areas beyond the Parks. Over 700 new indigenous ecotypes have been collected and are now being tested or reproduced.

Other Federal land management and conservation agencies and private industry are interested in the development of technologies and are seeking sources of local native plant species. The Natural Resource Conservation Service plant materials program selection criteria include establishment, vigor, growth, production, broad adaptation, and commer-

cial potential. The National Park Service plant increase program emphasizes local gene pool considerations, practical technology, adaptation, and cost effectiveness. Preservation of native plant genetics in natural ecosystems is a high priority in the National Park Service along with the restoration of native vegetation to areas that have been disturbed. Where disturbance is severe, restoration may have to begin at a lower successional stage, and pioneer species may have to be considered.

The Forest Service and the Bureau of Land Management have begun programs to develop native plants and technology for their use on public land. The military and Federal Highways Administration are contributing resources to the effort. Cooperation among agencies and private industry will be beneficial to the development of native plants and will allow their use to become more cost effective.

Issues

Scale and Magnitude

The National Park Service average seeding is 3 to 60 acres, but forest fires increase the demand for commercial native plant seeds each year. Forest fires in New Mexico and Arizona during the last 10 years have ranged from 58,600 acres in 1991 to 642,800 acres in 1994. The Bureau of Land Management is cooperating on a project in the Snake River plains to reseed 3 to 8 million acres of deteriorated rangeland. The Conservation Reserve Program and associated government programs reseeded millions of acres during the last 10 years. Each year, United States Army training maneuvers disturb thousands of acres that require revegetation.

Resources and Funding

The cost of restoration with native plants can be limiting. Project cost can vary from less than \$300 per acre to several thousands of dollars per acre, depending of the restoration requirements and gene pool restrictions. Funds can be concentrated on a precise job in a small area, or the same amount can be spent on a less intensive effort over a larger area. What are the impacts of these decisions on the overall ecosystem of a region?

Diversity

Revegetation should include as much natural diversity as possible, but cost, technology, and time constraints must be considered. The size of the area to be revegetated is also a major factor.

In: Holzworth, Larry K.; Brown, Ray W., comps. 1999. Revegetation with native species: proceedings, 1997 Society for Ecological Restoration annual meeting; 1997 November 12–15; Ft. Lauderdale, FL. Proc. RMRS-P-8. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

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Gene Pool Considerations

Some species and ecotypes are easily adaptable, while others require specific site conditions. Availability of seed is usually more restricted, and seeds are more costly when the size and location of a particular ecotype is limited. Disturbance can alter site characteristics, but natural selection is an ongoing process. It may be possible to improve diversity and natural selection with a species on a new site.

Time Restraints

Native species often do not produce good seed every year. The season for native seed ripening and collecting varies from year to year. It takes at least 3 years to produce seed from most native collections. Annual funding and budgeting are not conducive to long-term contracting for seed production.

Proposal

The Federal Native Plants Initiative was established by a Memorandum of Understanding in 1994. It was organized to coordinate and encourage the development and use of regional native plants and now includes nine Federal agencies and approximately 70 non-Federal cooperating organizations. The Initiative Committee identifies priority conservation needs for native plants and their habitats and coordinates programs to address these needs. The Federal Native Plants Initiative Committee identified the following goals:

1. Establish common priorities and direction.
2. Share agency expertise and resources.
3. Support cooperative efforts.
4. Develop consistent scientific methodology.
5. Encourage collaborative training programs.
6. Coordinate public education and outreach efforts.
7. Support ecosystem management initiatives.

A draft proposal was put together by the Federal Native Plants Initiative Committee to aid Federal agencies in the development of regional native plant sources. The proposal outlines a way in which the Committee, working with agencies, could facilitate a cost-effective program to develop native plants for restoration and revegetation projects in a bioregion.

Outline for Regional Native Plant Development

The Federal Native Plant Initiative Committee would:

1. Provide general overall direction, coordination, and support through respective agencies and organizations.
2. Identify and select one or more bioregions for pilot projects for implementation. The projects should be significant (1,000 or more acres per year) and have a long-term (4 to 5 years) commitment by one or more agencies.
3. Identify and contact interest groups in the proposed project area.
4. Facilitate the selection of a lead agency to initiate and coordinate activities at the bioregional level.

5. Select a meeting facilitator to lead general planning meetings, maintain the group focus, resolve conflicts, and ensure consensus.

The lead agency (agency, task force, or formal group) would:

1. Organize an initial informational meeting and identify the objectives for the bioregion-region.
2. Form a general committee from a group of the interested participants to assist the lead agency in realizing the specific objectives of the bioregion.
3. Organize a technical work group (specialists in the field) to assemble technical information and make recommendations to the general committee.
4. With the help of the general committee, develop specific arrangements, agreements, contracts, letters of intent, and memoranda of understanding with group involvement. Agreements should cover seed collection or source, development or increase, storage, and nursery production, and should establish target amounts.

The technical work groups would:

1. Assemble specific information for the general committee, including:
 - a. resources available (technology, plant species, facilities, commercial resources),
 - b. agency projects and funding sources, and
 - c. plant materials needs and estimated amounts by species.
2. Assemble species adaptation information by hardness zones, precipitation zones, vegetation, or bioregions (also information specific to the bioregion, such as species elevational range by ecotype).
3. Develop specific plans and logistics for making plant materials available, considering collection sites, reproduction technology, diversity, gene pool, processing, and storage characteristics; consider the advantages and disadvantages of self-regeneration, salvage, an increase program, and commercially available seeds.
4. Develop a species list and make recommendations on methods for developing seeds and plants (species by species).

Implementation:

1. Assemble project species list, estimate revegetation acreage, and propose schedule by vegetation zones or other grouping.
2. Develop technology for seed and plant production.
3. Use Association of Seed Certifying Agencies Guidelines for Wild Land Collected Seed program to maintain uniform quality control.
4. Develop cultural and management technology for successful establishment.
5. Review technical recommendations and the list of plant species to select the best methods and option(s) for allocation of resources to meet project objectives.
6. Maintain followup with informational and organizational meetings and evaluate long-term cost effectiveness relative to ecological values and objectives.
7. Ensure technical oversight of seed and plant production operations to maintain quality standards.
8. Coordinate with private companies and supporting agencies and groups on progress (this responsibility could be shared by agencies).

Summary

Regional groups can effectively develop local native plant sources. Several regional groups are already cooperating in the development of native plant species. A regional

approach has the advantage of bringing agency and private industry resources together to provide funding, support, and direction. Through an exchange of information and a cooperative approach, the availability of a wide variety of native plants can be increased in a cost-effective manner.