Progress and Vision for Large Scale Native Seed and Plant Materials Market

2007

Presented to:
NACD Forest Resource Committee
&
NASF Resource Management Committee

By:
Janet Lynn
Northern Arizona University
Ecological Monitoring & Assessment Program & Foundation
The EMA Program & Foundation

A partnership between Northern Arizona University and Babbitt Ranches

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A foundation for use-inspired research and education
The EMA Program Mission

To assist landowners and land managers by providing research and education to support land stewardship decisions in the American Southwest.
Typical Program / Project Features

- Coordinate research and education
- Develop inter- and multi-disciplinary teams
- Create applied student opportunities
- Provide outreach and education
Native Plants and Seeds

Goal
Development of a source of native plant and seed materials for revegetation projects.
Native Plants and Seeds

Overview

• Current Initiatives

• New Programs on the Colorado Plateau
A multi-state, collaborative research project was initiated in 2001 to evaluate, select, and increase native seed production in the Great Basin.
The Uncompahgre Plateau Native Plant Program

**GOAL:**
To facilitate the collection and propagation of species native to the Colorado Plateau for use in the restoration of native plant communities on public and private lands.
The Uncompahgre Plateau Native Plant Program

UP Country

- 1.5 million acres…
- Private 387,552 acres
- Public 1,126,359 acres
  - USFS 544,777 acres
  - BLM 571,992 acres
  - STATE 9,590 acres
UP Partners and Cooperators

- US Forest Service – Region 2 & 4
- USDI BLM – CO & UT State Offices
- CO Division of Wildlife
- UT Division of Wildlife Resources
- Public Lands Partnership: representing a broad base of public and private interests.
- Western Area Power Administration
- Tri-State Generation and Transmission Association, Inc.,
- Universities – CSU, BYU, USU
- The Nature Conservancy
- Lone Peak Nursery, UT
Field Research Locations

- Snow College- Snow Field Station, UT
- Brigham Young Univ. -Spanish Fork Farm, UT
- Utah State Univ. -Nephi Farm, UT
- Utah DWR-Fountain Green Facility, UT
- Colorado DOW-Billy Creek and Dove Creek Facility, CO
- FS Lone Peak Nursery, UT
- FS Lucky Peak Nursery, ID
- Colorado State Univ.-Rogers Mesa Facility, CO
- Upper Colorado Env. Plant Center - Meeker, CO
- Utah DWR -Great Basin Research Center
- Commercial Growers
- Private Growers
## UP Project Funding
### 2002 - 2007

<table>
<thead>
<tr>
<th>Source of Funds</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Colorado Division of Wildlife</td>
<td>$21,500</td>
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<tr>
<td>BLM (Colorado and Utah)</td>
<td>$840,000</td>
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<tr>
<td>US Forest Service (R2, R4)</td>
<td>$990,000</td>
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<tr>
<td>NRCS – CIG</td>
<td>$150,000</td>
</tr>
<tr>
<td>Other</td>
<td>$8,000</td>
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</tbody>
</table>

**Total Funds** $2,010,000
### Grasses
- Basin wildrye***
- Blue grama
- Bottlebrush squirreltail***
- Galleta
- Indian ricegrass
- **Mountain brome**
- **Muttongrass***
- Needle-and-threadgrass***
- **Nodding brome**
- **Prairie junegrass**
- Salina wildrye
- Sand dropseed
- **Sandburg bluegrass***
- **Slender wheatgrass**
- Western wheatgrass

### Forbs
- Actinea
- Arrowleaf balsamroot***
- Blue aster
- **Blue flax***
- Bluestem penstemon
- Cushion buckwheat***
- **Eastwood's milkvetch**
- Hairy golden aster
- Many-lobed groundsel
- Palmer penstemon***
- Redroot buckwheat
- Rock goldenrod
- Roughseed cat's eye
- Sand aster
- Scarlet globemallow***
- **Shaggy fleabane**
- Silky lupine
- Straight bladderpod
- **Sulphur-flower buckwheat***
- Tapertip hawksbeard
- **Utah sweetvetch***
- **Western yarrow**
- Wooly milkvetch

### Shrubs
- Antelope bitterbrush
- Basin big sagebrush
- Black sagebrush
- Cliffrose
- Dwarf rabbitbrush
- Fourwing saltbush
- Green ephedra
- Low rabbitbrush
- Mountain big sagebrush
- Mountain mahogany
- Rubber rabbitbrush
- Saskatoon serviceberry
- Skunkbush sumac
- Winterfat
- Woods rose
- Wyoming big sagebrush

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*Ready for production*

*Great Basin research spp.*
Foundation / Seed Increaser Fields

2004-2006:

- 30 species in 1-5 acres plots
- 21.5 acres of grasses @ 7 locations
- 15 acres of forbs @ 9 locations
- 6 acres of shrubs @ 6 locations
Life History Studies

Established at Fountain Green, UT and Rogers Mesa, CO - 4 replications of each species at each site.

15 species:
- blueleaf aster,
- Eastwood’s milkvetch,
- rough seed Cryptantha,
- sand aster,
- alpine golden buckwheat,
- cushion buckwheat,
- low fleabane,
- prairie junegrass,
- bladderpod,
- blue flax,
- silky lupine,
- lobe leaf groundsel,
- thrift mock goldenweed,
- western wheatgrass,
- dusty penstemon
Cultivation Studies

Established at Fountain Green, UT; BYU, UT and Rogers Mesa, CO - four replications of each species at each site.

17 species:
- Prairie junegrass
- Muttongrass
- Needle-and-thread grass
- Western wheatgrass
- Alpine golden buckwheat
- Blue flax
- Bluestem penstemon
- Cushion buckwheat
- Dusty penstemon
- Hairy goldenaster
- Low fleabane
- Lobe leaf groundsel
- Oregon daisy
- Scarlet globemallow
- Silky lupine
- Sulfur flower buckwheat
- Utah sweetvetch
Research Projects

• Defining Plant Communities and Conditions Requiring Restoration Studies

• Wildland Shrub Seed Increase Project

• Ecological, Morphological, and Genetic Adaptability Studies

• Restoration Measures and Technology Development
Education & Technology Transfer
Facilities
Colorado Plateau Native Plant Initiative

June 12-13, 2007
Moab, Utah
Colorado Plateau Native Plant Initiative Vision

A Colorado Plateau that supports native plant communities and their associated species for future generations
Colorado Plateau Native Plant Initiative

Goal #1:
Develop an adequate supply of native plant materials to facilitate the restoration of landscapes
Goal #2:
Develop methodologies to ensure successful establishment and persistence of native plant materials.

Colorado Plateau Native Plant Initiative
Goal #3:
Cooperate with public and private entities in the sharing of information
Partners: Current(*) and Potential

*US Forest Service – R2,R3,R4
*Bureau of Land Management – UT, CO, AZ, NM
*State Wildlife Agencies
US Geological Survey – Flagstaff and Denver Offices
USFS – Rocky Mt. Research Station
US Fish & Wildlife Service
USDA – Agricultural Research Service
Bureau of Indian Affairs
Natural Resource Conservation Service
National Park Service
Federal Highways
Oil and Gas Companies
Tribal Nations
Colorado Plateau Native Plant Initiative

Cooperators (in-kind contributions or customers)
- Universities (NAU, BYU, CSU, USU)
- Crop Improvement Association
- Seed Companies
- Non-governmental Organizations
- Farm Bureau
- Extension Offices
- Utility Companies
- Cooperative Ecosystem Studies Unit
- Plant Nurseries
- Local Governments
- Soil Conservation Districts
Colorado Plateau Native Plant Initiative

Organizational Structure

Steering Committee

Regional Coordinator

Core Working Group

Non-Profit Entity

Partnerships & Grants

Production & Technology

Science & Research

Education & Outreach

Administrative
Colorado Plateau Native Plant Initiative

Upcoming Meetings

Sept. 5\textsuperscript{th} - 7\textsuperscript{th}: Plant Community Restoration Workshop, Grand Junction, CO.

Oct. 29\textsuperscript{th} – Nov 1\textsuperscript{st}: The 9\textsuperscript{th} Biennial Conference of Research on the Colorado Plateau, Flagstaff, AZ.
Northern Arizona Native Plant Program
Northern Arizona Native Plant Program

A task force of individuals, government agencies, non-profit organizations and commercial businesses interested in developing a source of native plant materials for revegetation projects in northern Arizona.
Northern Arizona Native Plant Program

CPNPI

Utah

Arizona (NANSA)

Colorado

New Mexico
Northern Arizona Native Plant Program

Participants
US Forest Service – Region 3
USFS – Rocky Mt. Research Station
AZGFD
Coconino NRCD
NRCD
NAU – EMA, ERI, Research Greenhouse, Students
Grand Canyon Trust
The Nature Conservancy
BLM – Arizona Strip Field Office
Flagstaff Arboretum
Museum of Northern Arizona
Arizona Department of Transportation
State Land Department
Northern Arizona Native Plant Program

**Progress to Date**

1. Three meetings since April 2007

2. Current Projects in northern Arizona
   - USFS, R3: Native Plant Materials Project grant
   - The EMA Program: Economic Feasibility Study

3. Working Group Organization
Northern Arizona Native Plant Program Coordination

The EMA Program at NAU:

- Facilitate working group meetings and workshops
- Manage activities and outreach
- Coordinate with Colorado Plateau Regional Initiatives
- Maintain communications among partners, cooperators and stakeholders
- Seek out grant opportunities
For More Information:

www.upproject.org
www.emaprogram.com