Southwest Seed Partnership

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Thank you to Ella Samuel and partners
I. Impetus for Seed Partnership

Bare ground - major issue for SW
Too extensive for single organization to cover seed needs
Crosses land ownership
Adios seed bank
- Locally adapted seed
- High genetic diversity
- Species diversity
Commercial sources of native seed in SW

- Few producers
- Seed from outside region
- Cultivars (lower genetic diversity)
II. History of Partnership

Initiated October 2015

More seed & better seed & program
15 years ago

Uncoordinated, duplicated efforts
30 partners
Signed MOU
Pool resources for coordination, collection, production
50 species in production

Corvallis Plant Materials Center
### Southwest Seed Partnership

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III. Primary Purpose of Partnership and What We Do

Implement National Seed Strategy

National Strategy Goals

1. Assessments and prioritization
2. Seed collection and tracking
3. Accessions based on science
4. Production
5. Collaboration and coordination

SW Seed Partnership Steps

Improve supply and diversity of native seed for NM and AZ
Step 1
Determine Geographic Priorities

Which ecoregions have the greatest demand for seed?
Step 2
Identify Target Species

Species in demand?
Desired attributes?

- Early seral
- Nitrogen fixing
- Pollinator plants
- Workhorse
  - Widespread
  - Establish well/competitive
  - Easy to collect & grow
- Wildlife and cultural uses
Step 3
Collect Seed

Green and Blue = collections made for SWSP

Diversity:
- geographic
- within population
- temporal

Past collections that can be utilized for production

SWSP Collections
- All AZ collections (collaboration in progress)
- 2016 NMSO Collections
- All NM Collections
- Proposed SWSP extent
2016 Seed Crew
5 Partner Collaboration

NM
Forest Service R3
NM Bureau of Land Management
National Park Service
Institute for Applied Ecology

AZ
Verde Watershed Plant Materials Program

6 ecoregions, >200 populations from 62 species
Cover 2 program needs: SOS and SWSP
Can we share databases with partners or make data cross walks?
Step 5
Determine seed zones
Balance genetic contributions
Step 6

Production 2017 NM & AZ

Contracting 4-10 small to medium-sized test fields

Matrix grasses, pollinator resource plants, annual
COLLABORATION AND COORDINATION

Steps 1-7

Check-in meetings w/core partners (4x/month)

Stakeholder Meeting (1x/year) April 26, 2017, ABQ

Committees
Steering
Grower Advisory
Seed Quality
Species Selection
IV. Critical assessment of what we are lacking

Lack: SW producers. Experience and appropriate farm equipment for native species production.
Solution

• Outreach - make case to farmers to convert other ag crops to native species require less water (water shortages in SW)
• Listen to and respond to needs, offer training, and involve in R & D

Farming for Restoration

Native Seed Production with the Southwest Seed Partnership

Who uses native seed for restoration?
• US Forest Service
• Bureau of Land Management
• NM and AZ Departments of Transportation
• NM Fish and Wildlife Service
• Pueblo and Tribal Resource Managers
• National Park Service
• Bureau of Reclamation
• Army Corps of Engineers
• NM Energy, Minerals and Natural Resources
• AZ State Land Department
• New Mexico State University

Example species used in habitat restoration: 
Adonis bluebells, Indian iris, grass, clausia, larkspur, wildflowers, desert willow, prairie coneflower, showy milkweed, desert sunflowers, barrel cactus, purple milkvetch, Indian paintbrush, Narrowleaf goldenrod, Rocky Mountain bee plant, narrowleaf willow, desert willow, Utah juniper, black yucca, and mountain mahogany.

Native Seed is in Demand: Production in the Southwest could be more successful with a reliable and diverse supply of ecologically-appropriate native seed. By creating a locally-adapted seed bank that captures genetic diversity, we can transfer beneficial adaptations to cultivated species and improve long-term restoration success. Commercial producers currently offer a very limited selection of native species and tend to sell cultivars rather than wild-sourced material from local ecosystems.

The Southwest Seed Partnership (SWSP) is working to address this market gap and improve the supply of appropriate native seed.

How does the SWSP support farmers? We:
1) Provide a bridge between growers and sellers of native seed: growing and communicating demand, and helping growers find seed for sale.
2) Collect wild-sourced, verified seed from farmers and build appropriate accessions for grow out.
3) Establish production contracts with farmers, eventually making germplasm available for growing on a larger scale.
4) Conduct research to inform production.
5) Provide native seed workshops and training.
6) Work to ensure high seed quality, such as coordinating with NM and AZ seed certification.
7) Offer grants to help facilitate tribal economies and new farmers.

Growing Native Seed

Production of native seed types that historically have higher levels of genetic diversity can be more challenging than traditional crop agriculture. However, the SWSP can help provide information about best cultivation and harvesting practices. This sector is ideal for pioneering growers who may create and want to develop new knowledge in an emerging field. The SWSP recognizes the value added by locally-appropriate seed and educates potential buyers about the benefits of this premium product.

Join us at our SWSP Stakeholder Meetings and help shape the program.

For more information about the Southwest Seed Partnership: 
http://appliedecosystems.com/southwest-program/

For more information or to participate in the SWSP, please contact: Ted Batey for Applied Ecosystems
Heather Gilar: mgilar@appliedecosystems.com or
Carmen White: cwhite@appliedecosystems.com
Preliminary Approach

Large scale, established
Familiar grasses and forbs

Small-medium scale
Test cultivation of new species, pollinator plots, nursery production

Curtis and Curtis Seed

Pueblo of Tesuque

Pueblo of Santa Ana
Lack: Not all land managers educated about merits of diversity and local seed

Outreach to land managers

Stronger policy language: NM DOT changed seed purchasing requirements to prioritize local, native seed
Lack: Seed Transfer Zone Data

Solution

- Common Garden
- Seed Zone Mapper Tool
- Expert Feedback
- Provisional Seed Zones
- Genetic studies
- Life history traits

New Mexico Ecoregions
Lack: Foresight of future seed needs plus seed for emergency needs

Collection 1-2 years

First harvest 1-4 years (Best yield 2-4 years)

Cultivation 2 + years

Seed available in 4-10 years for projects

Solution Plan 5 years ahead
Thank You
The preceding presentation was delivered at the

2017 National Native Seed Conference
Washington, D.C. February 13-16, 2017

This and additional presentations available at http://nativeseed.info