

Crested Wheatgrass Diversification: PRACTICAL EXPERIENCES

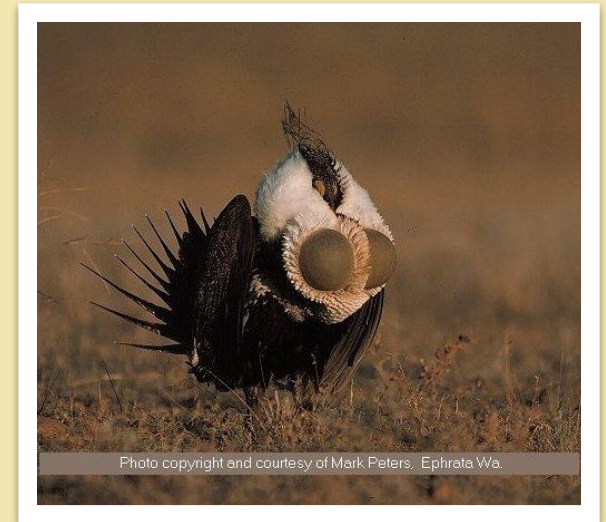


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Long-Term Thinking

- What is reasonable timeline for success?



Overview

- Plant Material Development
- Site Preparation
- Planting
- Post Planting Weed Control
- Forb planting

Developing Appropriate Genetics

Begins with a genetically diverse wild collection



Seed Increasing

Continues with intensive agricultural methods and weed control



Weeding between rows of an established Sandberg's bluegrass (*Poa secunda*) stand with a chisel plow.



Hand weeding a young Idaho fescue (*Festuca idahoensis*) field

Grass Seed Production



Prairie Junegrass (*Koeleria macrantha*)



Sandberg's bluegrass (*Poa secunda*)

Forb Seed Production



Arrowleaf balsamroot (*Balsamorhiza sagittata*), Wyeth's buckwheat (*Eriogonum heracleoides*), Venus Penstemon (*Penstemon venustus*), and Shaggy Fleabane Daisy (*Erigeron pumilis*).

Cultural Management



Oregon Sunshine (*Eriophyllum lanatum*), Hoary Tansyaster (*Machaeranthera canescens*), Royal Penstemon (*Penstemon speciosus*)

Harvest Management



Combining a swathed bluebunch (*Pseudoroegneria spicata*) wheatgrass field



Silvery lupine (*Lupinus argenteus*)
hand harvest

Seed Cleaning/Storage



Seed cleaning mill



Seed storage warehouse

Planting Process...

- Site Preparation – Approx 15 months
- Staged Planting – Grasses first, then interseed forbs/shrubs

Timeline	Year 1				Year 2				Year 3			
Task	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring	Summer	Fall
Site Preparation												
Mowing												
Harrowing												
Initial Herbicide Application												
Follow-up Herbicide/Mowing												
Pre-planting Weed Control												
Grass Planting												
Broadleaf Weed Control #1												
Broadleaf Weed Control #2												
Forb/Shrub Planting												
Monitoring (Key Times)						X	X	X		X	X	

Site Preparation

- Control of Pre-existing Vegetation
- Seedbank Depletion
- Residue Management
- Seedbed Preparation

Mowing



Rotary Blade Mower

Several weeks after mowing

Harrowing

A spring-tine heavy harrow is used



Herbicide Application

- Mid-Spring Heavy Round-Up
- Summer Round-Up/Broadleaf Selective



Ready to Plant...



Seeding

- Seeding occurs in late fall
- Rangeland drills help with accurate seed placement



Spring After Planting

Continue annual
broadleaf control
through spring and
summer



Forb Inter-seeding



Forbs are drilled the fall after grass seeding

Establishment Success

Three years post-planting



Long-Term Success



Summary

- Multiple year, aggressive process
- Plant material development takes 2-3 years
- Site preparation and planting takes 3 years
- Planning and funding are not included!!
- Once established, have patience

Questions





The preceding presentation was delivered at the

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

