



Aberdeen Plant Materials Center

United States
Department of
Agriculture

2003 Annual Technical Report

**Natural Resources
Conservation Service**

Aberdeen, Idaho

March 2004



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Interagency Riparian Wetland Project

Hoag, J.C. and J. Fripp, 2003. Streambank Soil Bioengineering for Low Precipitation Areas. Chapter 9, National Design Manual, USDA-NRCS, NDCSMC, Ft. Worth, TX 63 p.

Hoag, J.C. 2002. View from a Wetland, Number 8 (2002). Interagency Riparian/Wetland Project, Aberdeen PMC, Aberdeen, ID. 7 (2002). 4p.

INTRODUCTION

The Plant Materials Center at Aberdeen is part of a national plant materials program operated by the United States Department of Agriculture, Natural Resources Conservation Service. The purpose of the Plant Materials Center is to develop and communicate new technology for the use and management of plants. We also assemble, evaluate and release plant materials for conservation use and develop new techniques for establishment of conservation plants. The Aberdeen Plant Materials Center was established in 1939 and has been the primary breeder and releasing organization for 15 cultivars and a cooperator in the release of 12 additional cultivars. The Aberdeen Plant Materials Center serves portions of Nevada, Utah, California, Oregon and Idaho. This document is a compilation of progress reports for activities by the Aberdeen Plant Materials Center during FY 2003.

The following documents and presentations were developed during FY 2003 and may be obtained by contacting the Aberdeen Plant Materials Center:

DOCUMENTS

Stewart-Williams, K., L. St. John and D. Ogle 2002. 2002 Idaho Certified Seed Selection Guide for Some Varieties of Grasses, Forbs, and Shrubs. University of Idaho, College of Agricultural and Life Sciences, Moscow, ID. Progress Report 329. 2p.

St. John, L., J.C. Hoag, P. Blaker, D. Ogle 2003. Aberdeen Plant Materials Center - 2002 Annual Technical Report. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. Mar. 2003. 310p.

St. John, L. and D. Ogle 2002. Trout Creek, Nevada Off-Center Advanced Test Site - Summary of Progress 1987 - 2002. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. Oct. 18, 2002. 13p.

St. John, L., Hoag, J.C. 2003. 2002 Aberdeen Plant Materials Center Progress Report of Activities. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. Jan. 8, 2003. 4p.

St. John, L. 2002. 2002 Progress Report - 1998 Hybrid Poplar Initial Evaluation Planting. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. October 9, 2002. 2p.

St. John, L. 2002. Appar and Native Blue Flax Comparison - 2002 Progress Report. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, Idaho. Nov. 6, 2002. 2p.

St. John, L. 2003. Conservation Plant Materials Tested at Trout Creek, Nevada. Aberdeen Plant Materials Center, Aberdeen, ID. June 16, 2003. 1p.

St. John, L. 2003. Fact Sheet - Goldar Bluebunch Wheatgrass. Aberdeen Plant Materials Center, Aberdeen, ID. Mar. 3, 2003. 2p.

St. John, L. 2003. Great Basin Native Plant Selection and Increase Project FY 2002 Annual Report. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. Feb. 4, 2003. 2p.

St. John, L. 2003. Maintenance Tips for Your Windbreak or Ornamental Plantings. Aberdeen Plant Materials Center, Aberdeen, ID. August 19, 2003. 1p.

St. John, L. 2003. New Tools from the Plant Materials Toolkit. Aberdeen Plant Materials Center, Aberdeen, ID. June 16, 2003. 1p.

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St. John, L. 2003. Windbreak Maintenance Pointers. Aberdeen Plant Materials Center, Aberdeen, ID. May 29, 2003. 1p.

St. John, L. and D. Ogle 2003. Grass Display Nursery Brochure. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. Feb. 18, 2003. 8p.

St. John L. and P. Blaker 2002. New Native Plant Releases From the USDA-NRCS Aberdeen, ID Plant

Materials Center. In: Hild, Ann L.; Shaw, Nancy L.; Meyer, Susan E.; Schupp, Eugene W.; Booth, Terrence, comps. 2003. Seed and soil dynamics in shrubland ecosystems: proceedings; 2002 August 12-16; Laramie, WY., Ogden, UT. in press. 7p.

Rolson, Kortny 2002. Farmer trades row crops for flowers. The Idaho Statesman, Boise, ID. Oct. 2, 2002. 1p.

Ogle, D.G., T. Bush, L. St John, M. Stannard, and K.B. Jensen 2003. Orchardgrass Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 3p.

Ogle, D.G., L. St. John, and C. Stange 2002. Tree Planting, Care and Management. USDA-NRCS, Boise, Idaho. ID-PM-TN No. 43 October 2002 revision. 30p.

Ogle, D.G., L. St John, L.K. Holzworth, S.R. Winslow, and T.A. Jones 2003. Basin Wildrye Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D.G., L. St John, L.K. Holzworth, S.R. Winslow, and T.A. Jones 2003. Thickspike and Streambank Wheatgrass Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D.G., L. St John, L.K. Holzworth, and S.R. Winslow 2003. Winterfat Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

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Ogle, D.G., L. St john, and K.B. Jensen 2003. Crested Wheatgrass Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 6p.

Ogle, D.G., L. St John, and K.B. Jensen 2003. Intermediate Wheatgrass Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 6p.

Ogle, D.G., L. St John, and K.B. Jensen 2003. Siberian Wheatgrass Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 5p.

Ogle, D.G., L. St John, and J.S. Peterson 2003. Lewis Flax Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D.G., L. St John, and J.S. Peterson 2003. Small Burnet Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 3p.

Ogle, D.G., L. St John, and J.S. Peterson 2003. Venus Penstemon Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D.G., L. St John, and J.K. Peterson 2003. Blue Flax Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D.G., J. Scheetz, L.K. Holzworth, L. St John, and S.R. Winslow 2003. Western Wheatgrass Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D.G., J. Henson, M. Stannard, L. St John, and T.A. Jones 2003. Idaho Fescue Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 5p.

Ogle, D.G. and L. St John 2003. Fourwing Saltbush Plant Guide. USDA-NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D., L. St. John, M. Stannard, and L. Holzworth 2003. Technical Note 24: Grass, Grass-like, Forb, Legume and Woody Species for the Intermountain West. USDA-NRCS, Boise, ID, Bozeman, MT, and Spokane, WA. ID-TN24, Jan. 2003. 41p.

Ogle, D. G., L. St John, L.K. Holzworth, and K.B. Jensen 2003. Meadow Brome Plant Guide. USDA - NRCS, Boise, Idaho. Feb. 2003. 4p.

Ogle, D. and L. St. John 2003. Aberdeen Plant Materials Center Economic Impact 2002. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. Feb. 18, 2003. 1p.

Hoag, JC and J Fripp 2003. Streambank Soil Bioengineering for Low Precipitation Areas. National Design, Construction, and Soil Mechanics Center, Ft. Worth TX as part of the National Riparian Design Manual, Ft. Worth, TX. 7/29/03. 17p.

Hoag, J.C., L. St. John and D.G. Ogle 2002. Reading Seed Packaging Labels and Calculating Seed Mixtures (PLS

- What it is and How to use it). USDA-NRCS, Boise, Idaho. ID-PM-TN No 4 October 2002 revision. 15p.
Hoag, J.C. 2003. View From a Wetland, Number 8 (2002). USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. Number 8, Jan. 2003. 4p.
Blaker, P. and L. St. John 2002. Foundation Seed Production at Aberdeen Plant Materials Center. USDA-NRCS Aberdeen Plant Materials Center, Aberdeen, ID. October 7, 2002. 1p.

PRESENTATIONS

Date presented: 10/16/2002

Title: Riparian Ecology and Restoration Workshop

Presenter Hoag and Fripp

Location Burns, OR

Date presented: 10/17/2002

Title: Riparian Ecology and restoration Field exercise

Presenter Hoag and Fripp

Location Burns, OR

Date presented: 10/22/2002

Title: Riparian Ecology and Restoration Workshop

Presenter Hoag and Fripp

Location Carson City, NV

Date presented: 10/23/2002

Title: Riparian Ecology and Restoration Field Exercise no. 1

Presenter Hoag and Fripp

Location Carson River Carson City, NV

Date presented: 10/24/2002

Title: Riparian Ecology and Restoration Workshop field Exercise no. 2

Presenter Hoag and Fripp

Location Carson River Carson City, NV

Date presented: 10/28/2002

Title: Gibbon River reconstruction meeting

Presenter Hoag and Clark

Location Yellowstone National Park

Date presented: 11/5/2002

Title: Riparian ecology and restoration workshop, Alturas, CA

Presenter Hoag and Yard

Location Alturas, CA

Date presented: 11/6/2002

Title: Riparian Ecology and Restoration field exercise, Alturas CA

Presenter Hoag and Yard

Location Pit River, Alturas, CA

Date presented: 11/7/2002

Title: Road Management

Presenter Hoag and Yard

Location Alturas, CA

Date presented: 1/16/2003

Title: Production of Native Seed Crops

Presenter L. St. John

Location Ontario, OR

Date presented: 1/22/2003

Title: 2002 PMC Activities Update to Idaho Plant Materials Committee

Presenter St. John, L.

Location Boise, ID

Date presented: 1/26/2003
Title: Aberdeen Plant Materials Center - Mission and Function
Presenter L.St. John **Location** Aberdeen High School

Date presented: 1/27/2003
Title: Great Basin Restoration Initiative - Aberdeen PMC Progress
Presenter St. John, L. **Location** Salt Lake City, UT

Date presented: 1/29/2003
Title: Utah Plant Materials Committee Meeting
Presenter St. John, L. **Location**

Date presented: 2/4/2003
Title: Wetland Plant Releases from the Aberdeen Plant Materials Center
Presenter Hoag **Location** Idaho State University, Pocatello, ID

Date presented: 3/3/2003
Title: Wetlands and Constructed Wetland Systems
Presenter Hoag **Location** Idaho State University,

Date presented: 3/27/2003
Title: Waterjet Stinger, a method to plant unrooted cuttings of willows and cottonwoods
Presenter Hoag **Location** SER meeting, Portland, OR

Date presented: 3/27/2003
Title: Propagation of Wetland Plant Species by Seed
Presenter Hoag **Location** SER Meeting, Portland, OR

Date presented: 4/2/2003
Title: Riparian Ecology and Restoration Workshop, Panguitch, UT
Presenter Hoag and Yard **Location** Panguitch, UT

Date presented: 4/2/2003
Title: New Native Plant Releases from the USDA-NRCS Aberdeen, ID Plant Materials Center
Presenter L. St. John **Location** Boise, ID

Date presented: 4/3/2003
Title: Riparian Ecology and Restoration field exercise, Panguitch, UT
Presenter Hoag and Yard **Location** Panguitch, UT

Date presented: 4/3/2003
Title: Overview of Aberdeen Plant Materials Center at Intermountain Native Plant Summit
Presenter L. St. John **Location** Boise, ID

Date presented: 4/8/2003
Title: Riparian Ecology and Restoration Workshop, Santa Maria, CA
Presenter Hoag and Fripp **Location** Santa Maria, CA

Date presented: 4/9/2003
Title: Riparian Ecology and Restoration field exercise, Santa Maria, CA
Presenter Hoag and Fripp **Location** Walker Site on the Alamo Pintado Creek,

Date presented: 4/10/2003
Title: Riparian Ecology and Restoration field exercise, Olesen Site, Santa Maria, CA
Presenter Hoag and Fripp **Location** Olesen Site, East Williamson Creek, Buelton,

Date presented: 4/18/2003
Title: Streambank Soil Bioengineering Basics
Presenter Hoag **Location** Island Park, Idaho

Date presented: 4/29/2003
Title: Riparian Ecology and Restoration Workshop, Elko, NV
Presenter Hoag and Fripp **Location** Elko, NV

Date presented: 4/30/2003
Title: Riparian Ecology and Restoration Workshop Field Exercise, Trout Creek, NV
Presenter Hoag and Fripp **Location** Trout Creek, NV

Date presented: 5/14/2003
Title: Plant Material Considerations for the Intermountain West and an Overview of PMC Activities
Presenter St. John, L. **Location** Boise, ID

Date presented: 5/20/2003
Title: Introduction to Aberdeen Plant Materials Center
Presenter Cornforth, Simonson, St. **Location** Aberdeen Plant Materials Center

Date presented: 5/21/2003
Title: Sharing Solutions for Successful Planting in the Northern Great Plains
Presenter Hoag **Location** Sheridan, WY

Date presented: 6/2/2003
Title: SVAP and how to conduct a stream assessment
Presenter Hoag and Krajewski **Location** Lewiston, ID

Date presented: 6/10/2003
Title: Report to Idaho, Nevada, Utah Interagency Plant Materials Committee
Presenter St. John, L. **Location** Reno, Nevada

Date presented: 6/10/2003
Title: Tri-state Interagency PM Committee Meeting
Presenter Hoag **Location** DRI, Reno, NV

Date presented: 6/19/2003
Title: Riparian inventory and assessment protocols
Presenter Hoag and Krajewski **Location** Twin Falls, ID

Date presented: 7/8/2003
Title: Fundamentals of Seed Production
Presenter Cornforth **Location** Aberdeen Plant Materials Center

Date presented: 7/8/2003

Title: Seed Quality, Seeding Rates, Seed Mixtures, Drill Calibration

Presenter St. John

Location Aberdeen Plant Materials Center

Date presented: 7/8/2003

Title: PMC Functions and Responsibilities
Current PMC Projects

Presenter St. John

Location Aberdeen Plant Materials Center

Date presented: 7/9/2003

Title: Demonstration- Rice hull mixing, drill calibration, seedbed preparation, weed barrier

Presenter St. John, Cornforth,

Location Aberdeen Plant Materials Center

Date presented: 7/9/2003

Title: Wetland Plants and Uses

Presenter Hoag

Location Aberdeen PMC, ID

Date presented: 7/10/2003

Title: Fairview Constructed Wetland System

Presenter Hoag

Location Aberdeen PMC, ID

Date presented: 7/10/2003

Title: Coffee Point Off-Center Test Site

Presenter St. John

Location Off-Center test site

Date presented: 7/10/2003

Title: Riparian Considerations

Presenter Hoag

Location Aberdeen PMC, ID

Date presented: 7/14/2003

Title: Plant Materials Center Grass Display Nursery

Presenter St. John

Location Aberdeen Plant Materials Center

Date presented: 7/14/2003

Title: Constructed Wetland System at Fairview Wetland

Presenter Hoag and Inouye

Location Aberdeen, ID

Date presented: 7/21/2003

Title: CWS principle and how to plant hydrologic ally

Presenter Hoag

Location Ontario, OR

Date presented: 7/21/2003

Title: Constructed Wetland Systems and how to design a system

Presenter Hoag

Location Ontario, ID

Date presented: 7/22/2003

Title: Constructed Wetland System in SW Idaho

Presenter Hoag

Location Caldwell, ID

Date presented: 7/25/2003

Title: PMC Tour for Idaho BLM and Idaho Fish and Game Directors

Presenter St. John, Hoag, Cornforth,

Location Aberdeen Plant Materials Center

Date presented: 7/29/2003

Title: Vegetative Considerations for Streambank Soil Bioengineering

Presenter Hoag

Location Spokane, WA

Date presented: 8/5/2003

Title: Seed Collection, Processing, and Storage of Wetland Plants

Presenter Hoag

Location Grand Coulee, WA Colville Indian Reservation

Date presented: 9/5/2003

Title: Riparian Dynamics and Vegetation Planting considerations when using soil bioengineering treatments

Presenter Hoag and Fripp

Location Coeur d Alene, ID

Date presented: 9/10/2003

Title: Riparian Ecology and Restoration workshop, Grand Forks, ND

Presenter Hoag and Fripp

Location Grand Forks, ND

Date presented: 9/11/2003

Title: Riparian Ecology and Restoration Field Exercise, Grand Forks, ND

Presenter Hoag and Fripp

Location Grand Forks, ND

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ON-CENTER ACTIVITIES

Foundation Seed Production at Aberdeen Plant Materials Center

A major responsibility of the Aberdeen Plant Materials Center is the production of Foundation quality seed of the plant releases from the Center. Foundation seed is made available to the University of Idaho Agricultural Experiment Station, Idaho Crop Improvement Association, Utah Crop Improvement Association, other plant materials centers and cooperating agencies. Seed is distributed as provided for by allocation and exchange or other written agreements. Foundation seed of recent releases may also be provided to soil conservation districts for registered or certified seed production under District Seed Increase (DSI) programs.

The following table illustrates seed shipments from the Aberdeen Plant Materials Center for Fiscal year 1995 through 2003:

Cultivar	1995	1996	1997	1998	1999	2000	2001	2002	2003	TOTAL POUNDS
POUNDS PLS										
Appar Lewis flax	65	455	150	950	115	320	300	470	65	2890
Bannock Thickspike wheatgrass	581	215	175	425	610	275	250	550	25	3106
Delar small burnet	350	0	0	550	0	451	150	75	0	1576
Ephraim crested wheatgrass	790	713	1000	100	50	260	455	696	0	4064
Fourwing Saltbush	-	-	-	-	-	-	-	25	5	30
Goldar Bluebunch wheatgrass	638	175	200	200	370	175	100	375	250	2483
Hycrest crested wheatgrass	100	1000	1550	0 ^{1/}	0	0	0	0	0	2650
Magnar basin wildrye	202	0	250	180	901	517	1035	490	150	3725
Nezpar Indian ricegrass	0	0	325	350	100	900	150	75	340	2240
P-27 Siberian wheatgrass	110	250	1000	200	25	150	200	500	0	2435
Penstemon "Clearwater Selection"	1	0	0	1	0	1	10	1	10	24
Penstemon "Richfield Selection"	5	0	0	6	5	5	1	7	6	35
Paiute orchardgrass	550	400	250	0	250	101	450	200	0	2201
Regar meadowbrome	144	10	0	305	800	670	1061	207	50	3247
Rush intermediate wheatgrass	195	75	400	1820	1000	215	525	0	0	4230
Sodar streambank wheatgrass	311	0	100	250	100	860	500	500	200	2821
Tegmar dwarf intermed. wheatgrass	250	0	0	200	0	100	0	0	0	550
Northern Cold Desert Winterfat	-	-	-	-	-	-	-	8	3	11
TOTAL POUNDS	4292	3293	5400	5537	4326	5000	5187	4179	1104	38,318

^{1/} Foundation seed production of Hycrest crested wheatgrass was transferred to Meeker, Colorado Environmental Plant Center.

Aberdeen Plant Materials Center2003 FIELD ANNUAL PLAN OF OPERATIONHOME FARM

<u>Field</u>	<u>Acres</u>	<u>Crop</u>	<u>Operation</u>
1	1.5	Bannock (2000)	Manage for Foundation Seed production.
2	2.3	Bannock (1999)	Manage for Foundation seed production.
3	1.8	Maple Grove Flax (2002)	Manage for Certified seed production.
4	1.4	Constructed Wetland Ponds (1992)	Manage per constructed Wetland project plan.
5	2.4	Magnar (2000)	Manage for Foundation seed production.
6	2.4	Potatoes (2003)	U of I will plant potatoes.
7	3.2	Regar (2003)	Establish and manage for Foundation seed production.
8	3.2	Ephraim (2003)	Establish and manage for Foundation seed production.
9	3.2	Fallow (2003)	Fallow as needed to control weeds.
10	3.2	Magnar (1995)	Manage for Foundation seed production.
11	1.1	Anatone Bluebunch (2002)	Manage for Foundation seed production.
11	0.2	9067402 Mutton grass (2002)	Manage for increase and potential release.
12	1.4	Fallow (2003)	Fallow as needed to control weeds.
13N	0.1	Penstemon (2003)	Establish and manage for Certified seed production.
13S	1.3	Fallow (2003)	Fallow as needed to control weeds.
14	1.2	Woody Display Nursery (1995)	Maintain display of woody conservation plants. Manage Durar/Covar cover crop.
	-	Penstemon (1996)	Manage for Certified seed production.
15	1.4	Field windbreak (2000)	Maintain Simon poplar field windbreak.
		USFS Flax test (2000)	Maintain and evaluate according to project Plan.
16	1.0	Fallow	Fallow as needed for weed control.
17	0.5	Hybrid Poplars (1998)	Manage and evaluate according to project plan.

18-19	0.9	Fourwing and winterfat (1999)	Manage for Certified seed production.
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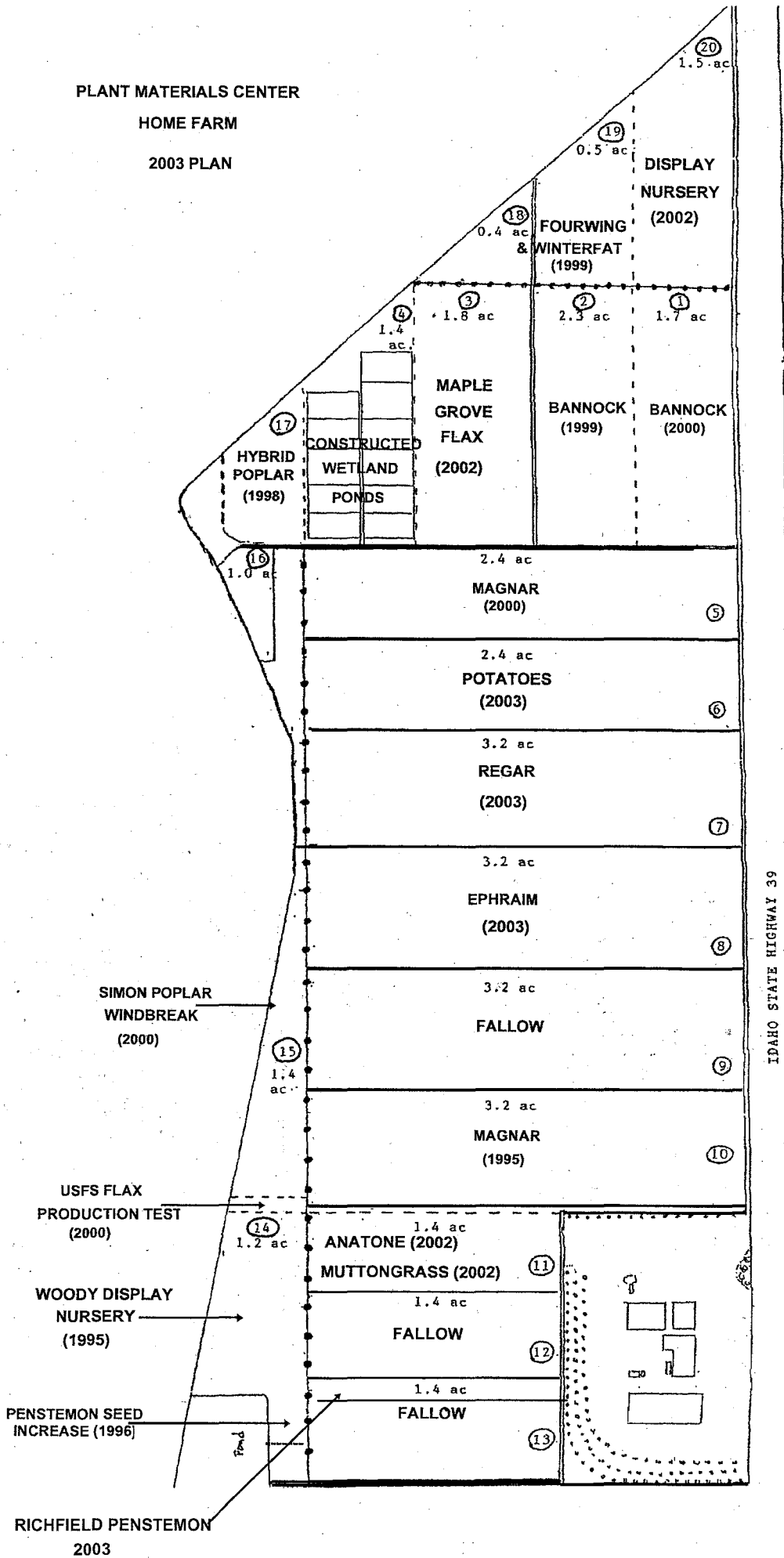
Aberdeen Plant Materials Center

2003 FIELD ANNUAL PLAN OF OPERATION (continued)

HOME FARM

<u>Field</u>	<u>Acres</u>	<u>Crop</u>	<u>Operation</u>
20	1.5	Grass Display Nursery (2002)	Manage for display.
Headquarters			Maintain buildings and grounds.

PLANT MATERIALS CENTER
HOME FARM
2003 PLAN



Aberdeen Plant Materials Center2003 FIELD ANNUAL PLAN OF OPERATIONFISH AND GAME FARM

<u>Field</u>	<u>Acres</u>	<u>Crop</u>	<u>Operation</u>
21W	2.2	Alfalfa (2001)	Manage for hay production and wildlife benefits.
21E	2.2	Potatoes (2003)	University to plant potatoes. University will plant wildlife food plot for mitigation on University Farm.
21N	1.0	Bozoisky Cover crop	Maintain as needed for permanent cover.
22W	2.7	Bannock (2003)	Establish and manage for Foundation seed production.
22E	2.7	Goldar (2002)	Manage for Foundation seed production.
22E	-	Willow IEP (1984)	Maintain as needed.
23W	2.7	Goldar (1999)	Manage for Foundation seed production.
23M	-	Windbreak	Maintain and irrigate as needed.
23E	2.7	Wildlife Food Plot (2003)	Establish and maintain corn for wildlife use.
24W	2.7	Paiute (2001)	Manage for Foundation seed production.
24E	1.6	Durar Cover Crop	Maintain as needed.
25	5.4	Alfalfa (2003)	Establish and manage for hay production and wildlife benefits.
26W	1.7	Durar/Covar Cover Crop (1996)	Maintain as needed.
26E	1.7	Willow Increase Block (1994)	Irrigate according to irrigation plan and control weeds. Maintain Durar/Covar mix between rows for permanent cover.
27	5.4	Wildlife Food Plot (2003)	Establish and maintain wheat for wildlife use.
28W	5.4	Wildlife food plot (2003)	Establish and maintain corn for wildlife use.
29W	2.7	Willows (1994)	Irrigate and control weeds according to Wetland Project plan.
29E	2.7	Goldar (2000)	Manage for Foundation seed production.

Aberdeen Plant Materials Center

2003 FIELD ANNUAL PLAN OF OPERATION (continued)

FISH AND GAME FARM

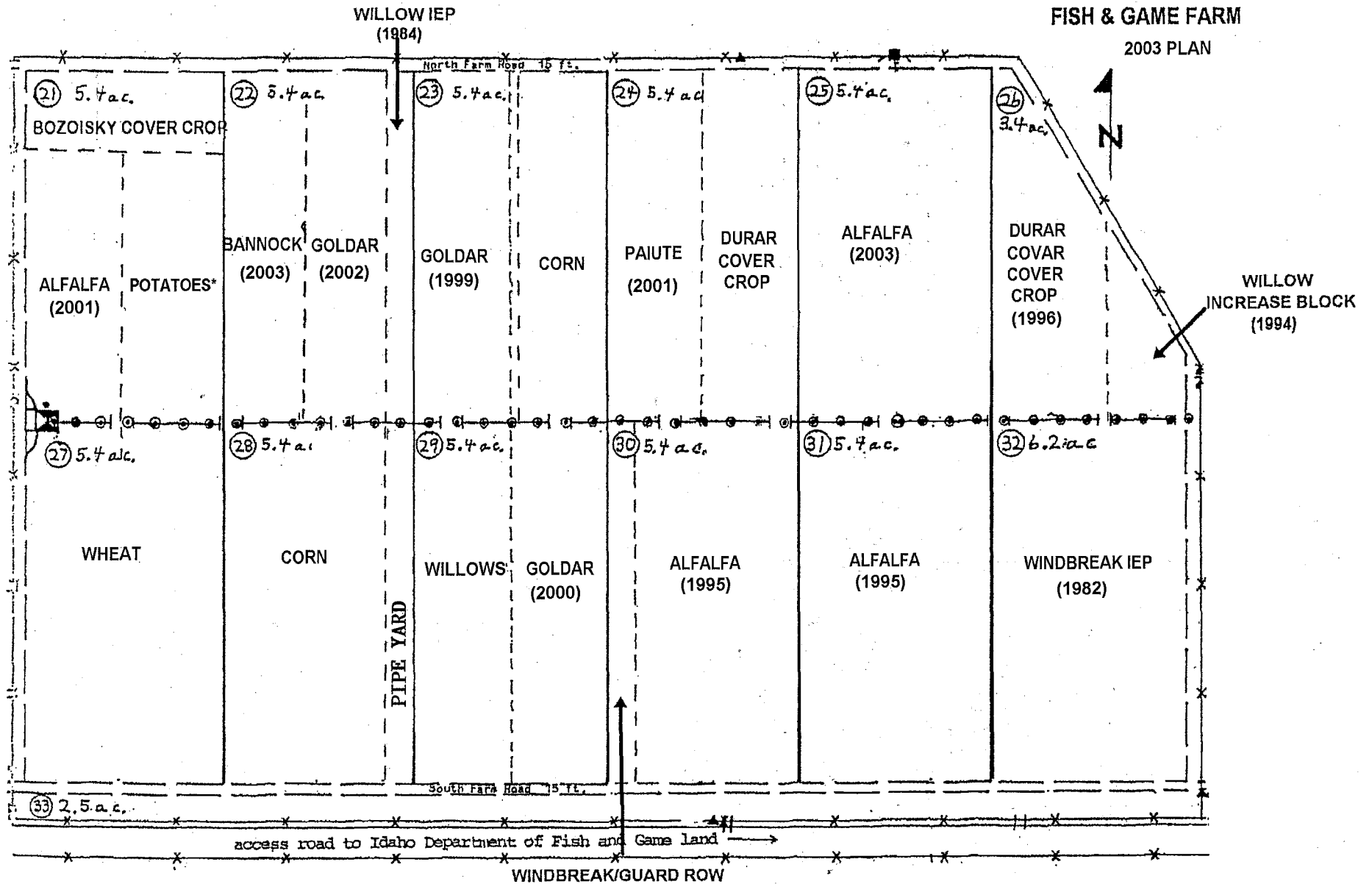
<u>Field</u>	<u>Acres</u>	<u>Crop</u>	<u>Operation</u>
30W	-	Windbreak/Guard Row	Maintain and irrigate as needed.
30	5.4	Alfalfa (1995)	Manage for hay production and wildlife benefits.
31	5.4	Alfalfa (1995)	Manage for hay production and wildlife benefits.
32	6.2	Windbreak IEP (1982)	Maintain as needed.

Any hay grown will not be cut prior to June 15 and not after September 1. Hay will be irrigated after last cut to first fall frost to achieve regrowth prior to winter dormancy.

Irrigated, permanent grass cover seedings will not be mowed prior to July 1 and not after August 1 and will be irrigated a minimum of 3 times. Non-irrigated grass cover seedings will not be mowed. Early mowing or mowing of non-irrigated grass cover requires notification to and inspection by Fish and Game.

BREWINGTON FARM (U of I)

<u>Field</u>	<u>Acres</u>	<u>Crop</u>	<u>Operation</u>
409	4.25	Nezpar (2000)	Manage for Foundation seed production.



*Potatoes limited to maximum 2.5 acres. University to plant mitigation wildlife food plot on University farm.

2003 Progress Report
1998 Hybrid Poplar Initial Evaluation Planting
Field 17, Aberdeen PMC
Loren St. John, Team Leader

The purpose of the Hybrid Poplar Initial Evaluation Planting is to evaluate accessions of hybrid poplar currently being grown in Oregon and Washington for adaptability to northern Utah and the Upper Snake River Plain of southeast Idaho. Hybrid poplar used for fiber, fuel and other lumber products is becoming a large agroforestry business in Oregon, Washington, and western Idaho. Presently there is no commercial production of hybrid poplar in southeast Idaho or northern Utah.

Five accessions of hybrid poplar considered as very productive and the most cold tolerant were obtained from Mount Jefferson Farms, Salem, Oregon. These accessions were planted in a complete randomized block design with 'Imperial', 'Siouxland', 'Robust', and 'Canam' as standards of comparison. The cuttings planted were dormant, 9 inches long and approximately 3/4 inch in diameter. The standards of comparison were collected at the PMC after spring growth had initiated.

Weed barrier material was installed in the clean-tilled field prior to planting. The cuttings were then hand planted through the weed barrier on May 28, 1998 so that only one bud was above the soil surface. Planting a cutting with only one bud above the soil surface increases the chance that the cutting will develop a single trunk which is desirable for wood production. Weed control needs were minimal because of the installation of weed barrier material. On June 1, 1999 forty-three plots were re-planted. The replacements were for those plots that did not establish during the first growing season. The evaluation planting is irrigated with a solid-set handline sprinkler system.

Between-row weed control was accomplished with mechanical cultivation between 1998 and 2000. The between-row area was seeded to a mixture of 'Durar' hard fescue and 'Bighorn' sheep fescue (3.5 pounds PLS per acre of each species) in June, 2001. The grass seeding is well established and controlling weeds.

In March, 2003 before buds began to break, the trees were pruned to remove all basal branches to encourage a single dominant trunk that is preferred for saw logs. No more than 50 percent of the branches on a single tree were removed. During the growing season sprouts and side branches below the prune line were removed periodically.

The plots were evaluated on September 19, 2003 and the data is summarized in Table 1. Accession no. 9076418 (OP-367) and 9076421 (52-225) continued to have the best survival. Accession no. 9076418 (OP-367) was the tallest (mean plant height 1069 cm – 421 inches) and also had the largest D.B.H. (mean 18.4 cm – 7.2 inches). This accession appears to be the best adapted to the soil and climate in the Snake River Plains of southeastern Idaho. Accession no. 9076418 (OP-367) and Siouxland had the best vigor ratings from the original planting. No pests were observed on the plants this year.

Of the plots re-planted in 1999, Robust continued to have the best survival and the tallest average height. Robust also had the largest mean D.B.H. (14.2 cm – 5.6 inches).

The planting will be evaluated next year and then will be harvested in 6 to 7 years to evaluate wood production.

Table 1.
2003 Evaluation Data
1998 Hybrid Poplar Initial Evaluation Planting

Accession Number	Number Survived	Percent Survival	Plant Height (cm)			D.B.H. ^{1/}	Vigor ^{2/}
			Minimum	Mean	Maximum	Mean (cm)	
9076418 (OP-367)	8	88.9	851	1069	1370	18.4	2.4
9076419 (184-411)	1	11.1	--	--	457	3.0	3.0
9076420 (50-197)	1	11.1	--	--	753	13.0	6.0
9076421 (52-225)	7	77.7	69	685	912	8.4	6.9
9076422 (15-29)	4	44.4	535	676	821	6.8	4.0
Canam	1	11.1	--	--	378	2.0	4.0
Robust	3	33.3	505	634	760	13.0	3.7
Siouxland	5	55.5	695	924	1095	13.4	2.6
Imperial	5	55.5	750	867	1065	14.2	3.2

Re-planted Hybrid Poplar 1999

Accession Number	Number Re-planted	Percent Survival	Plant Height (cm)			D.B.H. ^{1/}	Vigor ^{2/}
			Minimum	Avg.	Maximum	Mean (cm)	
9076418 (OP-367)	1	0	--	--	--	--	9.0
9076419 (184-411)	8	12	--	--	535	4.0	3.0
9076420 (50-197)	8	12	--	--	943	13.0	3.0
9076421 (52-225)	1	0	--	--	--	--	9.0
9076422 (15-29)	4	0	--	--	--	--	9.0
Canam	7	57	304	579	851	6.5	7.0
Robust	6	83	821	973	1126	14.2	3.7
Siouxland	4	75	635	424	1126	11.7	4.5
Imperial	4	25	--	--	699	12.0	3.0

^{1/} D.B.H. is diameter at breast height (1.4 m from ground surface)

^{2/} Rated 1 – 9, with 1 best, 9 worst

Perennial Grasses as Sugar Platform Stocks for Industrial Processing
2003 Study Summary
Cooperative Study with USDA-NRCS Forage Seed and Cereal Research Unit
Loren St. John, PMC Team Leader

During the 2003 growing season the PMC collected forage samples which were sent to the USDA-ARS Forage Seed and Cereal Research Unit in Corvallis, Oregon. The ARS is in the process of analyzing the samples for use as biofuel feed stocks.

The following table lists the accessions that were sampled from the Grass Display Nursery in Field 20 at the PMC Home Farm:

Sand Hollow squirreltail	<i>Elymus multisetus</i>
High Plains sandberg bluegrass	<i>Poa secunda</i>
Sodar streambank wheatgrass	<i>Elymus lanceolatus ssp. lanceolatus</i>
Bannock thickspike wheatgrass	<i>Elymus lanceolatus ssp. lanceolatus</i>
Whitmar beardless wheatgrass	<i>Pseudoroegneria spicata</i>
Goldar bluebunch wheatgrass	<i>Pseudoroegneria spicata</i>
Secar Snake River wheatgrass	<i>Elymus wawawaiensis</i>
Rosana western wheatgrass	<i>Pascopyrum smithii</i>
Sherman big bluegrass	<i>Poa secunda</i>
Pryor slender wheatgrass	<i>Elymus trachycaulus</i>
Magnar basin wildrye	<i>Leymus cinereus</i>
Shoshone beardless wildrye	<i>Leymus triticoides</i>
Bromar mountain brome	<i>Bromus marginatus</i>

Samples were collected on May 6 (vegetative stage), June 3 (boot stage), June 20 (flowering stage) and July 15 (seed fill stage). Four random samples were collected from each accession on each date, air-dried and shipped to the ARS Research Unit for biochemical analysis. The objective of the analysis is to identify the change in lignin, hemicellulose, cellulose, and sugars as a plant grows. The ARS is also conducting detailed greenhouse and growth chamber studies to verify the field sampling.

The PMC also provided to the ARS Research Unit standard seed packets of Magnar basin wildrye, Sodar streambank wheatgrass, Bannock thickspike wheatgrass, Godar bluebunch wheatgrass, and Nezpar Indian ricegrass for the greenhouse studies.

Samples of field run seed (in dirt) of Magnar, Bannock, Godar and Nezpar were also provided to the ARS Research Unit for evaluation of seed processing procedures.

It is anticipated that the PMC will continue to cooperate with ARS to evaluate perennial grasses as sugar platform stocks for industrial processing.

**Great Basin Native Plant Selection and Increase Project
FY 2002 Annual Report**

Project Title: Establishment and Maintenance of Certified Foundation (G1) Seed

Project Location: NRCS Aberdeen, ID Plant Materials Center

Principal Investigators: Loren St. John, Center Manager
Dan Ogle, NRCS Plant Materials Specialist, Boise, ID

Contact Information: Aberdeen Plant Materials Center, P.O. Box 296, Aberdeen, ID 83210. Email - LorenStjohn@id.usda.gov
Plant Materials Specialist, USDA-NRCS, 9173 West Barnes Drive, Suite C, Boise, ID 83709. Email - Dan.Ogle@id.usda.gov

Description of Project: To produce Certified Foundation (G1) seed of Maple Grove Lewis flax, Anatone bluebunch wheatgrass, Snake River Plains Germplasm fourwing saltbush and Northern Cold Desert Germplasm winterfat to facilitate commercial production. Evaluate procedures for production of rooted cuttings of fourwing saltbush. Establish demonstration planting near Boise, ID.

Status Report:

Seed Production

Maple Grove Flax - Seeded 1.8 acres field 3 on May 31, 2002. July 29 evaluation: Plant height 5 - 15 cm tall, good vigor. Plan to harvest summer, 2003.

Anatone bluebunch wheatgrass - Seeded 1.0 acres field 11 on May 31, 2002. July 29 evaluation: good, healthy full stand developing. Plant height 8 - 12 cm. Seedling vigor appears to be better than Goldar. Plan to harvest summer, 2003.

Snake River Plains Germplasm fourwing saltbush - Produced approximately 70 pounds (seed analysis pending). Shipped 25 pounds Certified seed from 2001 harvest. Provided 500 Certified cuttings to Washington grower (he reported 17 percent rooting success).

Northern Cold Desert Germplasm winterfat - Produced approximately 28 pounds (seed analysis pending). Shipped 8 pounds Certified seed from 2001 harvest.

Propagation Studies

Propagation of rooted fourwing saltbush from cuttings

Four cutting dates and percent rooting in ():

March 21, 2002	(0 %)
August 19, 2002	(50 %)
September 6, 2002	(4 %)
October 7, 2002	(14 %)

Timing of cutting harvest and morphology of cutting seem to be most important factor.

Greenhouse seedling establishment study: to evaluate fourwing saltbush seedling emergence based upon number of propagules planted per cell (5 versus 10 per cell) and to identify number of days to emergence, growth rates and transplant dates.

Seed planted September 30, 2002. Maximum emergence within 3 weeks. 5 seed plots averaged 10.5 % emergence. 10 seed plots averaged 8.5 % emergence.

Seedlings transplanted to 40 inch³ containers on November 11, 2002. Currently average 3 to 18 cm in height. Will continue to maintain plants to evaluate growth rates and maturity.

Special note: 75 percent of seedlings had red stems and 25 percent had white stems at transplant. Could this be an indication of sex? Will monitor.

Establishment of Demonstration Planting near Boise

Field visit with Mike Pellant and Nancy Shaw on October 24, 2002 to locate site. Planting site determined to be old demonstration nursery at Orchard test site (just inside north boundary).

BLM burned site in fall of 2002. PMC to apply Roundup spring, 2003 and proposed planting planned for fall, 2003. Need to identify accessions and prepare planting plan.

**FIELD PLANTING,
DEMONSTRATION AND DISTRICT
SEED INCREASE EVALUATION
SUMMARIES**

PLANT MATERIALS

2003

IDAHO EVALUATION SUMMARIES

FIELD, DSI and DEMONSTRATION PLANTINGS

IDAHO DIVISION I PLANT MATERIALS PLANTINGS

FIELD OFFICE: BONNERS FERRY

ID99005 Paul Headings Regar meadow brome - Field Plantings (2). Materials ordered February 22, 1999.

Field 1—pure stand of Regar. Field 2—mixed stand of Regar and alfalfa. Purpose – demonstration planting to document growth patterns, production, and forage quality. Site characteristics – MLRA E43b, silt loam soils, 5-10 percent slopes, north aspect, 2300 feet elevation, 24 inch precipitation zone, non-irrigated, T62N R1E NW ¼ Section 2. FY99 planted spring 1999. FY00 due to dry years 1999 and 2000 stand establishment was slow, but excellent stands in each field are establishing. Plantings average 3 tons per acre. FY01 Planting 1 - The “pure” stand of Regar Brome planting averaged 2 ton/acre. A forage analysis indicated the crude protein to be 8.75%. The forage grass for hay is fine leaves and stems. The hay feeds well to animals. In hot dry weather, the “windrows” have to be carefully harvested and cured to avoid damaging brittle leaves and stems. The crop can be “pulverized” easily. The average bale weight was 103 pounds. The owner applied 110 lbs. 40-0-0 to enhance production and will increase application rates up to 200 lbs/acre 40-0-0. There were no second cuttings since the field was planted three years ago due to poor to fair moisture conditions. Planting 2 - The Regar/Agate alfalfa mixture established well. The first cutting has grass present and makes great cattle feed. The second cutting has very little grass within the alfalfa due to slow recovery. This may be due to dry weather conditions. Also, this may be a good attribute for the producer who can sell hay with grass and no grass. FY01 Planting 1 - The "pure" stand of Regar has an excellent stand with 5 plants per square foot, good vigor, and 4000 pounds per acre production. Landowner applied 220 lbs. 40-0-0 in early spring. Planting 2 - Regar/alfalfa mixture has a good stand with 2 Regar/5 alfalfa plants per square foot, fair to good vigor, and 7000 pounds per acre production. FY02 and FY03 no evaluations.

ID99015 Merle Olsen Field Planting – Regar meadow brome/alfalfa. Materials ordered April 9, 1999. Site characteristics – Rubson silt loam soil, 5 percent slopes, south aspect, 1840 feet elevation, 24 inch precipitation zone, non-irrigated, T61N R1E Section 7. FY99 no evaluation. FY00 excellent mixed stand established. FY01 the Regar and alfalfa mixture performed well with good hay quality. This year’s crop had reduced yields due to drought conditions. FY02 and FY03 no evaluations.

ID00016 Boundary Creek WRP – cropland area planted to permanent perennial species field planting. A mix of Alkar tall wheatgrass, Greenar intermediate wheatgrass, Ranger alfalfa, birdsfoot trefoil, red clover, Sherman big bluegrass, tufted hairgrass, orchardgrass, and timothy at critical area planting rates was dormant planted on 1000 acres in late fall 1999. A 42 foot air-seeder with fertilizer attachment planted mix with 2000 units per acre of nitrogen, phosphorus, potassium, and sulfur applied 1 inch below and to side of seed. FY00 excellent stand is establishing with some species as tall as 3-4 feet by early July. In October wild oats were present throughout stand. FY01 The permanent wildlife planting mixture established well utilizing the 42-foot air seeder. The drill was calibrated with the producer based upon 14.2 lbs. PLS/acre. A “flush” of wild oats occurred the first year. The stand was seeded the 1st week of November 1999. The “so called dormant planting” resulted in some sprouting of clovers due to a warmer than normal late fall. As a result, some mortality occurred in the clovers. An excellent stand of Alkar tall wheatgrass, Greenar intermediate wheatgrass, birdsfoot trefoil, Ranger alfalfa, Latar orchardgrass, timothy and clover exists. The Sherman big bluegrass is “spotty” due to becoming overpowered by the other species in the mix. There are some ridges in the field with quackgrass, which is good cover. The IDF&G is actively spot spraying the Canadian thistle. They plan to obtain a boom sprayer in order to treat the acreage more uniformly. FY02 The overall stand is good to excellent with the primary species including Alkar tall wheatgrass, Greenar intermediate wheatgrass, Latar orchardgrass and redtop. Some birdsfoot trefoil, clover, timothy, and alfalfa are present in scattered locations. Tufted hairgrass and Sherman big bluegrass were not found. FY03 no evaluation.

ID04002 Dave Wattenburger Field Planting. Delar small burnet ordered August 19, 2003. Planting planned for dormant planting in late October.

FIELD OFFICE: COUER D’ALENE

None

FIELD OFFICE: PLUMMER

None

FIELD OFFICE: SANDPOINT

ID96029 Lee Johnson wood fiber mulch, Niner sideoats grama, Alma blue grama, annual rye, Durar hard fescue, Durar hard fescue/clover, prairie junegrass, and alpine bluegrass field plantings - tree nursery ground cover trial. Site loam soil (low to mod. permeability/high erosion potential), 5-10% slopes on SE exposure. FY96 planted 5/31/96. 1. Wood mulch is doing excellent job of weed control and no rodent activity to date - mulch was about 10 inches deep when applied 2. Excellent stand of annual rye established, Durar hard fescue plants are very small and establishing beneath cover crop 3. Many young Durar hard fescue plants were establishing, but very few clover plants - soil may have been too loose when seeded and clover seed may be too deep 4. Excellent initial stand of sideoats and blue grama establishing - could not tell which species was doing the best 5. Very few prairie junegrass plants establishing - appears some germination is occurring this fall 6. A lot of alpine bluegrass seedlings - appears germination did not occur until fall. FY97 and FY98 no evaluations. FY99 Treatment 1: Control no cover and normal weed control - 0 percent desirable cover with 50-80 weeds. Treatment 2: Cedar bark mulch 6-8 inches thick - 100 percent desirable cover in rows with 5 percent weeds invading mulch and some evidence of rodents in mulch. Trees near cedar mulch are more chlorotic than other treatments. Treatment 3: Durar hard fescue and annual ryegrass - 50-70 percent desirable cover with up to 20 percent weeds. Fescue blends provide more biomass than other seedings and good cover - almost 100 percent cover if mowed. Treatment 4: Durar hard fescue and Berseem annual clover - 60-80 percent desirable cover and up to 15 percent weeds. Treatment 5: blue grama and sideoats grama - 20-50 percent desirable cover with 30-80 percent weeds. Clearly the worst treatment in trial. Treatment 6: Prairie junegrass - 60-80 percent desirable cover and 10-15 percent weeds. A good alternative since this is a low growing cover. Treatment 7: Alpine bluegrass - 50-80 percent cover with 5-10 percent weeds. Less biomass produced than fescue or prairie junegrass. The alpine bluegrass produced more of a thick sod with seedheads 6-8 inches tall. This would be a better choice for nurseries that are concerned with the shading effect of taller grasses on lower branches. It also covers the ground better once established, especially in shady areas. One potential problem is its ability to spread, including into the tree rows. FY00, FY01, FY02 and FY03 no evaluations.

ID00004 Paul Jayo Regar meadow brome field planting - irrigated/non-irrigated and hay/grazing trial. Seed ordered January 21, 2000 for delivery in early April. Site is 30-acre field with Hoodoo silt loam soil, 0-1 percent slopes, 32-inch rainfall zone, and 2485 feet elevation. FY00 planting was delayed due to dry spring weather. Cooperator plans to plant fall 2000. FY01, FY02 and FY03 no evaluations.

IDAHO DIVISION II PLANT MATERIALS PLANTINGS

FIELD OFFICE: GRANGEVILLE

ID02002 Teresa Seloske Forest Field Planting. Lind Douglas fir (30 plants) and Yakima Douglas fir (13 plants) ordered July 16, 2001. Plants delivered to FO April 3, 2002 by WAPMC. FY02 Planting completed April 6, 2002. Lind Douglas fir 10 percent survival with poor vigor. Yakima Douglas fir 15 percent survival with fair vigor. Survival effected by extremely dry conditions. FY03 very hot dry summer resulted in failure of this planting. **Cancel**

FIELD OFFICE: LEWISTON

ID82001 Galin Buchanon Starthistle control field planting. Covar sheep fescue planted in early 1980's. FY01 good to excellent stand with 2 plants per foot squared average, excellent vigor, fair spread for bunch grass. Plants are 10 inches tall with seedheads averaging 14 inches tall and 6-inch diameter plants. Overall Covar is providing good starthistle control. Starthistle is present in plot, but not reproducing seed. Where Covar has 4 plants per foot squared, starthistle is not present. Covar is moving slowly downslope into starthistle dominated area. **Next field evaluation will be FY04.**

ID86007 Hellsgate field planting - adaptation. FY92 Rush 50%, Oahe 70%, Luna 60%, Ephraim 20%, Magnar 30%, Secar 10%, Alkar 70% and P27 50% survival. FY93 in very heavy cheatgrass infested area Nordan 10% Rush 40%, Oahe 20%, Luna 24%, Rosana 30%, Magnar 15%, Secar 20% and P27 10% survival. Rush and Luna appear to be the best species. FY94 Rush int. wheatgrass is the most vigorous followed closely by Luna pubescent wheatgrass. Magnar plants are the largest. Rodents have utilized all Secar plants and a few plants of Ephraim, Nordan, P-27, Sherman, and Rosana. The accessions that have failed include Goldar, Paiute, Delar, Appar, Bandera, Nezpar and Tualatin. Cheatgrass continues to dominate site. FY95 50% survival of Rush and Rosana; 30% survival Oahe, Luna, Magnar; 20% survival Secar; 10% survival Ephraim, P27 and Sherman. Failed species include Tualatin, Nezpar, Bandera, Appar, Durar, Delar, Paiute, and T2950-Goldar. Intermediate types are doing the best. Rush and Rosana have spread the most. Alkar has extensive die-out. Cheatgrass continues to dominate site. FY96, and FY97 no evaluations. FY98 survival/comments: Oahe 50% erratic 10-12 feet spread in some areas to dead in others; Magnar 70% some seedlings and plants are very vigorous with few weeds between plants; Rush 75% spreading vegetatively 12-14 feet wide and uniform; Rosana 60% spreading vegetatively 20-30 feet wide and spotty with many weeds; Luna 70% spreading vegetatively up to 12 feet wide and a few bare areas; and Secar 10% widely scattered plants with good vigor. 1 to 3 plants of Nordan, Ephraim, and P-27 found. All other plots are dead. FY99 and FY00 pubescent and intermediate wheatgrasses performing the best with Rush intermediate a particular standout. Rosana western wheatgrass is the most aggressive spreader. FY01 and FY02 no evaluation. **Next field evaluation will be FY04.**

ID95028 Dau Bannock thickspike wheatgrass and Rush intermediate wheatgrass field planting. Seed ordered 4/3/95. FY95, FY96, FY97, FY98 and FY99 no evaluations. FY00 40 plants per foot squared of Rush intermediate wheatgrass. Bannock thickspike wheatgrass failed. FY01 40 seedheads per foot squared, 4.5 feet tall, 3000 pounds per acre, estimate 500 pounds per acre seed production and stand is weed free. **Next field evaluation will be FY04.**

ID96009 Dau Rush intermediate wheatgrass, Luna pubescent wheatgrass, and Bozoisky Russian wildrye field planting (3 individual plantings) for star thistle control. Seed ordered 12/8/95. FY96, FY97, FY98 and FY99 no evaluations. FY00 excellent stand with 40 reproductive stems per square foot. Excellent vigor, ability to spread, erosion control, and forage production producing 3000 pounds per acre. Producer is very pleased with performance and plans to establish additional plantings. FY01 and FY02 no evaluation. **Next field evaluation will be FY04.**

ID98007A Mike Miller willow planting. Aberdeen willows (Laurel, White, Streamco, Coyote, Geyer) and Meeker willows (Coyote, Yellow 3 accessions, Scouler, Whiplash 2 accessions, Booth 3 accessions, Drummond 3 accessions, Geyer 2 accessions) and Pullman shrubs (Dogwood 3 accessions). Materials ordered 2/9/98. FY98 survival Meeker willows 832 10/10, 823 10/10, 820 9/10, 826 9/10, 826 9/10, 847 7/10, 834 7/10, 827 10/10, 835 6/10, 825 10/10, 828 7/10, 822 0/10, 829 5/10, 819 ?/10. Survival of Pullman dogwoods 740 3/5, 733 5/5, 739 5/5. FY99 no evaluation. FY00 80 percent survival of 820 Pacific willow (local standard). 20 percent survival of 827 Booth willow, 828 Drummond willow, 822 Geyer willow, 829 Drummond willow and 834 Yellow willow. 10 percent survival of 832 Geyer willow. 823 Coyote willow, 826 Booth willow, 847 Drummond willow, 825 Yellow willow, 819 Yellow willow,

739 dogwood, 733 dogwood, 740 dogwood, and 835 Yellow willow failed. Competition, insects and browse damage are factors affecting survival. FY01 survival 822 Geyer 10%, 828 Drummond failed, 825 Yellow 10%, 829 Drummond 10%, 820 Pacific 80% (all died back to base – sprouting about 3 feet high this years growth), 823 Sandbar failed, 832 Geyer 20%, 826 Booth 10%, 847 Drummond failed, and 827 Booth 50%. **Next field evaluation will be FY04.**

ID98007B Ed and Maxine Larson willow and dogwood planting. FY99 and FY00 no evaluations. FY01 Superior accessions are Laurel willow, which is now 15-18 feet tall with good density and being utilized for cuttings to plant on other areas of the property; Sandbar willow 9024823, which is 4-5 feet tall, spreading and competing well with other vegetation. Accessions that failed include 9024825 Booth willow, 9024826 Booth willow, 9024827 Booth willow, Streambank willow, Aberdeen Geyer willow, Aberdeen Coyote willow, and 9023740 redosier dogwood. **Next field evaluation will be FY04.**

ID98007C Modie Park willow planting. FY99 100% survival – Booths826, Booths827, and Pacific820; 70% survival sandbar823 and Dummond829; 60% survival dogwood; 33% survival Booth825; 30% survival Geyer822 and Drummond828; 20% survival Geyer832; 14% survival Dummond847; 10% survival yellow835; 0% survival-failed yellow819 and yellow834. Site is heavily overgrown with blackberries, cattails, rush and quackgrass. West side of creek was mowed resulting in severe willow damage. Most promising willows were yellow 9024835, sandbar 9024823, Drummond 9024829 and Booth 9024826/9024827. Geyer 9024832 has glaucous stems and undersides of leaves and may be Drummond. **Next field evaluation will be FY04.**

ID98007E Victor Thulon willow planting. Aberdeen willows (Laurel, White, Streamco, Coyote, Geyer) and Meeker willows (Coyote, Yellow 3 accessions, Scouler, Whiplash 2 accessions, Booth 3 accessions, Drummond 3 accessions, Geyer 2 accessions) and Pullman shrubs (Dogwood 3 accessions). Materials ordered 2/9/98. FY99 no evaluation. FY00 site is heavily infested with reed canarygrass. Meeker willows: 40% survival 827 Booth willow; 30 percent survival 835 Yellow willow and 834 Yellow willow; 20% survival 825 Booth willow; and 10 percent survival 832 Geyer willow and 822 Geyer willow. Aberdeen willows: 80 percent survival Laurel willow and White willow; 40 percent survival Streamco willow; and 30 percent survival Coyote willow. All other materials failed. FY01 Aberdeen willow survival Laurel 70% (best overall), White 70%, Streamco 30%, Coyote 30%. Meeker willow survival 835 Yellow 30%, 832 Geyer 10%, 825 Booth 10%, 827 Booth 40%, 822 Geyer 10%, and 834 Yellow 30%. **Next field evaluation will be FY04.**

ID98016 Fred Kaufman Hycrest crested wheatgrass, and Vavilov Siberian wheatgrass field planting. FY98 and FY99 no evaluations. FY00 excellent stands of Hycrest and Vavilov established. FY02 excellent stand with excellent vigor for each cultivar. Hycrest crested wheatgrass suppressing cheatgrass better than Vavilov Siberian wheatgrass. **Next field evaluation will be FY04.**

FIELD OFFICE: MOSCOW

None

FIELD OFFICE: NEZPERCE

None

FIELD OFFICE: OROFINO

ID99010 Ray Geidl field planting. Species include Coyote willow, Geyer 435 willow, Geyer 448 willow, Geyer 483 willow, Geyer 491 willow, Snowberry, Elderberry, Dogwood 733, Dogwood 740, and Chokecherry. FY99 and FY00 and FY01 no evaluations. FY02 Plantings are located in area with heavy reed canarygrass competition. Good survival for all willow and dogwood accessions with 4 of 5 cuttings for each still surviving, fair vigor for each, 40 inch height for all willows and 20 inches height for all dogwoods. Snowberry, Elderberry and chokecherry failed. FY03 no evaluation.

IDAHO DIVISION III PLANT MATERIALS PLANTINGS

FIELD OFFICE: CALDWELL

ID98021 Bill Baird Vavilov Siberian wheatgrass, Bozoisky Russian wildrye, tall wheatgrass field planting - saline bottom. Seed ordered May 14, 1998. Planting scheduled for Nov. 1998. FY99-FY03 cooperators have not planted site due to droughty conditions and he wants to give seeding best opportunity possible when he plants. **Cancel**

ID98022 Bill Baird Rush intermediate wheatgrass and orchardgrass field planting - irrigated pasture. Seed ordered May 14, 1998. Planting scheduled for mid May through mid June. FY98 irrigated pasture planted in mid May with poor stand establishing. Bill plans to replant in spring of 1999. FY99 good stand density establishing with 5 plants per foot squared and fair vigor. Plants reached 6-8 inch height this establishment year. Nitrogen, phosphorus, potassium, and sulfur were applied. This is a very coarse-gravelly soil requiring irrigation every 4-5 days. FY00 and FY01 no evaluations. FY02 very coarse-gravelly soils that require frequent 3-4 day irrigation. Stand has good density with about 6 plants per square foot, good vigor in spite of droughty infertile soils. Individual plants are increasing in size and are competitive with weedy species. Cooperator is please with performance.

ID99006 Jacy Gibbs-cooperator will complete evaluations for demo plots. Site characteristics: very warm dry summers, Cencove fine sandy loam soil, 0-2 percent slopes, about 2200 feet elevation, 8-10 inch precipitation, T3N R5W NE1/4 Section 10. Seed ordered February 24, 1999. Aberdeen accessions: Bannock thickspike wheatgrass, Sodar streambank wheatgrass, Goldar bluebunch wheatgrass, Appar blue flax, Magnar basin wildrye, Nezpar Indian ricegrass, Richfield Selection firecracker penstemon, Clearwater Selection alpine penstemon, Snake River Plain fourwing saltbush. Bridger accessions: Trailhead basin wildrye, Rimrock Indian ricegrass, M1 Nevada bluegrass, PI434231 plains bluegrass, 9005460 alpine bluegrass, 9078408 High Plains Sandberg bluegrass, Shoshone beardless wildrye, 9019219 bottlebrush squirreltail, Critana thickspike wheatgrass, Wytana fourwing saltbush. Meeker accessions: Summit Louisiana sagewort, Timp Utah sweetvetch, Bandera Rocky Mountain penstemon, 9040187-bottlebrush squirreltail, 9040189 bottlebrush squirreltail, 9043501 Salina wildrye, Maybell antelope bitterbrush. Pullman accessions Secar Snake River wheatgrass, Covar sheep fescue, Canbar Canby bluegrass, Sherman big bluegrass, Whitmar beardless wheatgrass, and Schwendimar thickspike wheatgrass. FY99 no evaluation. FY00 Nezpar has excellent seedling vigor, easy to transplant, remains green, and is an attractive landscape plant. Schwendimar is best thickspike wheatgrass, remains green longer, best regrowth, responds well after mowing, good dryland and limit irrigation. Goldar and Whitman stands are very poor due to cheatgrass competition. Basin wildrye, Sherman, Secar mix good weed competition. Basin wildrye, Sherman, Covar, Secar are all good landscape plants. Using Covar along one side of property for firebreak – it will be excellent. Penstemon species are very slow growing, remain green and will be good landscape plants. Appar can be a nuisance and is not very shade tolerant. Maybell is slow growing. Timp is a preferred species by rabbits resulting in difficulty establishing stand. Summary of best plants – Grasses: Secar Snake River wheatgrass, Magnar basin wildrye, Sherman big bluegrass, Nezpar Indian ricegrass, Covar sheep fescue, sand dropseed, Bannock thickspike wheatgrass, and Schwendimar thickspike wheatgrass. Forbs: western yarrow, Drummond phlox, white evening primrose, scarlet globemallow, silky lupine, Louisiana sagewort, Rocky Mountain iris, and Appar blue flax. Shrubs: native fourwing saltbush, native basin big sagebrush, Maybell bitterbrush, curleaf mountain mahogany, Saskatoon serviceberry, Woods rose, almond, and Drummond willow. Trees: Idaho hybrid poplar, and Rocky Mountain juniper. FY01, FY02 and FY03 no evaluations. **Cancel**

ID02001 CB River Springs Ranch WRP field planting. Vavilov Siberian wheatgrass, Bannock thickspike wheatgrass, Magnar basin wildrye, Northern Cold Desert winterfat, and Snake River Plain fourwing saltbush. Seed ordered 3/26/01 for shipment in early March 2002. Site characteristics: Felthom fine sandy loam soil, 3-12 percent slopes, NE aspect, 2100 feet elevation, 11 inch rainfall, cheatgrass community to be sprayed 2-3 times (spring and fall 2001) prior to early spring (2002) interseeder planting. FY02 this year's precipitation is below average. Field was sprayed for cheatgrass control in May 2001 and March 2002. Field was planted on April 9, 2002 using a grass seeding drill and a rain of 0.3 inches occurred immediately following planting. No appreciable rain fell during the rest of the year. A field check on May 16 showed excellent seed germination. Field was sprayed for broadleaf control in June 2002. Field check on November 19, 2002 - was unable to determine success of planting. FY03 no evaluation.

FIELD OFFICE: EMMETT

ID02023 Little Farms Rush intermediate wheatgrass, Vavilov Siberian wheatgrass, Covar sheep fescue, and Sodar streambank wheatgrass critical area planting. Seed ordered December 14, 1998 for delivery about August 1, 1999. FY02 seed transferred to Little Farms. FY03 no evaluation.

FIELD OFFICE: MARSING/GRANDVIEW

ID04001 Matt and Jean Barney demonstration plots. Bannock thickspike wheatgrass, Sodar streambank wheatgrass, Magnar basin wildrye, Nezpar Indian ricegrass, Snake River Plains fourwing saltbush, Northern Cold Desert winterfat, Vavilov Siberian wheatgrass, Critana thickspike wheatgrass, Rimrock Indian ricegrass, 9019219 bottlebrush squirreltail, PI434231 plains bluegrass, 9005460 alkali bluegrass, High Plains Sandberg bluegrass, 9063520 Ruby Valley pointvetch, 9005617 strawberry clover, 9016134 Gardner saltbush, Trailhead basin wildrye, Bozoisky Russian wildrye, Secar Snake River wheatgrass, Schwendimar thickspike wheatgrass and Sherman big bluegrass ordered April 17, 2003. Seeding planned of October - November 2003. **Site Characteristics:** Owyhee County, MLRA B11, Soil Map Unit 100 fine sandy loam, weak salinity, 1-7% slope, south aspect, 3300 feet elevation, 8-10 inch precipitation zone, non-irrigated, NE 1/4 Section 29 T4S R1W. Plots were planted late fall of 2003.

FIELD OFFICE: MERIDIAN

ID02004 Brad Little Field Planting – BASF Plateau Herbicide Study – Seeding Trial.

Herbicide Treatment 1 – Burn + Herbicide (control – 2 ounce – 4 ounce rates). Herbicide Treatment 2 – Non-burn + Herbicide (control - 2 ounce – 4 ounce – 6 ounce – 8 ounce – 10 ounce – 12 ounce rates). Seeding Treatments – Alfalfa and Snake River Plains Germplasm fourwing saltbush will be mixed with each of the following rangeland forage grass species: Rush intermediate wheatgrass, Luna pubescent wheatgrass, Hycrest crested wheatgrass, CD-II crested wheatgrass, Vavilov Siberian wheatgrass, P27 Siberian wheatgrass, Bozoisky Select Russian wildrye, Mankota Russian wildrye, and Covar sheep fescue. Each treatment (herbicide rate – seed mix) will cover 0.12 acres in 48x110 feet plots. Seed ordered September 18, 2001 for shipment by October 12, 2001. Herbicide treatments and seeding planned for November 2001 during dormant growth period. Site characteristics – MLRA B10, silt loam to sandy loam soil, 2-6 percent slopes, east southeast aspect, 2900-3000 feet elevation, 11-12 inch precipitation zone, non-irrigated, T5N R1N SW1/4 of SW1/4 of Section 5. Site sprayed November 2, 2001. Planting conducted in December 2001. FY02 there was no plants established on August 16, 2002 due to lack of spring and summer moisture for germination. As of evaluation date only 5 inches of moisture for entire year. FY03 wet spring, but extremely hot summer (record setting). No grass establishment. Observations on herbicide treatments: 2 ounce rate very similar to control (no herbicide treatment) with very little cheatgrass or six-weeks fescue control; 4-12 ounce rates resulted in good cheatgrass control; 8-12 ounce rates controlled Sandberg bluegrass, but it appears that there was little control of six-weeks fescue. Trial will be evaluated for at least one more year.

FIELD OFFICE: MOUNTAIN HOME

ID00017 Ted Hoffman-Idaho Department of Lands Species and Planting Method Demonstration for cheatgrass-medusahead wildrye control – rangeland rehabilitation. Three planting methods including conventional tillage with grain drill with sweeps, Idaho Fish and Game interseeder, and Idaho Department of Lands or BLM rangeland seeder will be demonstrated. Ten species – species mixes including Luna pubescent wheatgrass, Rush intermediate wheatgrass, Hycrest crested wheatgrass, Nordan crested wheatgrass, Vavilov Siberian wheatgrass, Bozoisky Russian wildrye, Bozoisky/Vavilov mix, Cereal Rye, Secar Snake River wheatgrass/Bannock thickspike wheatgrass/fourwing saltbush mix, and Secar Snake River wheatgrass/Bannock thickspike wheatgrass/Immigrant forage kochia mix will be cross planted over planting methods. Site characteristics include MLRA B11, Chilcott-Elijah silt loam soil, 0-12 percent slopes, south exposure, 3480 feet elevation, 10-12 inch rainfall zone, non-irrigated, T2S R6E SE1/4 of SE1/4 of Section 16. FY01 planting completed November 2001. The conventional tillage section was not completed and was replaced with a no-till operation. Little to no emergence occurred in 2001 due to extreme drought conditions. The evaluation in 2002 will determine if planting was a success or failure. FY02 more grass observed this year, however, drought has removed any hope of obtaining an adequate seeding. **Cancel**

ID03004 Pat Bennett field planting. Topar pubescent wheatgrass, Regar meadow brome, and Garrison creeping foxtail seeding mixture. Seed ordered October 24, 2002. Seeding planned for November 2002. Site is in MLRA 10A on Houk silty clay loam soil with 0-1 percent slope, 16 inch precipitation zone, 5000 feet elevation, and non-irrigated. NW1/4 Section 33 T1S R11E. D6 caterpillar was used to scalp site, breach existing embankments, and construct earthen plugs prior to planting. Seed was broadcast planted in December 2002 onto dry seedbed. Good winter moisture (snow cover) by late December. FY03 no evaluation.

FIELD OFFICE: PAYETTE

None

FIELD OFFICE: WEISER

ID91029 Grafe Bannock and Critana thickspike wheatgrass field planting. Site is a sandy loam soil, non-irrigated, 12-14 inch ppt, 2500 feet elevation, and 4-8% slopes on west exposure. FY92 estimate 20% stand. FY93 survival is 90% for both species. The existing plants are healthy and holding their own with competition. Neither species is as vigorous as Oahe on same sites. FY94 survival is 95% for each species, good stands, and excellent vigor. This trial continues to improve, the stands are spreading and filling in open ground. Both species appear well adapted to site even considering the extended drought conditions. Total forage production is less than adjacent intermediate wheatgrass, but is more palatable. Plants are producing seed this year. The stands are starting to provide competition for annual weeds, grasses and cereal rye. I am now starting to see the value of these plants on some of our most droughty and limiting sites. FY95 Good stands for both Bannock and Critana (95% survival). Both species continue to improve over time. Cereal rye is not affecting growth. Neither thickspike wheatgrass is producing as well as Oahe intermediate wheatgrass. Both species would fit well with similar palatability grasses in mixture (suggest Goldar or Secar bluebunch wheatgrass). FY96 good stands of both with 6 plants/ft² of each and excellent vigor. Growth of both species is still very good and weed competition is light. Total production continues to be less than adjacent intermediate wheatgrass. FY97 good stands (5 plants per foot), survival, and vigor for both Bannock and Critana. Growth and vigor for both does not reflect the excellent moisture year we had and stands are maintaining or declining slightly. FY98 no evaluation. FY99 good stands of both species with 90 percent survival and good vigor. Producing between 500 and 1000 pounds per acre in an extremely dry April through November year. Bannock is slightly taller at 18 inches than Critana at 16 inches. Heavy grasshopper damage this year. Cheatgrass invasion is slight. FY00 no evaluation. FY01 stands of both Bannock and Critana were rated poor, with 1 plant per square foot, fair vigor and 200 pounds of production per acre. Two years of drought has heavily impacted this planting and cheatgrass is invading. **Next evaluation scheduled for FY04.**

ID94025 Eckhardt Ephraim crested wheatgrass, Magnar basin wildrye, Mankota Russian wildrye, Trailhead basin wildrye, P27 Siberian wheatgrass, Manska pubescent wheatgrass, Reliant intermediate wheatgrass, Bannock thickspike wheatgrass, Schwendimar thickspike wheatgrass, Greenar intermediate wheatgrass, Sherman big bluegrass, Secar Snake River wheatgrass, Goldar bluebunch wheatgrass, Bozoisky Russian wildrye, Hycrest crested wheatgrass, Rush intermediate wheatgrass demo plots. Site is clay loam soil, non-irrigated, 10-12 inch ppt, 3000 feet elevation, and 5% slopes on NE exposure. Seed ordered July 1994. FY94 and FY95 due to drought conditions, seeding planned for spring 96. FY96 planted April 9, 1996 by hand planting and raking plots to control bulbous bluegrass competition. June 19, 1996 evaluation for establishment: Mankota poor, Manska good, Sherman very poor, Greenar good, Trailhead fair, Reliant good, Bozoisky good, Bannock good. July 8, 1996 establishment: Mankota fair, Manska good, Sherman poor, Greenar good, Trailhead fair, Reliant good, Bozoisky good, Bannock good, Goldar good, Rush excellent, Secar fair. Rush has the best stand establishment to date with Goldar next. FY97 no evaluation. FY98 first set of plots; Reliant is out producing all other plots, Greenar is second in production, Sherman hand planted plot is third in production, Sherman broadcast plot failed, T6633-P is fourth in production. Second set of plots; Bozoisky performed the best with Mankota second, and trailhead the poorest. The wildryes, thickspike wheatgrasses and intermediate wheatgrasses have shown adaptation to this area and could play a roll in revegetating local rangelands. FY99 plots were grazed this spring and grazing preference was evaluated. Plots: Greenar and Reliant were grazed the heaviest, followed by Mankota and Bozoisky Russian wildrye. This was uniform for all replications. Thickspike wheatgrasses and all other varieties had slight utilization. Basin wildryes were not utilized. Grazing preference for the larger plantings: Bozoisky Russian wildrye was used the heaviest, followed by Goldar bluebunch wheatgrass, and Rush intermediate wheatgrass used the least. Cattle are grazing Fourwing saltbush. The producer is very happy with results from these plots and uses the information to make his planting decisions. Cattle in mid May grazed FY00 the small plot species. Grazing preference was for Goldar, Bozoisky, and the intermediate wheatgrasses. The intermediate wheatgrasses are spreading into adjacent plots. Moderate use was made on Magnar and Trailhead. Sherman was used only slightly. Fourwing saltbush was utilized and continues to get taller (20 inches tall). In the large acre sized plots adjacent to a Hycrest planting, grazing preference (mid May) in order are: 1) Goldar, 2) Bozoisky, 3) Rush, and 4) Secar. Use of Goldar was similar too slightly heavier than the Hycrest. FY01 all plots are grazed this year. Utilization was heaviest on Greenar intermediate wheatgrass and Reliant intermediate wheatgrass plots. The larger plantings showed grazing preference was highest for Bozoisky Russian wildrye, then Goldar bluebunch wheatgrass, followed by Rush intermediate wheatgrass. FY03 plots were grazed this fall at time of evaluation.

ID94026 Weber Goldar bluebunch wheatgrass, Rush intermediate wheatgrass, Luna pubescent wheatgrass, Secar Snake River wheatgrass, Greenar intermediate wheatgrass, Schwendimar thickspike wheatgrass, Bozoisky Russian wildrye, Bannock thickspike wheatgrass, Delar small burnet, Firecracker and Alpine penstemon, Sherman big bluegrass, Wytana fourwing saltbush, and Rincon fourwing saltbush demo plots. Site is stony clay loam soil, non-irrigated, 16 inch ppt, 3200 feet elevation, 0-2% slopes. Seed ordered July 1994. FY94, FY95, and FY96 due to drought conditions, seeding not planted. FY97 seeded May 16, 1997 with good rains following planting. Weed competition is high. In general initial establishment was good for wheatgrasses, fair for wildryes and poor for forbs. FY98 rainfall was 150 percent of average this year resulting in a flush of weeds. All plots except forbs were sprayed for broadleaf weed control and were shredded to reduce overstory competition. The most successful plants include: GRASSES Rush is by far the superior plot from standpoint of vigor, total growth, and total production. Luna is rated second and Reliant is rated third. Other grasses are only marginally successful to non-existent due to possibly saturated soils and weed competition during the establishment year. FORBS Delar is doing very well and appears very hardy and adapted to wet soil conditions. Penstemons and Lupine did not establish. SHRUBS Rincon is taller (10-15 inches) than Wytana (4-6 inches). FY98 no evaluations. FY99 Weeds and saturated soils are a problem on this site. Most successful plants – grasses: Rush intermediate wheatgrass followed by Luna pubescent wheatgrass, and Reliant intermediate wheatgrass, with others only marginally successful; Forbs: Delar small burnet is performing very well and no other forbs established; Shrubs: Rincon fourwing saltbush is superior to Wytana fourwing saltbush on this site. FY00 no evaluation. FY01 following two years of extreme drought Greenar intermediate wheatgrass was the most productive and vigorous followed by Reliant intermediate wheatgrass and Luna pubescent wheatgrass. Rush intermediate wheatgrass, Mankota Russian wildrye, and Manska pubescent wheatgrass did not grow much this year. Magnar basin wildrye was superior to Trailhead basin wildrye in production and survivability. Thickspike wheatgrass and Russian wildrye accessions grew very slowly. Delar small burnet plants are not handling drought well and are dying. Rincon fourwing saltbush is better than Wytana fourwing saltbush with some plants to 18 inches in height. Weeds are infesting site. FY02 was a very dry growing season. Intermediate wheatgrasses - Greenar is producing more forage than any other species, Greenar is not spreading as fast as Rush or Reliant which is probably an advantage on this droughty site, Luna is the best pubescent wheatgrass, but not producing as much as Greenar. Basin wildryes - Magnar and Trailhead are nearly identical in production with Magnar slightly higher with more vigor than trailhead. Russian wildrye - Bozoisky is by far the best performer of the R. wildryes. Small burnet - Delar is no longer present. Fourwing Saltbush - Rincon is a little better than Wytana, but they lack vigor. Thickspike wheatgrass - all accessions are barely surviving. **Next evaluation scheduled for FY04.**

ID96024 Sutton Rush intermediate wheatgrass, Luna pubescent wheatgrass, and Oahe intermediate wheatgrass field planting. Site is loam soil, non-irrigated, 15-17-inch ppt, 3320 feet elevation, 1-4% slope on south exposure. Seed ordered March 14, 1996. FY96 planted in May into good seedbed with good weed control. Good stand establishing with about 3 plants per foot squared, each species was planted with alfalfa in alternate rows and alternating sections. FY97 good stands with excellent vigor of each cultivar. The Oahe/alfalfa stand was cut for hay and produced 1.5 tons/acre. Because of topography the Rush/alfalfa and Luna/alfalfa were not cut for hay. The entire field was grazed; grazing was uniform across all trials so preferences could not be determined. Producer is very happy with all three from standpoint of production potential when seeded with alfalfa. FY98 good stands and vigor for each species with about 7 plants per square foot. Yield for all species was about 5000 pounds per acre or about 3 AUMs per acre. Cattle are selecting Luna as first choice, then go to Rush before Oahe. The Rush was more mature than Luna when steers were put in pasture which may account for selection choices. FY99 good stands and vigor of all three species. Entire 84 acre seeding provided 135 AUMs or 1.6 AUMs/ac. Due to later season of use; cattle prefer Luna and Oahe to Rush. Rush initiates growth earlier and is more mature when cattle are turned into pasture, which probably accounts for this preference. FY00 similar report to last year. FY01 good stands and vigor for all species. Grazing preference continues to be for Oahe, followed by Luna, and the Rush. Production is about the same for all species although reduced this year due to two years of extreme drought. FY02 good stand, and vigor with greatly reduced production this drought year for all accessions. Produced 0.5-0.7 AUM/Acre for each accession, less than 50% of the normal precipitation year. Grazing is slowing spread of these species. **Next evaluation scheduled for FY04.**

ID97023 Schwenkfelder Rush intermediate wheatgrass District Seed Increase. Site is silty clay loam soil, 14-16 inch ppt, irrigated, 2700 feet elevation, 0-2% slopes, and north exposure, T15N R2W SW1/4 NE1/4 Section 16. Seed ordered March 24, 1997. FY97 spring planted May 29, 1997 into excellent firm seedbed. By July 3, 1997 adequate rain had occurred for good germination so no irrigation was required. There were still a few seedlings emerging on this date. Cooperator plans to spray for broadleaf weeds and will fertilize this fall to prepare for seed production. FY98 excellent stand and vigor with plants averaging 60 to 72 inches in height on June 23 with seedheads up to 15 inches

long. Harvested in mid August with 550 to 600 pounds per acre estimated yield. Baled forage yield was 7000 to 8000 pounds per acre. The hay is fed to range cattle early in the feeding season and utilize it readily. FY99 produced 300 lbs/ac seed this year. Producer is very happy with production and utilizes residue to feed beef cows. Hay yield was about 3 tons per acre. Producer fertilized with 43-lbs/ac nitrogen and 104-lbs/ac phosphorus in late October 1999. FY00 no evaluation. FY01 producer decided to graze this field this year due to drought and reduced seedhead production. Vigor was reduced because of drought. FY02 producer choose to irrigate (twice) this field and harvest (July 10th) for hay. Production was 7500 pounds per acre (3.76 tons/acre). Field was irrigated again and used for fall grazing. **Next evaluation scheduled for FY04.**

ID98019 Royce Schwenkfelder Bannock thickspike wheatgrass Field Planting. Seed ordered March 16, 1998 for April delivery. FY98 because of spring rains, this seeding did not go in until mid June. Seedbed preparation was excellent, but only 20 percent of plants emerged due to soil crusting. Additional seed was obtained and this seeding will be replanted. FY99 - FY03 producer has not planted due to severe drought conditions the past three years.

ID00001 Ed Pollard Field Planting – Native mix Secar Snake River wheatgrass, Bannock thickspike wheatgrass, Magnar basin wildrye, winterfat, fourwing saltbush, Wyoming big sagebrush. Site is Baldock silt loam soil, 10-12 inch precipitation, 2180 feet elevation, 1-percent slope, SW exposure, T10 and 11N R4W Sections 3 and 34. Seed ordered (Bannock and Magnar) on 10-6-99. FY00 seeded October 27, 1999 into very dry soft seedbed. It rained .2 inches the night of seeding and weather was been mild until early December. Winterfat still had fluff on seed so it was broadcast ahead of drill. Half of sagebrush and all of fourwing saltbush seed were mixed with grass and drilled – the other half of sagebrush will be broadcast later this winter onto snow. FY00 unable to get good evaluation this year due to droughty conditions. FY01 this is the second year of extreme drought conditions that are severely impacting plant development. Competition from annual weeds is heavy. Not enough plants to give a good evaluation. FY02 all species are adapted to site, but are severely impacted by third year of drought. There is heavy competition from weeds (cheatgrass, foxtail barley, and thistle) and producer is conducting a weed control program. Shrubs are present in limited amounts, but not very obvious. Grasses are suppressed and it will take a long time for them to dominate site. FY03 all species have very poor establishment due to drought conditions and excessive weed competition. New seeding mixes are being developed to replant site. **Cancel**

ID02010 Hugh Pangman - New Meadows Riparian Planting. 9067541 Peachleaf willow - Baker source and Golden willow. 50 cuttings ordered February 11, 2002 for shipment in early May 2002. To be planted with waterjet stinger. FY02 willows were planted through cobbly site using a backhoe to watertable located at 5-6 feet depth. 95 survival of each species. Peachleaf willows are 18-20 inches tall and Golden willows are 24 inches tall. Golden willows are more vigorous with more stem growth. FY03 Peachleaf willow 95 percent survival with 36-48 inch height. Golden willow local cuttings also have 95 percent survival with 48 inch plus height. Producer is please with this planting.

ID02011 Tom Vogel - Paddock Riparian Planting. 9067546 Peachleaf willow - Burns source and local coyote willow. 50 cuttings ordered February 11, 2002 for shipment in late March 2002. To be planted with waterjet stinger. FY02 willows were planted on April 3, 2002 using the waterjet stinger. Stream was dry for most of July and August. Peachleaf willows have about 75 percent survival with some leader growth up to 36 inches. Coyote willow has about 60% survival. FY03 no evaluation.

ID02014 Mink Land and Livestock Riparian Planting. 9067549 Peachleaf willow - Prairie City source and local source coyote willow, 2002 for shipment in late March 2002. To be planted with waterjet stinger. FY02 Peachleaf willow survival 50% and Coyote willow survival 10%. Planting depth (soils were very dry for most of season) was probably too shallow and plant perhaps should have been completed sooner. FY03 Peachleaf willow 80 percent survival with 48 to 96 inch height. Coyote willow local cuttings have 65 percent survival with 24 to 36 inch heights.

ID02017 Jim Eckhardt Field Planting - Plateau Herbicide Trial (4 oz, 8 oz, 12 oz, Control 4 oz, 8 oz, 12 oz). Seed ordered March 20, 2002 for shipment in early October. Species include: Magnar basin wildrye, Trailhead basin wildrye, Bozoisky Russian wildrye, Mankota Russian, Bannock thickspike wheatgrass, Critana thickspike wheatgrass, Goldar bluebunch wheatgrass, High Plains Sandberg bluegrass, Vavilov Siberian wheatgrass, CD-II crested wheatgrass and Hycrest crested wheatgrass. Site Characteristics: MLRA B10, Deshler-Devon silty clay loam soil, 2-5 percent slope, south aspect, 2600 feet elevation, 12 inch rainfall zone, T11N R6W NE 1/4 NW1/4 Section 1. FY02 Plateau was applied (4, 8 and 12 ounce rates) March 27, 2002 by Joe Vollmer. Did not control salsify, fiddleneck or sunflower. Planted November 4, 2002 under dry/cold conditions with a rangeland drill at 12-inch spacing. FY03 three planted

species established this year: 1) Vavilov Siberian wheatgrass had the best stand and was the most vigorous. It did not grow in the untreated control plot – established well in the 4 and 8 ounce treatments – did not establish in the 12 ounce treatment; 2) CD-II crested wheatgrass was not as vigorous as Vavilov and had fewer plants established. It had no establishment in the no treatment - some establishment in the 4 ounce treatment – good establishment in the 8 ounce treatment – no establishment in the 12 ounce treatment; 3) Hycrest crested wheatgrass was the least vigorous of the establishing species with 30-35 percent fewer plants than Vavilov and CD-II. It had no establishment in the untreated plot - spotty establishment in the 4 and 8 ounce plots – no establishment in the 12 ounce plots. At this evaluation the 8 ounce treatment appears to be the best rate for Plateau herbicide.

IDAHO DIVISION IV PLANT MATERIALS PLANTINGS

FIELD OFFICE: BURLEY

ID94003 Bronson Bozoisky Russian wildrye, Mankota Russian wildrye, Trailhead basin wildrye, Magnar basin wildrye, Goldar bluebunch wheatgrass (firebreaks and winter grazing). Site is sandy loam soil (weakly saline), 9-10" ppt, partially irrigated, 4800 feet elevation, 0-2% slopes. Species seeded in fall of 1994 with good seedbed. FY95 good stands of Mankota, Magnar and Trailhead; fair stands of Bozoisky and Goldar. All seedings are establishing well except in weedy areas. No seed production during establishment year. FY96 good stand of Goldar, fair stand of Mankota and Magnar, and very poor stand of Trailhead and Bozoisky. All plants that are present look good and are producing seed. There are weeds present including cheatgrass, tumble mustard, Russian thistle, broom snakeweed and sagebrush. FY97 Goldar full stand, Trailhead has improved and is spreading, Magnar is very thin, and both Russian wildryes are adapted with thin stands. FY98 good stands of Bozoisky and Goldar and fair stands of Mankota, Trailhead and Magnar. Stands are grazed in winter. FY99 Good stand and vigor of all species. All species are in same pasture and the Bozoisky is grazed closer than the other species. FY00 fair to good stand of all species. Cooperator is very pleased with all species and prefers them over crested wheatgrass varieties. Site was grazed in spring. Cooperator states that livestock make good use of Bozoisky and Mankota in spring, Trailhead in winter, and Magnar in fall and winter. Magnar stays greener than Trailhead. FY01 this site is suffering from two years of drought. Mankota Russian wildrye has 36-inch height, fair to good stand and good vigor. Bozoisky has 20-inch height, fair stand with fair vigor. Magnar has 30-inch height and Trailhead has 20-inch height and both have fair to poor stands with fair to good vigor. Goldar has 24-inch height, fair to poor stand with good vigor. FY02 Survival/Plant Height - Mankota 75%/26 inch, Magnar 80%/40 inch, Trailhead 80%/36 inch, Bozoisky 75%/30 inch, Goldar 30%/26 inch. Magnar and Trailhead are only lightly grazed and are showing very little effect from grazing. Bozoisky and Mankota stands are heavily grazed and stand are beginning to decline. Goldar stand is also heavily grazed and stand has declined significantly. Producer comments indicate that Goldar is always the first species to be grazed in this pasture followed by the Russian wildrye. FY03 no evaluation.

ID96012 Poulton Garrison field planting for plug nursery. Seed ordered 12/8/96. FY96 no evaluations. FY97 field has full stand with 2 plus plants/ft². Plants have height of 36 inches and no weeds. Stand is gravity irrigated and was fertilized with 80 pounds of N in early June. FY98 excellent stand that has improved significantly in the last year. The stand was hayed this year. FY99 good to excellent stand. The stand was 36 inches tall when swathed for hay and had 6 inches of regrowth in early September. Cooperator is very pleased with this grass. Elk are utilizing planting. FY00 planting was cut for hay and elk are utilizing it heavily due to drought conditions. FY01 due to drought conditions, this planting was hayed earlier than normal and has been heavily grazed. Production was below normal. Stand is solid with no bare spots or invading species. FY02 same comments as last year. FY03 no evaluation.

ID96028 East Cassia SCD Hycrest crested wheatgrass, Sodar streambank wheatgrass, Bannock thickspike wheatgrass, and Appar blue flax field planting and Hycrest II (CD-II) crested wheatgrass, Sodar, Bannock, and Appar field planting. FY96 planting planned for fall of 1996. FY97 no evaluation. FY98 fair stand of all species except Appar, which failed. FY99 poor stands of Hycrest, CDII, and Flax. Bannock and Sodar failed. Crested wheatgrass can be rowed in very heavy stands of cheatgrass. FY00 fair stand of Hycrest and CD-II, poor stand of Bannock, and Sodar and Appar failed. Both Hycrest and CD-II are thickening up and starting to crowd out cheatgrass. Some Bannock is present, but Sodar and Appar were not observed. FY01 no evaluation. FY02 planting has been mowed resulting in poor opportunity to evaluate planting. FY03 no evaluation.

ID97005 Hawker Field planting for medusahead wildrye control. Sherman big bluegrass, Covar sheep fescue and Garnet (905308) mountain brome. Site is very stony loam soil, non-irrigated, 14 inch ppt, 5800 feet elevation, 4% slope on south exposure. Seed ordered 10/17/96. FY97 new seeding and difficult to determine establishment. FY98 good stand of Sherman and Covar establishing and fair stand of mountain brome establishing. FY99 due to severe grasshopper population, it is impossible to determine stand composition. FY00 due to drought planted species were not found – evaluate in spring 2001. FY01 site was heavily grazed early this year and no regrowth occurred. FY02 cattle have been in field most of the summer and field is overgrazed. Planting evaluation could not be performed. FY03 no evaluation.

ID97006 Gary Jones Field planting of Garrison creeping foxtail. Site is silt loam soil, irrigated, 5000 feet elevation, and 0-3% slope on south exposure. Seed ordered 10/17/96. FY97 new seeding and very difficult to determine establishment. FY98 poor stand establishing with .5 plants per foot². FY99 good stand with about 4 plants per square foot and 4000 pounds per acre production. Fertilizer would benefit stand and reduce weeds. FY00 good stand with excellent vigor. Planting was hayed this year. FY01 this is a good planting. It was cut earlier than usual for hay due to shortage of irrigation water. Yield was down this year, but cooperators were satisfied with yield given the droughty conditions. FY02 landowner is enthused about Garrison production/performance and plans to plant additional field to this species. FY03 no evaluation.

ID00009A Warren Yadon willow field planting. 9067561 Lemmon willow (12), 9067548 Drummond willow (12), 9067436 Yellow willow (12), 9067375 Peachleaf willow (15), and 9067376 Peachleaf willow (14) were ordered on March 1, 2000 for shipment April 10, 2000. FY00 willow evaluations will be performed next year. FY01 this planting is overgrown with woods rose, stinging nettle and weeds. Cuttings are alive, but very difficult to evaluate this late in the year. Recommend evaluating earlier next year. FY02 12 Drummond and 6 Yellow willows were alternately planted with 2 Yellow willows 6-8 feet tall still surviving. 6 Yellow willows planted into the face of a 4-5 feet cutbank on the west side of stream, all have survived and are 2-4 feet tall with limited branching. 14 Peachleaf 376 were planted with 4 6-8 feet tall plants surviving. 15 Peachleaf 375 were planted with 12 2-10 feet tall plants surviving. 12 Lemmon willows were planted, but could not be located. FY03 no evaluation.

FIELD OFFICE: GOODING/FAIRFIELD

ID98018A Bill Simon Farms Rush intermediate wheatgrass District Seed Increase. Seed ordered March 16, 1998 for mid April delivery. FY98 Rush seeded in April 1998 into twin rows on 30-inch centers. The 55 acre field was formerly in alfalfa (1996 and prior) and fallowed in 1997. Excellent stand established by the fall of 1998 with plants fully bunched and vigorous. Stand was sprayed with formula 40 2, 4-D in late June or early July. Producer did not fertilize stands in the fall. FY99 approximately 25 percent of production was lost to shatter due to strong winds prior to harvest. The 55-acre field produced approximately 180 lbs/acre. On droughtier hilltops and ridges producer noted that seed production was lacking and suggested that wider row spacing would be desirable. FY00 Rush stand remain strong and Bill Simon feels it is the best grass on the Prairie. The dry year took its toll on seed production, however. Harvested the third week of August 2000 and the 55-acre field produced 91 pounds/acre clean seed. The 55-acre field was in alfalfa prior to seeding to Rush, and this field has more weeds. FY01 spring frost damaged reproductive stems - no seed production. FY02 unfavorable moisture year - 50 pounds per acre seed production. FY03 no evaluation.

ID98018B Bill Simon Farms Rush intermediate wheatgrass District Seed Increase. Seed ordered March 16, 1998 for mid April delivery. FY98 rush seeded in April 1998 into twin rows on 30-inch centers. The 85-acre field was formerly in small grain. Excellent stand was established by the fall of 1998 with plants fully bunched and vigorous. Stands were sprayed with formula 40 2, 4-D in late June or early July. Producer did not fertilize stands in the fall. FY99 approximately 25 percent of production was lost to shatter due to strong winds prior to harvest. The 85-acre field produced approximately 110 lbs/acre. On droughtier hilltops and ridges producer noted that seed production was lacking and suggested that wider row spacing would be desirable. FY00 Rush stands remain strong and Bill Simon feels it is the best grass on the Prairie. The dry year took its toll on seed production, however. Harvested the third week of August 2000, the 85-acre field produced 81 pounds/acre clean seed. Weeds in the 85-acre field are not a problem, since prior to seeding to Rush the field was in 2 years of wheat, and prior to that 5 years of Regar meadow brome, providing a clean field. FY01 unfavorable moisture year - 40 pounds per acre seed production. FY02 unfavorable moisture year - 23 pounds per acre seed production. FY03 no evaluation.

ID98020 Bill Simon Bannock thickspike wheatgrass District Seed Increase. Seed ordered April 10, 1998 for mid April delivery. FY98 Bannock seeded on 12-inch centers. Evaluation in November 1998 indicated a slow start with weak plants at the end of the first full growing season. Weeds do not appear to be a problem, but soils are somewhat gravelly and it appears to be a difficult site to establish a stand. Field was fertilized with about 20 units of nitrogen in the fall. FY99 plants remain narrow and spindly, but fertilizer did contribute to improved plant health. Harvest of approximately 80 lbs/acre was completed early while plants were still green, but seed was mature and beginning to shatter. FY00 this is the first-to-ripen grass in Bill's portfolio, interfering with his alfalfa hay harvest on the Prairie. This year the Bannock was harvested the first week of August, and produced 110 pounds/acre clean seed, which is higher than last year's yield despite the dry year. The field was fertilized with 40 units of ammonium sulfate about May 1, 2000, and later sprayed with Formula 40 2,4-D. Cheatgrass is increasing in the field and will need to be controlled in 2001. FY01

unfavorable moisture year - 100 pounds per acre seed production. FY02 unfavorable moisture year - 65 pounds per acre seed production. FY03 no evaluation.

ID99007 Spring Cove Ranch – Butler Field Planting Laurel willow. Island-constructed wetland, silt loam soil, 0-2 percent slopes, 3100 feet elevation, T5S R12E SW1/4 Section 21. FY99 20 Laurel willows were at water edge on islands. Tree tubes (1.5 feet tall) were utilized to protect cutting from muskrats. All cutting are flourishing with about 5 to 6 feet of growth the first growing season. FY00 Laurel willows are thriving on the islands, protected by their tree tubes. Plants are vigorous and are now beginning to obtain fuller, multi-branched shape. FY01 planting doing very well - tree tubes removed. FY02 planting doing very well - beaver/muskrat are not damaging trees to date. Providing excellent bank erosion protection. FY03 no evaluation.

ID00005 Camas SCD (Koonce) formerly ID86010 Koonce multiple species demo plots. FY99 field evaluation determined these plots to be contaminated and planting was destroyed, site cleaned-up and fallowed during 1999, and was replanted in the spring of 2000. Plots replanted May 1, 2000. Plots will be irrigated the first growing season. FY00 plots were irrigated until mid June, and then discontinued. Most of the wheatgrasses sprouted in the central and northern portions of the plot, but remained small at evaluation time due to dry season. Plot remains relatively weed-free except the southernmost 15 feet of the plot (sheep fescue area) which is a solid stand of globe mallow. The fescue is sprouted underneath the large mallow leaves. This is a particularly difficult weed to control once established. Special attention needs to be directed here in spring 2001.

FY01 the plots have been subjected to two seasons of unfavorable plant growth (dry springs) and one of the lowest winter snowpacks recorded on the Camas Prairie. Still, all varieties exhibit some level of success except for the following varieties which could not be found for observation: Durar hard fescue, Nezpar Indian ricegrass, 9043501 Salina wildrye, and Thurber's needlegrass. These varieties did not establish at all or remain yet as dormant seed due to drought. Some of the absent species may have germinated but died unnoticed due to drought. Weed competition most likely is not a factor of establishment difficulties in the plot. Possible exceptions may be in the Covar sheep fescue area that had significant amounts of common mallow in 2000 but is now under control due to spot spraying. Scouringrush is invading in the Bighorn sheep fescue and Magnar basin wildrye areas and may be a factor there. The entire demo plot was spot-sprayed in 2001 twice (last of June and first of August) with 2, 4-D/Banvel. At the time of this evaluation the plot did not contain weed problems significant to grass establishment.

The wheatgrasses are performing the best. The highest performing wheatgrasses include Rush and Reliant intermediate wheatgrasses, Manska and Luna pubescent wheatgrasses, CDII and Nordan crested wheatgrasses, Bannock thickspike wheatgrass, and Pryor slender wheatgrass. Weak wheatgrass performance was observed with Arriba western, Whitmar beardless wildrye, San Luis slender wheatgrass, Critana thickspike wheatgrass, Ephraim crested wheatgrass, Douglas crested wheatgrass, and P27 Siberian wheatgrass. Bozoisky and Mankota Russian wildrye performed moderately, but the other wildryes either did poorly (Volga Mammoth and Magnar) or did not establish (Salina and Trailhead). Manchar and Liso smooth bromes have done well considering the drought with moderate performances, but Garnet and Bromar mountain bromes and Regar meadow brome did not fare so well and have overall weak ratings. The fescues, needlegrasses, orchardgrasses, ricegrasses, timothy, and foxtail are currently performing weakly or did not establish. Sherman big bluegrass had low establishment density but the existing plants have good vigor with many seedheads produced.

FY02 drought continues. Excellent plots include: Rush, Greenar, Reliant, Topar, Manska, Luna, Bozoisky, CD-II, Hycrest, and Nordan. Good plots include: Rosana, Manchar, Regar, Alkar, Jose, Liso, Oahe, Tegmar, 238, Goldar, P-7, Mankota, Secar, Pryor, Bannock, Schwendimar, Sodar, Sherman, Vavilov, and Magnar. Fair plots include: Latar, Garrison, Arriba, Climax, Covar, Volga, Whitmar, San Luis, Critana, Ephraim, Douglas, P-27, Rimrock, High Plains, and Trailhead. Poor plots include: Paiute, Garnet, Bromar, Durar, 902484, and 9040137. Failed plots include: Salina and Nezpar.

FY03 no evaluation.

ID00006 Bill Simon Bannock thickspike wheatgrass District Seed Increase. Seed ordered February 10, 2000 for mid April delivery. FY00 this new Bannock seeding in spring 2000 was installed adjacent and south of existing Bannock field under file ID98020. Bannock was drilled at 3 pounds per acre PLS on 24-inch centers. The field was helicopter sprayed with 2, 4-D the third week of June. Where helicopter missed, Russian thistle prevailed this year but should diminish next year. At evaluation time on November 1, 2000, the stand was well on its way to establishment considering the dry year. FY01 unfavorable moisture year - 200 pounds per acre seed production. FY02 unfavorable moisture year - 110 pounds per acre seed production. FY03 no evaluation.

ID01007 Spring Cove Ranch – Butler demonstration plantings of Magnar basin wildrye, Snake River Plain fourwing saltbush, and Northern Cold Desert winterfat. Seed ordered March 16, 2001. Site characteristics: Planting 1. Vertisol soil, 11-inch rainfall, irrigated, 3300 feet elevation, south of Pioneer Reservoir. Planting 2. Sodic soil, 12-inch rainfall, irrigated, 3500 feet elevation, near Clover Creek – Hill City Road – southern base of Bennett Mountain foothills. FY01 and FY02 seed not planted due to extreme drought. FY03 no evaluation.

ID01011 Bill Simon District Seed Increase High Plains Sandberg bluegrass test plots. Seed ordered in September 2001. FY02 seed not planted due to drought. FY03 no evaluation.

ID02015 Bob Josaitis Field Planting. 905439 switchgrass (Bridger PMC) and Blackwell switchgrass (Manhattan PMC) were ordered March 15, 2002 for shipment about April 1, 2002. Purpose: portion of seed mix for wildlife nesting cover. Site Characteristics: MLRA 11a, Harsand fine sandy loam soil, 0-2 percent slope, 3700 feet elevation, 11 inches precipitation, full irrigation, T6S R15E Section 4. FY02 seed not planted due to drought. FY03 no evaluation.

FIELD OFFICE: JEROME

ID99012 Tom Davis Critical Area Planting on pond embankment/dike. Hycrest crested wheatgrass and Vavilov Siberian wheatgrass seed ordered March 30, 1999. Planting planned for early April 1999. FY99 spring planting failed due to lack of rainfall. Cooperator planted (broadcast and harrowed) in November 1999 under dry conditions. FY00 good stand in areas where sprinkler semi-irrigates - poor to fair stand establishing in dry areas due to extremely droughty conditions. 2 plants per square foot, good vigor, 12-inch height. Expect stand to improve with better rainfall this fall-winter. FY01 good stand with 3 plants per foot squared, and good vigor. FY02 good stand with 4 plants per square foot. FY03 no evaluation.

ID99014 Tom Davis irrigation pivot corner field planting. Vavilov Siberian wheatgrass ordered March 30, 1999 with delivery about September 1, 1999. Planting planned for late October 1999. FY00 planted (broadcast and harrowed) in November under dry conditions. Good stand in areas where sprinkler semi-irrigates - poor to fair stand establishing in dry areas due to extremely droughty conditions. 2 plants per square foot, good vigor, 12-inch height. Expect stand to improve with better rainfall this fall-winter. FY01 good stand with 3 plants per foot squared and good vigor. FY02 fair stand with 2 plants per square foot. FY03 no evaluation.

FIELD OFFICE: RUPERT

ID02016 Cooperator Unknown critical area planting - roadside. Seed ordered March 6, 2002 (100 pounds Topar). FY02 and FY03 no evaluations.

FIELD OFFICE: SHOSHONE/HAILEY

ID01003 Cooperator unknown willow field planting. 10 cuttings each of 9067548 Drummond willow, 9067435 Geyer willow, 9067491 Geyer willow, 9067437 Booth willow, 9067469 Booth willow, and 9067478 Booth willow. FY01 no evaluation. FY02 and FY03 no evaluations.

FIELD OFFICE: TWIN FALLS

ID00007 Twin Falls SWCD/Twin Falls Highway District Drought tolerant landscape-weed control demonstration plantings. Seed ordered March 1, 2000 for late March delivery. Planting 1: Vavilov Siberian wheatgrass, Bozoisky Russian wildrye, and Ladak alfalfa. Planting 2: Hycrest crested wheatgrass, Bozoisky Russian wildrye, and Ladak alfalfa. Planting 3: Secar Snake River wheatgrass, Critana thickspike wheatgrass, Trailhead basin wildrye, Rimrock Indian ricegrass, and Wytana fourwing saltbush. Planting 4: Secar Snake River wheatgrass, Bannock thickspike wheatgrass, Magnar basin wildrye, Nezpar Indian ricegrass, and Snake River Plain fourwing saltbush. Site characteristics: MLRA B11A, Portneuf silt loam soil, 0-2 percent slopes, north exposure, 3800 feet elevation, 10-12 inch precipitation, irrigated for establishment only, T11S R18E SW1/4 of SW1/4 of Section 13. FY00 due to very dry spring the planting was delayed until better planting conditions occur. FY01 site was planted in mid to late April and sprinkler irrigated in May to assist with plant establishment. Site was also mowed several times during growing season for weed control. Because of mowing, species identification was not possible – estimated initial stand establishment for all plantings are fair with good plant vigor. FY02 introduced plantings are well established - native plantings failed. Introduced seed of Vavilov Siberian wheatgrass (15 lb) and Bozoisky Russian wildrye (5 lb) was ordered on September 15, 2002 to replant failed portion. Planting completed for October 25, 2002 (dormant planting). FY03 field observation determined that little establishment has occurred this year due to drought conditions.

ID02008 Hot Creek Riparian Planting. 9067541 Peachleaf willow - Baker source, 9067549 Peachleaf willow - Prairie City source, and 9067560 Peachleaf willow - Deer Creek source. Cuttings ordered February 11, 2002 for shipment April 1, 2002. FY02 - 9067541 12 percent survival with poor vigor - 9067549 24percent survival with poor vigor - 9067560 56 percent survival with poor vigor. Survival impacted by continuously saturated soils. Success primarily related to different site conditions. FY03 no evaluation.

ID02009 Shoshone Creek Riparian Planting. 9067541 Peachleaf willow - Baker source, 9067549 Peachleaf willow - Prairie City source, and 9067560 Peachleaf willow - Deer Creek source. Cuttings ordered February 11, 2002 for shipment April 1, 2002. FY02 - 9067549 60 percent survival with good vigor - 9067541 76 percent survival with good to excellent vigor - 9067560 50 percent survival with fair vigor, native Planeleaf willow 100 percent survival with excellent vigor. Death loss can primarily be related to livestock damage when cattle were place in field for 5 days. FY03 no evaluation.

ID03001 Walt Coiner Field Planting. Seed was ordered on September 17, 2002. Purpose: Field Planting - windbreak interspace perennial cover/weed control study - irrigated-semi irrigated-dryland trials. Approximately 1 acre per species - broadcast seeding rates - Aberdeen PMC broadcast planters were used for seeding - dormant fall planting completed November 4 and 5, 2002. **Irrigated species:** Durar hard fescue; Sherman big bluegrass; Foothills Canada bluegrass, and Talon Canada bluegrass. **Semi Irrigated species:** Covar sheep fescue; Sodar streambank wheatgrass; Paiute orchardgrass; Ephraim crested wheatgrass; Sherman big bluegrass; Roadcrest crested wheatgrass; Rosana western wheatgrass; and Quatro sheep fescue. **Dryland species:** Vavilov Siberian wheatgrass and Bozoisky Russian wildrye. FY03 - Initial evaluation August 20th. Below is preliminary data per this evaluation:

Irrigated Perennial Cover (full irrigation)

Species	Stand	Plants/ft2	Vigor	Adapted (Yes/No)
Sherman big bluegrass	good-exc.	6-8	excellent	yes-good
Talon Canada bluegrass	good-exc.	4-6	excellent	yes-good
Foothills C. bluegrass	excellent	5-7	excellent	yes-good
Durar hard fescue	fair-good	3-4	excellent	yes-good

Semi-Irrigated Perennial Cover

Covar sheep fescue	poor-fair	2	fair-good	no-needs full irr.
Quatro sheep fescue	poor	<1	fair	no-needs full irr.
Newhy hybrid wheatgrass	poor	<1	fair	no-needs full irr.
Roadcrest c. wheatgrass	good	3-5	good	yes-good
Ephraim c. wheatgrass	excellent	8-10	good-exc.	yes-exc.
Sodar s. wheatgrass	good	2-3	fair	yes-fair
Paiute orchardgrass	fair-good	1	fair-good	yes-needs full irr. for establishment

Dryland Perennial Cover

Vavilov S. wheatgrass	good	4-5	good	yes-good
Bozoisky R. wildrye	poor	<1	fair	unknown
Sherman big bluegrass	v. poor	<1	v. poor	no-needs est. irr.
Rosana w. wheatgrass	fair	<1	good	no-needs est. irr.

IDAHO DIVISION V PLANT MATERIALS PLANTINGS

FIELD OFFICE: AMERICAN FALLS/ABERDEEN

None

FIELD OFFICE: BLACKFOOT

ID02006 Paul Ricks Demonstration Planting. Seed ordered February 11, 2002 for shipment to Aberdeen PMC by March 4, 2002. FY02 Planting completed in May 2002. August 27, 2002 initial evaluation indicated at least some establishment of all seed plots.

Fully Irrigated Plots FY03 good to excellent stands – Forager alfalfa, Rampage alfalfa, Alice clover, Rowdy alfalfa, Mara perennial rye, Fawn tall fescue, Latar orchardgrass, Johnstone tall fescue, Potomac orchardgrass, Teton tall fescue, Bavidana orchardgrass, Povet tall fescue, Paiute orchardgrass, Barcel tall fescue, Regar meadow brome, Barcarella tall fescue, Rebound meadow brome, T33 tall fescue, Paddock meadow brome, Bartura meadow fescue, Hakari mountain brome, 9005438 switchgrass, Blackwell switchgrass, 9005439 switchgrass, and Bozoisky Russian wildrye. Poor to fair stands – Jumbo Ladina clover, Lutana cicer milkvetch, Ranger alfalfa, Endura Kura clover, Bull Birdsfoot trefoil, Climax timothy, Barliza timothy and Mutimedia sunflower.

Partially Irrigated Plots FY03 good to excellent stands – Forager alfalfa, Rampage alfalfa, Rowdy alfalfa, Travois alfalfa, Ladac alfalfa, Bromar mountain brome, Luna pubescent wheatgrass, Garnet mountain brome, Reliant intermediate wheatgrass, Newhy hybrid wheatgrass, Rush intermediate wheatgrass, Greenar intermediate wheatgrass, Bozoisky Russian wildrye, Tegmar intermediate wheatgrass, Latar tall wheatgrass. Poor to fair stands – Eski sainfoin, Remont sainfoin, Delar small burnet, Appar blue flax, Timp Utah sweetvetch, 9057902 western yarrow, Ruby Valley pointvetch, Covar sheep fescue, Arriba western wheatgrass, Rosana western wheatgrass, Paiute orchardgrass, Bannock thickspike wheatgrass, Douglas crested wheatgrass, Critana thickspike wheatgrass, Manchar smooth brome, Schwendimar thickspike wheatgrass, Lodorm green needlegrass, Sherman big bluegrass, Foothill Canada bluegrass, SL hybrid wheatgrass, RS Hoffman wheatgrass, San Luis slender wheatgrass, Pryor slender wheatgrass, Alkar tall wheatgrass, Mandan Canada wildrye, Magnar basin wildrye, Joseph Idaho fescue, Trailhead basin wildrye, Mankota Russian wildrye, Goldar bluebunch wheatgrass, and Syn A Russian wildrye.

Dryland Plots FY03 good to excellent stands – Rampage alfalfa, Rowdy alfalfa, Luna pubescent wheatgrass, Hycrest crested wheatgrass, Critana thickspike wheatgrass, CD-II crested wheatgrass, Mankota Russian wildrye, and Bozoisky Russian wildrye. Poor to fair stands – Forager alfalfa, Whitmar beardless wheatgrass, Immigrant forage Kochia, Rimrock Indian ricegrass, Travois alfalfa, Nezpar Indian ricegrass, Ladac alfalfa, P27 Siberian wheatgrass, Secar Snake River wheatgrass, Vavilov Siberian wheatgrass, Covar sheep fescue, Durar hard fescue, Arriba western wheatgrass, Rosana western wheatgrass, Nordan crested wheatgrass, Sodar streambank wheatgrass, Ephraim crested wheatgrass, Bannock thickspike wheatgrass, Schwendimar thickspike wheatgrass, Magnar basin wildrye, High Plains Sandberg bluegrass, Trailhead basin wildrye, 9019219 bottlebrush squirreltail, Goldar bluebunch wheatgrass, Open Range winterfat, and Wytana fourwing saltbush.

FIELD OFFICE: FORT HALL

ID03002 Shoshone-Bannock Tribe Demonstration Planting. Nezpar Indian ricegrass, Goldar bluebunch wheatgrass, Magnar basin wildrye, Sodar streambank wheatgrass, Bannock thickspike wheatgrass, Rimrock Indian ricegrass, Trailhead basin wildrye, Critana thickspike wheatgrass, Shoshone creeping wildrye, High Plains Sandberg bluegrass, Secar Snake River wheatgrass, Sherman big bluegrass, Schwendimar thickspike wheatgrass, Joseph Idaho fescue, Nezpurs Idaho fescue Winchester germplasm Idaho fescue, Needle and Thread grass. Seed ordered September 30, 2002. Planting completed early November 2002. FY03 no evaluation.

ID03005 Shoshone-Bannock High School field planting. Common Camas bulbs. Bulbs ordered January 14, 2003. Site - MLRA B11b, 10-12 inch precipitation, sub-irrigated wet to semiwet bottomlands, non-irrigated. FY03 no evaluation.

FIELD OFFICE: MALAD

ID02007 Don Buehler Riparian Planting. 9076375 Peachleaf willow - Caribou source, 9076376 Peachleaf willow - Pocatello source, and coyote willow. Cuttings to be shipped April 1, 2002. FY02 - 9076375 92 percent survival with poor to good vigor and 4-6 inch height - 9076376 90 percent survival with poor to good survival and 4-5 inch height. Landowner watered cuttings weekly to assist with establishment and carry them through the drought. FY03 no survival due to severe drought and rodent damage. **Cancel**

ID03006 Monte Price Poplar Demonstration. Robusta poplar, Carolina poplar, Siouxland poplar, Simon poplar, OP-367 poplar and 52-225 poplar. Cuttings to be shipped April 1, 2003. FY03 planting completed April 18, 2003 – 2.5 feet planting depth. Survival September 22, 2003 – all plantings failed due to severe drought and rodent damage. **Cancel**

FIELD OFFICE: MONTPELIER

None

FIELD OFFICE: POCATELLO

None

FIELD OFFICE: PRESTON

ID95036 Franklin County Bannock thickspike wheatgrass and Sodar streambank wheatgrass critical area planting. Site is landfill, Wheelon/Collonston soil, non-irrigated, 14-15 inch ppt, 5000 feet elevation, 12-20% slopes on north exposure. Seed ordered 5/5/95. FY95 seed planted 5/17/95 in good clean seedbed. Fall evaluation indicated good stand establishing for both species. FY96 good stands of both species with 3 plants/ft² and spreading. Species are providing good erosion control. FY97 and FY98 no evaluations. FY99 good stand of each specie with 3-4 plants per square foot, good vigor, good ability to spread, and good erosion control under these conditions. Weed infestation of planting is very low. FY00 Bannock and Sodar stands are good with good vigor and 4 plants per square foot. FY01, FY02 and FY03 no evaluations.

FIELD OFFICE: SODA SPRINGS

None

IDAHO DIVISION VI PLANT MATERIALS PLANTINGS

FIELD OFFICE: ARCO

ID03003 Hill-Freeman Snake River Plain fourwing saltbush field planting. Seed ordered October 18, 2002. FY03 one half pound of Snake River Plains fourwing saltbush was included in a five acre marginal pastureland seeding adjacent to Warm Springs Creek on Barton Flat (South Custer County). The entire seeding area of 13.3 acres included a three and a half acre stand of decadent crested wheatgrass. A seed mix of Vavilov Siberian wheatgrass (1.2 lbs/ac), Bannock thickspike wheatgrass (2.0 lbs/ac), Bozoisky Russian wildrye (1.2 lbs/ac), Rincon fourwing saltbush (0.25 lbs/ac), and Bighorn skunkbush sumac (0.25 lbs/ac) was broadcast over the seeding area. The area was then rolled to obtain seed to soil contact on a firm weed free seedbed.

FIELD OFFICE: DRIGGS

ID91006 Fair Grounds Multiple Species Demo Plots. FY92 planted spring 1992 excellent survival on all species except trefoil, mountain brome and cicer milkvetch which will have to be replanted. FY93 Remont, Bromar, Lutana planted spring of 1993. Remont is not tolerant of frequent irrigation. Bozoisky exhibits poor seedling vigor, Goldar has poor plant vigor, Canbar not recommended for pure stands, Magnar not adapted to shallow soils, Newhy lacks seedling vigor, Manchar exhibits poor summer regrowth, Whitmar is not tolerant of excessive moisture, and Garrison adapted to wet soils. Magnar, Bromar, Rush, and Lutana are all doing poorly. Ordered Rush, P27, Magnar, Canbar, and Bozoisky on 3/17/94 to be included in plots. FY94 all plots good to excellent stand except Lutana, Remont and Delar. These plots are all irrigated so evaluations for drought, flood, salt and acid tolerance not possible. This planting does provide excellent trials for irrigated varieties in high mountain valleys. FY95 best performers are Hycrest, Critana, Alkar, Tegmar, Luna, Greenar, Topar, Rush, Regar, Manchar, Latar, Paiute, Sodar, Newhy, Durar, Sherman, Canby and Delar. Complete evaluations are available on request. FY96 not evaluated. FY97 Durar and Delar good to excellent stands with high vigor; Regar, Amur, Manchar, Latar, Paiute good stands with excellent vigor; Rush fair stand with fair vigor; Sodar, Goldar, Cascade, Appar poor stands with fair vigor; Hycrest, Critana, Alkar, Tegmar, Luna, Greenar, Topar, Lutana, Garrison, Whitmar, Secar, P27, Bromar, Magnar, Bozoisky, Canbar, Sherman, Kalo, very poor to failed stands. All plots are subject to turfgrass encroachment. February 9, 1998 ordered Hycrest, CD-II (Hycrest II), Sherman, Newhy, Critana, Bannock, Garrison, and Bozoisky for plots. FY98 species with good to excellent stands include Amur, Rush, Manchar, Latar, Durar, Cascade, and Delar. Species with poor to fair stands include Alkar, Luna, Topar, P27, Bromar, Paiute, Magnar, Appar, and Bozoisky. Failed stands include Hycrest, Critana, Tegmar, Greenar, Secar, Whitmar, Garrison, Lutana, Regar, Sodar, Newhy, Kalo, Sherman, Canbar, and Goldar. FY99 - FY03 no evaluations.

ID99018 SCD field planting – leafy spurge competition study. Species include Rush intermediate wheatgrass, Luna pubescent wheatgrass, Regar meadow brome, Bromar mountain brome, Durar hard fescue, Bozoisky Russian wildrye, and Climax timothy. Seed ordered April 28, 1999 for shipment about May 17, 1999. FY99 Roundup was applied on June 10th to leafy spurge plots with up to 200 stems per 9.6 square foot hoop. Grass was drilled into plots on July 1, 1999 using a Brillion drill. Evaluation of germination and establishment will be performed in the spring of 2000. Replicated plots will be installed in May of 2000. FY00 - FY03 no evaluation.

ID02019 Lowel Curtis field planting. Species include Garrison creeping foxtail, Regar meadow brome and Johnstone tall fescue. Seed ordered April 8, 2002. FY02 and FY03 no evaluations.

FIELD OFFICE: IDAHO FALLS

ID94020 Winterfeld Magnar basin wildrye and Trailhead basin wildrye vegetative terraces field planting. Seed ordered 3/94. FY94 planted 5/94. Good initial stand establishment with good vigor. FY95 excellent stand establishment with over 3 plants/ft². Plants average 24" height. Grouse are using basin wildrye for nesting cover. Working well for erosion control. FY96 excellent stands with excellent vigor Trailhead and good vigor Magnar. Excellent wildlife use by game birds, deer, owls, and coyotes. Both species are very good for snow catchment and field windbreaks. FY97 100% survival, Trailhead spreading a little faster than Magnar. Plant height about 96 inches for each. Cooperator notes that Trailhead is more drought tolerant and Magnar is more robust. FY98 100 percent survival for both species. Cut for seed this year with 140 pounds of clean seed per acre. FY99 excellent stands: Magnar 96 inches tall with little to no spread; Trailhead 84 inches tall with good spread via seed shatter. FY00 excellent stands with excellent vigor for both Magnar

and Trailhead. Magnar is more robust with 96 inches height. Trailhead is spreading rapidly, is more drought tolerant, and approximately 84 inches tall. FY01 excellent stand and vigor with 96 inch height. Seed production was approximately 100 pounds per acre. Straw yield was 1.6 tons per acre. FY02 Trailhead plowed out. Magnar excellent stand with excellent vigor, 72 inch height, and 4000 pounds per acre production. FY03 no seed crop due to insect damage.

ID95046 Winterfeld Venus penstemon and Firecracker penstemon District Seed Increase. Seed sent 8/95. FY95 planted fall 1995. FY96 poor stand establishing for Alpine and no emergence for Firecracker, no seed production. FY97 Alpine slow establisher and susceptible to frost, no seed production. FY98 fair stand of both Firecracker and Alpine penstemon (1 plant per foot 2). Stands for both species are getting better each year. FY99 fair stands in unfavorable moisture year and no seed production. FY00 Firecracker penstemon died due to drought and short-lived character. Alpine penstemon has good stand with good vigor and stands 24 inches tall. Seed production was unknown at evaluation date. FY01 firecracker penstemon came back, excellent stands and vigor for both species. Seed production estimated at 600 pound per acre bulk. FY02 - Venus - fair stand with excellent vigor, 24 inch height, and 100 pounds per acre bulk production. Firecracker - fair stand with excellent vigor, but slower establishment, 24 inch height, and 100 pounds per acre bulk production. FY03 Firecracker penstemon stand is going out – no production. Venus penstemon produced 80 pounds of seed.

ID99016 Winterfeld Goldar bluebunch wheatgrass District Seed Increase. Seed ordered April 15, 1999. Site characteristics – Tetonia silt loam soil, 1- percent slopes, north aspect, 5400 feet elevation, 18 inch precipitation zone, non-irrigated, T2N R43E NW1/4 Section 26. FY99 planted spring 1999 with good stand establishing. FY00 excellent stand and vigor. Seed production unknown at evaluation date. Good regrowth in spite of very droughty conditions. FY01 excellent stand and vigor. 150 pounds per acre cleaned seed production (some problem with silver top). 900 pounds of straw per acre. FY02 - excellent stand with excellent vigor, 36 inch plant height and 100 pounds per acre cleaned production. Regrowth is excellent and field experiences a lot of wildlife use (elk). FY03 excellent stand produced 100 pounds per acre in unfavorable moisture year.

ID01006 Winterfeld Ephraim crested wheatgrass District Seed Increase. Seed ordered March 13, 2001. Site characteristics - Tetonia silt loam soil, 2 percent slopes, south aspect, 5600 feet elevation, 18 inch precipitation, non-irrigated, T2N R43E SE1/4 Section 8. FY01 plan to plant spring 2002 due to drought this year. FY02 - planted the spring of 2002. Establishing stand is excellent with excellent vigor and 10 inch plant height. FY03 planting failed.
Cancel

ID01012 Winterfeld Regar meadow brome – Foundation. FY01 good stand establishing with fair vigor due to drought conditions. FY02 - excellent stand with excellent vigor and 36 inch height. Drought year production 55 pounds per acre cleaned. FY03 excellent stand produced 125 pounds per acre under severe drought conditions.

ID01013 Winterfeld Sodar streambank wheatgrass – Foundation. FY01 excellent stand establishing with excellent vigor under severe drought conditions. FY02 - excellent stand with excellent vigor and 24 inch height. Drought year production 38 pounds per acre cleaned. FY03 excellent stand produced 35 pounds per acre under severe drought conditions.

ID03007 Winterfeld San Juan penstemon - Demonstration planting. Seed ordered February 10, 2003. Seed shipped February 18, 2003. FY03 planted fall of 2003.

FIELD OFFICE: REXBURG

ID89015 Wagoner Luna pubescent wheatgrass, P-27 Siberian wheatgrass, Sodar streambank wheatgrass, Greenar intermediate wheatgrass, Delar small burnet, Trevois alfalfa field planting on rangeland. Site is gravelly loam soil with a pan at 5-6 inches, non-irrigated, 12-inch ppt, 6300 feet elevation, and 3% slopes on NE exposure. FY89 ripped rangeland in spring and seeded mix in fall of 1990. FY91 excellent stand establishing with production about 1400 lbs/ac. FY92 clipping data: No Treatment - 318 lbs/ac., chisel only treatment (native species) - 495 lbs/ac., chisel/disc/seed treatment - 1110 lbs/ac. Clipped 7/9/92. FY93 Clipped plots resulted in production of 1200-2000 lbs/ac. FY94 production of about 800 lbs/ac in extremely droughty year. Non treated rangeland producing about 100 lbs/ac this year. FY95 excellent stand Luna and Greenar, Good stand P-27, Sodar and Travois and Poor stand of Delar. Stand produced 1400+ lbs/acre this year. High antelope use of stand was noted. Stand was grazed 3 weeks in spring and 4 weeks in fall with good management. FY96 excellent stand of Trevois and good stands of Luna, P27, Sodar, and

Greenar. Very poor stand of Delar. Considered 90% stand overall. Produced 1000 lbs/ac in very poor moisture year. Stand is doing great under good management. FY03 Disc-Seed treatment – near fence good stand of natives – primarily crested wheatgrass in seeding with 5-6 percent sagebrush and 600 pounds per acre production in very dry year. Ripped-Disc-No Seed treatment – sagebrush very heavy with forage producing about 200 pounds per acre and brush producing about 200 pounds per acre in very dry year. Ripped-Disc-Seed treatment – excellent stand of primarily Bozoisky wildrye, Nordan crested wheatgrass, P27 Siberian wheatgrass and some Trevois alfalfa. Very little intermediate wheatgrass left in stand. Production is about 1000 pounds per acre in very dry year. **Next evaluation 2008.**

ID90025 Wagoner Rush intermediate wheatgrass field planting on rangeland. Site is gravelly loam soil with a pan at 5-6 inches, non-irrigated, 12-inch ppt, 6300 feet elevation, and 3% slopes on NE exposure. FY89 ripped rangeland. FY90 planted April 1990. FY91 excellent stand establishing with no weeds. Production is 1400 lbs/ac. FY92 stand excellent with 1200 lbs/ac production. FY93 excellent stand producing 2000+ lbs/ac. Grazing value - appears to be a highly preferred/selected species according to cooperators. FY94 excellent stand producing 800 lbs/ac in very droughty year. FY95 excellent stand producing 1800+ lbs/acre. Rush is the most productive species in all range trials. FY96 excellent stand with 5-10 plants/ft² producing 1000-lbs/ac and good vigor in very low rainfall year. FY03 good to excellent stand with 3 plants per square foot and good to excellent vigor. Producing 700 pounds per acre in very dry year – produces about 1400 pounds per acre in average to favorable years. Sagebrush invasion is about 1-5 percent of plant community. No weeds in stand. **Next evaluation 2008.**

ID90035 Wagoner Bozoisky Russian wildrye field planting on rangeland. Site is gravelly loam soil, non-irrigated, 12-inch ppt, 6200 feet elevation, and 2% slopes on NE exposure. FY90 planted April. FY91 good stand establishing. FY92 excellent stand producing 1100 lbs/ac. FY93 90% + stand and up to 4' tall, estimated production 1200-1400 lbs/ac. FY94 good stand producing about 600 lbs/ac in very droughty year and only 50% of plants produced seedheads this year. FY95 good stand producing 1200+ lbs/acre. This species is doing very well and is well adapted to site. FY96 good stand with 4-5 plants/ft² and 1200-lbs/ac production in very low summer rainfall year. FY03 good stand of P27 Siberian wheatgrass and Bozoisky Russian wildrye with 3 plants per square foot and good to excellent vigor. Stand is producing about 800 pounds per acre in a very dry year. Estimate 1400-1600 pounds per acre in an average to favorable moisture year. **Next evaluation 2008.**

ID91033 Madison SCD Multiple species demo plots. Located behind Rexburg FO. FY91 planted in spring. FY92 planting establishing well. Shrubs under fiber mulch are out performing those that are not. FY93 plants were doing well but had to be moved because of enlargement of parking lot. Will know survival in 94. FY94 Grass plots were removed because of parking lot enlargement. Austrees are 4 years old and about 20 feet tall and 2 year old poplars are 10-12 feet tall. FY95 Arctic willows failed transplant, all others are doing very well. Austrees are 25 to 30 feet tall (five years Old). Grass will be planted in spring of 1996. FY96 Austrees 30+ feet tall, Poplars 20+ feet tall and Larch is eight feet tall (4 years old). FY97 lost one poplar to disease all others doing well. FY03 most of this planting has been destroyed for parking lot. **Cancel**

ID92013 Webster Regar meadow brome, Bozoisky Russian wildrye, Luna pubescent wheatgrass, Critana thickspike wheatgrass field planting on rangeland. Site is gravelly silt loam soil, non-irrigated, 14-inch ppt, 6000 feet elevation, and 4% slopes on SE exposure. FY92 site sprayed for weed control, but too dry to seed. FY93 seeding not completed. FY94 very poor moisture conditions, planting not installed. FY95 good stand of all species establishing with good spring moisture. FY96 good stand of all species with 2-4 plants/ft² and good vigor on all except Regar has fair vigor. Stand had low production and is still establishing. FY97 good stands for all species with 60% stands and good vigor - they have been slow to establish on this tough site. FY99 Bozoisky and Luna good stands, Regar and Critana fair stands. FY03 good to excellent stand of Bozoisky Russian wildrye and Regar meadow brome with 3 plants per square foot (70% Bozoisky – 30% Regar), good vigor and about 1500 pounds per acre production in a very dry year. Good to excellent stand of Bozoisky Russian wildrye and Trevois alfalfa with 3 plants per square foot (70% Bozoisky – 30% Trevois), good vigor and about 1500 pounds per acre production in a very dry year. Fair to good stand of Critana thickspike wheatgrass with 9 plants per square foot, poor vigor and about 400 pounds per acre production in a very dry year. Good to excellent stand of Luna pubescent wheatgrass with 5 plants per square foot, good vigor and about 1500 pounds per acre production in a very dry year. Bozoisky is heavily grazed (80-90 percent utilization) by cattle and elk and stands are maintaining very well. **Next evaluation 2008.**

ID93001 Clark SCD Multiple species demo plots. Site is located near Clark County Senior Center. FY93 trees were planted and ground prepared by chiseling to plant grass in the spring of 94. FY94 trees and shrubs planted with fabric material have a 98-100% survival. Grass plots were not installed due to drought conditions. FY95 all trees have survived and doing great. Poplars are 6-8 feet tall second year. Grass plots were planted in spring of 1995 and are establishing well. FY96 poplars 10-15 feet tall, juniper 4-5 feet tall, grass plots are establishing well. FY97 excellent growth for both trees and shrubs. FY99 grass plots are well established. A 1600 feet windbreak with drip system has been added to area (species include row 1: poplars, row 2 mixed shrubs of Siberian peashrub, chokecherry, and Nanking cherry, and row 3 Rocky Mountain juniper. Survival the first year was 98 percent. FY03 This planting was not maintained and plots have failed. **Cancel**

ID94017 Lerwill Multiple willows adaptation demo. Colorado accessions. Cuttings ordered 3/94. Cuttings shipped 4/94. FY94 no evaluation. Some cuttings of each species have survived. The PMC accessions have much better growth than native species. Some loss due to spraying herbicide to control thistles. FY96 willows that survived are doing well. FY97 40 percent survival with surviving willows growing well. They survived spring flooding. FY98 vigor is good with plants now 8 to 10 feet tall and 10 feet crown width. FY03 this planting has been affected by grazing cattle – 6 willows still survive. **Cancel**

ID98009 Lerwill Aberdeen PMC - Laurel willow field planting. Materials ordered 2/9/98. FY98 - FY02 no evaluations. FY03 this planting has been affected by grazing cattle – 6 willows still survive. **Cancel**

ID00011 Richard Beesley Poplar field planting of accessions (15-29; 50-197; OP-367; 184-411; 52-225). Materials shipped from Oregon to Aberdeen PMC April 1998 and transferred to Rexburg same date. FY98 Poplar accessions planted in April were subjected to several hard frosts, and very hot dry summer. Survival was poor at 30 percent. 100 cuttings each of OP367 Hybrid poplar and 52-225 Hybrid poplar were ordered March 1, 2000 from Aberdeen for shipment on about March 7, 2000. FY00 - FY02 no evaluation. FY03 planting failed. **Cancel**

FIELD OFFICE: RIGBY/TERRITON

ID96019a Mud Lake Willows and cottonwood demo planting Laurel, Coyote, White, Robusta poplar, Siouxland poplar, and Carolina poplar. Cuttings ordered 2/20/96. Planted May 8, 1996 using fabric mulch material and drip irrigation. FY96 Water application, started July 5th with willows receiving 7 gallons/week and poplars receiving 12 gallons/week. Flood irrigation by Park officials resulted in over-irrigation and drip system was cut back. 100% survival of all species except coyote which had 70% survival. Good vigor for all species except Carolina poplar which had fair vigor. Growth: Carolina 3.2 feet; Siouxland 5.7 feet; Robust 5.5 feet; Laurel 2.7 feet; White 3.7 feet; Coyote 4.0 feet. FY97 Irrigation: 3 gallons/tree from May through September. Survival/Vigor/Height: Carolina poplar 75%/good/10.5 feet; Siouxland poplar 100%/excellent/14 feet; Robust poplar 100%/fair/7 feet; Laurel willow 100%/excellent/7.5 feet; White willow 100%/excellent/9 feet; Coyote willow 67%/fair/ 4.5 feet. FY98 Survival/ Vigor/Height: Carolina poplar 75%/good/15 feet; Siouxland poplar 100%/excellent/ 20 feet; Robust poplar 100%/fair/12 feet; Laurel willow 100%/excellent/10.5 feet; White willow 100%/good/14 feet; Coyote willow 70%/good/6.5 feet. FY99 Carolina poplar 75% survival with good vigor and 21.2 feet height. Siouxland poplar 100% survival with excellent vigor and 26.4 feet height. Robust poplar 100% survival with poor vigor (yellow leaves) and 16.6 feet height – seedlings are vigorous with good color and suspect Aberdeen stock may have disease. Laurel willow 100% survival with good vigor and 12.4 feet height. White willow 100% survival with good vigor and 18.5 feet height. Coyote willow 70% survival with fair vigor and 6.9 feet height. FY00 Flood irrigated every two weeks with drip irrigation 6-10 gal/week. Carolina poplar 75 percent survival with excellent vigor and 320 inch height. Siouxland poplar 100 percent survival with excellent vigor and 354 inch height. Robust poplar 100 percent survival with poor vigor (disease) and 216 inch height. Laurel willow 100 percent survival with excellent vigor and 180 inch height. White willow 100 percent survival with fair vigor and 240 inch height. Coyote willow 66 percent survival with fair vigor and 90 inch height. FY01 6-year-old planting was flood irrigated every two week this year. Carolina poplar (10-15 feet spacing recommended) - 75% survival, excellent vigor, 36 feet height, 16 feet crown width, and 5.5 inch DBH. Siouxland poplar (10-15 feet spacing recommended) – 100% survival, excellent vigor, 38 feet height, 15 feet crown width, and 5 inch DBH. Robust poplar (10-15 feet spacing recommended) – 100% survival, poor vigor, 25 feet height, 9 feet crown width, and 3.5 inch DBH. Laurel willow (8-10 feet spacing recommended) – 100% survival, good vigor, 17 feet height, 12.5 feet crown width, and 2 inch DBH. White willow (10-12 feet spacing recommended) – 100% survival, fair vigor, 20 feet height, 12 feet crown width, and 2 inch DBH. Coyote willow (3-5 feet spacing recommended) – 70% survival, fair vigor, 8 feet height, and 3 feet crown width. FY02 Carolina poplar 75% survival, excellent vigor, 439 inch height, and 5.75 dbh. Siouxland poplar 100% survival, excellent vigor, 455 inch height, and 17.5 inch dbh. Robusta poplar 100% survival, fair vigor, 319 inch height, and 4

inch dbh. Laurel willow 100% survival, good vigor, 211 inch height, and 2.25 dbh. White willow 100% survival, good vigor, 235 inch height, and 2.25 inch dbh. Coyote willow 66% survival fair vigor, and 139 inch height. FY03 100 percent survival of Carolina poplar (good vigor – 40 feet height), Souixland poplar (good vigor – 44 feet height), Robust poplar (fair-good vigor – 25-25 feet height), Laurel willow (good vigor – 22 feet height – lower limbs dieing), and White willow (excellent vigor – 16 feet height – good density). 50 percent survival of Coyote willow (fair-good vigor – 21 feet height). Souixland best choice of poplars – White willow best choice of willows. **Next evaluation 2007.**

ID96019b Rigby Cottonwood demo planting - Carolina, Siouland, Robusta. Planted April 29th using fabric mulch and drip irrigation. FY96 Water application 10-14 gallons per week. Growth Carolina 2.0 feet; Siouland 3.2 feet; Robust 4.0 feet. FY97 100% survival for all poplars. Good vigor for Carolina and Siouland / poor vigor for Robust. Height 8-9 feet Carolina and Siouland / 3 feet Robust. FY98 Survival/Vigor/Height: Carolina poplar 100%/good/15 feet; Siouland poplar 100%/ excellent/18 feet; and Robust poplar 100%/poor/5.5 feet. FY99 Carolina poplar 100% survival with fair vigor and 21 feet height. Siouland poplar 100% survival with fair vigor and 21 feet height. Robust poplar 100% survival with very poor vigor and 7 feet height. Note – Robust poplars from Lawyers Nursery are thriving, so suspect Aberdeen cuttings may be carrying a disease. FY00 Drip irrigated (14 gal/week) – Carolina poplar 100 percent survival with fair vigor and 240 inch height; Siouland poplar 100 percent survival with fair vigor and 252 inch height; Robust poplar 100 percent survival with poor vigor and 84 inch height. FY01 6-year-old planting is irrigated with drip irrigation system at 7 gallons per week. Carolina poplar – 100% survival, poor vigor 22 feet height, 7 feet crown width, and 2.5 inch DBH. Siouland poplar – 100% survival, poor vigor, 24 feet height, 6 feet crown width, and 3 inch DBH. Robust poplar – 100% survival, very poor vigor, 7 feet height, 4 feet crown width, and 1 inch DBH. Drought stress is evident and drip irrigation system is probably not fully functioning with plugged emitters, need for additional emitters, and need for longer watering sets. FY02 Carolina poplar 100% survival, very poor vigor, 300 inch height, and 2.5 inch dbh. Siouland polar 100% survival, fair vigor, 330 inch height, and 2.75 dbh. Robusta poplar 100% survival, very poor vigor, 92 inch height, and 1 inch dbh. Irrigation system problems were repaired and irrigation sets have been extended - expect improvement next year. FY03 100 percent survival of Carolina poplar (fair to good vigor – 10 feet height – some winter die back), Souixland poplar (good vigor – 28 feet height) and Robusta poplar (very poor vigor – 8 feet height). Best choice Souixland poplar. **Next evaluation 2007.**

ID97019b Camas Creek site 1 Willow field planting. Cuttings of Aberdeen PMC willows - White, Laurel, Streamco, Geyer, Coyote and Meeker PMC willows Scoulers, Pacific, Booth (827), Drummond (828), Greyleaf, Wolf and Geyer (832). Planted April 10, 1997 for streambank protection (no irrigation). On May 21, 1997 Laurel and White were submerged and all others were partially submerged. FY97 Survival/Vigor/Height: White 100%/excellent/3 feet; Laurel 100%/excellent/ 1.5 feet; Streamco 100%/excellent/2.5 feet; Geyer 100%/ excellent/2 feet; Coyote 60%/excellent/2 feet; Scouler 100% excellent/2 feet; Pacific 100%/excellent/3 feet; Booth (827) 100%/good/1.5 feet; Drummond (828) 100%/good/1.5 feet; Greyleaf 80%/fair/2 feet; Wolf 80%/fair/0.5 feet; Geyer (832) 100%/exc./2 feet. FY98 Survival/Vigor/Height: White 100%/good/4 feet; Laurel 100%/fair/2 feet; Streamco 100%/good/3 feet; Geyer 100%/fair/2.5 feet; Coyote 67%/excellent/5-5 feet; Scouler 80%/fair/2 feet; Pacific 100%/good/3 feet; Booth (827) 100%/poor/ 2 feet; Drummond (828) 80%/fair/2.5 feet; Greyleaf 80%/poor/2 feet; Wolf 80%/ poor/1 foot; and Geyer (832) 80%/fair/2.5 feet. FY99 White willow 100% survival with good vigor and 6 feet height. Laurel willow 100% survival with fair vigor and 3 feet height. Streamco willow 100% survival with good vigor and 4 feet height. Geyer willow 100% survival with good vigor and 5 feet height. Coyote willow 100% survival with good vigor and 5 feet height. Scouler willow 60% survival with fair vigor and 4 feet height. Pacific willow 100% survival with good vigor and 7 feet height. Booth (827) willow 100% survival with fair vigor and 3 feet height. Drummond (828) willow 20% survival with poor vigor and 2 feet height. Greyleaf willow 80% survival with poor vigor and 1 foot height. Wolf willow 20% survival with poor vigor and 1.5 feet height. Geyer (832) willow 80% survival with fair vigor and 3.5 feet height. FY00 Elk heavily utilize site in winter. Overall the Streamco, White, Pacific, Coyote willows are performing the best under browsed conditions. Streamco is probably the best streambank stabilization willow being tested and is spreading with noticeable root growth. Aberdeen willows - White willow 100 percent survival with excellent vigor and 80 inch height; Laurel willow 75 percent survival with good vigor and 48 inch height; Streamco willow 100 percent survival with good vigor and 48 inch height; Geyer willow 80 percent survival with poor vigor and 60 inch height; Coyote willow 100 percent survival with good vigor and 48 inch height. Meeker willows – Scouler willow 60 percent survival with fair vigor and 40 inch height; Pacific willow 100 percent survival with good vigor and 90 inch height; Booth (827) willow 100 percent survival with fair vigor and 48 inch height; Drummond (828) willow 80 percent survival with fair vigor and 48 inch height; Greyleaf willow 40 percent survival with poor vigor and 28 inch height; Wolf willow 40 percent survival with poor vigor and 28 inch height; Geyer (832) willow 60 percent survival with good vigor and 60 inch height. FY01 riparian planting with moisture provided by stream/subirrigation through 1st week of

July (2 years of drought have affected this planting – however, tree type willows Pacific, White, and Streamco are best performers perhaps because they were able to root more deeply than shrub type willows). Scouler willow – 40% survival, very poor vigor, 4 feet height, and 3 feet crown width. Pacific willow – 100% survival, good vigor, 7 feet height and 7 feet crown width. Booth willow (827) – 100% survival, poor vigor, 2.5 feet height, and 3 feet crown width. Drummond willow (828) – 100% survival, poor vigor, 2.5 feet height, and 2 feet crown width. Greyleaf and Wolf willow failed. Geyer willow (832) – 40% survival, fair vigor, 4 feet height, and 4 feet crown width. White willow – 100% survival, fair vigor, 7 feet height, and 6 feet crown width. Laurel willow – 75% survival, poor vigor, 3 feet height, and 3 feet crown width. Streamco willow – 100% survival, good vigor, 6 feet height, and 8 feet crown width. Geyer (Aberdeen) willow – 100% survival, poor vigor, 3 feet height, and 3 feet crown width. Coyote willow – 40% survival, poor vigor, 4 feet height, and 2 feet crown width. FY02 continuing drought with stream flows drying up in late June. All willows are surviving with reduced growth - Streamco is the most drought tolerant. FY03 **Cancel**

ID98013 Jefferson County Landfill Field planting 1) Ephraim crested wheatgrass, Sodar streambank wheatgrass, and Bannock thickspike wheatgrass; 2) Covar sheep fescue, Schwendimar thickspike wheatgrass, and Secar Snake River wheatgrass. Seed ordered Feb 9, 1998. Site is silty clay loam soil, 0-1 % slope, east aspect, 4785 feet elevation, 10-12 inch ppt, non-irrigated, T6N R33E SE1/4 Section 14. FY98 initial evaluation showed very poor to no establishment of Covar, Schwendimar, Secar, Sodar, and poor to very poor establishment of Ephraim and Bannock. The clay soil portions of the seeding crust and the sandy soil portion of the seeding may have been too dry. Site should be evaluated one more season before a decision to reseed is made. FY99 Covar – fair stand with poor vigor and .2 plants per square foot. Schwendimar – very poor stand with poor vigor and .1 plants per square foot. Secar – very poor stand with poor vigor and .1 plant per square foot. Bannock fair stand with poor vigor and 1 plant per square foot. Sodar – poor stand with poor vigor and .1 plants per square foot. Ephraim – fair stand with fair vigor and 1 plant per square foot. FY00 Planting Mix 1 – fair stand of Ephraim/Sodar/Bannock is establishing with fair vigor and stand is limiting weed growth. Planting Mix 2 – poor stand of Covar/Swendimar/Secar is establishing with fair vigor. Secar and Schwendimar failed in planting for the most part, but Covar is establishing slowly. Stand is dominated by kochia weed. Planting 3 – Bannock has good stand with fair vigor. Windbreak planting (drip irrigated) is irrigated once per week for 12-16 hours, is doing very well, and trees are uniform – Russian Olive 5-8 feet height with 5 feet crown width; Rocky Mountain Juniper 3-5 feet height with 3 feet crown width; Siberian Peashrub 4-7 feet height with 4 feet crown width. FY01 the Ephraim-Bannock-Sodar mix and Bannock only plantings are increasing and spreading. Covar in the Covar-Swendimar-Secar mix is also increasing. Grass densities of 2+ plants per foot squared occur on more favorable sandy soils. The hard packed clayey areas have few grass seedlings established. The windbreak planting is doing very well with 100% survival and very good maintenance for water (drip irrigation system) and weed control. Russian olive is averaging 9 feet tall and 7 feet crowns on sandier soils and 5-6 feet tall with 5 feet crowns on clayey hard packed soils. Junipers and Siberian peashrub are not affected as much by varied soil conditions with Junipers averaging 5 feet tall with 4 feet crowns on sandy soils and 4.5 feet tall with 4 feet crowns on clayey soils. The Siberian peashrub is averaging 6 feet tall with 5 feet crowns on sandy soils and 5.5 feet tall with 5 feet crowns on clayey soils. FY02 grass planting are doing very well and spreading with over 3 plants per square foot. FY03 planting is doing well. **Next evaluation 2006.**

ID98014 Calvin Moser Rush intermediate wheatgrass pasture trial. Seed ordered 2/9/98. Site is sandy loam soil, 0-2 % slope, west aspect, 4795 feet elevation, 10-12 inch ppt, irrigated, T4N R38E SE1/4 Section 29. FY98 two acres of Rush were seeded at the end of March with oats as a cover crop (15 lbs/acre oats). The oats were harvested in mid-September and the Rush is responding with average of one foot tall and 2 plants/ft² at the end of October. FY99 Rush - excellent stand with excellent vigor, 9000 pounds per acre production, 4 to 6 feet height, and 3+ plants per square foot. Regar – not planted. FY00 good stand with fair vigor and 5400 pounds production. Production lower due to heat and severe drought conditions. FY01 good stand with 3 plants per square feet and good vigor. Stand produced about 4000 pounds per acre this year with two flood irrigation applications. Stand probably would have produced more if cooperators had fertilized planting. FY02 good stand with good vigor - planting produced about 2 tons per acre. **Next evaluation 2006.**

ID01004 Cooperator unknown cottonwood field planting. Ten cuttings each of 9067408 Narrowleaf cottonwood, 9067443 Narrowleaf cottonwood, 9067484 Narrowleaf cottonwood, 9067502 Narrowleaf cottonwood, Robust poplar, Carolina poplar, and Siouland poplar. FY01 and FY02 no evaluation. FY03 planting is very weedy and poorly maintained. **Cancel**

ID02005 SCD Leafy Spurge Demonstration Plots. Ephraim crested wheatgrass, Covar sheep fescue, Bozoisky Russian wildrye, Luna pubescent wheatgrass, Bannock thickspike wheatgrass, P27 Siberian wheatgrass, Vavilov Siberian wheatgrass, Durar hard fescue, Hycrest crested wheatgrass, Tegmar intermediate wheatgrass, Sodar streambank wheatgrass, CD-II crested wheatgrass, Newhy hybrid wheatgrass, Syn A Russian wildrye, Rush intermediate wheatgrass and Manchar smooth brome. Seed ordered September 2001. Dormant fall planting 2001. FY02 establishment year: Good stands of P27 Siberian wheatgrass, Hycrest crested wheatgrass, and Rush intermediate wheatgrass; Fair stands of Bozoisky Russian wildrye, Tegmar intermediate wheatgrass, Sodar streambank wheatgrass, Newhy hybrid wheatgrass and Syn A Russian wildrye; Poor stands of Ephraim crested wheatgrass, Covar sheep fescue, Luna pubescent wheatgrass, Bannock thickspike wheatgrass, Vavilov Siberian wheatgrass, Durar hard fescue, CD-II crested wheatgrass and Manchar smooth brome. Weeds are thick in these plots - plots were sprayed this fall to control leafy spurge. FY03 planting destroyed. **Cancel**

FIELD OFFICE: SALMON/CHALLIS

ID80100 IDL Bradbury Flat Multiple Adaptation Evaluation. Planted March 25, 1980. Evaluations 8/7/84, 8/6/86, 7/12/89, 7/7/92, 11/14/95, and 9/99. FY03 evaluated May 21, 2003 by Dan Ogle and Mark Olson - **Next evaluation FY06.**

Accession	Stand	Plants/ft2	Vigor	Comments
B1574 crested wheatgrass	70%	1.0	good-exc.	
P27 Siberian wheatgrass	65%	0.5	good	
Sodar streambank wheatgrass	65%	1.5	good	
AB447 crested wheatgrass	60%	0.5	good	
Secar Snake River wheatgrass	60%	0.25	fair-good	high residue problems
Hatch winterfat	50%	0.5	good-exc.	
AB764 winterfat	50%	0.5	good-exc.	
AB922 fourwing saltbush	1%	< 0.1	fair-good	
AB942 fourwing saltbush	1%	< 0.1	fair-good	

Nezpar Indian ricegrass, Luna pubescent wheatgrass, Goldar bluebunch wheatgrass, Magnar basin wildrye, Topar pubescent wheatgrass, Appar blue flax, NM1143 Firecracker penstemon, Bandera R.M. penstemon, Cedar Palmer penstemon, NM1123 Venus penstemon, AB555 aster, R885a black-eyed susan, Delar small burnet, Immigrant forage kochia, Ladac alfalfa, buckwheat species, and arrowleaf balsamroot failed.

ID80101 IDL Bradbury Flat Multiple Adaptation Evaluation. Planted November 7, 1981. Evaluations 8/7/84, 8/6/86, 7/12/89, 7/7/92, 11/14/95, and 9/99. FY03 evaluated May 21, 2003 by Dan Ogle and Mark Olson - **Next evaluation FY06.**

Accession	Stand	Plants/ft2	Vigor	Comments
B1574 crested wheatgrass	50%	0.5	good	
P27 Siberian wheatgrass	60%	0.75	excellent	
Sodar streambank wheatgrass	80%	1.25	excellent	
AB447 crested wheatgrass	65%	0.5	good-exc.	
Secar Snake River wheatgrass	50%	0.25	good-exc.	High residue problems
AB764 winterfat	20%	0.15	poor	
AB585 winterfat	1%	<0.1	very poor	
AB922 fourwing saltbush	3%	0.1	very poor	
AB942 fourwing saltbush	2%	<0.1	very poor	
Immigrant forage kochia	3%	0.1	fair-good	
Bozoisky Russian wildrye	70%	0.5	excellent	
Vinall Russian wildrye	70%	0.7	excellent	

Nezpar Indian ricegrass, Luna pubescent wheatgrass, Goldar bluebunch wheatgrass, Magnar basin wildrye, Topar pubescent wheatgrass, Appar blue flax, NM1143 firecracker penstemon, Bandera R.M. penstemon, Cedar Palmer penstemon, NM1123 Venus penstemon, Delar small burnet, Lodorm green needlegrass, Blair smooth brome, and Paiute orchardgrass failed

ID82101 BLM Hole In Rock Multiple Adaptation Evaluation. Planted late October 1982. Evaluations 8/7/84, 7/28/86, 7/13/89, 7/7/92, 9/95 and 9/99. **Access to site is very difficult and future evaluations will be cancelled - maintain file for reference.**

ID83100 FS Nip & Tuck Multiple Adaptation Evaluation. Evaluations 7/6/92, 9/95 and 7/02. Site has deteriorated to point future evaluations would provide little future value. **Cancel future evaluations, but maintain file for reference.**

ID82102 BLM Centennial Multiple Adaptation Evaluation. Planted late October 1982. Evaluations 8/7/84, 7/28/86, 7/13/89, 6/26/92, 6/20/95. FY99 not evaluated. FY03 evaluated May 21, 2003 by Dan Ogle and Mark Olson - **Next evaluation FY06.**

Accession	Stand	Plants/ft2	Vigor	Comments
GP52 alfalfa	10%	0.1	fair-good	
BC79 alfalfa	3%	0.05	fair	
RS1 wheatgrass cross	25%	0.5	good	
RS2 wheatgrass cross	15%	0.25	fair	
Newhy hybrid wheatgrass	75%	1.0	good	
Scarlet globemallow	1%	<0.1	fair-good	
Ephraim crested wheatgrass	85%	1.25	fair-good	
Barton western wheatgrass	5%	0.25	poor-fair	
Topar pubescent wheatgrass	1%	<0.1	very poor	
Whitmar beardless wheatgrass	25%	0.25	fair-good	
Goldar bluebunch wheatgrass	25%	0.5	fair-good	
Secar Snake River wheatgrass	50%	0.75	fair-good	
Vinall Russian wildrye	60%	0.75	good-exc.	
Bozoisky Russian wildrye	45%	0.25	excellent	
U7881 alfalfa	1%	<0.1	very poor	
Nordan crested wheatgrass	70%	0.75	good	

Lutana cicer milkvetch, Canbar Canby bluegrass, Immigrant forage kochia, Bandera R.M. penstemon, Cedar Palmer penstemon, Appar blue flax, Paiute orchardgrass, P27 Siberian wheatgrass, Nezpar Indian ricegrass, Magnar basin wildrye, and yellow sweetclover failed

ID82103 BLM Spud Alluvial Multiple Adaptation Evaluation. Planted late October 1982. Evaluations 8/7/84, 7/28/86, 7/13/89, 6/25/92, 11/14/95 and 9/99. FY03 evaluated May 20, 2003 by Dan Ogle and Mark Olson - **Next evaluation FY06.**

Accession	Stand	Plants/ft2	Vigor	Comments
RS1 wheatgrass cross	85%	1.5	fair	
RS2 wheatgrass cross	85%	1.5	fair	
Fairway crested wheatgrass	85%	1.5	fair	
Immigrant forage kochia	50%	2.0	excellent	many young plants
Ephraim crested wheatgrass	75%	1.0	good	
Barton western wheatgrass	<5%	0.1	poor	
Whitmar beardless wheatgrass	70%	1.0	fair	
P27 Siberian wheatgrass	90%	1.5	good	
Goldar bluebunch wheatgrass	30%	0.3	poor	
Secar Snake River wheatgrass	80%	0.75	fair-good	
Vinall Russian wildrye	70%	1.0	good-exc.	
Bozoisky Russian wildrye	85%	0.75	excellent	

BC79 Synthetic alfalfa, GP52 Synthetic alfalfa, scarlet globemallow, Cedar Palmer penstemon, Appar blue flax, Paiute orchardgrass, Topar pubescent wheatgrass, Nezpar Indian ricegrass, Magnar basin wildrye, and yellow sweetclover failed.

ID82104 BLM Jeff's Flat Multiple Adaptation Evaluation. Planted late October 1982. Evaluations 8/7/84, 7/28/86, 7/13/89, 6/26/92. 1995 no evaluation, and 9/99. FY03 evaluated May 19, 2003 by Dan Ogle and Mark Olson - **Next evaluation FY06.**

Accession	Stand	Plants/ft2	Vigor	Comments
GP52 Synthetic alfalfa	1-5%	<0.25	fair	
BC79 Synthetic alfalfa	1-5%	<0.25	fair	
Manchar smooth brome	50%	4	good	
Baylor smooth brome	50%	4	good	
Durar hard fescue	75%	3	good-exc.	
Covar sheep fescue	45%	2	good	
Nordan crested wheatgrass	25%	0.5	fair-good	
P27 Siberian wheatgrass	40%	0.75	good	
Greenar intermediate wheatgrass	65%	4	excellent	
Magnar basin wildrye	5%	0.1	fair	
Vinall Russian wildrye	3%	0.1	poor	
Bozoisky Russian wildrye	5%	0.1	fair	

RS1 wheatgrass cross, RS2 wheatgrass cross, Hycrest crested wheatgrass, Delar small burnet, Lutana cicer milkvetch, Cedar Palmer penstemon, Appar blue flax, Paiute orchardgrass, Sherman big bluegrass, yellow sweetclover failed.

ID82105 BLM Round Valley Multiple Adaptation Evaluation. Planted late October 1982. Evaluations 8/7/84, 8/6/86, 7/12/89, 6/25/92, 11/13/95 and 9/99. FY03 evaluated May 19, 2003 by Dan Ogle and Mark Olson - **Next evaluation FY06.**

Accession	Stand	Plants/ft2	Vigor	Comments
RS1 wheatgrass cross	1%	<0.1	fair	
RS2 wheatgrass cross	1%	<0.1	fair	
Immigrant forage kochia	2%	<0.1	fair-good	
Scarlet globemallow	1%	<0.1	fair	
Nordan crested wheatgrass	70%	1.0	good	
P27 Siberian wheatgrass	70%	1.0	good-exc.	
Vinall Russian wildrye	30%	0.5	good	
Bozoisky Russian wildrye	75%	1.5	excellent	
Nordan crested wheatgrass	60%	1.0	fair-good	

GP52 synthetic alfalfa, BC79 synthetic alfalfa, Critana thickspike wheatgrass, Bandera R.M. penstemon, Cedar Palmer penstemon, Appar blue flax, Paiute orchardgrass, Goldar bluebunch wheatgrass, Secar Snake River wheatgrass, Barton western wheatgrass, Topar pubescent wheatgrass, Whitmar beardless wildrye, Nezpar Indian ricegrass, Magnar basin wildrye, yellow sweetclover failed.

ID82106 BLM Gooseberry/Sheep Creek Multiple Adaptation Evaluation. Evaluations 7/7/92.

FY03 evaluated May 19, 2003 by Dan Ogle and Mark Olson - **Next evaluation FY06.**

Accession	Stand	Plants/ft2	Vigor	Comments
Nordan crested wheatgrass	5%	0.1	fair-good	
Bozoisky Russian wildrye	10%	0.2	poor-fair	
Vinall Russian wildrye	10%	0.3	fair	
Sherman big bluegrass	95%	1.5	fair-good	
Greenar intermediate wheatgrass	2%	<0.1	very poor	
P27 Siberian wheatgrass	1%	<0.1	very poor	
Ephraim crested wheatgrass	3%	<0.1	poor	
Durar hard fescue	85%	2	good	
Covar sheep fescue	80%	2	fair-good	
Manchar smooth brome	50%	0.5	fair	
Baylor smooth brome	20%	0.25	fair	
Fairway crested wheatgrass	5%	0.1	fair	

Magnar basin wildrye, Appar blue flax, Paiute orchardgrass, Cedar Palmer penstemon, Bandera R.M. penstemon, Lutana cicer milkvetch, Delar small burnet, RS2 wheatgrass cross, RS1 wheatgrass cross, BC79 synthetic alfalfa, and GP52 synthetic alfalfa failed.

ID00012 SCD Field Planting – Blanchard blue elderberry, 9023733 dogwood, 9023739 dogwood, and 9023740 dogwood. Materials ordered March 13, 2000 for shipping on April 10, 2000. FY00 - FY03 no evaluations. **Cancel**

ID01001 Cooperator unknown cottonwood field planting. 9067408 Narrowleaf cottonwood, 9067443 Narrowleaf cottonwood, 9067484 Narrowleaf cottonwood, 9067502 Narrowleaf cottonwood, 9067537 Black cottonwood, 9067538 Black cottonwood, 9067562 Black cottonwood, 9067563 Black cottonwood, 9067568 Black cottonwood, 9067569 Black cottonwood, Robust poplar, Carolina poplar, and Siouxland poplar. FY01- FY03 no evaluations. **Cancel**

FIELD OFFICE: ST. ANTHONY

ID02020 Mae Lake Trust field planting. Species include Rush intermediate wheatgrass, Bannock thickspike wheatgrass, Nezpar Indian ricegrass, and Maybell antelope bitterbrush. Seed ordered April 8, 2002. FY03 no evaluation.

PLANT MATERIALS

2003

UTAH EVALUATION SUMMARIES

FIELD, DSI and DEMONSTRATION PLANTINGS

UTAH AREA 1 PLANT MATERIALS PLANTINGS

UT89011 Johnson - Tooele FO Secar Snake River wheatgrass and Hycrest crested wheatgrass field planting for jointed goatgrass control. FY90 seeded in March and stand is establishing. FY91 - FY93 no evaluations. FY94 fair stand of both species. Secar has better vigor and forage production. Secar does not establish as easily as Hycrest. Cattle prefer Secar. FY95 cooperators were disappointed in slow establishment and vigor of Secar in prior years. Secar plants are now well established and very vigorous. Secar is spreading outside of planted rows. During this favorable moisture year Secar remained green and continued to grow throughout the summer. Native bluebunch wheatgrass also remained green the entire growing season. FY96 good stand and vigor for both species. Secar is spreading outside of planted rows, but does not compete well with weeds (goatgrass and morning glory). Cooperators prefer Hycrest for early spring use. Secar is better species for use in later periods. FY97- FY99 no evaluations. FY00 Secar fair stand with good vigor. Hycrest good stand with good vigor. Grazing use is higher on Hycrest (45%) than Secar (10%) in spring grazing period. FY01 and FY02 no evaluation. FY03 Secar fair to good stand – Hycrest good stand. Weed infestation (bindweed) is still a problem with more bindweed in Secar stand than the Hycrest stand. Both species have good vigor. Hycrest is moving into Secar stand. Secar is spreading some from drill rows. Hycrest is spreading into interspaces between rows. Cooperators prefer Hycrest for spring grazing and uniform grazing was observed in both stands in fall.

UT97001 Frank Bohman – Ogden FO Rush intermediate wheatgrass field planting. Site is loamy soil, non-irrigated, 19-inch ppt, 6000 feet elevation, and 30-40% slope on north exposure. Seed ordered July 15, 1996 for dormant fall planting. Seed shipped 9/9/96. FY97 no evaluation. FY98 excellent stand and vigor with .8 AUM/acre. Planting was over-seeded by air the same year as planting resulting in small burnet, orchardgrass, and flax also present in stand. FY99 no evaluation. FY00 excellent stand and vigor with 2 AUM/acre production. This was the first year the planting was grazed in early to mid May. Cooperators are very pleased with planting and production. FY01 - FY02 no evaluations. FY03 **cancel**.

UT98001 Cooperators Unknown – Bonneville FO Pullman PMC shrub field planting - dogwood (3 accessions), chokecherry, mockorange, and Hawthorn. Materials ordered 2/9/98. FY98-FY99 no evaluations. FY00 40 percent survival with fair vigor and 30 inch height. There is a lot of competition from other riparian species, but these plants are surviving and growing slowly. FY01 and FY02 no evaluation. FY03 **cancel**.

UT99002 Scott Hansen - Tremonton FO P27 Siberian wheatgrass, Vavilov Siberian wheatgrass, Rush intermediate wheatgrass, and Goldar bluebunch wheatgrass field planting. Rimrock Indian ricegrass and Maybell antelope bitterbrush demo packets were also ordered. Site is a silt loam soil, 3 percent slope, east aspect, 5075 feet elevation, 20 inch rainfall, and non-irrigated. T12N R2W Section 22 SE Quarter. Seed ordered December 8, 1998 for delivery mid September 1999. FY99 area is heavily infested with weeds. Cooperators plan to control weeds during spring-summer 2000-2001 and plant spring 2002. FY02 no evaluation. FY03 **cancel**.

UT99003 Hathaway Family - Tremonton FO P27 Siberian wheatgrass, Vavilov Siberian wheatgrass, Rush intermediate wheatgrass, Goldar bluebunch wheatgrass, Ephraim crested wheatgrass, Nordan crested wheatgrass, and Lincoln smooth brome field planting. Site is a former beet dump with high organic soil, 1 percent slope, east aspect, 4800 feet elevation, 18 inch rainfall, and non-irrigated. T2N R Section ? Seed ordered December 8, 1998 for delivery as soon as possible. FY99 cooperators plan an additional season of weed control in spring – summer 2000 with planting planned for fall 2000. FY00 weeds continue to be a problem following 3 applications of Roundup this season. FY01 and FY02 no evaluation. FY03 planting failed - **cancel**.

UT99005 Gordon Zito - Tremonton FO Robusta poplar, Carolina poplar, Laurel willow, Golden willow, and White willow field planting. Site is a silt loam soil, 0-25 percent slope, west aspect, 4300 feet elevation, 18 inch rainfall, and non-irrigated. T11N R3W Section 2 NE Quarter. Cuttings ordered December 8, 1998 for delivery about April 1, 1999. FY99 Carolina poplar and white willow failed. Robust poplar .6 percent survival (1 of 15), Laurel willow 13 percent survival (2 of 15), and Golden willow 13 percent survival (2 of 15). Best survival in areas near fresh water seep – failure in more saline areas. FY00 site was severely damaged by livestock this season – a few willows remain and will be evaluated next year. FY01 all of the plants are still alive, but showing salt-burn on leaves. FY02 no evaluation. FY03 cattle destroyed planting - **cancel**.

UT99006 Ross McKinnon - Randolph FO Luna pubescent wheatgrass, Rush intermediate wheatgrass, Largo tall wheatgrass, Jose tall wheatgrass, Alkar tall wheatgrass, Bozoisky Russian wildrye, Shoshone beardless wildrye (both seed and plugs), and Prairieland Altai wildrye field planting for saline soil demonstration. Site is silty clay loam soil (saline), 0-1 percent slope, west aspect, 6230 feet elevation, 11 inch rainfall, and non-irrigated. T11N R7E Section 23 NW of NW Quarter. Seed ordered December 8, 1998 for delivery October 1, 1999. FY99 seeding completed in late November 1999. FY00, FY01 and FY02 no evaluations. FY03 planting failed due to drought - **cancel**.

UT99008 Bryner - Logan FO Laurel willow field planting – nursery. Site is Airport loam soil, 7.7 pH, heavy clay sub-soils, 0 slope, 16-inch rainfall zone, high watertable, and 4430 feet elevation. FY99 cuttings planted April 17, 1999 into 12 inch scalped circles, T12N R1E SW quarter of Section 31. Trees are drip-irrigated. June 4, 1999 cuttings have sprouted and appear to be establishing well. FY00, FY01, FY02 and FY03 no evaluations.

UT00001 Don Peterson - Logan FO spring field planting of Rush intermediate wheatgrass (medusahead wildrye control). Leatham silt loam soil, 30 percent slopes, southwest aspect, 5400 feet elevation, 14-17 inch precipitation, non-irrigated, T9N R1E North ½ Section 5. FY00 site burned in fall 1999 and sprayed with Roundup-Escort mix in spring 2000 for medusahead control. Chemical kill of medusahead was excellent. 14 pounds per acre were drilled in 8 inch spacing on May 20, 2000 with good initial germination and establishment. Planted May 2000 with poor initial establishment. Field was reseeded in the fall of 2000. FY01 no evaluation. FY02 stand good with survival estimated at 70 percent, 3-4 plants per square foot, and good vigor. FY03 stand is about 70 percent with fair vigor and good spread.

UT00005A Gordon Zito – Tremonton FO willow field planting. 40 cuttings of 9067556 Coyote willow, 15 cuttings of 9067436 Yellow willow, and 40 cuttings of 9067560 Peachleaf willow were ordered on March 1, 2000 for shipment on April 10, 2000. Planted along Malad River April 20, 2000 on Kr soil, salt limitations, 0-20 percent slopes, west aspect, 4300 feet elevation, 18 inch rainfall, non-irrigated, T11N, R3W, NE ¼ Section 2. FY01 All plants are still alive, but showing salt-burn on leaves. FY02 no evaluation. FY03 planting failed - **cancel**.

UT00005C Bret Selman – Tremonton FO willow field planting. 5 cuttings each of 9067556 Coyote willow, 9067436 Yellow willow, and 9067560 Peachleaf willow were ordered on March 1, 2000 for shipment on April 10, 2000. Planted along Spring Branch of the Little Bear River April 20, 2000 on Kr soil, salt limitations, 0-10 percent slopes, west aspect, 5300 feet elevation, 18 inch rainfall, non-irrigated, T9N, R1E NW ¼ Section 21. FY01 this planting is doing well - more extensive evaluation will occur in FY02. FY03 planting failed - **cancel**.

UT01003 – Randolph FO willow field planting. 9067548 Drummond willow 15 cuttings, 9067435 Geyer willow 15 cuttings, 9067491 Geyer willow 15 cuttings, 9067437 Booth willow 15 cuttings, 9067469 Booth willow 15 cuttings, 9067478 Booth willow 15 cuttings, 9067553 Lemmon willow 15 cuttings, and 9067567 Lemmon willow 15 cuttings. FY01 and FY02 no evaluation. FY03 planting failed due to drought and heavy saline clay soils - **cancel**.

UT01005 Scott Hansen – Tremonton FO field planting. Tarweed control. P27 Siberian wheatgrass, Vavilov Siberian wheatgrass, Ephraim crested wheatgrass, Goldar bluebunch wheatgrass, Nezpar Indian ricegrass, Rimrock Indian ricegrass, Arriba western wheatgrass, Bozoisky Russian wildrye, Mankota Russian wildrye, and Richfield Selection firecracker penstemon. Seed ordered April 16, 2001. FY01 not planted in 2001 or 2002 due to drought. FY03 planted into 4 plots in late March 2003.

Plot 1: Vavilov Siberian wheatgrass, Rush intermediate wheatgrass, and Goldar bluebunch wheatgrass – broadcast planted.

Plot 2: Vavilov Siberian wheatgrass, Rush intermediate wheatgrass, and Goldar bluebunch wheatgrass – broadcast planted.

Plot 3: Vavilov Siberian wheatgrass, Rush intermediate wheatgrass, and Goldar bluebunch wheatgrass – broadcast planted.

Plot 4: Vavilov Siberian wheatgrass, Rush intermediate wheatgrass, Goldar bluebunch wheatgrass, Nezpar Indian ricegrass, Arriba western wheatgrass, P27 Siberian wheatgrass, Ephraim crested wheatgrass, Bozoisky Russian wildrye, Rincon fourwing saltbush, Mankota Russian wildrye, and Rimrock Indian ricegrass – broadcast planted. FY03 initial evaluation during severe drought - Vavilov, P27 and Ephraim fair stands

UT03005 Jon White field planting. Rush intermediate wheatgrass, Topar pubescent wheatgrass, and Tegmar dwarf intermediate wheatgrass were ordered April 18, 2003. Luna pubescent wheatgrass, Oahe intermediate wheatgrass and Regar meadow brome will be provided by cooperator. Purpose: Critical Area Planting - medusahead rye competition. Site Characteristics: Cache County, MLRA E47, 16 acres, Barfuss-Leatham silt loam soil complex, 35 percent slopes, northwest aspect, 5300 feet elevation, 14-17 inch precipitation, non-irrigated, SE1/4 Section 31 T10N R1E. Spring 2003 planting. Planting of 15 pounds per acre was completed on April 29, 2003 using a drill with 6 inch spacing into very good weed free seedbed.

UTAH AREA 2 PLANT MATERIALS PLANTINGS

UT99001 Graymont Western (Lime plant) – Fillmore FO Vavilov Siberian wheatgrass critical area planting. 20 pounds of Vavilov seed was ordered November 19, 1998. The Vavilov will be planted in a mix, which will include Nordan crested wheatgrass, Sodar streambank wheatgrass, Critana thickspike wheatgrass, Nezpar Indian ricegrass, and forbs and shrubs. Site characteristics are a crushed gravelly – silty material lain over rock – cobble material; this material hardens to a near cemented pavement when packed and as moisture occurs; rainfall is about 8-10 inches; site is very windy. Site modifications recommended included 10 ton per acre composted straw, fertilizer based on soil tests, ripping prior to seeding resulting in a rough - rocky soil surface with about 50% of surface being exposed rock to provide micro-sites where seedlings would be protected from constant winds were recommended. FY99 no evaluation. FY00 Three site preparation treatments were installed in the fall/spring of 1998/1999 including 1. Planting directly into shallowly scarified site where soil surface was shattered and smooth; 2. Planting into moderately ripped site where soil surface was rough with approximately 25 percent of surface exposed angular rock; and 3. Planting into severely ripped site where soil surface was very rough with approximately 50 percent of surface exposed large angular rock. Company Manager indicated the past two years were dry winters with below normal rainfall season long. The mid growing season evaluation, on June 6, 2000, indicated Sodar streambank wheatgrass, Bannock or Critana thickspike wheatgrass, Vavilov Siberian wheatgrass, Nezpar Indian ricegrass, penstemon species, scarlet globemallow, winterfat, fourwing saltbush, and Wyoming big sagebrush were all planted and present to some degree on each treatment. Treatment 1 had a 5-10 percent stand present, plants were very small (stunted), and not reproducing (no seedheads present). Treatment 2 had a 30-40 percent stand present, plants were average sized, and a few were reproducing. Treatment 3 had a 70-90 percent stand, plants were tall for site (high vigor), and a high percentage of plants were reproducing. FY01 Graymont has produced a publication "Assessment of Revegetated Test Benches and Reference Transects at Cricket Mountain Plant" that describes the success of this trial. **Next evaluation planned for 2005.**

UT00003 Cooperator Unknown - Beaver FO willow field planting. 50 cuttings each of 9067435 Geyer willow, 9067437 Booth willow, 5730101 Drummond willow, 9067466 Yellow willow, 9067452 Yellow willow, 9067549 Peachleaf willow. Cuttings ordered March 1, 2000 with shipment April 10, 2000. FY00 very poor establishment year due to extreme drought. FY01 grazing has been removed, but deer use is heavy in some locations. Survival-Height-Vigor: 435 Geyer 40% survival, 15 inch height and fair vigor; 437 Booth 46% survival 12 inch height and fair vigor; 101 Drummond 40% survival, 15 inch height and fair vigor; 466 Yellow 20% survival due to poor planting location, 24 inch height and fair vigor; 452 Yellow 80% survival, 26 inch height and excellent vigor; 549 Peachleaf 62% survival, 24 inch height and good vigor. FY02 and FY03 no evaluations.

UT00004 Peterson – Fillmore FO Laurel willow field planting. 100 cuttings ordered March 1, 2000 with shipment April 10, 2000. FY00 no evaluation. FY01 50 percent survival with fair vigor due to inadequate water management. Plant height is 60 inches and crown width is 1-3 feet. FY02 – FY03 no water was available for this planting and planting failed – **cancel**.

UT01002 LaDon Anderson Cottonwood Planting - Fillmore FO Cuttings ordered February 2001 for shipment on April 19, 2001. No evaluation FY01 and FY02. FY03 planting failed – **cancel**.

UT02002 Rasmussen - Fillmore FO demonstration planting of Snake River Plains fourwing saltbush. Seed purchased through Utah Crop Improvement Association. Seed shipped from Aberdeen PMC April 12, 2002. FY03 due to poor climatic conditions, seed has not been planted.

UT03001 Merlin Webb – Cedar City FO. Seed shipped February 2003. Rimrock Indian ricegrass, Critana thickspike wheatgrass, Trailhead basin wildrye, Volga mammoth wildrye, Nezpar Indian ricegrass, Bannock thickspike wheatgrass, Magnar basin wildrye, Vavilov Siberian wheatgrass, P-27 Siberian wheatgrass, Snake River Plains fourwing saltbush broadcast seeded into good seedbed on February 22, 2003. Rained soon after planting was completed.

UT03004 Bob Bliss - Fillmore FO field planting - Durar hard fescue and western wheatgrass. Seed ordered March 20, 2003.

UTAH AREA 3 PLANT MATERIALS PLANTINGS

UT86018 Smith – Roosevelt FO Hycrest crested wheatgrass, Ephraim crested wheatgrass, Appar blue flax, Arriba western wheatgrass, T28606 needle and thread, Magnar basin wildrye, and Nordan crested wheatgrass field planting. FY90 Hycrest, Ephraim, Appar, Magnar, Nordan all 80-100 % survival. Arriba and T28606 are less than 40% survival. FY91 and FY92 no evaluations. FY93 Hycrest, Ephraim, Appar, Nordan, and T28606 doing best. Magnar and Arriba poorer stands. Sagebrush invading site, heavy use by elk, and Appar has many new seedlings. FY94 Hycrest, Appar, Arriba, and Nordan all have good stands. Ephraim, T28606 and Magnar have fair stands. All species are adapted to site and wildlife use is heavy. FY95 no change except vigor has improved due to excellent moisture year. FY96 Hycrest, Ephraim, Appar, T28606 and Nordan have good vigor. Fair vigor for Arriba and Magnar. FY97 Hycrest, Ephraim, Appar, Arriba and Nordan good stands. T28606 and Magnar fair stands. Many sagebrush seedlings within plots, particularly heavy in Arriba western wheatgrass and T28606 needle and thread. FY98 Hycrest, Ephraim, Appar, Arriba, Magnar, and Nordan all have excellent vigor. T28606 has good vigor. FY99 very heavy wildlife use in winter and spring. Poor regrowth due to dry spring/ summer and fair regrowth following late summer rains. Planting is being invaded by sagebrush. FY00 Heavy spring use by wildlife and a very dry spring and summer. Rains began in early September and plants began to green-up. Evaluation indicated good vigor for Ephraim, Appar, Arriba, T28606, Nordan and fair vigor for Hycrest and Magnar. FY01 fair to poor vigor for all species following two years of drought and heavy wildlife use. Sagebrush invasion is effective plant growth and vigor. FY03 good stands of Hycrest, Ephraim, Arriba and Nordan. Fair stands of T28606 needle and thread and Magnar. Appar failed. Area is experiencing heavy wildlife use.

UT88009 Skyline Mine - Price FO Multiple Grass on critical area planting – slopes. FY90 and FY92 planting summaries available. FY93 portion of seeding destroyed for new beltline. Rest of seeding doing very well. FY95 Appar flax is spreading, both intermediate and pubescent wheatgrass have spread, thickspike wheatgrass is doing very well, Sherman big bluegrass is doing great, mountain rye is not producing well, Paiute is doing well in plots but has not spread, Aster is improving, Covar sheep fescue is not performing well. **FY96** seeding about the same as last year, erosion from slope covered some of the seeding and it will be interesting to see how the plants can withstand this sedimentation. Rush, Sherman and Mountain ryegrass are doing the best overall.

FY99 10 Year Evaluation. Mixture 1: Luna pubescent wheatgrass is very good on steep slopes and fair on gentle slopes. Hycrest crested wheatgrass failed. Manchar smooth brome is not present on steep slopes, but doing very well on gentle slopes. Appar blue flax is fair on steep slopes and excellent on gentle slopes. Kalo birdsfoot trefoil failed on steep slopes and fair on gentle slopes. Delar small burnet and roses are present on both steep and gentle slopes.

Mixture 2: Topar pubescent wheatgrass is very good on steep slopes and good on gentle slopes. Ephraim crested wheatgrass and Sodar streambank wheatgrass failed. Delar small burnet is fair on steep slopes and very good on gentle slopes. Roses are present on both slopes. **Mixture 3:** Rush intermediate wheatgrass is good on both steep and gentle slopes. P27 Siberian wheatgrass failed. Critana thickspike wheatgrass is fair on both slopes. Cedar Palmer penstemon is poor on steep slopes and fair on gentle slopes. Summit Louisiana sagewort and roses are present on both slopes.

Mixture 4: Arriba western wheatgrass is fair to good on both slopes. Mountain rye is very good on gentle slopes. Sherman big bluegrass is good steep slopes and excellent on gentle slopes. Summit Louisiana sagewort is fair on both slopes. Roses are present on both slopes. **Mixture 5:** Rosana western wheatgrass is fair on both slopes. Paiute orchardgrass is very good on both slopes. Covar sheep fescue is good on steep slopes and fair on gentle slopes. Bandera Rocky Mountain penstemon is fair on both slopes. Roses are present on both slopes. **Mixture 6:** Tegmar intermediate wheatgrass is fair on both slopes. Durar hard fescue is fair on steep slopes and high fair on gentle slopes. Bannock thickspike wheatgrass is high fair to good on both slopes. Lutana cicer milkvetch is good on both slopes. Roses are present on both slopes. **Mixture 7:** San Luis slender wheatgrass is good on both slopes. Newhy hybrid wheatgrass failed. Cascade birdsfoot trefoil is poor on steep slopes and good on gentle slope. Blueleaf aster is good to very good on both slopes. Western yarrow is good on both slopes. Roses are present on both slopes.

FY02 very difficult to evaluate following 2 years of severe drought. All grasses have very little production.

FY03 15 Year Evaluation: The last several years of drought has damaged these stands. Rain in August 2003 has helped plant survival and vigor. **Mixture 1 – steep slopes:** Luna fair, Manchar failed, Appar failed, Delar failed, Roses are present; **gentle slopes:** Paiute has moved in, Manchar fair, Appar fair, Lutana good. **Mixture 2 – steep slopes:** Topar good, Delar fair, Appar and Roses are present; **gentle slopes:** Delar good, Topar good, Appar good. **Mixture 3 – steep slopes:** Rush good, Critana failed, Cedar failed, Summit good, Roses are present; **gentle slopes:** Rush good,

Critana fair, Cedar failed, Lutana good. **Mixture 4 – steep slopes:** Arriba good, Mountain rye fair, Sherman failed, Summit fair, Roses and Goldenrod present; **gentle slopes:** Arriba good, Mountain rye good, Sherman fair, Lutana good, Summit fair, Roses and Goldenrod present. **Mixture 5 – steep slopes:** Rosana good, Paiute fair, Covar fair, Bandera failed, Current and Roses present; **gentle slopes:** Rosana fair, Paiute good, Covar good, Bandera fair, Appar fair, Lutana good. **Mixture 6 – steep slopes:** Tegmar good, Durar failed, Bannock failed, Lutana good, Roses and Current present; **gentle slopes:** Tegmar good, Durar poor, Bannock fair, Lutana good, Paiute fair. **Mixture 7 – steep slopes:** San Luis fair, Cascade failed, Blueleaf aster good, Western yarrow fair, Roses present; **gentle slopes:** San Luis good, Blueleaf aster good, Western Yarrow fair, Lutana fair.

UT90017 Snowball - Price FO Multiple species irrigated demo plots for saline soils. FY92 and FY94 detailed reports available. Irrigation has pushed salinity down below root zone to a large degree. FY95 and FY96 Cicer milkvetch best producer (5279 lbs/ac) followed by San Luis (2587), Revenue (2326), Alsike (1986), Newhy (1673), Hoffman (1646), Festorina/Forager/Tall wheatgrass (1460), Shoshone/Fawn/Altai (1350), Magnar (1125), Garrison (1050), and Kura/Matua/ Trefoil 850) FY99 No yield data gathered. Excellent stands include Shoshone beardless wildrye, Fawn tall fescue, Newhy hybrid wheatgrass, Festorina tall fescue, Forager tall fescue, RS Hoffman, Kura clover, and SP90 Kura clover. Good stands include: Prairieland altai wildrye, Revenue slender wheatgrass, San Luis slender wheatgrass, Jose tall wheatgrass, Garrison creeping foxtail, Johnstone tall fescue X perennial rye, Lutana/Monarch cicer milkvetch, Regar meadow brome, and orchardgrass. Poor stands include Magnar basin wildrye, some plots of cicer milkvetch, Cascade birdsfoot trefoil, and Dakota/Forestburg switchgrass. Mowing significantly reduces vigor of basin wildrye and switchgrass. Festorina and Forager are preferred over Fawn by sheep. Alsike clover and Matua brome failed/died. The fescue x perennial ryegrass appears to show some signs of winterkill. FY03 No water was applied to plots in 2003. Prairieland Altai wildrye good stand with fair vigor and poor production. Magnar basin wildrye very poor stand with fair vigor and very poor production. Shoshone beardless wildrye fair stand with fair vigor and poor production. Revenue slender wheatgrass failed (short-lived species). San Luis slender wheatgrass failed (short-lived species). Jose tall wheatgrass fair stand with poor vigor and poor production. Monarch cicer milkvetch fair to very poor stand with fair vigor and very poor production. Garrison creeping foxtail fair stand with poor vigor and poor production. Fawn tall fescue good stand with poor vigor and poor production. Newhy hybrid wheatgrass good stand with fair vigor and fair production. Cascade Birdsfoot trefoil failed. Festorina tall fescue good stand with poor vigor and poor production. Forager tall fescue good stand with poor vigor and poor production. Tall fescue – perennial rye cross fair stand with poor vigor and poor production. Orchardgrass poor stand with very poor vigor and very poor production. RS Hoffman grass good stand with fair to good vigor and fair production. Kura clover poor stand with very poor vigor and very poor production. 18SP90 Kura clover poor stand with very poor vigor and very poor production. The few remaining Magnar basin wildrye plant and Altai wildrye plants produced seedheads. RS Hoffman appears to be doing better under drought conditions than Newhy.

UT93005 Smith – Roosevelt FO Trailhead basin wildrye, Magnar basin wildrye field planting for erosion control. FY94 planted October 1993 and initial evaluation indicated Magnar with best seedling establishment and Trailhead doing best in run in areas. FY95 both Trailhead and Magnar rated good stands. Magnar is best adapted. FY96 good stands for both, good vigor for both, good drought tolerance for both, all seedheads of both species eaten by wildlife. FY97 excellent stands and plant vigor for both cultivars. Plant height about 50 inches for Magnar and 38 inches for Trailhead. Magnar has excellent seed production and Trailhead has fair seed production. FY98 excellent vigor and long seedheads for both cultivars. Magnar is a more robust and taller plant than Trailhead. FY99 no evaluation. Excellent stands of each with good vigor and approximately 50 inch height. Basal areas are getting larger, but no seed production this year due to spring/summer drought. FY00 due to very dry spring and summer with rains coming in early September resulting in green-up, both Trailhead and Magnar had fair vigor and only 36-40 inches of growth. FY01 both Magnar and Trailhead have poor vigor after very dry spring and summer (7.7 inches of precipitation this year). Each plant only has 2-3 reproductive stems, which probably did not produce seed this year. FY03 – Fair vigor for both Magnar (45 inch height – 0.5 AUM/ac) and Trailhead (38 inch height – 0.3 AUM/ac). Elk are using the fall greenup.

UT98005 Prevedel – Roosevelt FO Rush intermediate wheatgrass sprinkler irrigated field planting. Materials ordered 3/30/98. FY98 planted August 16, 1998 into excellent seedbed. FY99 excellent stand with excellent vigor and 20 plants per square foot. In early August plants went from very palatable to coarse. Fall rains softened it up making it more palatable to elk now utilizing field. FY00 stand produced approximately 3000 pound/acre under sprinkler irrigation. Elk graze stand until it gets rank, but will graze regrowth. Cooperator states Rush is an excellent grass for intensive grazing systems. FY01 excellent stand and vigor with 7 AUMs per acre. Cooperator is very satisfied with Rush intermediate wheatgrass performance. FY03 Rush is doing very well in the excessive heat of this summer and is

becoming more dominant in the pasture mix of Rush, Regar meadow brome and Paiute orchardgrass. Still producing about 7 AUM/ac.

UT99007 Curtis Rozmon - Price FO field planting on irrigated pasture. Trial includes 905438 switchgrass, 905439 switchgrass, Cave-In-Rock switchgrass, Blackwell switchgrass, Kanlow switchgrass, Latar orchardgrass, perennial ryegrass, and white clover. Site is MLRA D35, loamy fine sand soil, 0-1 percent slope, southwest exposure, 4000 feet elevation, 6-8 inch precipitation, irrigated, T23S R16E SE1/4 Section 25. Seed ordered March 22, 1999. FY99 not planted this year. FY00-FY03 didn't plant due to extreme drought.

UT00007 George Carter – Monticello FO. Tegmar intermediate wheatgrass - Topar pubescent wheatgrass – Paiute orchardgrass critical area planting. Seed ordered July 5, 2000. Site characteristics: Herm-Lles clay loam to stony loam, 8 percent slopes, west aspect, 8500 feet elevation, 14-16 inch rainfall zone, irrigated for establishment, T26S R23E Section 24. Planting planned for October 2000. FY01 no evaluation. FY02 planting was irrigated for establishment. Good stand of all three species establishing with good vigor. FY03 excellent stand of all three species with excellent vigor and production. Stand continues to be irrigated

UT01004 Monument Valley High School – Monticello FO. Critical Area Planting – Volga mammoth wildrye. Seed ordered April 2001. FY01 no evaluation. FY02 – FY03 grass came up initially, but wind blown sand cut the plants off at ground level resulting in stand failure – **cancel**.

UT02001 Ken Pickup – Roosevelt FO. Field planting. Rush intermediate wheatgrass (3 acres) - Topar pubescent wheatgrass (5 acres) – Paiute orchardgrass (2 acres). Site information: MLRA D34, Turzo silt loam soil, 8 inch precipitation zone, irrigated, 4800 feet elevation, 2% slope, south exposure, T7S R2E Section 16. Seed ordered April 19, 2002. FY03 fair stand of Rush producing about 1 AUM/ac with fair vigor. Fair stand of Topar producing about .75 AUM/ac with fair vigor. Weeds are a problem in both stands of grass.

UT03002 David James – Monticello FO demonstration planting. Northern Cold Desert winterfat seed ordered February 18, 2003. Site information: MLRA D35; Limeridge shallow sandy loam soil series; 4 percent slope; south aspect; 4800 feet elevation; 6-8 inch precipitation zone; non-irrigated; T40S R20E Sections 6 and 36.

UT03003 Mike Wilcox - Monticello FO field planting. UT98004 planted fall (seeding germinated) 1998, but failed due to drought with little to no winter-spring precipitation. This is a dormant fall replanting of Rush intermediate wheatgrass. Luna pubescent wheatgrass is the standard of comparison. Barnam loam soil, 3 percent slopes, south aspect, 6000 feet elevation, 14 inch precipitation, non-irrigated, T31N R26E Section 8. FY00 very little germination this spring (<10%) due to very dry spring. FY01 no evaluation. UT00002 FY02 planting failed due to drought. Seed (Topar pubescent wheatgrass) for UT03003 ordered 2-21-03. FY03 not planted due to drought.

