

Progress Report – 08S232
Annual Report – 2000
By: Dr. Gary L. Noller

Dinosaur National Monument
Plant Materials Agreement

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I. Introduction

This report covers the activities conducted by the Upper Colorado Environmental Plant Center, Meeker, Colorado, for the Dinosaur National Monument Plant Materials Agreement in 2000. The agreement was initiated in September of 1996 and was amended in August 1997. It involves collecting and increasing five grass species native to Dinosaur National Monument. These grasses will be used for restoration and to reduce pressures from non-indigenous weedy plants found in the National Monument. Dinosaur personnel made three trips to the plant center in 2000. One trip was to deliver seed to the center for cleaning and another to pick up the cleaned seed. The third trip was to introduce Fish and Wildlife Service people from Utah to the plant center products and services.

II. Targeted Species of Grass

Common Name	Number	Scientific Name (Old)
Western wheatgrass	9070955	<i>Pascopyron smithii</i> (<i>Agropyron smithii</i>)
Indian ricegrass	9070953	<i>Oryzopsis hymenoides</i>
Great basin wildrye	9070951	<i>Leymus cinereus</i> (<i>Elymus cinereus</i>)
Bluebunch wheatgrass	9070952	<i>Psuedoroegneria spicata</i> <i>ssp. spicata</i> (<i>Agropyron spicatum</i>)
Alkali sacaton	9070954	<i>Sporobolus airoides</i>
Sand dropseed	(not collected)	<i>Sporobolus cryptandrus</i>
Salina wildrye	(not collected)	<i>Leymus salinus ssp. salinus</i> (<i>Elymus salinus</i>)

Progress Report – 08S232

Annual Report – 2000

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III. Seed Collection and Conditioning Information

Introduction

No additional seed was collected from Dinosaur National Monument for seed production at the plant center in 2000.

IV. Seed Production

Introduction

Seed fields were planted on November 5 and 6, 1997 and one additional field was added on July 20, 1998. In addition, one seed field (Western wheatgrass) was removed in 1999, reducing the number of seed fields to four. Two seed fields (Indian ricegrass and alkali sacaton) were interseeded in 1999, to improve stands. Seed test results (See attachments) from the Colorado Seed Laboratory are included for seed produced in 1999. 2000 was not a good seed production year at the plant center. The center was dry from April through July. In addition, three of the four seed fields had other materials present in the clean seed. The seed production fields were inspected (See attachments) by the Colorado Seed Growers in 2000, which helps the plant center provide a quality product to Dinosaur National Monument. The following updates the seed fields through 2000.

1. Indian ricegrass - November 5, 1997 - planted 8 rows (0.24 acre) - field 4 - planted at rate of about 30 seeds per foot of row - total seed lot (1.42 lb) used - harvested light seed crop (52.0 g), September 8, 1998 - moderate to good stand November 20, 1998. Harvested July 14, 1999, produced 1.24 lb clean seed. Harvested July 3, 2000, produced 0.97 lb clean seed.
2. Bluebunch wheatgrass - November 5, 1997 - planted 8 rows (0.24 acre) - field 1 - planted at rate of about 30 seeds per foot of row - had few seed heads 1998, no harvest - good stand November 20, 1998. Harvested July 20, 1999, produced 16.5 lb clean seed. Harvested July 12, 2000, produced 1.4 lb clean seed.
3. Western wheatgrass - November 6, 1997 - planted 8 rows (0.24 acre) - field 6A - planted at rate of about 20 seeds per foot of row, due to small quantity of seed and rhizomatous habit of plant - noted some off type plants in 1998, will rouge these out in 1999 - few seed heads 1998, no harvest - excellent stand with numerous sprouts November 20, 1998. Field had numerous off type plants 1999, field plowed.
4. Basin wildrye - November 6, 1997 - planted 8 rows (0.24 acre) - field 8A - planted at rate of about 30 seeds per foot of row - Few seed heads fall 1998, no harvest - excellent stand November 20, 1998. Harvested August 5, 1999, produced 29.0 lb clean seed. Harvested July 25, 2000, produced 2.4 lb of clean seed.

Progress Report – 08S232

Annual Report – 2000

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5. Alkali sacaton - July 20, 1998 - planted 6 rows (0.18 acre) - Field 4 - planted at a rate of about 30 seeds per foot of row - noted seedlings on September 2, 1998 - fair stand November 20, 1998. Harvested September 1, 1999, produced 99 grams of clean seed. Harvested two seed crops in 2000 (July 12 and September 11), produced 2.4 lb clean seed.

V Seed Shipments

Seed was only provided to Dinosaur once in 2000, and this was seed provided to the plant center for cleaning.

Summary

1. A cooperative agreement between Dinosaur National Monument and the Upper Colorado Environmental Plant Center was initiated in September of 1996 and amended in August of 1997.
2. The agreement involved the collection, evaluation and increase of 5 grasses native to Dinosaur National Monument.
3. Seed fields were planted in November 1997 for 4 contract species and the final seed field (Alkali sacaton) was added in July 1998.
4. The western wheatgrass seed field was plowed in 1999, due to numerous off type plants, which reduced the number of seed fields to four.
5. Two seed fields (Indian ricegrass and alkali sacaton) were interseeded in 1999, to improve stands.
6. Seed crops were harvested from four seed production fields in 2000, and one field (Alkali sacaton) was harvested twice.

DINOSAUR NATIONAL MONUMENT
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UPPER COLORADO ENVIRONMENTAL PLANT CENTER,
MEEKER, COLORADO

INTRODUCTION: The Upper Colorado Environmental Plant Center entered into an agreement with Dinosaur National Monument in September of 1996 and amended the agreement in August of 1997. This agreement involves the collection and seed production of five grass species native to Dinosaur National Monument. Targeted species are: Western wheatgrass (*Pascopyron smithii* - 9070955), Indian ricegrass (*Oryzopsis hymenoides* - 9070953), Great basin wildrye (*Leymus cinereus* - 9070951), Bluebunch wheatgrass (*Pseudoroegneria spicata* ssp. *spicata* - 9070952), Alkali sacaton (*Sporobolus airoides* - 9070954), Sand dropseed (*Sporobolus cryptanderus*) and Salina wildrye (*Leymus salinus* ssp. *salinus*). These grasses will be used for restoration and to reduce pressure from non-indigenous weedy plants found in the National Monument. The western wheatgrass seed field was plowed in 1999, due to numerous off types. Two seed fields (Indian ricegrass and alkali sacaton) were interseeded to improve stands in 1999. Dinosaur personnel made three trips to the plant center in 2000. One trip was to deliver seed to the center for cleaning and another was to pick up the cleaned seed. The third trip was to introduce Fish and Wildlife personnel from Utah to the plant center products and services.

ACCOMPLISHMENTS: Seed was harvested from each of the seed fields in 2000, and one field (Alkali sacaton) was harvested twice (July 12 and September 11).

<u>Seed Harvested</u>		<u>Seed Fields</u>	
Name	Amount	Name	Size
Indian ricegrass	0.97 lb	Basin wildrye	0.24 acre
Basin wildrye	5.50 lb	Bluebunch wheatgrass	0.24 acre
Bluebunch wheatgrass	1.40 lb	Indian ricegrass *	0.24 acre
Alkali sacaton	2.40 lb	Alkali sacaton *	0.18 acre

* Interseeded in 1999

TECHNOLOGY DEVELOPMENTS: Specific information on procedures and methods for seed cleaning can be requested for each species.