

**Project Report 08S239
Annual Report 2000
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**BRYCE CANYON NATIONAL PARK
COOPERATIVE AGREEMENT**

**Project Number 08S239
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INTRODUCTION

Upper Colorado Environmental Plant Center (UCEPC) Project No. 08S239 was initiated on June 3, 1998 by Bryce Canyon National Park, the USDA Natural Resources Conservation Service, and the UCEPC. Changes in Park priorities increased the scope of the project by nearly two times and construction was delayed by one year. Because of the necessary changes in the project, an amendment to the original Interagency Agreement 2071-8-0001 was initiated in August of 1999. The fully signed amendment was executed in its entirety on February 2, 2000, and will direct future operations in lieu of the original agreement. Two species, nodding brome, *Bromus anomalus*, and slender wheatgrass, *Elymus trachycaulus*, continue to be the only species targeted for seed increase. Quantities of seed were harvested from both species in 1999 and 2000.

OBJECTIVE

The intent of the agreement is for the UCEPC to provide approximately 1500 pounds of seed of these two species for revegetation purposes on disturbances associated with Rainbow Point Road reconstruction within Bryce Canyon National Park.

ACTIVITIES

The nodding brome field which was planted in July, 1998 was intra-seeded on May 12, 1999. This was done to improve stand establishment for the field and increase seed production during subsequent years. Both fields were cultivated twice, irrigated twice with hand set overhead sprinklers and hand rouged twice prior to seed harvest. Three hundred pounds per acre of 30-10-0 fertilizer was applied in November.

SEED PRODUCTION

The following quantities of seed were produced for Bryce Canyon in 1999.

Bromus anomalus	185 pounds (49 PLS)
Elymus trachycaulus	30.5 pounds (28 PLS)

Fiscal year 2000 seed production

Bromus anomalus	34 pounds (9 PLS)
Elymus trachycaulus	103 pounds (78 PLS)

Inventory	Approximately 450 bulk pounds
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Total Bulk pounds of seed 802.5

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DISCUSSION

The summer of 2000 was one of the hottest and driest on record at UCEPC. In addition, a severe hail storm occurred on June 19. This storm caused considerable crop damage. Seed fill was quite poor on most materials, including both Bryce crops and germination from seed was lower than normal.

The following information recaps the accomplishments of the UCEPC relative to seed increase production for Bryce Canyon through 2000.

Species

Nodding Brome

Bromus anomalus

Establishment

1.0 acre on July 20, 1998

Activities

Intra-seeded May 12, 1999

Harvest

185 clean pounds 1999

34 clean pounds 2000

Species

Slender Wheatgrass

Elymus trachycaulus

Establishment

0.5 acre on August 12, 1998

Harvest

30.5 clean pounds 1999

103 clean pounds 2000

The 1999 production boosts the quantity of bulk, clean Bryce Canyon slender wheatgrass seed to 583 pounds. From our estimates, there should be approximately 650 PLS pounds of seed on inventory for revegetation uses in Bryce Canyon prior to seed harvest in year 2001.

This October, it was noted that much of the nodding brome field appeared dead or in poor condition. If spring observations indicate a decadent field, a new field will be established pending park approval.

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2000 ANNUAL REPORT
prepared by
UPPER COLORADO ENVIRONMENTAL PLANT CENTER
MEEKER, COLORADO

INTRODUCTION

Bryce Canyon National Park and the Upper Colorado Environmental Plant Center entered into an agreement which was formally approved in June, 1998. Preliminary steps have been initiated to amend the agreement to increase target production quantities to 1500 pounds and extend the agreement into Fiscal Year 2002. Two species, slender wheatgrass, *Elymus trachycaulus*, and nodding brome, *Bromus anomalus*, were identified for seed increase.

ACCOMPLISHMENTS

Approximately 34 pounds of nodding brome, 9 PLS pounds, were produced in 2000 on a field established July 20, 1998. In its second year of production, a one half acre field of slender wheatgrass, established August 12, 1998, produced 103 clean pounds, 78 PLS pounds, of seed. Current inventory of Bryce Canyon Seed is estimated at 450 PLS pounds.

TECHNOLOGY DEVELOPMENTS

Specific information about germination trials, soil preparation, seeding rates or seeding establishment methods are available upon request.