

Project Number 08S239
Annual Report – December 2004
By: Steve Parr

BRYCE CANYON NATIONAL PARK
COOPERATIVE AGREEMENT

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 directed operations in lieu of the original agreement through fiscal year 2002. A second amendment was signed in December of 2002 to extend production through 2003. In December, 2003 a new agreement was signed that calls for the continued production of two grass species. Those two species, nodding brome, *Bromus anomalus*, and slender wheatgrass, *Elymus trachycaulus*, will be evaluated in 2005 for possible adjustments to seed increase. The agreement calls for seed production through 2006.

OBJECTIVE - The intent of the agreement is for the UCEPC to produce as much seed of these two species for revegetation purposes on disturbances within Bryce Canyon National Park as possible through 2006.

ACTIVITIES – Two thousand four marks the fifth consecutive year of below average precipitation. However, this year was cooler than the previous five years and the cool season grasses for Bryce responded well to irrigation. Bryce slender wheatgrass produced 398 pounds of clean seed on 1.3 acres and the nodding brome field produced 138 clean pounds. Two seed shipments were also made to Bryce Canyon in 2004. One shipment on July 22, 2004 was for the entire inventory of Bryce seed. Two hundred thirty five pounds of slender wheatgrass and 45 pounds of nodding brome were shipped for park uses. The second shipment was of seed produced in 2004. Tetrazolium tests were conducted as soon as seed was cleaned, and on September 25, 2004, 25 PLS pounds of nodding brome and 128 PLS pounds of slender wheatgrass were shipped to the park.

On August 13, 2004, 1.2 acres of slender wheatgrass was planted to bring the total acreage for slender wheatgrass to 2.5. The spring 2005 assessment will determine how production will proceed.

SEED PRODUCTION

The following quantities of seed have been produced for Bryce Canyon:

Species	Seed Production		Fiscal Year
Bromus anomalus	185 lb	49 PLS	1999
Elymus trachycaulus	30.5 lb	28 PLS	1999
Bromus anomalus	34 lb	9 PLS	2000
Elymus trachycaulus	103 lb	78 PLS	2000
Bromus anomalus	Field plowed		2001
Elymus trachycaulus	246 lb	211 PLS	2001
Bromus anomalus	2.4 lb	1 PLS	2002
Elymus trachycaulus	149 lb	120 PLS	2002
Bromus anomalus	50 lb	33 PLS	2003
Elymus trachycaulus	240 lb	213 PLS	2003
Bromus anomalus	138	83 PLS	2004
Elymus trachycaulus	398	232 PLS	2004

Total Inventory in PLS Pounds of Seed

58 PLS pounds of nodding brome	2004 seed lot
270 PLS pounds of slender wheatgrass	2004 seed lot

DISCUSSION - For the fifth year in a row, precipitation was below average. In 2004, the total precipitation was 81.7% of average. Although seed production volume was up this year, the PLS production for Bryce seed was still quite poor. However, each of the Bryce materials did not receive a full germination test, but rather a tetrazolium test for rapid turnaround and use for fall 2004. If the park would like a full germination test done, it may be advisable to do so.

Field assessment during the spring of 2005 will direct activities for seed production through 2006. A minimum of 2.0 acres of slender wheatgrass will be produced, and depending on field conditions, as much as 3.3 acres of slender could be produced in addition to one half acre of nodding brome.