

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE STATE OF COLORADO NATURAL RESOURCES CONSERVATION SERVICE

PLANT MATERIALS TECHNICAL NOTE NO. 67

March 31, 2008

To: All Offices

From: Pat Davey, State Plant Materials Specialist

Subject: Publication – Pueblo Germplasm Bottlebrush Squirreltail

This technical note transmits the “Summary of Viability Information for Pueblo Germplasm Bottlebrush Squirreltail Following Seed Storage of Certain Lots for a Period of Twelve Years at the Upper Colorado Environmental Plant Center Meeker, Colorado.” Prepared by Dr. Gary L. Noller, Plant Materials Consultant, January 2008.

Pueblo germplasm bottlebrush squirreltail was released in 2005 as a selected class release. It was the first release of bottlebrush squirreltail *Elymus elymoides ssp. brevifolius* from a single source along with Wapiti germplasm. It was released for erosion control and forage production for domestic livestock and wildlife, it is important for fire restoration; it has excellent seed dispersal and seedling vigor which are important for many conservation applications. In 2006, all seed lots of Pueblo were updated for viability. This technical note presents the current information on viability of Pueblo (Table 1).

1. In the eight lots, initial seed viability of Pueblo ranged from 75 percent (2000 lot) to 97 percent (1997 lot) for the eight lots tested and averaged 87.1.
2. In a period of seven to 12 years, viability of seed from six lots changed from good (81 to 97 percent) to poor (0 to 4 percent).
3. The 1999 lot was not tested initially because there was only one pound of seed; however six years after cleaning, the lot did have 23 percent viability in 2006.
4. The 2000 lot initially had a viability of 75 percent and still had 43 percent viability when retested in 2006 six years later.
5. It appears that viability of Pueblo germplasm decreases rather rapidly and should be examined yearly to determine the time limit for storage of Pueblo seed.

Table 1. Listing of Viability on Nine Pueblo Germplasm Bottlebrush Squirretail Seed Lots.

Pueblo Seed Viability

		Test Year													
		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Year Grown	1992 Lot	81% *													
	1993 Lot		81%												0%
	1994 Lot			82%											0%
	1995 Lot				94%										4%
	1996 Lot					95%									2%
	1997 Lot						97%								0%
	1998 Lot							92%							3%
	1999 Lot														23%
	2000 Lot									75%					43%

*Note: The 1992 lot was depleted prior to testing in 2006.