

TECHNICAL NOTES

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

PLANT MATERIALS TECHNICAL NOTE NO. 68

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To: All Offices

From: Pat Davey, State Plant Materials Specialist

Subject: Publication – Wapiti Germplasm Bottlebrush Squirreltail

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

Wapiti 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, released for erosion control and forage production for domestic livestock and wildlife, it is important for fire restoration, and it has excellent seed dispersal and seedling vigor which are important for many conservation applications. In 2006, all lots of Wapiti were updated for viability. This technical note presents the current information on viability of Wapiti (Table 1).

1. In these nine lots, initial seed viability of Wapiti ranged from 70 percent (1989 lot) to 97 percent (1997 lot) and averaged 88.3 percent.
2. In a period of seven to 13 years, viability of seed from six lots changed from good (77 to 97 percent) to poor (0 to 3 percent).
3. In a period of eight to 14 years lots that were tested twice decreased to 0 or 1 percent.
4. It appears that viability of Wapiti germplasm decreases rather rapidly and viability should be examined yearly to determine the time limit for storage of Wapiti seed.

Table 1. Listing of Viability on Nine Wapiti Germplasm Bottlebrush Squirreltail Seed Lots.

Wapiti Seed Viability

		Test Year																		
		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006		
1989	Lot	70%*																		
1990	Lot																			
1991	Lot	94%*																		
1992	Lot																96%			0%
1993	Lot					96%													0%	
1994	Lot						87%											0%		
1995	Lot								94%									1%		
1996	Lot									77%								1%		
1997	Lot										97%							0%		
1998	Lot											84%						3%		

*Note. The 1989 and 1991 lots were depleted prior to testing in 2006. Seed was not available for 1990.