

TECHNICAL NOTES

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

PLANT MATERIALS TECHNICAL NOTE NO. 69

March 31, 2008

To: All Offices

From: Pat Davey, State Plant Materials Specialist

Subject: Publication – 'Timp' Utah sweetvetch

This technical note transmits the “Summary of Viability Information for 'Timp' Utah Sweetvetch Following Storage of Some Lots for as Long as 16 Years at Upper Colorado Environmental Plant Center in Meeker, Colorado,” prepared by Dr. Gary L. Noller, Plant Materials Consultant, January 2008.

'Timp' Utah sweetvetch *Hedysarum boreale* was released as a native legume cultivar in 1994 for use on rangelands, upland wildlife habitat improvements and critical areas within its historically recognized natural range. It is a cool-season perennial herbaceous legume and has good palatability for big game, livestock and is a desirable forb for sage grouse habitat improvement. It is potentially valuable for stabilizing disturbed lands including oil shale mined lands. This technical note presents the current information on viability of 'Timp' (Table 1). In 1991 and 1993 Breeders and Foundation classes of seed were tested in the same year.

1. For the ten lots (Table 0), initial viability ranged from 94 percent (1990 lot) to 46 percent (1997 lot February test) and averaged 80.9 percent.
2. After sixteen years, the 1990 lot had 94 percent viability initially and still had 77 percent.
3. After ten years, the 1996 lot had 95 percent viability initially and had 77 percent.
4. It appears that the loss of viability for seed of 'Timp' is not uniform for all seed lots. Viability of the 1990 lot changed only 17 percent in 16 years, while the 1996 lot lost 18 percent in ten years.
5. Dormancy or hard seed in 'Timp' was reported initially ranging from 56 percent for the 1990 lot to only 16 percent for the February 1998 test of the 1997 lot. It normally becomes less with time although still noted in all eight lots for the 2007 tests.
6. The viability of 'Timp' is retained longer than that for some grasses (See Technical Notes for Garnet mountain brome, Wapiti, and Pueblo bottlebrush squirreltail).
7. Viability of 'Timp' seed should probably be tested every two or three years.

Table 1. List of viability and dormancy for ten lots of 'timp'. In 1991 and 1993, breeders (b) and foundation classes were tested in the same year. In other years, only foundation class seed was tested.

'Timp' Viability

	Test Year																		
	1991	1992	1993	1994 Mar.	1994 Sept.	1995	1996	1997	1998 Feb.	1998 Mar.	1999	2000	2001	2002	2003	2004	2005	2006	2007
1990 Lot	94%																82%		77%
Dor	56%																63%		61%
1991 B Lot		88%																	41%
Dor		32%																	35%
1991 Lot		86%		75%	63%	60%											41%	39%	depleted
Dor		32%		24%	11%	20%											25%	28%	
1993 B Lot					85%														56%
Dor					37%														50%
1993 Lot			91%																68%
Dor			49%																48%
1994 Lot					76%	80%		79%									62%		70%
Dor					32%	22%		19%									35%		48%
1995 Lot							93%	92%						87%	depleted				
Dor							35%	30%						51%					
1996 Lot								95%			90%	88%			89%		75%		77%
Dor								54%			39%	38%			44%		48%		57%
1997 Lot									46%	62%	recleaned						43%		45%
Dor									16%	25%							33%		36%
1998 Lot										55%	55%								33%
Dor										27%	19%								28%

Note: Dor = dormant or hard seed.