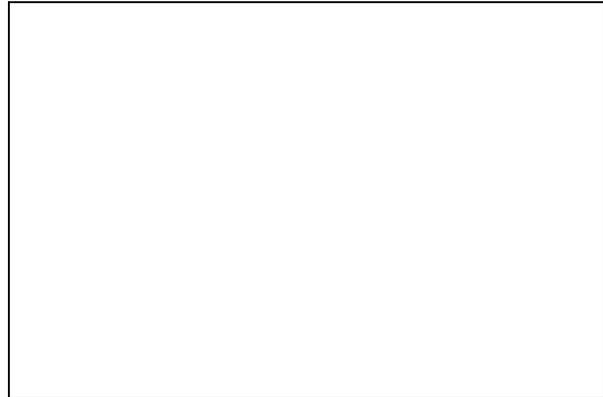


Protocol Information

USDA NRCS - Corvallis Plant Materials Center
3415 NE Granger Ave
Corvallis, Oregon 58413
(541)757-4812



Family Scientific Name: **Poaceae**

Family Common Name: **Grass**

Scientific Name: ***Phleum alpinum L.***

Common Name: **Alpine timothy**

Species Code: **PHAL2**

Ecotype: **Collected at Mount Rainier National Park; near
Tipsoo lake in wet meadows, 5,000 to 6,000 ft
elevation**

General Distribution: **Western US; South Dakota; Michigan, also
Northeast in Maine and New Hampshire. Occurs in
wet meadows, bogs, and other wet places.**

Propagation Goal: **Seeds**

Propagation Method: **Seed**

Product Type: **Propagules (seeds, cuttings, poles, etc.)**

Stock Type: **seed**

Time To Grow: **2 Years**

Target Specifications: **Clean seed free of noxious weeds; approximately
1,100,000 seed / lb. Native -collected lots tested at
98% germination after a 7-day prechill.**

Propagule Collection: **Hand stripped into paper sacks at maturity;
ripened seed is retained for a short time on plants
before shattering. Seed ripens in September in
collection zone.**

Propagule Processing: **Small lots hand rubbed or threshed with a geared-
down hammermill; air-screened with office clipper,
1/14" round screen, low air flow.**

Pre-Planting Treatments: **7-day prechill for seed testing; or direct-sown into**

field in early April at Corvallis

Growing Area Preparation/

Annual Practices for Perennial Crops: **Fine, weed-free seed bed prepared; seed shallowly drilled with a Planet Jr. - #10; 2.4 lbs /ac bulk seed rate resulted in fair stand establishment.**

Establishment Phase: **Supplemental sprinkler irrigation supplied as needed during stand establishment - through July of the first year. Small seedlings grow slowly at first and are susceptible to weed competition. Broadleaf weeds controlled with the herbicides 2,4-D and dicamba at label rates; grassy weeds controlled by "spot-wicking" applications of glyphosate herbicide. Ammonium nitrate (50 lbs N / ac) and 15 lbs/ ac sulfur was applied in March and again in May to established field; additional 50 lbs N /ac ammonium nitrate applied again in December.**

Length of Establishment Phase: **1 year; little to no seed production during first year.**

Active Growth Phase: **Early spring growth (March and April) often affected by rust / fungi; these foliar diseases were controlled with 2 to 3 applications of propiconazole and chlorothalonil applied at label rates, prior to boot stage.**

Length of Active Growth Phase: **April to July at Corvallis PMC.**

Hardening Phase: **na**

Length of Hardening Phase: **na**

Harvesting, Storage and Shipping: **Seeds hand stripped at PMC in late June / early July – methods same as for native collection. Seeds held in cool, dry storage in cloth sacks.**

Length of Storage: **unknown**

Outplanting performance on typical sites: **Seed harvested at PMC in July 1992 was sown into test plots on a disturbed soil site near the collection zone at Mount Rainier National Park in the fall of 1992 and observed over 3 years. In each plot, seeds were fall- sown at the rate of 35 PLS / sq ft onto bare native soil either in untreated and amended plots (amendment consisted of the addition of organic matter (peat moss), 9-month slow-release N-P-K fertilizer, and straw-blanket erosion control blanketing. In spring of 1993, at seedling emergence it appeared that straw erosion control blanketing had effectively protected the seedlings from heavy frost damage; by fall of the first year the treated plots had an average of 52% stand cover vs.**

untreated plots at 2% cover, and average plant height was 16 cm vs. 2 cm, respectively. By the 3rd year, the amended plots were successfully established for this species with an average plant density of 34 / ft sq (vs. 15 / ft sq for unamended plots); plant cover was at 70% for amended vs. 3% for unamended plots; 87% of the stand was in flower / seed set vs. 0% for unamended.

With proper soil preparation, this species was shown to perform well from fall seeding in a disturbed soil site over 3 years.

Other Comments: Individual plants survived fairly well from year to year at Corvallis although the overall stand density and vigor was weak; seeding at higher rates might be helpful but even established plants did not compete well with grassy weed species, for which there are no chemical controls available.

Due to changing labels, laws, and regulations, the authors and USDA NRCS assume no liability for pesticide information. Any use of a pesticide contrary to current product label instructions is neither legal nor recommended.

The use of manufacturer and trade names in this document is for clarification only. No discrimination is intended and no endorsement is given by the USDA NRCS.

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