



Norton Sound Germlasm alpine milkvetch *Astragalus alpinus* Selected Class Release “Natural”

**Uses: Revegetation
Southcentral, Interior,
and Arctic Alaska**

Background Information

Alpine milkvetch is part of the pea family. It grows on gravel, grassy slopes, and stony mountainsides; from sea level up to about 2000 meters in Alaska (Hultén, 1968).

Its flowers range in color from pink to lavender to white and they bloom in late May to early August. The flowers are insect pollinated. Alpine milkvetch produces seeds from August to early September. The seed pods tend not to open on their own, since in nature they are blown away and the seeds are scattered as the pods rip apart with attrition from wind or water. The seeds may stay afloat for 3 to 13 days.

Alpine milkvetch is a perennial forb that has a matted growth pattern.

There is some evidence that alpine milkvetch may be an early colonizer species on burned sites. It would develop from seeds or rhizomes already present in the soil (Anderson, 2007).

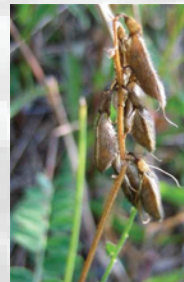


Map from Hultén, 1968.
Used with the permission of Stanford
University Press.

Distribution

Astragalus alpinus is widespread throughout Alaska. It is circumboreal and can be found in Asia, Europe, and North America (White, 2005).

Norton Sound Germlasm
alpine milkvetch
is maintained by the
Alaska Plant Materials Center
for commercial production.



Norton Sound Germlasm Plant Identification Number: 9097865

Norton Sound Germlasm alpine milkvetch was collected by Stoney Wright in 1995 (Wright, 2007). The original source was located near Nome, Alaska.

This native herb is a Selected Class Release by the Alaska Plant Materials Center (PMC). This means it has been grown and harvested at the PMC and continues to exhibit excellent performance.

This legume is recommended for use in revegetation because its seedlings are vigorous and able to survive in dry conditions. Its shallow rhizomes are known for controlling soil erosion. The leaves and flowers of alpine milkvetch enhance the diversity of the finished project and add nitrogen to the soil.

Interesting Notes

Astragalus alpinus is eaten by bighorn sheep, mountain goats, marmots, and squirrels (Pahl and Smreciu, 1999). The flowers, leaves and stems have been used to make a yellow-green dye.

Alaska Plant Materials Center
Serving Alaska's needs in production of Alaska native plants.

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Norton Sound Germplasm alpine milkvetch

Norton Sound Germplasm alpine milkvetch for Revegetation Purposes

Norton Sound Germplasm is a colonizer of dry, gravelly areas. It is good for erosion control. According to Pahl and Smreciu (1999) it has become established on coal mine spoils, capped talus sands, and calcareous mine spoils.

Since alpine milkvetch is a legume, it adds to the nitrogen in the soil—thus helping other plants to survive. Arctic plant studies of nitrogen fixing plants in Alaska (Allen, 1995) have found that rhizobia are associated with *Astragalus*. They hypothesize that these types of legumes help create a healthy ecosystem. This indicates the importance of adding legumes to the revegetation mix.



Astragalus alpinus seed.
~ 216,000 seeds per pound,
2 - 3 mm long

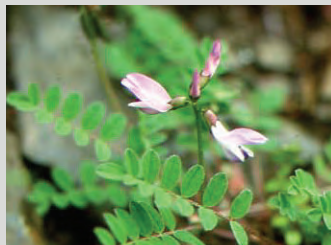
To Produce Norton Sound

Conventional farm equipment is needed. Either use a drill for seeding to a depth of ~1/4 inch or sow on the surface. Seed needs to be scarified lightly (sanded) before planting to remove part of the hard seed coat.

Seed should be sown in the spring. Soil must be an upland, dry mixture. Cultural practices of light irrigation, cultivation of weeds, and fertilization should enhance growth.

Pods need to be gathered when they turn brown. For a small lot hand harvesting is recommended. For field plantings, a seed stripper works well, several times during the season. With this method, cut, bag, dry, or spread to dry and then thresh. To clean the seeds use a top screen of 5 1/2 x 64" round and a bottom screen of 6 x 26" mesh (Pahl and Smreciu, 1999).

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Notice the variation of colors in alpine milkvetch.

The bottom picture shows a seedling about 6 weeks old, grown at the PMC greenhouse. Seeds germinate quickly, if they have been lightly scarified. Seeds will grow without scarification, just at a slower rate.



References

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White, R. 2005. *Astragalus alpinus*. International Legume Database and Information Service. <http://www.ildis.org/LegumeWeb>.

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