

Plant Propagation Protocol for *Alopecurus magellanicus*

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2026/ALMA8.pdf>



Image: Troy Declan on iNaturalist

TAXONOMY	
Plant Family	
Scientific Name	Poaceae Barnhart
Common Name	Grass family
Species	
Scientific Name	
Scientific Name	<i>Alopecurus magellanicus</i> Lam.
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	<i>Alopecurus borealis</i> ^{[1][12]} <i>Alopecurus glaucus</i> ^[12] <i>Alopecurus occidentalis</i> ^[12] <i>Alopecurus alpinus</i> ^[1]
Common Name(s)	Alpine meadow-foxtail Synonym: boreal alopecurus ^[12]
Species Code (as per USDA Plants database)	ALMA8
GENERAL INFORMATION	

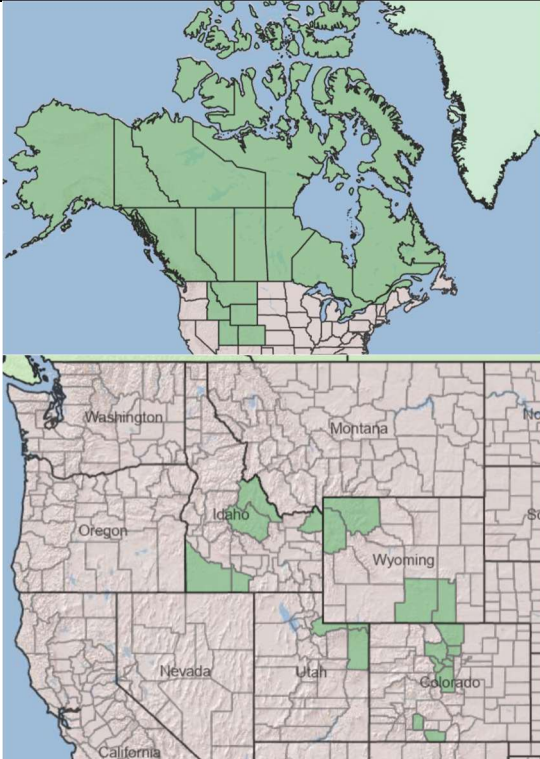
<p>Geographical range</p>	 <p>Image source: USDA Plants Database^[12] Green indicates <i>Alopecurus magellanicus</i> presence in the United States, Canada, and Greenland. State/province level data shown in the upper map. County-level data for the shown for the contiguous U.S. in lower map.</p>
<p>Ecological distribution</p>	<p>Occurs in wet meadows, patches of snow, and around bodies of fresh water (ponds, marshes, streams, rivers, lakes).^[1]</p>
<p>Climate and elevation range</p>	<p>Medium-high elevations^[1]</p>
<p>Local habitat and abundance</p>	<p>Common in the high arctic. Found near other early colonizers of disturbed sites, and other alpine grasses.^[1]</p>
<p>Plant strategy type / successional stage</p>	<p>Colonizer of disturbed (early successional) sites, including newly exposed alpine substrates^{[1][7]}</p>
<p>Plant characteristics</p>	<p><i>Alopecurus magellanicus</i> is a short-lived perennial graminoid. Flowers are in inflorescence form and are oblong, compact and have bilateral symmetry. Flowers are white and bloom mid-spring. Plant has green foliage and green seeds. Leaves are grass-like and alternating on the stem. It grows up to 15cm tall^{[1][12]}.</p>



Image: A. S. Hitchcock in *Manual of the grasses of the United States*^[8]

PROPAGATION DETAILS: FROM SEED

Note that some of the information in the following section is from sources focused on related species, or graminoids/grasses in general. There is limited reliable information on *Alopecurus magellanicus*. Information from sources 1, 2, 5, 8, and 12 is about *Alopecurus magellanicus* specifically. Information from remaining sources is for closely related species (3, 9, 11), alpine grasses (6), and other alpine graminoids (3, 4, 7) when applicable.

Ecotype	N/A
Propagation Goal	plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	N/A
Time to Grow	
Target Specifications	Developed roots, stems sturdy enough to remain upright and weather the elements ^[9]
Propagule Collection Instructions	Collect seeds in the fall. ^[11] Seeds will be easy to remove from the plant when ripe. You may cut the whole flower off to collect seeds or strip seeds off the flower with your fingers. ^{[3][4]}
Propagule Processing/Propagule Characteristics	600000 seeds per pound ^[12]
Pre-Planting Propagule Treatments	It is reported by some sources that dormancy-breaking is not necessary for this species. ^{[1][6]} You may gently rub seeds together by hand to separate seeds from extra plant material (this process would be most relevant for seed storage). Seeds can be stored by drying and refrigeration. ^[3] Alpine species are found to commonly have physiological dormancy and tend to have improved germination after cold stratification. Perhaps if germination is poor for <i>Alopecurus magellanicus</i> , it could be beneficial to try cold stratification techniques on the seeds, which could involve something like 4-12 weeks of moist, cold stratification at 1-5 °C. ^[7]

Growing Area Preparation / Annual Practices for Perennial Crops	Soil pH should be between 5 and 7.5 ^[12]
Establishment Phase Details	Sow seeds in the spring when temperature is 13-18°C. ^[11] Surface sow or sow shallowly, as many alpine grasses show a positive response to light and some spring temperature fluctuation. ^[7] May be most successful in containers in a cold frame ^[2]
Length of Establishment Phase	7-30 days (for grasses in general) ^[3]
Active Growth Phase	Plants are relatively hardy and grow independently from seed, mainly requiring water and sunlight. Soil should become dry between waterings. If needed, you may separate and replant seedlings in the spring. ^{[2][9]} Grasses typically prefer full to partial sun exposure ^{[1][9]}
Length of Active Growth Phase	One growing season (for grasses in general) ^[3]
Hardening Phase	Wild grasses are typically ready to be out planted relatively quickly after seeding. Because of this, this phase may be less relevant for this species
Length of Hardening Phase	Perennials take 1-3 years to reach full size ^[6]
Harvesting, Storage and Shipping	If grass is tall and well developed, you may want to trim foliage. ^[6]
Length of Storage	Grasses will likely need watering, but watering can be somewhat infrequent ^[6]
Guidelines for Outplanting / Performance on Typical Sites	Prefers fine to medium textured soils at outplanting site. ^[12] Does not require care after outplanting ^[11]
Other Comments	The Poaceae family is typically easily propagated from seed ^[11] Perennials take 1-3 years to reach full size ^[6]
PROPAGATION DETAILS: VEGETATIVE	
Note that some of the information in the following section is from sources focused on related species, or graminoids/grasses in general. There is limited reliable information on <i>Alopecurus magellanicus</i> . Information from sources 1, 2, and 12 is about <i>Alopecurus magellanicus</i> specifically. Information from remaining sources is for closely related species (3, 9, 11), alpine grasses (6), and other alpine graminoids (7) when applicable. Source 10 is about grasses in general, due to a lack of reliable information present for division of alpine grasses.	
Ecotype	N/A
Propagation Goal	Plants

Propagation Method	Vegetative
Product Type	Container (plug)
Stock Type	
Time to Grow	
Target Specifications	Developed roots, stems sturdy enough to remain upright and weather the elements ^[9]
Propagule Collection Instructions	This species typically grows in clumps. In the spring, dig up a clump, retaining as much of the root system as possible (likely about 6 inches depth ^[12]) and cut apart the root ball with a sharp knife to separate it into multiple parts. ^[11]
Propagule Processing/Propagule Characteristics	For grass division in general, divisions should typically include roots, shoots, and crown tissue ^[10]
Pre-Planting Propagule Treatments	For grass division in general, roots should remain moist, and root pruning is not recommended ^[10]
Growing Area Preparation / Annual Practices for Perennial Crops	Soil pH should be between 5 and 7.5 ^[12]
Establishment Phase Details	Plant separated parts in soil, and water thoroughly. ^{[10][11]}
Length of Establishment Phase	Not enough information found for <i>Alopecurus magellanicus</i> to calculate length
Active Growth Phase	Prefers full to partial sun exposure ^{[1][9]}
Length of Active Growth Phase	Not enough information found for <i>Alopecurus magellanicus</i> to calculate length
Hardening Phase	Wild grasses are typically ready to be out planted relatively quickly after division. ^[6] Hardening phase used to prepare plants for potentially harsh conditions after outplanting.
Length of Hardening Phase	Perennials take 1-3 years to reach full size ^[6]
Harvesting, Storage and Shipping	Storage of live plants: overwinter plants in dormancy in a cold frame to protect them from freeze/thaw cycles. Shipping: If grass is tall and well developed, you may want to trim foliage before shipping. ^[6]

Length of Storage	Grasses will likely need watering during storage, but watering can be infrequent and containers and media should be well-draining to prevent root rot. ^[6]
Guidelines for Outplanting / Performance on Typical Sites	Prefers fine to medium textured soils in outplanting site. ^[12] Does not require care after outplanting. ^[11]
Other Comments	Vegetative propagation is likely to be successful for this species due to its biology and based on information provided by horticulture sources specifically referring to this species as well as information on general alpine grass. ^{[1][2][7]}

INFORMATION SOURCES

References	<ol style="list-style-type: none"> 1. Aiken, S. G., et al. (2007). <i>Flora of the Canadian Arctic Archipelago - Alopecurus magellanicus Lam.</i> Nature.ca; NRC Research Press, National Research Council of Canada. 2. <i>Alopecurus magellanicus (Alpine foxtail)</i>. (n.d.). Shoot Gardening. Retrieved May 19, 2026, from https://www.shootgardening.com/plants/alopecurus-magellanicus 3. Buterbaugh, R. (2024, October 7). <i>Native Seed Hand Harvest Guidelines</i>. SDSU Extension. https://extension.sdstate.edu/native-seed-hand-harvest-guidelines 4. <i>Collecting Native Seed</i>. (n.d.). Wwww.fs.usda.gov. https://www.fs.usda.gov/wildflowers/Native_Plant_Materials/developing/collecting.shtml 5. Declan, T. (2023). Alpine Foxtail [Online image]. In <i>iNaturalist</i>. https://www.inaturalist.org/observations/186874529 6. <i>Growing native grasses from seed</i>. (2024, March 11). Illinois Extension. https://extension.illinois.edu/blogs/grasses-glance/2024-03-11-growing-native-grasses-seed 7. Fernández-Pascual, Eduardo, et al. "The Seed Germination Spectrum of Alpine Plants: A Global Meta-Analysis." <i>New Phytologist</i>, vol. 229, no. 6, Dec. 2020, pp. 3573–86, https://doi.org/10.1111/nph.17086. Accessed 22 Sept. 2021. 8. Hitchcock, A. S. (1951). <i>Manual of the grasses of the United States</i> (2nd ed., A. Chase, Rev.; U.S. Department of Agriculture Miscellaneous Publication No. 200). U.S. Government Printing Office. 9. <i>How to Grow and Care for Alpine meadow-grass</i>. (2025). PictureThis. https://www.picturethisai.com/care/Poa_alpina.html 10. "Ornamental Grasses: Dividing RHS Advice." <i>Rhs.org.uk</i>, Royal Horticultural Society, 12 Mar. 2026, www.rhs.org.uk/plants/types/grasses/ornamental/dividing.
------------	--

	<p>11. <i>10 Island Wild Plant Society Cultivation Notes: 2023-2024</i> (pp. 161–162). (2024). 10 Island Wild Plant Society. https://riwps.org/exploring-natives/cultivation-notes/</p> <p>12. <i>USDA Plants Database</i>. (n.d.). Usda.gov. Retrieved May 19, 2026, from https://plants.sc.egov.usda.gov/plant-profile/ALMA8</p>
Other Sources Consulted	<p>13. <i>Don't Avoid the Graminoids!</i> (2021, July 18). Chicago Botanic Garden. https://www.chicagobotanic.org/blog/plant-science-conservation/dont-avoid-graminoids</p> <p>14. Ezcurra Lab. (2020). <i>Poaceae</i> (PDF document). University of California, Riverside. https://ezcurralab.ucr.edu/sites/default/files/2020-05/13_poaceae.pdf</p> <p>15. McGlone, Christopher M., et al. "Established Native Perennial Grasses Out-Compete an Invasive Annual Grass regardless of Soil Water and Nutrient Availability." <i>Plant Ecology</i>, vol. 213, no. 3, Oct. 2011, pp. 445–57, https://doi.org/10.1007/s11258-011-9992-1. Accessed 22 Feb. 2022.</p> <p>16. Neby, M., Semenchuk, P., Neby, E., & Cooper, E. J. (2021). Comparison of Methods for Revegetation of Vehicle Tracks in High Arctic Tundra on Svalbard. <i>Arctic Science</i>. https://doi.org/10.1139/as-2021-0016</p> <p>17. Spackman, Casey. "How to Collect and Preserve Rangeland Plants New Mexico State University - BE BOLD. Shape the Future." <i>Nmsu.edu</i>, 2025, pubs.nmsu.edu/_b/B814/index.html. Accessed 9 June 2026.</p> <p>18. Stroh, P. A., Walker, K. J., Humphrey, T. A., Pescott, O. L., & Burkmar, R. J. (2023). <i>Plant Atlas 2020</i>. Princeton University Press.</p>
Protocol Author	Elsa Ackerson
Date Protocol Created or Updated	05/19/2026