

Plant Propagation Protocol for *Echinochloa muricata*

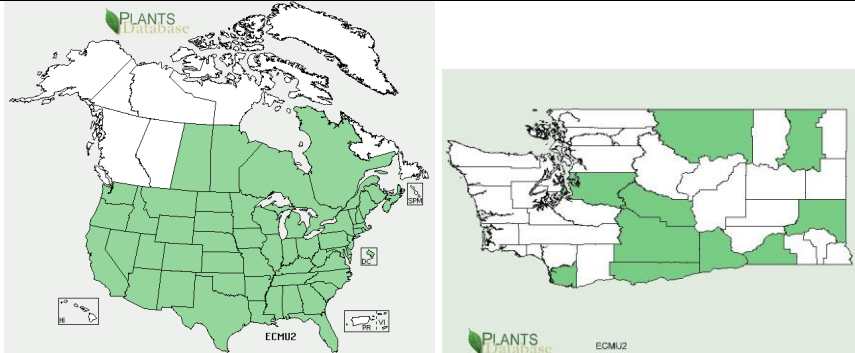
ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/ECMU2.pdf>



TAXONOMY

Plant Family	
Scientific Name	Poaceae
Common Name	Grass family
Species	
Scientific Name	
Scientific Name	<i>Echinochloa muricata</i> (P.Beauc.) Fernald
Varieties	<i>Echinochloa microstacha</i> <i>Echinochloa muricata muricata</i> <i>Echinochloa muricata occidentalis</i> <i>Echinochloa muricata fassett</i> <i>Echinochloa ludoviciana</i>
Sub-species	<i>Echinochloa muricata microstachya</i>
Cultivar	none
Common Synonym(s)	<i>Echinochloa pungens</i> <i>Echinochloa wiegandii</i>

	<i>Echinochola occidentalis</i>
Common Name(s)	Awned barnyard Grass, Barnyard grass, American Barnyard grass, Rough barnyard grass
Species Code (as per USDA Plants database)	ECMU2
GENERAL INFORMATION	
Geographical range	 <p>(USDA database)</p>
Ecological distribution	Found in damp, sandy shores, fields and disturbed areas (Go botany) Found in wetlands commonly (EOL)
Climate and elevation range	Does best in full to partial sun, wet to moist conditions, and fertile soil that is loamy or silty. (Awned Barnyard grass) About 300-1200 feet elevation is where it has been found in Washington (CPNWH)
Local habitat and abundance	Found in Leavenworth on a sunny roadside ditch, In Clark county, as well as Stevens county among muddy rocks near falls, and at snake river in sandy river beds. These are just some of the areas it has been found at in Washington. (CPNWH and Burke Museum Herbarium database)
Plant strategy type / successional stage	Graminoid, weedy plant (EOL)
Plant characteristics	Annual Grass (Robert W.) Summer annual, about 1.5-3.5 feet tall. Often branched at the base sending up multiple culms. Culms are light green. Root system shallow and fibrous. (Awned Barnyard Grass) Blooms in July (Califlora)
PROPAGATION DETAILS	
Ecotype	No Information Found
Propagation Goal	No Information Found
Propagation Method	This grass spreads by reseeding itself (Awned barnyard grass)
Product Type	No Information Found
Stock Type	No Information Found
Time to Grow	No Information Found
Target	No Information Found

Specifications	
Propagule Collection Instructions	Flowering occurs from July to October (Penn State Extension)
Propagule Processing/Propagule Characteristics	A single plant can produce up to 7,000 seeds (Penn State Extension)
Pre-Planting Propagule Treatments	No Information Found
Growing Area Preparation / Annual Practices for Perennial Crops	Does best in full to partial sun, wet to moist conditions, and fertile soil that is loamy or silty. (Awned Barnyard grass) Shallow tillage provides warmth and light to encourage germination (Pen state Extension)
Establishment Phase Details	Seeds can germinate in four months (Penn state Extension)
Length of Establishment Phase	No Information found
Active Growth Phase	No Information Found
Length of Active Growth Phase	No Information found
Hardening Phase	No information found
Length of Hardening Phase	No information found
Harvesting, Storage and Shipping	No information found
Length of Storage	Seeds can remain dormant for three or four years with little or no loss in viability (Penn State Extension)
Guidelines for Outplanting / Performance on Typical Sites	No information found.
Other Comments	Seeds germinate after the weather is warm and settled. (Awned barnyard grass)
INFORMATION SOURCES	
References	<i>Awned Barnyard Grass</i> . Web. 19 May 2014. < http://www.illinoiswildflowers.info/grasses/plants/awned_barnyard.htm >.

	<p><i>Burke Museum Herbarium Database</i>. 2014. Web. 19 May 2014. <http://biology.burke.washington.edu/herbarium/collections/results.php?Genus=Echinochloa&Species=muricata&State=Washington&SourcePage=search.php&IncludeSynonyms=Y&SortBy=Year&SortOrder=DESC>.</p> <p><i>Califlora</i>. 2014. Web. 19 May 2014. <http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=2884>.</p> <p><i>CPNWH</i>. Web. 19 May 2014. <http://www.pnwhherbaria.org/data/results.php?DisplayAs=WebPage&ExcludeCultivated=Y&GroupBy=ungrouped&SortBy=Year&SortOrder=DESC&SearchAllHerbaria=Y&QueryCount=1&IncludeSynonyms1=Y&Genus1=Echinochloa&Species1=muricata&State1=Washington&Zoom=4&Lat=55&Lng=-135&PolygonCount=0>.</p> <p>"<i>Echinochloa Muricata</i>." <i>Go Botany</i>. Web. 18 May 2014. https://gobotany.newenglandwild.org/species/echinochloa/muricata/</p> <p><i>EOL: Encyclopedia of Life</i>. Web. 19 May 2014. <http://eol.org/pages/1114110/data></p> <p><i>Robert W. Freckmenn Herbarium</i>. 2012. Web. 19 May 2014. <http://wisplants.uwsp.edu/scripts/detail.asp?SpCode=echmurvmic>.</p> <p><i>Penn State Extension</i>. 2014. Web. 19 May 2014. <http://extension.psu.edu/pests/weeds/weed-id/barnyardgrass>.</p>
Other Sources Consulted	<p><i>Barnyard Grass</i>. Web. 18 May 2014. <http://www.eeob.iastate.edu/research/iowagrasses/speciespages/EchinMuric/EchinMuric.html>.</p> <p><i>Burke Museum of Natural History and Culture</i>. 2014. Web. 19 May 2014. <http://biology.burke.washington.edu/herbarium/imagecollection.php?SciName=Echinochloa%20muricata>.</p> <p>In Klinkenberg, Brian. (Editor) 2013. <i>E-Flora BC: Electronic Atlas of the Plants of British Columbia</i> [eflora.bc.ca]. Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia, Vancouver. [Accessed:5/20/2014 1:29:42 PM]</p> <p><i>Manual of the Alien Plants of Belgium</i>. Web. 18 May 2014. <http://alienplantsbelgium.be/content/echinochloa-muricata>.</p> <p><i>Montana Field Guides</i>. Web. 19 May 2014. <http://fieldguide.mt.gov/detail_PMPOA2D040.aspx>.</p> <p>Toogood, Alan R. <i>Plant Propagation Made Easy</i>. Portland, Or.: Timber, 1994. Print.</p> <p>Toogood, Alan R. <i>Plant Propagation</i>. New York: DK Pub., 1999. Print.</p> <p>Thompson, Peter. <i>The Propagator's Handbook: Fifty Foolproof Recipes, Hundreds of Plants for Your Garden</i>. Newton Abbot, Devon: David & Charles, 1996. Print.</p> <p><i>Washington Flora Checklist</i>. 2010. Web. 19 May 2014.</p>

	http://biology.burke.washington.edu/herbarium/waflora/checklist.php?Taxon=Echinochloa%20muricata .C
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