

**Plant Propagation Protocol for *Carex inops***  
 ESRM 412 – Native Plant Production



<b>TAXONOMY</b>	
<b>Family Names</b>	
Family Scientific Name:	Cyperaceae
Family Common Name:	Sedge
<b>Scientific Names</b>	
Genus:	<i>Carex</i>
Species:	<i>inops</i>
Species Authority:	L. H. Bailey
Variety:	
Sub-species:	
Cultivar:	
Authority for Variety/Sub-species:	
Common Synonym(s) (include full scientific names (e.g., <i>Elymus glaucus</i> Buckley), including variety or subspecies information)	CAINI3 <i>Carex inops</i> L.H. Bailey <i>ssp inops</i> CAINH2 <i>Carex inops ssp heliophila</i> (Mack.) Crins Synonyms for <i>ssp heliophila</i> CAER5 <i>Carex erxlebeniana</i> L. Kelso CAHE5 <i>Carex heliophila</i> Mack.

	<p>CAPEH <i>Carex pensylvanica</i> Lam. ssp. <i>Heliophila</i> (Mack.) W.A. Weber          CAPED <i>Carex pensylvanica</i> Lam. var. <i>digyna</i> Boeckeler</p>
Common Name(s):	long-stolon sedge or sun sedge (ssp heliophila)
Species Code (as per USDA Plants database):	CAIN9
<b>GENER</b>	
<p>Geographical range (distribution maps for North America and Washington state)</p>	<div> </div> <p><a href="http://plants.usda.gov/java/profile?symbol=CAIN9">http://plants.usda.gov/java/profile?symbol=CAIN9</a></p> <div> </div> <p><a href="http://plants.usda.gov/java/profile?symbol=CAIN9">http://plants.usda.gov/java/profile?symbol=CAIN9</a></p>

Ecological distribution (ecosystems it occurs in, etc):	Found in shortgrass, mixed, and tallgrass prairies, as well as Ponderosa pine communities and other woodlands (Fryer 2009)
Climate and elevation range	Dry to seasonally wet climates. Occasionally found at elevations > 5000 ft.(Fryer 2009)
Local habitat and abundance; may include commonly associated species	May dominate to co-dominate in some systems. High prevalence and persistence even in systems where it is not the dominant species. (Fryer 2009)
Plant strategy type / successional stage (stress-tolerator, competitor, weedy/colonizer, seral, late successional)	No information
Plant characteristics (life form (shrub, grass, forb), longevity, key characteristics, etc)	Graminoid with a modeled lifespan of 25 years. (Fryer 2009)
<b>PROPAGATION DETAILS</b>	
Ecotype:	No information
Propagation Goal:	No information
Propagation Method:	No information
Product Type:	No information
Stock Type:	No information
Time to Grow:	No information
Target Specifications:	No information
Propagule Collection:	<i>Carex inops</i> seed heads may be field collected by clipping from August to September depending on location. (www.goert.ca)
Propagule Processing/Propagule Characteristics:	Separate seed from seed head. Dry inflorescences by spreading out over fine screen in a warm, dry, well-ventilated area. Clean seed by hand stripping and using a sieve or air screen cleaner to remove chaff (as per <i>C. rostrata</i> ). (www.goert.ca)  Store dry in refrigerator (as per <i>C. obnupta</i> in Rose <i>et al.</i> , 1998), or dry in sealed containers at room temperature with a moisture content of 6-8% for up to 17 months (as per <i>C. rostrata</i> ). (www.goert.ca)
Pre-Planting Propagule Treatments (cleaning, dormancy treatments, etc):	Sow in fall and keep wet outdoors for natural stratification or stratify wet in a refrigerator and sow in February in potting soil and place in a hoop house (as per <i>C. rostrata</i> ). (www.goert.ca)
Growing Area Preparation / Annual Practices for Perennial Crops (growing media, type and size of containers, etc):	No information
Establishment Phase (from seeding to germination):	Sow in February in potting soil and place in hoop house. (as per <i>C. obnupta</i> ). (www.goert.ca)

Length of Establishment Phase:	Germination within one month (as per <i>C. obnupta</i> ). (www.goert.ca)
Active Growth Phase (from germination until plants are no longer actively growing):	No information
Length of Active Growth Phase:	No information
Hardening Phase:	No information
Length of Hardening Phase:	No information
Harvesting, Storage and Shipping (of seedlings):	No information
Length of Storage:	No information
Guidelines for Outplanting / Performance on Typical Sites:	No information
Other Comments:	Other sources report that <i>Carex inops</i> can be difficult to propagate from seed. (Davenport)

### INFORMATION SOURCES

References (full citations):	<p>"PLANTS Profile" <i>Carex inops</i> L. H. Bailey long-stolon sedge. <a href="http://plants.usda.gov/java/profile?symbol=CAIN9">http://plants.usda.gov/java/profile?symbol=CAIN9</a> (Accessed 17 May 2011)</p> <p>Fryer, Janet L. 2009. <i>Carex inops</i>. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <a href="http://www.fs.fed.us/database/feis/">http://www.fs.fed.us/database/feis/</a> [2011, May 18].</p> <p>"Native Plant Propagation Guidelines: grasses &amp; sedges" <i>Carex inops</i> (long-stolon sedge) <a href="http://www.goert.ca/propagation_guidelines/grasses_and_sedges/carex_inops">http://www.goert.ca/propagation_guidelines/grasses_and_sedges/carex_inops</a> (Accessed 17 May 2011)</p> <p>Barbour, Jill R. 2005. Propagation protocol for production of <i>Carex pennsylvanica</i> Lam. seeds (seed cleaning techniques); USDA FS - National Seed Laboratory, Dry Branch, Georgia. In: Native Plant Network. URL: <a href="http://www.nativeplantnetwork.org">http://www.nativeplantnetwork.org</a> (accessed 17 May 2011). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.</p> <p>Butler, Jennifer; Frieswyk, Christin. 2001. Propagation protocol for production of <i>Carex</i> seeds; USDI NPS - Rocky Mountain National Park, Estes Park, Colorado. In: Native Plant Network. URL:</p>
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	<p><a href="http://www.nativeplantnetwork.org">http://www.nativeplantnetwork.org</a> (accessed 17 May 2011). Moscow (ID): University of Idaho, College of Natural Resources, Forest Research Nursery.</p> <p>Davenport, R. "Rocky Prairie Restoration and Native Plant Propagation Project"  <a href="http://www.southsoundprairies.org/documents/completdavenportdoc..pdf">http://www.southsoundprairies.org/documents/completdavenportdoc..pdf</a> (Accessed 17 May 2011)</p>
Other Sources Consulted (but that contained no pertinent information) (full citations):	<p>"<i>Carex inops</i> (Cyperaceae)" <i>Carex inops</i> L. H. Bailey  <a href="http://culturesheet.org/cyperaceae:carex:inops">http://culturesheet.org/cyperaceae:carex:inops</a>  (Accessed 17 May 2011)</p> <p>Hipp A. L. Field Guide to Wisconsin Sedges. 2008.  <a href="http://systematics.mortonarb.org/lab/publications/sedgeFieldGuide_excerpts.pdf">http://systematics.mortonarb.org/lab/publications/sedgeFieldGuide_excerpts.pdf</a> (Accessed 17 May 2011)</p> <p>"SUNRIVER TO MT BACHELOR DRAFT REVEGETATION PLAN"  <a href="http://www.nativerevegetation.org/pdf/learn/tech_guide_8_revegetation_plan_example.pdf">http://www.nativerevegetation.org/pdf/learn/tech_guide_8_revegetation_plan_example.pdf</a> (Accessed 17 May 2011)</p> <p>"E-Flora BC: Electronic Atlas of the Plants of British Columbia" <i>Carex inops</i> L.H. Bailey  <a href="http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Carex%20inops&amp;redblue=Both&amp;lifeform=6">http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Carex%20inops&amp;redblue=Both&amp;lifeform=6</a>  (Access 17 May 2011)</p>
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Date Protocol Created or Updated (MM/DD/YY):	05/17/11

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