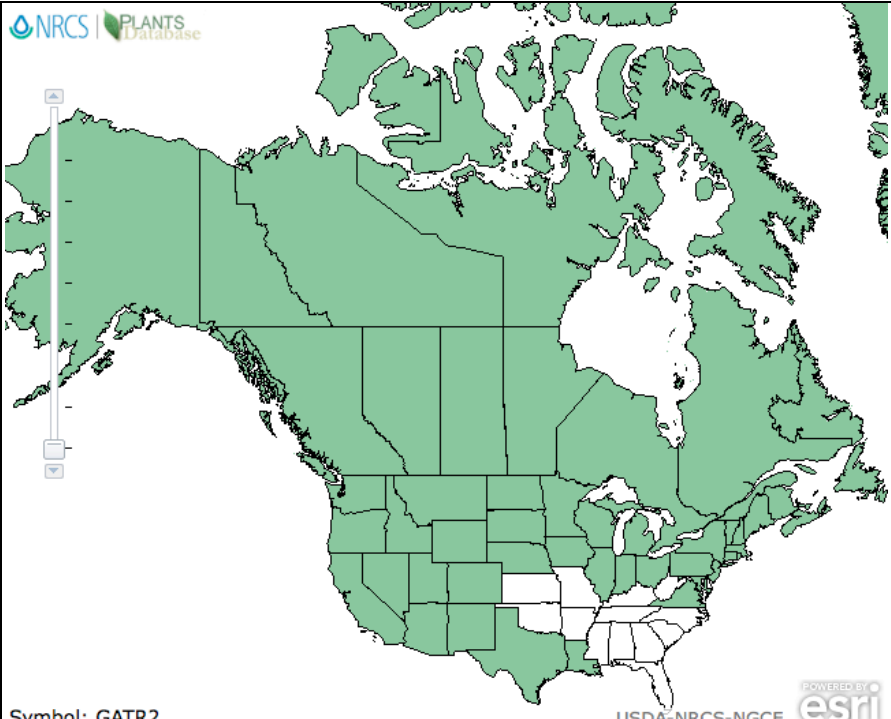


## Plant Propagation Protocol for *Galium trifidum*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/GATR2.pdf>

TAXONOMY	
Plant Family	
Scientific Name	Rubiaceae
Common Name	Madder Family
Species Scientific Name	
Scientific Name	<i>Galium trifidum</i> L. (USDA)
Varieties	N/A
Sub-species	<i>Galium trifidum</i> L. subsp. <i>columbianum</i> (Rydb.) Hulten <i>Galium trifidum</i> L. subsp. <i>halophilum</i> (Fernald & Wiegand) Puff <i>Galium trifidum</i> L. subsp. <i>subbiflorum</i> (Wiegand) Piper <i>Galium trifidum</i> L. subsp. <i>trifidum</i> (USDA)
Cultivar	N/A
Common Synonym(s)	N/A
Common Name(s)	Threepetal Bedstraw (USDA)
Species Code (as per USDA Plants database)	GATR2
GENERAL INFORMATION	
Geographical range	 <p>Symbol: GATR2</p> <p>Geographical Range spans all of Canada, the western half of the</p>

	United States, the upper Midwest, and Northeast (USDA).
Ecological distribution	Grows in swamps and wetlands (USDA)
Climate and elevation range	Grows in partly sunny to mostly shady conditions with wet or moist soil. This species grows in low to mid elevation ranges (WA Native Plant Society).
Local habitat and abundance	<i>G. trifidum</i> can grow in wetlands, marshes, swamps, bogs, lake shores, streams and river banks, saltmarshes, and forest edges (WA Native Plant Society).
Plant strategy type / successional stage	Stress tolerator: can grow in wetland ecosystems, in stagnant water, and damp soils (WA Native Plant Society).
Plant characteristics	<p>Dicot herb that can grow to approximately 30 inches in height.</p> <p>Leaves: Whorls that are blunt at the apex, bristles on margins, and are light green</p> <p>Flowers: Clusters of white flowers on narrow stalks. Flowers in June, July, August and September.</p> <p>Fruits: Pairs of fruits that are waxy, green and spherical (WA Native Plant Society)</p>
<b>PROPAGATION DETAILS</b>	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container
Stock Type	Herb
Time to Grow	N/A
Target Specifications	Approximately 1.5-2 feet in height (WA Native Plant Society).
Propagule Collection Instructions	Seeds can be harvested at the end of summer when fruit and seeding period is ending. Seeds and fruit do not persist on the plant and should be harvested before fall (Cannon Valley Nursery).
Propagule Processing/Propagule Characteristics	500,000 seeds per pound (Cannon Valley Nursery).
Pre-Planting Propagule Treatments	Cold stratification required for seeds to germinate (Cannon Valley Nursery).
Growing Area Preparation / Annual Practices for Perennial Crops	Grows best in a media with a pH range of 4.6 to 8. Roots will grow to be 8 inches long and should be planted in pots that can allow for this length (Cannon Valley Nursery).
Establishment Phase Details	Requires 80 days of above freezing temperatures to germinate (Cannon Valley Nursery).
Length of Establishment Phase	N/A
Active Growth Phase	N/A

Length of Active Growth Phase	N/A
Hardening Phase	N/A
Length of Hardening Phase	N/A
Harvesting, Storage and Shipping	N/A
Length of Storage	N/A
Guidelines for Outplanting / Performance on Typical Sites	This is a short lived species and therefore should be planted once fully grown (Cannon Valley Nursery).
Other Comments	This species is listed as endangered in New Jersey (USDA). Roots have historically been used as a red dye (WA Native Plant Society).
<b>INFORMATION SOURCES</b>	
References	See Below
Other Sources Consulted	See Below
Protocol Author	Courtney Bobsin
Date Protocol Created or Updated	05/25/2016

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