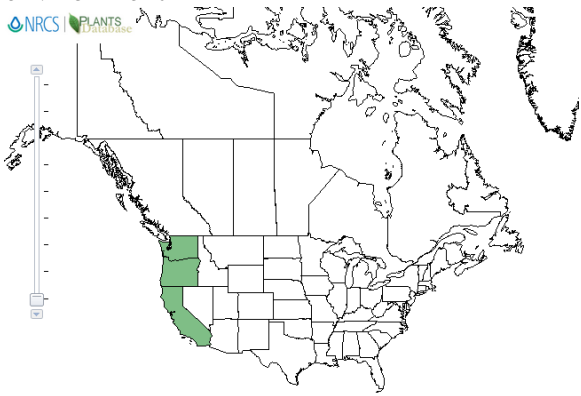


**Plant Propagation Protocol for *Grindelia stricta***  
ESRM 412 – Native Plant Production

<b>TAXONOMY</b>	
Plant Family	
Scientific Name	Asteraceae
Common Name	Daisy
Species Scientific Name	
Scientific Name	
Genus:	<i>Grindelia</i>
Species:	<i>stricta</i>
Species Authority:	DC.
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	<i>Grindelia integrifolia</i> DC. <i>Grindelia integrifolia</i> var. <i>macrophylla</i> <i>Grindelia macrophylla</i>
Common Name(s)	Oregon gumweed,
Species Code (as per USDA Plants database)	GRST3
<b>GENERAL INFORMATION</b>	
Geographical range	<p>Oregon gumweed is perennial herbaceous species found in North America from southern BC to northern California where it is found in beaches, rocky bluffs, and disturbed sites. Flowers are yellow, daisy-like; it is summer flowering. Appearance varies with the environment</p>  <p>The map shows the distribution of <i>Grindelia stricta</i> across North America. The range is highlighted in green, covering southern British Columbia, California, and northern Baja California. The map includes state and provincial boundaries and a scale bar.</p>
Ecological distribution	Mounding, spreading groundcover especially suited for coastal sites, yellow, daisy-like flowers in summer contrast with ample green foliage. They need dry soil and full sun, and are raised from seed. They are not

	adapted to regions of cold, wet winters.
Climate and elevation range	0 - 1640 feet
Local habitat and abundance	
Plant strategy type / successional stage	Strong stress-toleration. Sun, drought tolerant or occasional summer water, adaptable to many kinds of soil. This is a highly variable species which has received various treatments. Douglas (1995) concluded that it was best to recognize only one environmentally variable species.
Plant characteristics	Herb to 90 cm; stems simple or branched, decumbent to ascending, glabrous to villous, occasionally glandular. Lvs to 25*4cm, oblong to oblanceolate, acute to obtuse, entire to minutely serrate near apex, base attenuate, petiolate; stem lvs amplexicaul.
<b>PROPAGATION DETAILS</b>	
Ecotype	Colorado
Propagation Goal	Seed.
Propagation Method	Seed.
Product Type	Propagules (seeds, cuttings, poles, etc.)
Stock Type	
Time to Grow	1 week.
Target Specifications	80 cm
Propagule Collection Instructions	Collect seeds in the fall from flowering heads
Propagule Processing/Propagule Characteristics	140 per gram.
Pre-Planting Propagule Treatments	Seed germinates in 2-3 weeks at 50-60 °F. Sow in sharp draining seed mix and cover to depth of seed
Growing Area Preparation / Annual Practices for Perennial Crops	
Establishment Phase Details	
Length of Establishment Phase	Time to germination: 6 days.
Active Growth Phase	2 month.
Length of Active Growth Phase	
Hardening Phase	
Length of Hardening Phase	
Harvesting, Storage and Shipping	Seed storage condition: Seed stored in the greenhouse.
Length of Storage	
Guidelines for Outplanting / Performance on Typical Sites	
Other Comments	
<b>INFORMATION SOURCES</b>	

References	See below
Other Sources Consulted	
Protocol Author	Chao Yang
Date Protocol Created or Updated	05/19/2015

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