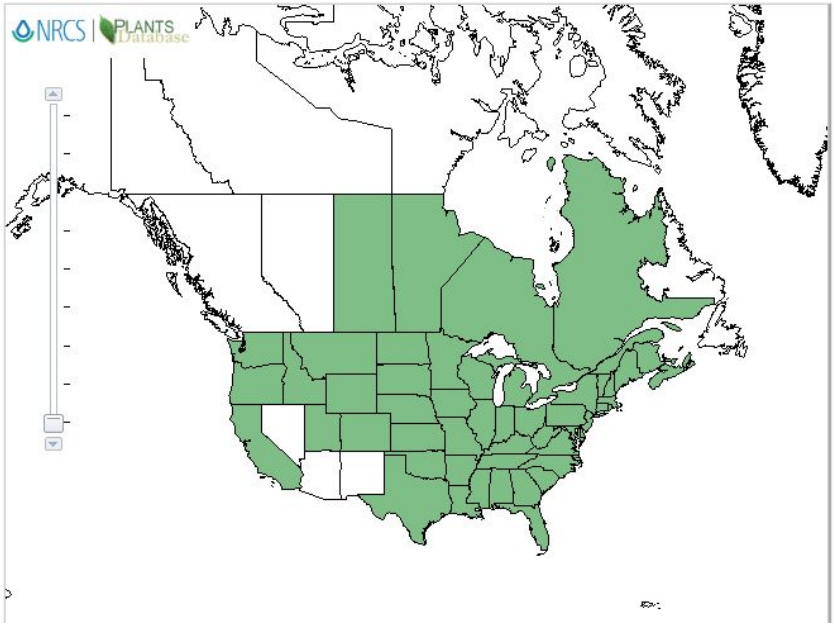
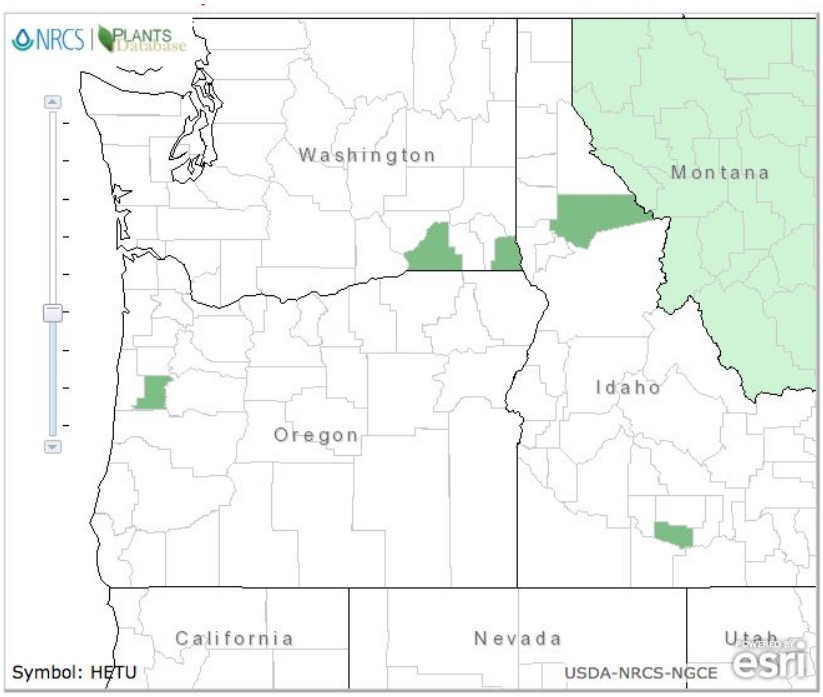
Top images [8]; Bottom image[10]

***Helianthus tuberosus* L. (Jerusalem Artichoke)**

TAXONOMY	
Plant Family	
Scientific Name	Asteraceae／Compositae [8]
Common Name	Aster family [8]
Species Scientific Name	
Scientific Name	*Helianthus tuberosus* Linnaeus [8]
Varieties	*Helianthus tuberosus* L.var. *Subcanescens* A. Gray [12] *Helianthus tuberosus* L.var. *Fuseau* [12]

	Helianthus tuberosus L.var. *Red Fuseau* [12] *Helianthus tuberosus* L.var. *Garnet* [4] *Helianthus tuberosus* L.var. *Stampede* [4] *Helianthus tuberosus* L.var. *Brazilian* [11]
Sub-species	N/A
Cultivar	N/A
Common Synonym(s)	*Helianthus tomentosus Michx.* [8] *Helianthus tuberosus* L. var. *Subcanescens* A. Gray[8]
Common Name(s)	Jerusalem Artichoke, Topinambour, Sunchoke, Sunroot, Earth Apple [3]
Species Code (as per USDA Plants database)	HETU, HETO4, or HETUS2 [8]
GENERAL INFORMATION	

Geographical range	 
Ecological distribution	Found among the greater part of North America. It has also been widely distributed throughout Europe due to North American colonizer Champlain expanding its growth and production to France.[1]
Climate and elevation range	Plants grow between 0-1000m elevation. Adapted to most climates, jerusalem artichokes usually require 125 days frost free during their growing season. Prefered climate promoting an optimal yield during growing season is that ranging between 65º-80º F with rainfall of 50” or less.[1]

Local habitat and abundance	This plant is often found in disturbed areas such as agronomic field, roadsides, and riverbanks [7] also common among various woodland borders.
Plant strategy type / successional stage	Rhizome system bearing tubers,[16] weedy and/or invasive (USDA) fast spreading.[1]
Plant characteristics	Perennial. Plants with an unlimited capacity can grow to be between 4 - 10 ft tall. (fine gardening). Stems can become woody with age (omafra fact sheet). Foliage is lance shaped, covered in coarse hairs [11], and are alternating.[16] Late summer bloomage reaches about 4" wide and are of a bright yellow hue.[11] This species is a tuberous plant of the rhizome variety. Tubers are the primary mode of reproduction, plant does produce seeds but usually in low numbers. (ohio state) Tubers are elongated and nonuniform, can be "knobby" and/or "round clustered" [16]. Color of tubers can range from red, purple, brown, and white. Grows in most to all soil types that are well drained, adapted to grow in poor nutrient soils. Soil can be dry or moist. Cannot grow in shade. Sensitive to daylight hours, requires longer periods when in growing stages and shorter during tuber development.
PROPAGATION DETAILS (TUBER)	
Ecotype	N/A
Propagation Goal	Plants
Propagation Method	Vegetative. Tubers planted at 10-15 cm depth. [12]
Product Type	Bareroot
Stock Type	N/A
Time to Grow	Early spring when ground soil can be worked.[12]
Target Specifications	N/A
Propagule Collection Instructions	Tubers should be harvested in the fall (aprox. 125-130 days after germination) or in early spring the following year.[16] It is recommended to wait until after the first frost, after foliage has died off. Harvesting methods are similar to that of potatoes which requires them to be removed from the ground. Avoid damaging the tuber when digging and plan to prevent long

	exposure to sunlight when unburied (no more than 1 to 2 hours). Viable tubers should be 1-2 oz or larger with a minimum of 2 to 3 buds per tuber.[1]
Propagule Processing/Propagule Characteristics	Tubers larger than 2 oz should be cut into smaller pieces that contain 2 to 3 buds per piece. Tubers should be overlooked and confirmed to have no signs of disease or infestation.[1]
Pre-Planting Propagule Treatments	One source recommended to treat cut end of tubers with a natural fungicide (cinnamon) before planting.[11]
Growing Area Preparation / Annual Practices for Perennial Crops	Plant performs best in slightly alkaline soil that is well drained, does not perform well in heavy clay soils that are prone to waterlogging. Temperature of soil should be no lower than 41ºF, temperatures colder will result in tuber dormancy.[16] Soil moisture should be no less than 30% of field capacity during the development stages of the tubers for optimal formation.[1]
Establishment Phase Details	Appropriate tuber sizes should be planted between 12” and 24” apart within assigned row. Rows should then be spaced between 30”-36” apart. Each tuber should be covered with 2”-3” of soil, similarly to potatoes, hilling in recommended for water retention.[1]
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	Harvesting specifications are the same as that of the propagule collection instructions. Recommended storage temperature of tubers is between 32º and 35º F with a relative humidity of 95%[15]. Tubers that are being kept for seeds should not be frozen.[1] Tubers should not be washed before storage, the thin skin could be easily damaged and could result in moisture loss, tuber rot, or disease infestation.
Length of Storage	4-5 months [15]
Guidelines for Outplanting / Performance on Typical Sites	**N/A**
Other	Prone to white mold[12] Food source to many native peoples before the colonization of North America.[1] Crop produces high levels of inulin, which makes it not only considers this edible plant to be a healthy alternative crop but also a potential source for ethanol production.[6] https://www.pakbs.org/pjbot/PDFs/47(6)/19.pdf provides the most significant information on growing stages, just not translated to growth phases of a seedling (i.e establishment, active, & hardening)
INFORMATION SOURCES	
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