

**Plant Propagation Protocol for *Ambrosia acanthicarpa***

ESRM 412 – Native Plant Production

URL: <https://courses.washington.edu/esrm412/protocols/2026/AMAC2.pdf>




NPS Photo



Chem Garden

<b>TAXONOMY</b>	
<b>Plant Family</b>	
Scientific Name	<i>Ambrosia acanthicarpa</i>
Common Name	<i>flatspine bur ragweed</i>
<b>Species Scientific Name</b>	
Scientific Name	Kingdom: Pantea Subkingdom: <i>Tracheobionta</i> Supervision: <i>Spermatophyta</i> Division: <i>Magnoliophyta</i> Class: <i>Magnoliopsida</i> Subclass: <i>Asteridae</i> Order: <i>Asterales</i> Family: <i>Asteraceae</i> Genus: <i>Ambrosia</i> Species: <i>Ambrosia acanthicarpa</i> (USDA NRCS)
Varieties	None are recognized in the USDA Plant Database
Sub-species	None are recognized in the USDA Plant Database
Cultivar	None are known
Common Synonym(s)	<i>Franseria acanthicarpa</i> (Hook.) Coville <i>Gaertneria acanthicarpa</i> (Hook.) Britton (USDA NRCS)
Common Name(s)	<i>flatspine bur ragweed</i> <i>flatspine burr ragweed</i> <i>bursage</i> <i>bursage ragweed</i>

	<p><i>flat-spine burr-ragweed</i>  <i>annual bursage</i>  <i>sand bursage</i>  (ITIS)</p> <p>Desert Ragweed (Chem Garden)  Wooly Burweed (Chem Garden)</p>
Species Code (as per USDA Plants database)	AMAC2 (USDA NRCS)
<b>GENERAL INFORMATION</b>	
Geographical range	 <p>Source: USDA PLANTS Database  North America, Continental U.S. &amp; Native Canada (ITIS)</p> <p>In Southern Canada, Michigan, Missouri, Texas, northwestern Mexico (Jepson eFlora)</p>
Ecological distribution	<p>Sandy plains, disturbed sites (Jepson eFlora)</p> <p>Can be found in Canyons, Sandy flats, and dunes Flora of North America)</p>
Climate and elevation range	<p>Elevation is -30m to 2450m (Jepson eFlora)</p> <p>10-3000m (Flora of North America).</p> <p>Likes moderate temperature and low humidity. (Earthone)</p>
Local habitat and abundance	<p>Occurs in dry, open sites such as desert flats, washes, and disturbed areas in western North America (USDA NRCS; Jepson eFlora).</p> <p>Favors hot and dry environments in the Sonoran Desert. Is adapted regions with high temperature and low precipitation. Grows in sandy and gravelly soils where nutrients are poor. (Botanical Realm)</p> <p>Prefers sandy soil with good drainage and can tolerate nutrient poor soils (Earthone)</p>

Plant strategy type / successional stage	Acts a pioneer species in disturbed areas, so an successional early species (Botanical Realm)  Annual Herb (National Park Service)
Plant characteristics	This is an annual plant that grows about 40–150 cm tall from a thin taproot. Its leaves and stems are somewhat grayish and covered with short, stiff hairs, making it slightly bristly in texture. (Jepson eFlora)  It is a sprawling bush, with branches that can grow wide. Leaves are narrow. A distinct feature is the spiny fruit (Botanical Realm)  It has soft fuzzy leaves and fuzzy heads. (Chem Garden)
<b>PROPAGATION DETAILS: FROM SEED</b>	
Ecotype	Joshua Tree, CA (Asbell, 2017)
Propagation Goal	Plants (Asbell, 2017)
Propagation Method	Seed (Asbell, 2017)
Product Type	Container (plug) (Asbell, 2017)
Stock Type	4 x 10 Anderson plants bands (Asbell, 2017)
Time to Grow	6 months (Asbell, 2017)
Target Specifications	Not specified (Asbell, 2017)
Propagule Collection Instructions	Seed was hand collected (Asbell, 2017)
Propagule Processing/Propagule Characteristics	37 percent of seeds germinated (Asbell, 2017)
Pre-Planting Propagule Treatments	Seeds were dried in paper bags and cleaned to remove male flowers and weed seeds. Seeds are stored in containers at 3 degrees Celsius. Seeds were not treated before sowing. They were directly sown into 17inches by 17 inches by 2 inches seeds flats. (Asbell, 2017)
Growing Area Preparation / Annual Practices for Perennial Crops	The media consisted of 3 parts including coarse horticultural perlite, vermiculite and a small amount of Osmocote. Seeds started in a greenhouse in April. Green house temperatures were between 50 degrees Fahrenheit and 90 degrees Fahrenheit. (Asbell, 2017)
Establishment Phase Details	Maximum germination was reached in 3 weeks. (Asbell, 2017)
Length of Establishment Phase	3 weeks (Asbell, 2017)
Active Growth Phase	6 weeks (Asbell, 2017)

Length of Active Growth Phase	Not specified (Asbell, 2017)
Hardening Phase	Not specified. (Asbell, 2017)
Length of Hardening Phase	Not specified. (Asbell, 2017)
Harvesting, Storage and Shipping	Not specified. (Asbell, 2017)
Length of Storage	Not specified. (Asbell, 2017)
Guidelines for Outplanting / Performance on Typical Sites	seedlings were pricked out and transplanted directly into 4" x 10" Anderson plant bands and moved outdoors into a shade house with 63% shade cover. Containers were hand watered. (Asbell, 2017)
Other Comments	Please note this information is for <i>Ambrosia dumosa</i> a similar plant from the same genus and grows in a similar climate. (Asbell, 2017)
<b>PROPAGATION DETAILS: VEGETATIVE (Cutting)</b>	
Ecotype	Not specified (Propagate One)
Propagation Goal	Plants (Propagate One)
Propagation Method	Vegetative (Propagate One)
Product Type	Not specified (Propagate One)
Stock Type	Softwood cuttings (Propagate One)  Semi-hardwood stem cuttings that are 4-6inches long (Chem Garden)
Time to Grow	Rooting may take 3-8 weeks. (Chem Garden)
Target Specifications	New plants preserve the genetic characteristics of the mother in order to preserve the most desirable traits. (Propagate One)  It is important to select non-flowering and semi hardwood stems that are not floppy, but flexible that are 4-6 inches long. Make a clean cut below the leaf node. (Chem Garden)
Propagule Collection Instructions	Take softwood cuttings in early summer. (Propagate One)  Suggested to collect cuttings in late spring to early summer when the plant is actively growing. Use a clean knife or shears to prune. (Chem Garden)
Propagule Processing/Propagule Characteristics	Not specified (Propagate One)
Pre-Planting Propagule Treatments	The use of rooting hormone is high recommended to increase success rates. (Propagate One & Chem Garden)

	Remove lower leaves (Chem Garden)
Growing Area Preparation / Annual Practices for Perennial Crops	Use a well draining, gritty mix such as perlite and coarse sand. Use small pots to plant the cuttings or seed trays with drainage holes. To keep humidity a plastic bag can be used. (Chem Garden)
Establishment Phase Details	Misting regularly and constant monitoring. (Propagate One)  Place cuttings in a bright place with indirect sunlight. Water lightly, if you use a dome or nag remove it a few hours a day for air circulation to reduce pests. (Chem Garden)
Length of Establishment Phase	3-8 weeks (Chem Garden)
Active Growth Phase	Cuttings need to be bright direct light, overwatering can cause to much moisture. Monitor for new growth and rooting by gently tugging on cuttings for resistance. (Chem Garden)
Length of Active Growth Phase	Not specified (Propagate One)
Hardening Phase	Not specified (Propagate One)
Length of Hardening Phase	Not specified (Propagate One)
Harvesting, Storage and Shipping	Not specified (Propagate One)
Length of Storage	Not specified (Propagate One)
Guidelines for Out planting / Performance on Typical Sites	Not specified (Propagate One)
Other Comments	Cuttings are a better way or propagation for this plant then germination.
<b>INFORMATION SOURCES</b>	
References	See below
Protocol Author	Abby Blackford
Date Protocol Created or Updated	05/13/2026

References:

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- 2) Botanical Realm. "Flatspine Bursage (Ambrosia Acanthicarpa) Species." *Botanical Realm*, 2 Jan. 2025, <https://www.botanicalrealm.com/plant-identification/flatspine-bursage-ambrosia-acanthicarpa/>.
- 3) Earthone. "Ambrosia Acanthicarpa." *Earthone*, <https://earthone.io/plant/ambrosia%20acanthicarpa>.

- 4) Flore of North America. "Ambrosia Acanthicarpa Hooker." *Flore of North America*,  
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- 5) Jepson Herbarium. "Ambrosia acanthicarpa ANNUAL BUR-SAGE." *The University and Jepson Herbaria University of California, Berkeley*,  
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- 6) Logo, The ITIS, and Integrated Taxonomic Information System - Report. "Ambrosia Acanthicarpa Hook." *Integrated Taxonomic Information System - Report*, May,  
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- 8) Prop Master 2K. "How to Propagate Ambrosia Acanthicarpa." *Propagate One*, 10 Feb. 2025, <https://propagate.one/how-to-propagate-ambrosia-acanthicarpa/>.
- 9) propagateone. "Ambrosia Acanthicarpa." *Propagateone*, 22 Feb. 2026,  
<https://chemgarden.intramate.com/2026/02/22/ambrosia-acanthicarpa/>.
- 10) USDA NRCS National Plant Data Team. "Ambrosia Acanthicarpa Hook. Flatspine Bur Ragweed." *Natural Resources Conservation Service U.S. DEPARTMENT OF AGRICULTURE*, USDA NRCS National Plant Data Team,  
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- 11) Pl@ntNet. "Ambrosia Acanthicarpa Hook." *Pl@ntNet*,  
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