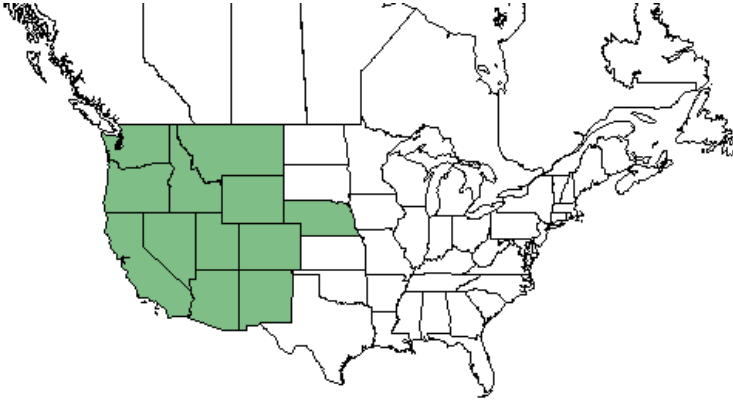


Plant Propagation Protocol for *Cleome lutea*

ESRM 412 – Native Plant Production

Protocol URL: <https://courses.washington.edu/esrm412/protocols/CLLU2.pdf>



Cleome lutea range map,
USDA PLANTS Database



Yellow beeplant, Photo by Al Schneider
@USDA-NRCS PLANTS Database

TAXONOMY	
Plant Family	
Scientific Name	Formerly <i>Capparaceae</i> ; now <i>Brassicaceae</i>
Common Name	Formerly Caper; now Cabbage
Species Scientific Name	
Scientific Name	<i>Cleome lutea</i> Hook.
Varieties	<i>Cleome lutea</i> Hook. var. <i>jonesii</i> J.F. Macbr. Jones spiderflower
Sub-species	
Cultivar	
Common Synonym(s)	<i>Peritoma lutea</i>
Common Name(s)	Yellow spiderflower, yellow beeplant, beeflower, Nevada bee plant
Species Code (as per USDA Plants database)	CLLU2
GENERAL INFORMATION	
Geographical range	From the central Great Plains to Washington and south to California and New Mexico (see above for range map).
Ecological distribution	Found in arid to semi-arid regions.
Climate and elevation range	
Local habitat and abundance	Grows in warm and cold desert shrub communities. Commonly associated with shadscale, sagebrush,

	horsebrush pinyon-juniper, and black greasewood plant communities.
Plant strategy type / successional stage	Self-fertilizing, reseeds readily in disturbed areas without pollinators
Plant characteristics	Annual forb, it has one to several branched or simple erect stems reaching 0.3-1.5 meters tall. Palmate leaves with 3 to 5 oblong to lanceolate leaflets, each leaflet is 1-5 cm long and 2-10 mm wide. Yellow flowers have 4 petals, 4 sepals, 6 stamens, and the fruit is a two-valved silique. Flowers are similar to those found in the mustard family, however the stamens are long and exerted from the flower, unlike in the mustard family.
PROPAGATION DETAILS	
Ecotype	
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Bareroot (field grown)
Stock Type	N/A
Time to Grow	Planted in late fall, two growing seasons for full stand establishment
Target Specifications	Mature at approx. 2.7 feet
Propagule Collection Instructions	Collect seeds in summer
Propagule Processing/Propagule Characteristics	Full stand seeding rate is 11 kg pure live seed per ha (10 lbs. PLS per acre)
Pre-Planting Propagule Treatments	Seeds require a cold stratification period to germinate. Stratified in lightly moistened peat or sand at 4 to 5 degrees C (39 to 41 degrees F) for 30 to 190 days.
Growing Area Preparation / Annual Practices for Perennial Crops	Should be planted in a weed-free seed bed at a depth of 3-6 mm, moist soil
Establishment Phase Details	N/A
Length of Establishment Phase	10 to 14 days
Active Growth Phase	Spring and summer
Length of Active Growth Phase	4 to 6 months
Hardening Phase	Early to late fall
Length of Hardening Phase	3 to 4 months
Harvesting, Storage and Shipping	Store stratified seeds discussed above
Length of Storage	30 to 190 days
Guidelines for Outplanting / Performance on Typical Sites	Best established where winter soils are moist.
Other Comments	Defer grazing on seeded land for at least two growing seasons to allow for full establishment of the stand.
INFORMATION SOURCES	
References	See below
Other Sources Consulted	
Protocol Author	Kalina Bevelhimer

Date Protocol Created or Updated	05/30/20
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References:

“Conservation Plant Characteristics for *Cleome Lutea* Hook. (Yellow Spiderflower).” *USDA PLANTS Database*, plants.usda.gov/java/charProfile?symbol=CLLU2.

Giblin, David, and Don Knoke. “*Peritoma Lutea* (Yellow Bee Plant.” *Burke Herbarium Image Collection*, Burke Museum Herbarium, biology.burke.washington.edu/herbarium/imagecollection/taxon.php?Taxon=Peritoma%20lutea.

“*Peritoma Lutea*, Yellow Beeplant.” *The American Southwest*, www.americansouthwest.net/plants/wildflowers/peritoma-lutea.html.

“Plant Guide for Yellow Beeplant (*Cleome Lutea* Hook.).” *USDA PLANTS Database*, NRCS Plant Materials Center, plants.usda.gov/plantguide/pdf/pg_cllu2.pdf.

“Plants Profile for *Cleome Lutea* (Yellow Spiderflower).” *USDA PLANTS Database*, plants.usda.gov/core/profile?symbol=CLLU2.

“Plants Profile for *Cleome Lutea Jonesii* (Jones Spiderflower).” *USDA PLANTS Database*, plants.usda.gov/core/profile?symbol=CLLUJ.