

Growing Eucalyptus from Seed

At A Glance: To protect Hawai'i's endemic 'ōhi'a trees, the Hawai'i Department of Agriculture has banned importation of plants in the Myrtle family, including eucalyptus. To help local growers produce eucalyptus foliage for Hawai'i florists, this publication provides instructions on how to grow several eucalyptus species from seeds already available in Hawai'i. The eucalyptus species in this research—*Eucalyptus pulverulenta* 'Baby Blue', *E. cinerea* 'Silver Dollar', and *E. gunnii* 'Silver Drop'—have low potential for invasiveness.



Figure 1. Eucalyptus branches with mature capsules. Harvest when the capsules are slightly open.

Harvesting Seeds

Based on preliminary data, 'Baby Blue' seeds should be harvested after flowering when the fruit (capsules) start to open slightly (Figure 1). Cut the branches with mature capsules, and allow the capsules to air-dry in a cool, dark place. Shake the capsules to release the seeds and separate the seeds from the chaff (plant debris) (Figure 2). One method of separating the seeds from the chaff is to pour them from a height of approximately 1 foot into a collecting vessel while directing a light air stream at them, such as from a fan. The denser seeds will fall directly into the vessel, while the chaff will be diverted to the side by the air. Seeds can be planted soon after or allowed

to dry and then stored in an air-tight container or bag at room temperature or in the refrigerator with a desiccant.

Introduction

With the implementation of the Hawai'i Department of Agriculture's ban on the importation of members of the myrtle (Myrtaceae) family to prevent introducing new diseases affecting 'ōhi'a (Hawai'i State Department of Agriculture 2020), it became difficult to source sufficient numbers of ornamental eucalyptus branches to meet the needs of the local floral industry. However, small amounts of seed are occasionally available, legally and from local sources, which could provide material for local florists and designers. (Contact your local ornamental crops Extension Agent for local seed sources.)

This sheet outlines the steps to grow ornamental eucalyptus from seed, based on our local research experience with *Eucalyptus pulverulenta* 'Baby Blue', *E. cinerea* 'Silver Dollar', and *E. gunnii* 'Silver Drop'.

Note: These techniques have been tested on the eucalyptus species mentioned above, which are common in the floral trade and have been tested for invasive potential. Before growing any other eucalyptus species we strongly recommend checking the Plant Pono database (<https://plantpono.org/>) to determine if the species is an invasive species risk.

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Figure 2. Eucalyptus seeds collected after shaking the capsules. Note the seeds are dark black and the chaff is tan.

Sowing Seeds

Sow seeds in sterilized seedling trays or cells with drainage holes, filled with commercial potting mix. Do not make holes to sow the seeds into. Instead, sprinkle seeds on the surface and lightly cover seeds with potting mix. Place seedling trays on a bench in full sunlight at temperatures between 60–75°F. Irrigate with overhead/mist irrigation approximately 2–10 minutes each day depending on temperature and rainfall. To encourage germination, keep trays consistently moist but not too wet; avoid over-watering.

To learn more about the sowing process, go to <https://go.hawaii.edu/9CF> for a video overview.

Germination

Preliminary data indicate germination takes 7–30 days (Table 1 and Figure 3). The germination rate can vary among the different species of eucalyptus and is also influenced by the ambient conditions and quality of seeds.

Some literature suggests that seed treatment before sowing may increase the germination rate. Suggested techniques include stratification (keeping the seeds moist in low, but above-freezing

temperatures for weeks to months) or scarification (breaking the seed coat by either gentle surface friction or soaking in hot water or chemicals to break down the seed coat). Further research is needed to see which techniques might work best for the species available in the state. As with any use of chemicals in agriculture, it is important to follow the instructions on the label.

Eucalyptus Species	Location	Elevation (ft)	# Seeds Sown	# Seeds Germinated	% Germination
<i>E. cineria</i> 'Silver Dollar'	Wailua Homesteads, Kaua'i	532	240	144	60%
<i>E. cineria</i> 'Silver Dollar'	Wailua Homesteads, Kaua'i	532	161	69	27%
<i>E. cineria</i> 'Silver Dollar'	Kula, Maui	3150	336	282	84%
<i>E. gunnii</i> 'Silver Drop'	Wailua Homesteads, Kaua'i	532	50	26	52%
<i>E. gunnii</i> 'Silver Drop'	Wailua Homesteads, Kaua'i	532	148	68	35%
<i>E. gunnii</i> 'Silver Drop'	Wailua Homesteads, Kaua'i	532	187	71	12%
<i>E. gunnii</i> 'Silver Drop'	Kula, Maui	3150	288	146	29%
<i>E. pulverulenta</i> 'Baby Blue'	Wailua Homesteads, Kaua'i	532	76	28	37%
<i>E. pulverulenta</i> 'Baby Blue'	Wailua Homesteads, Kaua'i	532	174	70	20%
<i>E. pulverulenta</i> 'Baby Blue'	Kula, Maui	3150	152	44	50%

Table 1. Germination and survival rates of different eucalyptus species grown at CTAHR Agricultural Research Stations on Maui and Kaua'i. Each row represents a distinct seed-sowing event.



Figure 3. Germinating *Eucalyptus pulverulenta* 'Baby Blue' seedlings approximately 20 days after sowing in trays.

Seedling Care

Allow germinated seedlings to grow in trays or cells with consistent irrigation. After approximately 5–7 months of growth, if plants are displaying a light green/yellow color or purplish hue consider adding 2–3 granules of 13–11–11 slow-release fertilizer to each eucalyptus seedling (Figure 4). Eucalyptus plants are generally vigorous, but can be affected by some local pests and diseases; for more information, please see Lutgen et al. (2024).



Figure 4. Eucalyptus seedlings fertilized with 2–3 granules of 13–11–11 slow-release fertilizer applied to each plant tube at 6 months of growth.



Figure 5. Seedling of *Eucalyptus pulverulenta* 'Baby Blue' ready for transplanting.

Transplanting

To encourage healthy taproot growth, transplant seedlings into dibble tubes or deep containers when they are approximately 1–2 inches tall or when they develop their first true leaves (Figure 5). If the seedlings begin to outgrow the dibble tubes and cannot be planted immediately, tall forestry pots are a good larger option. Plants kept in pots for long periods may develop a deformed taproot ('J-root'), which can limit the growth of the plant as it matures. For information on how to identify good locations for planting the seedlings in the ground, please refer to Keach et al. (2024).

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Hawai'i Department of Agriculture

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References and Resources

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