



## **NIYORON** *Cordia subcordata*

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**N**iyoron is a small to medium size tree usually found on limestone soils. It grows naturally on beach strands and is native to the Mariana Islands and other Pacific Islands.

**Other Common Names:** Anau, Beach cordia, Cordia, Galu, Glueberry, Ikoak, Ikoik, Ironwood, Island walnut, Kalau, Kalimasada, Kanawa, Kerosene wood, Koa, Kanava, Kou, Manjak, Mareer, Motou, Narrow-leafed bird lime tree, Nawanawa, Pramasada, Puataukanave, Purnamasada, Sea trumpet, Snottygobbles, Te kanawa, Tou, Tauanave, Vaua asi

**Synonyms:** *Cordia orientalis*, *Cordia rumphii*

**Family Name:** Boraginaceae

### **Plant appearance**

**Distinctive feature:** Niyoron has a broad dense crown with flaky light gray bark and beautiful scentless orange flowers. The fruits grow in clusters and turn brown when mature. The fruits are hard and woody, The seeds are waterproof and can float.

### **Leaf**

**Shape:** Broadly egg-shaped to elliptical with pointed ends

**Arrangement:** Alternate

**Type:** Simple

### **Flower**

**Size:** About 0.50 in.

**Color:** Green with white hair-like structures extending on the sides

**Shape:** Round

**Arrangement:** Simple, spike

**Flowering period:** Year round



**Niyoron flowers<sup>a</sup>.**

### **Habit**

**Typical height:** 25-40 ft.

### **Fruit**

**Type:** Drupe

**Size:** 0.75-1.25 in. long, round or egg-shaped

**Color:** Brown when mature

**Number of seeds:** 4 or fewer

**Edible:** Yes

### **Growing your own**

**Form:** Seed

**Seed collection:** Select healthy seeds from mature fruits either on the tree or ground. Fruits usually fall on the ground as they ripen.

**Seed treatment:** Soak seeds overnight for up to 2 days and clip the ends of the fruit to hasten germination.

**Germination time:** 3-6 weeks

**Planting depth:** No deeper than twice the size of the seed

**Pre-planting:** Germinated seeds may be transplanted into pots once the cotyledons come out. Seedlings may stay in the nursery for 6-8 months and ready for outplanting when 1-1.5 ft. high.



Niyoron leaves<sup>a</sup>.

**Special hints:** Seedling hardening should be done under full sun with less watering before outplanting. Tree growth becomes slower when it reaches mature size at 23-33 ft.

### Production conditions

**pH value:** 6.1-7.4 (neutral to alkaline)

**Water:** Needs sufficient water but can tolerate drought and waterlogging

**Salt tolerance:** High

**Wind tolerance:** Moderate

**Soil characteristics:** Basalt, limestone, clay, or sand, sandy loam, sandy clay loam, sandy clay, clay loam, and clay

**Light:** Full sun but can tolerate slight shade

**Space requirement:** 10-20 ft.

**Growth rate:** 1-3 ft. per year

**Growth direction:** Upwards

**Fertilizer:** Potting media composed of peat moss, perlite, and vermiculite combined with low-release fertilizer and compost is highly recommended.

**Pruning:** Prune dead branches. Prune as necessary for structure and crown thinning. Prune no more than 25 percent of plant every 4-6 months.



Niyoron fruit<sup>a</sup>.

### Risks

**Near surface roots:** It has extensive shallow root system.

**Limb breakage:** Medium

**Special considerations:** The hard, woody fruits may pose hazard to pedestrians if tree is planted in urban areas.

**Pests:** The leaf worm, *Ethmia nigroapicella*, attacks the leaves and defoliates the tree. Pathogenic fungi such as *Pythium*, *Phytophthora*, and *Fusarium* can also attack seedlings when overwatered, which injures the roots during outplanting.

### How to use this plant

Niyoron is compatible with many coastal species. It is not considered invasive although it has potential to spread easily.

**Agroforestry:** Coastal protection, windbreak, home gardens, shade tree

**Wildlife:** Fodder for pigs

**Medicinal:** Unknown

**Other uses:** Canoe/boat/raft making, woodcrafting (bowls, utensils, and large calabashes), body ornamentation/garlands, tannin/dye (cloth and fishing lines), ceremonial/religious importance



Niyoron seed<sup>a</sup>.

## Photo credits

a. Christine B. Laurent

## Acknowledgements

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## For further information

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## References

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University of Guam Press. 125pp.

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[http://uses.plantnet-project.org/en/Cordia\\_subcordata\\_\(PROTA\)](http://uses.plantnet-project.org/en/Cordia_subcordata_(PROTA))



Niyoron seedling<sup>a</sup>.

This is a continuation of the first set of 9 Native Tree factsheets in collaboration with Guam Department of Agriculture and USDA which is found in this link: [http://cnas-re.uog.edu/useful-cnas-documents-posters/?wpv\\_aux\\_current\\_post\\_id=3189&wpv\\_view\\_count=3187-TCPID3189&wpv\\_paged=2](http://cnas-re.uog.edu/useful-cnas-documents-posters/?wpv_aux_current_post_id=3189&wpv_view_count=3187-TCPID3189&wpv_paged=2).

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