

# ORNAMENTAL AMARANTH

Foxtail Amaranth, Inca wheat, love-lies-bleeding

*Amaranthus caudatus*

Amaranthaceae

---

## ECHO® PLANT INFORMATION SHEET

---

### Description

*Amaranthus caudatus* is a cultivated herbaceous crop originating from South America. Reaching 1.5-2.5 m in height, its simple leaves occur in spiral arrangement along the stem. Inflorescences are large (as long as 1.5 m) and showy, with small, red or green flowers. Small, oval-shaped seeds (1.5-2.5 mm) vary in color from creamy white, reddish, or brown.

### Uses

A pseudocereal, *A. caudatus* seeds are used similar to grains: roasted, ground into flour, boiled, dried and stored, sprouted, or even fermented for beverages. Leaves are treated as a vegetable and prepared similar to other leafy crops. Plants can also be used for livestock fodder. Because of the showy flowers, *A. caudatus* is often grown as an ornamental.

### Cultivation

- **Elevation** - up to 3600 m
- **Rainfall** - 250-4200 mm
- **Soil Types** - 4.3-8.5 pH; well-drained soils
- **Temperature Range** - 7-40°C
- **Day Length Sensitivity** - none
- **Light** - prefers full sun

Scarification of *A. caudatus* seed increases germination rate, but is not required. Seeds can be broadcast or direct seeded in rows. Broadcast rates should be 8-18 kg/ha. When planting in rows, seeds should be 1-1.5 cm deep. Spacing should be 2.5-3.5 cm in-row, and 30-45 cm between-row. *A. caudatus* can be intercropped with maize.

### Harvesting and Seed Production

*A. caudatus* exhibits asynchronous ripening—when portions of the seed heads ripen before others—making harvest more intensive. Hand cutting ripe portions as they ripen, and while the plant is still green, will help prevent seed shatter. Leaves may be harvested continuously as needed.

### Pests and Diseases

Several fungal pathogens affect *A. caudatus*, as well as caterpillars, stinkbugs, grasshoppers, and aphids.

### Cooking and Nutrition

*A. caudatus* seeds are high in fatty acids and quality protein, and are gluten-free. They can be roasted, boiled, or dried and stored. Dried seed can be ground for flour, sprouted, or fermented for alcoholic beverages. Leaves can be boiled, stir-fried, or prepared in similar fashion to other leafy crops. *A. caudatus* is a hyperaccumulator of nitrates from the soil. Depending on fertilizer source, leaves can be high in nitrates, which is an anti-nutritive compound.

### References

Agong, S.G., 2006. *Amaranthus caudatus* L. Record from PROTA4U. Brink, M. & Belay, G. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands. <<http://www.prota4u.org/search.asp>>. Accessed 26 August 2019.

Ecocrop. 1993-2007. *Adenanthera pavonina*. Food and Agriculture Organization, Rome, Italy. [ecocrop.fao.org/ecocrop/srv/en/dataSheet?id=2187](http://ecocrop.fao.org/ecocrop/srv/en/dataSheet?id=2187). Accessed 26 August 2019.

Tropical Plants Database, Ken Fern. [tropical.theferns.info](http://tropical.theferns.info). [tropical.theferns.info/viewtropical.php?id=Amaranthus+caudatus](http://tropical.theferns.info/viewtropical.php?id=Amaranthus+caudatus). Accessed 26 August 2019

<http://ecocrop.fao.org/ecocrop/srv/en/cropView?id=2187>