

# SWORD BEAN

*Canavalia gladiata*

Fabaceae

---

## ECHO® PLANT INFORMATION SHEET

---

### Description

*Canavalia gladiata* is a perennial, fast-growing, heavily producing, climbing legume. It is widely cultivated in the humid tropics of Southeast Asia, but remains a minor vegetable elsewhere. Plants can reach 10 m in length with a deep, penetrating root system. Leaves are trifoliate, similar to other legumes, with white, butterfly-like flowers also similar to other legumes. Mature pods reach 40 cm in length.

### Uses

Young green pods and seeds are eaten sparingly as a cooked vegetable, though *C. gladiata* is most useful as a green manure cover crop. Since it is a vining plant, *C. gladiata* is usually grown along buildings or other structures. Immature vines and seeds, rich in protein and starch, can be fed to livestock in limited amounts; the level of toxicity increases with maturity of the plant.

### Common Names

- French
  - pois sabre rouge
- Spanish
  - caraota grande
  - frijol de machete
  - poroto sable

### Cultivation

- **Elevation** - up to 1500 m
- **Rainfall** - 600-2600 mm
- **Soil Types** - low quality, pH 4.3-7.5, tolerates some salinity and waterlogging
- **Temperature Range** - 12-36° C
- **Day Length Sensitivity** - requires day lengths less than 12 hours to flower
- **Light** - prefers full sun

Preferred environmental conditions are found in the humid lowlands, but these beans may be grown with success in elevations to 1500 m.

*C. gladiata* seeds should be planted 5-7.5 cm deep, 45-60-cm in-row spacing, and 75-100 cm between-row to allow for spreading habit. Best growth occurs with trellis support.

### Harvesting and Seed Production

*C. gladiata* is fast growing. Young pods are available for harvest 3-4 months after planting, before pod swelling occurs. Mature seeds take 5-10 months to mature and the pods will break open, scattering the seeds when fully mature. The dried seeds store well as they are not attractive to insects.

### Pests and Diseases

*C. gladiata* is resistant to diseases and pests. However, it is occasionally subject to root rot disease, fall armyworm, and stem-boring beetle grubs. It is recommended to destroy vines at the end of the harvest season and rotate with other crops to assist in pest and disease control.

### Cooking and Nutrition

The immature pods and seeds may be cooked and eaten after draining off the cooking water.

### References

Ecocrop. 1993-2007. *Canavalia gladiata*. Food and Agriculture Organization, Rome, Italy. [ecocrop.fao.org/ecocrop/srv/en/dataSheet?id=2227](http://ecocrop.fao.org/ecocrop/srv/en/dataSheet?id=2227). Accessed 16 July 2019.

Bosch, C.H., 2004. *Canavalia gladiata* (Jacq.) DC. [Internet] Record from PROTA4U. Grubben, G.J.H. & Denton, O.A. (Editors). PROTA (Plant Resources of Tropical Africa / Ressources végétales de l'Afrique tropicale), Wageningen, Netherlands. <http://www.prota4u.org/search.asp>. Accessed 16 July 2019.