

### Recommended varieties

All 13 yaqona varieties in Fiji are Noble Varieties that are preferred for human consumption.

- Loa Kasa Balavu
- Loa Kasa Leka
- Vula Kasa Balavu
- Vula Kasa Leka
- Qila leka
- Matakaro Balavu
- Yonolulu
- Damu
- Yalu
- Qila Balavu
- Dokobana Vula
- Matakaro leka
- Dokobana loa



### Seed Rate

2,500 mounds/ha (3-5 cuttings/mound)

### Planting Time

Yaqona can be planted all the year round and the best time to plant is from August to October

### Spacing

**Traditional System:** the wider spacing of yaqona allows for intercropping as it is a shade loving crop.

*Between rows:* 2m

*Plants within rows:* 2m



### Fertilizer

a) **NPK: 13:13:21 200kg/ha.** Basal application of 30g with soil per mound at planting.

b) **Urea:** Apply 30g with soil per mound 4 months after planting.

Ministry of Agriculture does not necessarily recommend fertilizer on yaqona, this is done to supplement growth and development at some stages based on soil nutrient deficiencies.

- It is imperatively recommended to have the soil analysed before fertilizer application.
- Yaqona grows well on new fertile soil with high organic matter.
- Clay loam soil is better with good drainage.
- Soil analysis should be done during site selection.

### Weed Control/ Management

Hand weeding is highly recommended, this depend on the age of the crop, and the season of the year. Yaqona farmers exercise their discretion on yaqona weeding.

### Disease Control/Management

**Kava Die Back Disease:** caused by Cucumber Mosaic Virus (CMV) and transmitted by sap sucking insects such as Aphids. Plants wilt from the top and goes right to the base of the plants. Infected plants will re - generate new plants at the base, but these are all infected and must be removed.

- Use traditional growing methods like clean stem cuttings, enough shading for the young plants at the first

6 months of growth.

- Remove and destroy infected plants by burning and burying.
- Grow yaqona on new soil, with no history of dieback disease.
- Inter-crop with crops such as dalo-ni-tana, coconuts, banana, cassava, yams and sweet potato.
- Avoid planting host plants such as Cucurbits plants (pumpkin, cucumber and watermelon), Solanaceous plants (tomato, capsicum, chillies, eggplant and tobacco), leguminous plants, pineapple, erythrina (drala) and weeds like mile-a-minute and commelina.
- Source clean and healthy planting materials from non-infected areas and non - infected plants within the farm.
- Farmers are encouraged to venture into raising yaqona seedlings in nursery as this provides a better selection of clean seedlings at 3 – 4 months before planting.

### Insect Control/ Management:

No major insect pests.

Farmers are advised to keep watch of Rose Beetle attack on the leaves. Normally at night, this can reduce the surface area on the leaves for food production.

### Harvest/ Yield/Food Value:

Harvest after 3-4 years from planting. It can be left in the field for up to 6 – 10 years.

Fresh kava roots contain an average of 80% water. Dried roots approximately contain 43% starch, 20% dietary fibre, 15% kava lactones, 12% water, 3.2% sugars, 3.6% protein and



3.2% minerals.

### Yield (Dry)

4 to 6kg of green kava is required to produce 1 kg of dried kava. It is estimated that 4,000 – 4,500 tonnes of dry weight kava is produced in Fiji annually and about 3,300 – 3,700 tonnes of dry weight (82%) is consumed in the domestic markets.

### Kavalactone Content

The physiological effects of kava are usually viewed as an important characteristic of kava quality amongst customers, alongside characteristics such as where it was grown, taste and cleanliness. The effect of the kava drink is determined by chemicals called kavalactones. There are 6 major kava lactones namely Kavain, Methysticin, Yangonin, Dihydro kavain, Dihydromethysticin and Desmethoxy yangonin.

The chemotype or kavalactone profile in the laboratory is then determined by ranking the proportions of six kavalactones from highest to the lowest amount (i.e. in descending order). For example, kava with a chemotype of 426531 has high concentrations by kavain (KAV), followed in decreasing concentrations by dihydro kavain (DHK), methystiin (METH), dihydromethystiin (DHM), yangonin (YAN) and desmethoxy yangonin (DMY).

**Table 1:** Variety and Chemotype of Fijian Kava, based on preliminary analysis by the USP IAS laboratory and single samples of different varieties sent to Herb Research (Germany).

	VARIETY	IAS-CHEMOTYPE	GERMANY
1.	Vula Kasa Leka	426531 (Lewena) 426531 (Waka)	426531
2.	Vula Kasa Balavu	426351 (Lewena) 426531 (Waka)	
3.	Dokobana Loa	426351 (Lewena) 426531 (Waka)	426531
4.	Dokobana Vula	426531 (Lewena) 463251 (Waka)	426351
5.	Damu	426351 (Lewena) 462351 (Waka)	426531
6.	Loa Kasa Balavu	426531 (Lewena) 462351 (Waka)	

7.	Loa Kasa Leka	426531 (Lewena) 462351 (Waka)	426531
8.	Matakaro Leka	426531 (Lewena) 462351 (Waka)	426531
9.	Matakaro Balavu	426351 (Lewena) 462351 (Waka)	426531
10.	Qila Balavu	426531 (Lewena) 462351 (Waka)	462351
11.	Qila Leka	246531 (Lewena) 426531 (Waka)	426531
12.	Yonolulu	426351 (Lewena) 46235 (Waka)	462351
13.	Yalu	462351 (Lewena) 426351 (Waka)	426531

Source: Fiji Kava Quality Manual, 2017

### Disaster Risk and Climate Change tips:

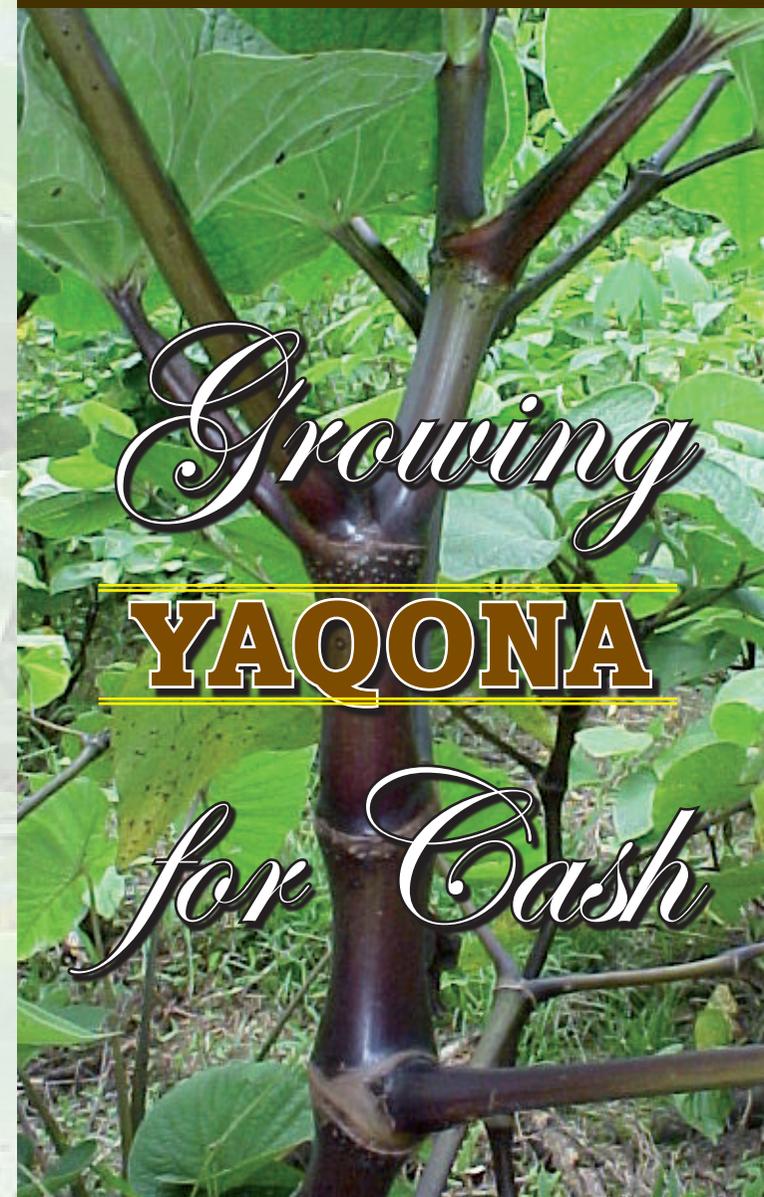
- Yaqona is very prone to wind damage and lots of damage arises during tropical cyclones.
- Replanting is encouraged immediately after cyclones to avoid deterioration of kasa (stem cuttings).
- In disaster prone areas, plant Yaqona as part of a multi-crop food garden (with coconut, yams, cocoa and coffee).
- Can be a good source of income after disaster, with the sales of cuttings and dried roots (waka) and stumps (lewena).
- Mulch to keep soil moisture in severe drought period, prune field-grown plants extensively by removing large leaves to reduce evapotranspiration rates.



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