

# Fruit Production Systems in the Pacific



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# Oceania

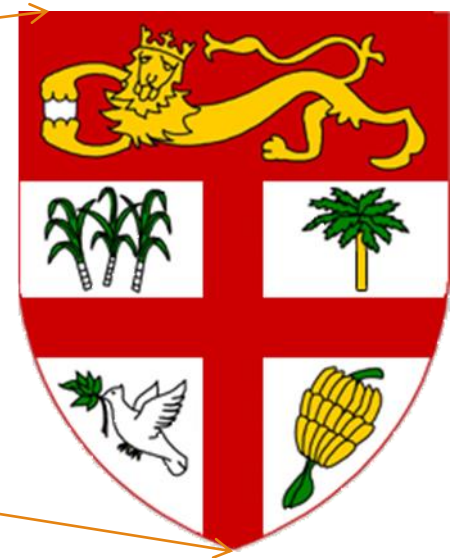
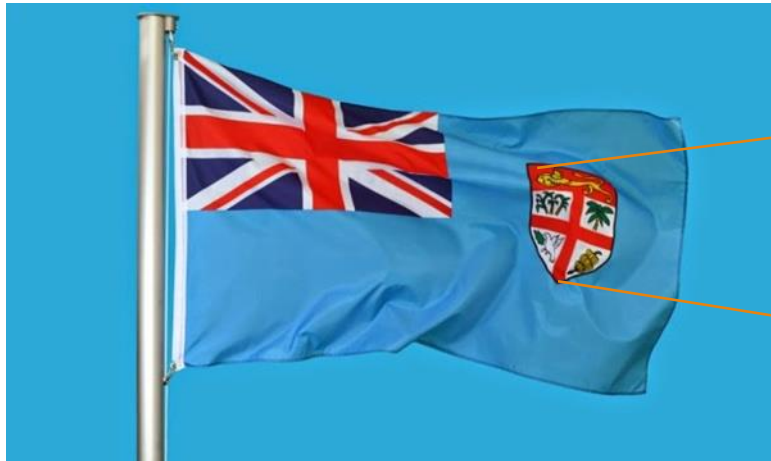


# Fiji



# Fiji Flag

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# Some Facts

- ❑ Small Island Countries
- ❑ Isolated
- ❑ High incidence of cyclone (Category 5 TC Winston)
- ❑ Small holder production systems (3 to 5 ha)
- ❑ Fruit consumption is not common
- ❑ High levels of NCD's



# NCD's in the Pacific

- ❑ WHO in 2014 revealed 1.9 billion adults in the world are overweight of which 600 million were obese.
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- ❑ PIC made up top 7 list of fattest countries in the world.
  - ❑ 70% of Pacific Islanders aged 15 and over have an unhealthy weight.
  - ❑ Obesity in Fiji has risen by 8.5%.
  - ❑ 18% of Tongan adult population has type-two diabetes.
  - ❑ Tonga having one of the highest rates of obesity in the world with non-communicative diseases.



# NCD's in the Pacific

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- ❑ Health based NCD remediation has been widely advocating increased consumption of fresh fruits and vegetables in the Pacific.
- ❑ Evans *et al.*, (2001, 2002, 2003) identified consumer accessibility (both physically and economically) to fresh fruits and vegetables as a major hurdle.



# Fruits Development Program

- ❑ Improving domestic market supply to address existing insufficient supply of local fruits.
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- ❑ Better access for smallholder farms to domestic retail and tourism market.
  - ❑ Expanding existing fruit exports (papaya, breadfruit, mango, pineapple, banana).
  - ❑ Re-building historical significant fruit-industries (banana and citrus).
  - ❑ Make available more fruit seedlings through Govt. and Private nurseries.
  - ❑ Development of value-added products.



# Major Tropical Fruits

❑ Papaya



❑ Pineapple



❑ Banana



❑ Breadfruit



❑ Mangoes



# Papaya

- ❑ Fiji's main export commodity

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Year	2009	2010	2011	2012	2013	2014	2015
Production (Tons)	2,446.35	2,129.26	3,096.75	2,666.9	2,777.36	5,776.73	4,200.75
Area (Ha)	399.71	348.76	168.28	133.6	205.31	237.57	146.88
Export (Tons)	392.90	176.51	432.12	1071.10	182.32	252.21	444.80

- ❑ Other countries - Production is concentrated mainly for domestic market.
- ❑ Emerging crop in the region.



# Papaya Production System

- ❑ Organized planting systems with av. Farm size of 1 to 2 ha.
- ❑ Harvested produce is sold in local municipal markets, processed, hotels and exported.
- ❑ Farms for export are registered and produce treated using HTFA facility operated and managed by farmers cooperative.



Dr. Desa visits Fiji Red Papaya farm owned by Mr. Pushkar Charan near Sigatoka city. The papaya produced in this farm is export by Nature's Way Cooperative Fiji Ltd.



This packing house facility operated by Nature's Way Cooperative Fiji Ltd., located near Nadi International Airport, is funded partly by the Fiji government.





# Pineapple

❑ Commercially important crop for Fiji

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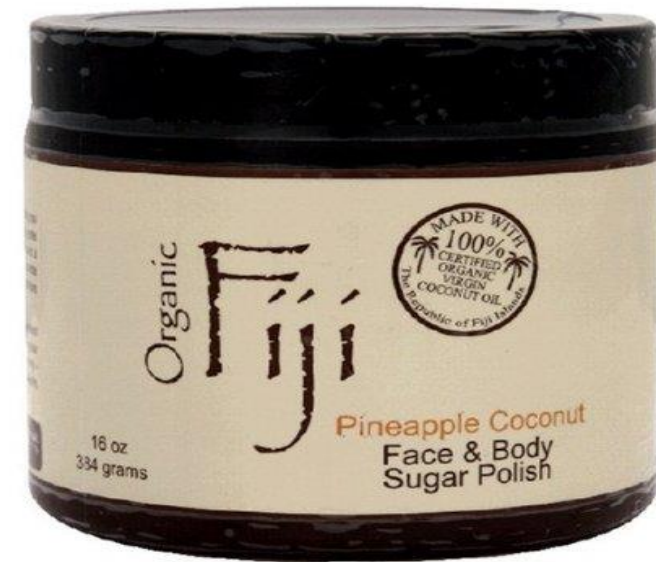
Year	2009	2010	2011	2012	2013	2014	2015
Production (Tons)	3868.05	3344.8	4115.52	841.26	5770.62	6538.20	8838.63
Area (Ha)	233.31	215.8	335.85	54.37	439.26	454.89	577.88
Export (Tons)	24.51	17.06	6.24	6.57	8.75	6.37	12.91

❑ Tonga – 55 ha (Domestic market)

❑ Samoa – 125 ha (Domestic market)

# Pineapple Production System

- ❑ Fiji has a organized production system with av. Farm size of 2 to 5 ha.
- ❑ Harvested produce are sold in hotels and municipal markets.
- ❑ The countries in the region small are producers with av. Farm size of 1 ha (Tonga – 55ha, Samoa – 50ha).



# Banana

❑ Important domestic crop for Fiji.

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Year	2009	2010	2011	2012	2013	2014	2015
Production (Tons)	4457.51	4442.14	4809.625	730.05	4634.38	5021.76	5271.84
Area (Ha)	411.28	407.37	563.48	123.91	499.92	529.18	515.10
Export (Tons)	112.08	1.24	14.58	10.00	-	9.04	112.08

❑ Important domestic crop also in Samoa and Tonga



# Banana Production system

- ❑ Banana production in Fiji is planted on small scale with farmers having 100 to 200 trees each.
- ❑ Production is mainly for municipal market, hotel and processed.
- ❑ 2,500 tons of organic banana in Fiji is processed into baby foods and flavoring yoghurt.
- ❑ Banana is used as a staple food in Samoa (Consumed at green stage).
- ❑ Production in the region is small scale mainly targeted to their domestic markets.





# Breadfruit

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- ❑ Important food security crop in the region.
- ❑ An emerging export product supplying a large Pacific Island diaspora in New Zealand.
- ❑ High potential for production of gluten free flour.
- ❑ Fiji currently exports around 12 tons annually while Samoa exports about 70 tons



# Breadfruit Production Systems

- ❑ Commercial breadfruit production in the Pacific is currently sourced from community, and low intensity smallholder plantings.
- ❑ Every village and settlement in the Pacific has 2 to 3 breadfruit trees for food security.
- ❑ Fiji has recently adopted a more organized orchard based planting.





# Exotic Fruits

## □ Guava





# Indian Jujube





# Dragon Fruit





# Mangosteen

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# Rambutan

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# Production systems

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- ❑ Production of exotic fruits mainly limited to backyard with individuals having 1 or 2 plants of different fruits for food security.
- ❑ Seedlings are normally sold by Government nurseries at low cost.
- ❑ Lack of awareness of its existence among the general population.
- ❑ Lack of improved varieties.



# Indigenous Fruits

❑ Kavika (Fijian wax apple, *Syzygium jambos* (L.)).

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❑ Sour Sop (*Annona muricata*)

❑ Dawa (Fijian Longan, *Pometia pinnata*)

❑ Wi (*Spondias dulcis*)

❑ Tarawau (Pacific walnut, *Dracontomelon dao*)



# Production System

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- ❑ Indigenous fruits are grown in the wild
- ❑ No formal cultivation or orchards.
- ❑ Fast diminishing from forest areas.
- ❑ Some fruits are starting to be established in backyards.

# Conclusion

## □ 4 fruit groups

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- Tropical Fruits (Well manage orchard planting)
- Exotic Fruits (Backyards)
- Indigenous Fruits (Wild)
- Imported Fruits (Apples, Citrus, Grapes and Pear)





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# Thank You

