

MARKET LINK

for primary produce

A publication of the Market Information Service (MIS) - Ministry of Agriculture and Fisheries
“Linking the market and primary producers”

SEA GRAPES (LIMU)

Sea grape is a collective term for the edible varieties of the green seaweed called the Caulerpa. Green seaweed from the genus Caulerpa is consumed throughout the Pacific and South East Asia. The Caulerpa racemorsa is a bright green algae that forms carpets in the coral reefs, it is tropical seaweed known as the limu in Samoa, nama in Fiji, tangau in Tonga. According to the Ministry of Agriculture and Fisheries, Fisheries Division, there are two main varieties that are harvest for consumption from the lagoons and reef areas of Samoa; these are known scientifically as the *Caulerpa racemosa* found in Upolu and *Caulerpa chemnitzia* found in Savaii.

LOCAL PRODUCTION

With a total of 17 species of sea grapes found in Samoa there are only 2 varieties that are harvested for consumption.

Sea grapes in Samoa are mostly harvested by women as subsistence or as an income generating activity.

The bulk of production in Samoa is recorded from the North West coast of Upolu in the villages of Satuimalufilufi and Satapuala from a total of 20 villages selling sea grape along



the roadside while the highest production in Savaii is recorded from Lano and Siufaga- Faga.

Monthly production of limu fuaufa showed no general trend or season. Availability of limu as indicated by the figures given by the Fisheries Divisions production was a year round with outliers of exceptional monthly production during the year.

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Market Situation

Sea grapes in Samoa are usually sold in bundles (ofu limu) wrapped with breadfruit leaves, young coconut leaves and laugapapā leaves at local markets and along the roadside stalls. Besides selling limu to the local markets, restaurants also offer income opportunities for limu sellers occasionally from time to time.

The market sales of limu fuafua, is entirely sourced from wild-harvest fisheries gleaning from reef flat. Limu are usually sold at a range price of SAT \$10-\$15, in previous years limu prices ranged from SAT \$5 to SAT\$15, due to the increasing cost of living and the demand for limu decreases, price continues to rise overtime. The standard price for ofu limu sold in main outlet markets is \$10. Main outlet markets selling limu are Fugalei Market, Roadside, Salelologa Fish Market and the Apia Fish Market.

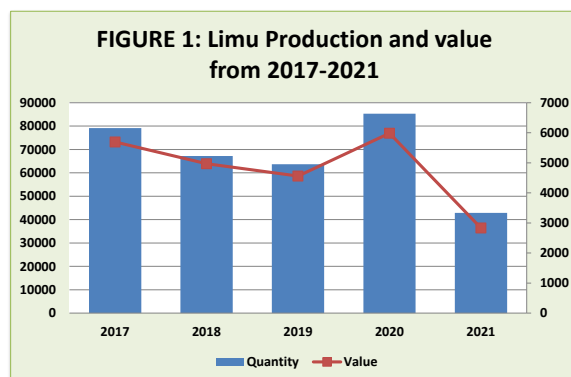


Figure 1 shows a fluctuating pattern of limu production and its value, with its highest production recorded in 2020 with a sum of 6636 valued at SAT \$76,910.00 tala. A decline in the production of limu totaled at 3,335 valued at SAT \$3,6430.00 tala was recorded in 2021; this was due to COVID 19 SOE restrictions which closed all sales of products all over Samoa.

The Ministry of Agriculture and Fisheries through the Fisheries division conducted market surveys on main outlet markets, to

monitor monthly production of Limu in Upolu and Savaii. On a finer scale there is a considerable variability in the price based upon the weight of the bundle. The estimated volume of limu traded can also be made by factoring in the weight of the breadfruit leaves used to make the bundle.

Aquaculture of Sea grapes

The farming of limu in Samoa is very unstable. With the limited scientific information for interest farmers to access through to assist them on their projected developments and that the traditional knowledge is diminishing makes it hard for people to share and find information on how to farm sea grapes.

However, the Fisheries division had successfully initiates programs and projects in partnership with stakeholders for local communities in assisting them on the development of limu as an income generating industry in coastal rural communities, hence assisting these people within local communities, building the capacity on how to carry out limu culture and with the potential for serving the domestic market. The Fisheries Division also introduces and shares with village-led communities farming techniques that can sustain the resources and produce maximum yields from the fishery.



There has been an existing and improved knowledge of Fisheries staff in limu

production using the fragmentation technique as the regrowth strategy. They have been managing and are accountable for all aspects of aquaculture trials.

They have also demonstrated their capacity to maintain the trial, measuring the important attributes of growth rates of the limu as both weight and changes in morphology. These represent two important aspects for limu culture, as both the volume and the quality of the product are integral for commercial viability.



Harvesting

Harvesting of Limu fuafua generally involved one or two individuals. The harvest site could be accessed either by canoe or by foot depending on the distance of the site from the shore. Limu is harvested at the reef front and inside the lagoon. Both the runners and uprights of limu fuafua were harvested and the harvesting process took from 30 minutes to an hour. There were no costs associated with harvesting limu. Some fishers also gleaned for the other sea cucumber upon completion of limu harvesting.

Fisheries survey shows that limu sellers are mainly women. This study can be expected to benefit women primarily, but the participation will be open to any members of the local community.

Outlook

The fisheries division works collaboratively with donors (UNDP, UN, etc.) to ensure ongoing activity to sustain the progress of limu industry in Samoa, with their active role in integrating programs for local communities to revitalize limu farming as one of the income generating industries for the locals.

A recent project implemented by the UNDP supports the effort of the Ministry of Agriculture in revitalizing sea grape farming, and aims to strengthen COVID-19 preparedness and accelerate socio-economic recovery through the revival of limu in Samoa. These projects implemented activities for 20 coastal villages sites across Samoa, focusing on the two main islands of Upolu and Savaii (10 sites in Upou, 10 in Savaii). The project also looks at expanding the Toloa Hatchery at Mulifanua to diversify aquaculture and marine culture stocks for distribution to local communities, in this initiation there is an ongoing construction of the Toloa seaweed hatchery. This project also targets niche markets opportunity for local



Ongoing activities of the Fisheries division include weekly surveys conducted for initiated sites, regular monitoring measures for limu farming developments, initiates guidelines to maintain the availability of limu on ocean reefs of Samoa.

In addition to this implementation, the Fisheries have an online interviewing portal which has a great contribution on their efforts to integrate data from local limu harvesters on their consumption of limu.

There is a great potential for Samoa's sea grape industry to be harvested and exported to overseas markets if the development and monitoring of farming sites is well maintained.

Other Use & Benefits

There are so many uses of Limu, in the Pacific it is mainly a food source. Other use of limu includes animal feed, fertilizers and biofuels, medicine, pharmaceuticals and cosmetic applications.

Limu should be considered for consumption on a regular basis as it is a very essential dietary food for our health. It has an amount of nutrition which elevates our health benefits

- Good for mental and chronic health (contains Omega 3)
- Nutritious for body growth (vitamin C)
- Cleans blood system for women (Iron)
- Helps relieve bones and muscles (Calcium)
- Low risk of communicable disease (antioxidants)

Table 1: Average price of Agricultural Commodities at Local Markets

Commodities (SAT\$/kg)	March 2022	April 2022	Lowest price for 2022 to date	Highest price for 2022 to date
Taro	3.37	3.37	3.37	3.64
Banana	1.38	1.53	1.24	1.53
Taamu	4.28	5.83	4.28	6.55
Coconut	0.71	0.79	0.71	0.79
Breadfruit	1.35	1.44	0.93	1.44
Yam	5.65	4.70	3.16	5.65
Head cabbage	8.13	10.92	6.54	10.92
Tomato	15.62	16.37	12.84	16.37
Chinese cabbage	7.44	7.41	6.07	7.44
Cucumber	4.99	5.16	4.00	5.16
Pumpkin	3.16	3.15	3.15	3.49

SOURCE: SBS Local Market Survey

TABLE 2: Foreign Currency

July-August 2021	USD\$	NZD\$	AUD\$	YEN\$	FJD\$	EURO
1 Samoan Tala SAT\$ =	0.3838	0.6163	0.5585	59.3900	0.8695	0.4067

Source: Bank of the South Pacific

Market Link Newsletter

This newsletter is published bi-monthly and it seeks to assist stakeholders (farmers, consumers, wholesalers, policymakers) make informed market and marketing decisions based on credible, relevant price and supply information. Help us help you by providing constructive feedback on market information issues that will improve the service which will lead to growing a healthy and wealthy Samoa. For more information contact the Policy, Planning and Communication Division and ask for Soo Iuvale.

Disclaimer

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