

Information and Analysis Paper – Samoa's former Agricultural Exports.

RESEARCH ON EXPORTS FROM THE 19TH CENTURY TO THE 20TH CENTURY

Prepared by the Ministry of the Prime Minister and Cabinet through the Policy Implementation and Monitoring Division

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Samoa's Agricultural exports from the 1900s to 2000s.

BACKGROUND

The annexation of Samoa by Germany from 1900 to 1914 was due to their strong interests in the plantations and lands of Samoa for economic reasons¹. From this period, Samoa began to trade with other countries of the world for money, performing International Trade via exportation and importation of goods. **Copra** (dried coconut meat) was the backbone of Germanys export trade. **Cocoa bean** (used for chocolates) and **rubber** were later on introduced by the German merchant's and settlers, although the export value of rubber had little impact on the economy. These were the staple products of Samoa for exports since then.

About the end of the Great War (World War I), in 1918, the New Zealand government took over Samoa and they encouraged the production of **bananas** for which there was a large market in New Zealand. Findings found that the annual production of both bananas and copra had been in the range of 13,000 to 15,000 metric tons (about 14,500 to 16,500 short tons). The cocoa beans at that time were of very high quality and were used in New Zealand for fine chocolates².

PURPOSE

The purpose of this research is to examine the trend of Samoa's agricultural exports (taro, copra, banana and cocoa) from the 1950s to the 2000s and what led to the plummet of taro, copra, banana and cocoa in terms of export commodities. The research looks at Samoa's export partners at the time, the capita income and the approaches the government took to recuperate the production of exports and whether these methods were effective.

The guiding principles in this paper are as follow;

- i. Trend of Samoa's former agricultural exports (taro, copra, banana and cocoa) from the 1950s to the 2000s.
- ii. Trend of boxes of bananas per week, tons of copra, kilos of cocoa beans Samoa exported
- iii. Samoa's export partners
- iv. Find out the top banana producers in Samoa
- v. When the exports began to plummet
- vi. Causes of the downfall/decline in exports
- vii. What the government did back then to salvage these exports

¹ Meleisea, M etl, Economic Policy, German Samoa 1900-1914, LAGAGA: A SHORT STORY OF Western Samoa, USP,1987, pg 108.

² Pacific Islands Countries Trade Strategies and Agreements Handbook, Volume I, IBP Inc, In the period before German colonization, Samoa produced mostly copra. German merchants and settlers

viii. Find out whether such efforts were helpful

METHODOLOGY

- Online articles and books
- **↓** Library archives
- ♣ Respective agencies correspondence through telephone and email
- Team Discussion

Challenges faced, on conducting this research:

♣ There were no statistical data provided by any government agencies on the researched period (1950s to 1980s), except for written materials by some researchers, online books and library materials.

LEGISLATIONS

Exchange Control Regulations 1999

Trend of Samoa's former agricultural exports (copra, cocoa beans and banana and taro,) from the 1950s to the 2000s.

♣ Trend of Exports in the 1900s

Germany

During Samoa's colonial years under Germany in the 1900s, copra export was Germany's major source of income which led to the enforcement of Germanys *Coconut Planting Law in 1900*. Under this law Samoans were to plant fifty (50) coconuts per year and those who did not were fined. This vigorous planting law resulted in the steady increase of copra exports in the 1900s.

By graphing the per capita value of crop exports of Samoa from 1900s to the present an interesting trend appears (see Figure 1).

40
35
30
25
20
15
10
1901 - 1916 - 1934 - 1952 - 1956 1958 1960 1962 1964 1966
1903 1918 1936 1954

Figure 1: Exports of Samoa from 1900s to 1960s

Source: Bryant Nevin, Change in the Agricultural Land Use in Western Samoa, 1967.

As shown the average annual export of copra from 1900 - 1902, was just under 6,000 tons. From 1910 - 1912, it increased to 10,000 tons. Rising copra prices assisted the profitability of the crop. From 1900 - 1902 the average annual value was £63,500. This rose to £173,400 from 1910-1912. In the same year cocoa planting began and it became the second most valuable crop, yielding about 600 tons and earning over £35,000.

In 1913, rubber planting commenced, and other tropical crops were under experimental development³. The importation of the rubber introduced the rhinoceros beetle which destroyed many coconut trees. It spread rapidly and threatened the lucrative copra industry at the time. ⁴

Direction of Trade and main countries of Exports.

In 1913, approximately 50% of Samoa's exports went to Germany, 40% to Australia and New Zealand, and 5% to the United States. The bulk of the imports (60%) came from Australia and New Zealand, only 15% from Germany, and 9% from the United States⁵.

New Zealand

After the World War I in 1918, New Zealand's British Rule over Samoa began and Germanheld properties and businesses significantly changed the trading pattern for Samoa. All interaction with Germany ceased, while that with the United States increased dramatically. The (British-owned) Union Company refused to carry copra because of its highly inflammable nature. This action, in the words of the report, "had a most disastrous effect

³ Meleisea, M etl, Economic Policy, German Samoa 1900-1914, LAGAGA.

⁴ Bryant Nevin, Stability under German Rule, Chapter Five, Administration rule prior to World War II, Change in the Agricultural Land Use in Samoa 1967, University of Hawaii Library, p 44.

⁵ Felix Keesing, Modern Samoa: Its Government and Changing Life, London, George Allen and Unwin Ltd, 1934, p 303.

on British trade,"⁶ by allowing the Americans to take over the shipping, and consequently the purchase and supply of Samoan trade goods. By 1918 Samoa was selling 83% of its exports to, and buying 35% of its imports from, the United States⁷. Copra and cocoa prices fell drastically as a result of the War and world depression and with the result that the European plantations found it hard to pay expenses. Although there was severe economic hardship for the Europeans, the Samoan villagers benefited indirectly from New Zealand's policies. Samoan achieved their highest standard of living during the war boom in copra prices. At this time, Samoa invested heavily in traditional commitments like feasts and church construction.⁸

In 1920, the average copra value was £39.7 per ton. It dropped to an average of £25.6 in 1921 and £18.8 per ton in 1922.9 The same year Samoans reacted sharply by boycotting the stores. This marked the first time the Samoans had reacted to a price change on the world market but has become a pattern followed by a majority of the rural Samoans ever since. In 1937, there had been a slight increase in the price of cocoa and copra after the major drop during the depression. Samoans were dismayed to find the export values decline from 1937 to 1942. Therefore the government increases the volume of banana exports. Figure 1 shows a steady decline in the value of copra exports while there was a gradual increase in banana exports. Although the value of cocoa exports fluctuated from year to year, the value of cocoa exports had increased 60 % from 1936 to 1941. The increase in cocoa exports was due to the greater amount of cocoa acreages owned by Samoans then.

Trend of Exports in the 1950s

In the 1950s, New Zealand was the major market for exports for Samoa under the New Zealand administration. The country's **main exports were bananas, cocoa and copra.** Figure 2.1 shows these quantity and financial value (£N.Z.), for the period 1954-1957.

⁶ Report of the Commission to Inquire into the Conditions of Trade between Tonga, Western Samoa, NZ, Fiji, 1920.

⁷ Ibid.

⁸ Bryant Nevin, Stability under German Rule, Chapter Five, Administration rule prior to World War II, Change in the Agricultural Land Use in Samoa 1967, University of Hawaii Library, p 44.

⁹ Apia Chamber of Commerce, Fourteenth Annual Report (1945), p 62 & 63.

¹⁰ Bryant Nevin, Stability under German Rule, Chapter Five, Administration rule prior to World War II, Change in the Agricultural Land Use in Samoa 1967, University of Hawaii Library, p 44.

Figure 1.1: Samoa's main exports, 1954-1957

Year	Crop	Quantity (cases/tons)	Value (pounds sterling)
1954	Bananas	276,135 cases	300,256
	Cocoa	2,399 tons	937,681
	Copra	13,664 tons	954,284
1955	Bananas	446,325 cases	463,035
	Cocoa	3,041 tons	878,566
	Copra	17,178 tons	1,078,739
1956	Bananas	294,887 cases	303,871
	Cocoa	3,338 tons	668,171
	Copra	13,581 tons	817,494
1957	Bananas	329,185 cases	370,316
	Cocoa	3,069 tons	648,562
	Copra	14,325 tons	806,471

Source: Department of Island Territories, 1957.

New Zealand was the key market for exports (40% in 1959), with the UK also taking a significant amount (35%) of Samoa produce. Both countries were also prominent in the import trade, with NZ supplying 28% and the UK 17%, of Samoa imports. Australia and the USA continued to trade with Samoa over this time although their role as import-suppliers was more important than their role as external markets, especially in the case of Australia¹¹.

The lack of empirical data makes it impossible to obtain a clear overview of the economic growth and GDP per capita in this period.

As shown in Figure 2, banana was seen as one of the major source of export income during this period. It was estimated that, Samoa during the 1950s exported 1.2 million cases of bananas a year to New Zealand, but shipping problems, hurricanes, diseases and inefficiency cost them this market. ¹² In 1953, over 30% of New Zealand's banana imports were from Samoa, while Fiji and Tonga supplied the remainder. ¹³ At the same time, banana exports brought in about one third of Samoa's trade revenue.

Since 1955, when the world market for cocoa and copra began to stabilize, the per capita values of Samoa's exports have fluctuated and in the following years began to decline.

¹¹ Ibid.

¹² Trade and Aid, Samoa Travel Guide, http://samoa.southpacific.org/samoa/trade.html Accessed 18/10/2018.

¹³ Monthly Abstract of Statisctics, External Trade 1952/53.

The fluctuations varied, but as the percentages are calculated in terms of the value of trade, the short-term fluctuations are often explained by the unstable prices for individual commodities, 3 rather than by a change in the direction of the volume of trade.

In 1959 the total value of Samoa's exports was 3.3 million, of which 41% was made up by copra sales, 30% by cocoa, and 27% by bananas¹⁴. The imports for the year totaled 2.5 million, with the major individual items being meat (10%), motor vehicles/parts (6%) sugar (4%) and cotton piece goods (2%) though the main expenditure overall was on foodstuffs.¹⁵

Export Trades in the 1960s & 1970s

In the 1960s and the 1970s, copra and cocoa were the main exports of Samoa accounting for over one half of export revenue until the $1980s^{16}$. New Zealand was the main trading partner. In the 1960s Samoa's total exports valued at US\$6.18 million¹⁷. This accounted for 98 % of total exports in 1963^{18} . Figure 3.1 shows Samoa's main exports in the 1960s and early 1970s.

Figure 2: Samoa's main exports 1962-1972

In the 1973, exports value was US\$0.63 million (92.5 %). Banana production was declined as a result of the devastating cyclone in 1966. In this year, the volume of banana exports dropped by 87% (62,000 cases compared to the 482,000 cases in 1965¹⁹.

This decline resulted mainly from the collapse of the banana export industry, which had contributed one-third of all exports at its peak in 1958²⁰. This stagnation was due to the devastating hurricane in 1966 and increased senility among palms, rhinoceros beetle attacks on coconut stems and a declining interest and participation in coconut production among the rural population. It was also a result of the pervasive marketing problems of supplying the New Zealand market, similar to those experienced by other Polynesian countries. ²¹

¹⁴ New Zealand Official Yearbook, 1961.

¹⁵ Mulder, Yvonne, *Samoa and New Zealand: Small State- Large State Relations*, Chapter 5: Trade and Investment, University of Canterbury, 1980, p 102.

¹⁶ Mase, Research on Exports in Samoa, 1998.

¹⁷ Fleming Euan etl, Export Performance in South Pacific Countries Marginally Endowed with Natural Resources: Samoa and Tonga, 1960 to 1999, 2003, p 7.

¹⁸ Unosa, D, Chapter 3: Post-Independence Progress, Social Policies in Samoa, pages 10 & 11.

¹⁹ Mulder, Yvonne, *Samoa and New Zealand: Small State- Large State Relations*, Chapter 5: Trade and Investment, University of Canterbury, 1980, p 108.

²⁰ ISNAR, 1983, *The Agricultural Research System in Western Samoa: Report to the Government of Western Samoa,* International Service for National Agricultural Research, The Hague.

²¹ Ward R.G and Proctor, A (eds) 1980, *South Pacific Agriculture; Choices and Constraints*, Asian Development Bank and Australian National University Press, Manila and Canberra.

	1962	1964	1966	1968	1970	1972
Cocoa	1.2	0.7	1.5	1.3	1.4	0.9
Copra	0.7	0.9	0.9	1.9	1.7	1.4
Banana	0.9	0.8	0.03	0.3	0.8	0.2
Other	0.03	0.05	0.4	0.5	0.7	0.8
Total	2.83	2.45	2.83	4.0	4.6	3.3

Note: Monetary vales for 1962 and 1964 exports are in pounds sterling. All other years are in SAT\$

Source: Government of Samoa, 1970.

In this period, the agriculture sector share of GDP was estimated at 50.8% in 1972, 51.7% in 1978.²²

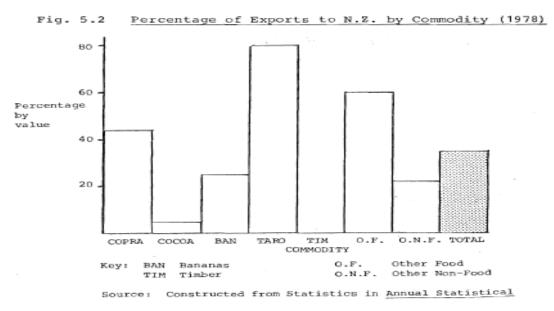
In contrast to the decline in copra and banana export values in the 1970s, the cocoa export value expanded over the decade, with average receipts of US\$5.83 million per year that increased annually by US\$152 k. It had declined from the early 1960s until 1972, when the industry was stirred from its torpor by a sevenfold increase in world cocoa prices from 1971 to 1977²³ that reversed its fortunes. Increased unit export values encouraged greater export volumes, and export receipts peaked in 1977 at a level that was never to be achieved again.

The taro export industry commenced on a very small scale in the 1960s, and exports were quite haphazard until the early 1970s by which time taro was included in the official export statistics. In 1971, the value of taro exports was US\$0.78 million and it increased to US\$2.23 million by 1979, making it the third largest export industry in the country.

Coconut cream exports began in 1975 and reached the respectable level of US\$1.20 million by the end of the decade. Dominated by private firms, it was to prove one of the more durable export industries.

Figures 4.1 show the percentage of these commodities Which Samoa exported to New Zealand.

²³ IMF 2002, International Financial Statistics, International Monetary Fund, Washington, DC.



Source: Mulder, Yvonne, *Samoa and New Zealand: Small State- Large State Relations*, Chapter 5: Trade and Investment, University of Canterbury, 1980, p 103.

Export Trades in the 1980s

In the 1980s, coconut oil milling began and reached full operating capacity by 1983. It was introduced as a way of adding value to copra and was almost immediately successful. No copra was exported in the 1984. The industry was to experience oscillating fortunes over the next 15 years.

The production of bananas, once a major export virtually ceased. Tourism industry increased significantly over this period. Government policies focused on assistance to industries that used local materials and had export or import potential. Coconut products exports contributed 10 to 15% of Samoa's GDP IN 1984.²⁴

In 1980 Samoa's economic growth was slow due to the oil price rise and world recession which had a significant impact on Samoa due to fundamental weakness in its balance of payments already apparent in the 1970s. These were caused by deterioration in the terms of trade compounded by adverse weather conditions. From 1983, recovery was achieved with modest economic growth as a result of the comprehensive adjustment policies introduced by the new government including fiscal and monetary constraint and use of the exchange rate to improve competitiveness.

Success was initially short-lived because operating difficulties with the coconut oil mill led to the resumption of small but nevertheless significant exports of copra from 1985 to 1990. Copra export earnings in 1989 were US\$1.31 million compared with US\$2.84 million for coconut oil. The export performance of copra and coconut oil exports was hampered by a

²⁴ Government of Samoa, 1984.

decline in copra production from its all-time high of 43.1 kt in 1982, which in turn reflected the continuation of a downward trend in world copra and coconut oil prices. A bonus scheme, various subsidies and several major projects had failed to deflect output from this trend²⁵. A by-product of coconut oil, copra meal exports began in 1982 and ranged in value between 3 per cent and 10 per cent of the value of coconut oil exports over the rest of the decade, the proportion determined largely by fluctuations in coconut oil world prices. The highest value reached was US\$0.49 million in 1983.

Coconut cream overtook copra as the second main user of coconuts for export after coconut oil during the 1980s. Coconut cream processing had been a reasonably stable export industry since affirming its major export presence in 1985 with US\$1.55 million of exports. Private processors made these quite impressive gains, despite having to export into a very competitive world market, by adopting product differentiation and market segmentation strategies. The export value of coconut cream reached US\$2.07 million in 1989, contributing 20 per cent of agricultural exports.

Cocoa export values declined during the early 1980s with falls in prices and yields, but a recovery began in 1983 as the effects began to be felt of a rehabilitation program in the 1970s and early 1980s that entailed replanting areas with high-yielding Amelonado varieties. The volume of cocoa bean exports almost trebled and their unit value almost doubled²⁶. Despite a decline in volume in 1984, cocoa export values remained above US\$1 million until 1987. For the remainder of the decade, however, falling world prices led to a rapid decline in cocoa export values that were only US\$0.26 million in 1989. The substantial premium traditionally earned by Samoan cocoa in world markets when Trinitarian cocoa dominated, making it eligible for sale as 'fine or flavor' cocoa, had disappeared.

The taro export industry dominated agricultural exports in the 1980s without government assistance in a difficult trading environment, building on the export potential it had demonstrated in the 1970s. It was based on a market focus strategy directed towards an identifiable market segment in specific Pacific Rim markets: those with large expatriate Polynesian populations. The industry achieved what superficially appeared an unlikely success given the commercial disadvantages identified by Brown as a low value-weight ratio, short shelf life and price volatility.

Government attempts to revive the banana export industry in the 1970s and 1980s failed to have any noticeable effect on agricultural export values in the 1980s. The most expensive of these attempts, following a plantation model, began exporting in 1980 (Fairbairn 1985:315) and resulted in an increase in export values from US\$0.39 million in 1979 to

²⁶²⁶ NCDS 1995, South Pacific Economic and Social Database, National Centre for Development Studies, Australian National University, Canberra.

²⁵ NPO 1992, Samoa: Seventh Development Plan 1992-1994, National Planning Office, Prime Minister's Office, Apia Samoa.

US\$0.53 million in 1982. By 1983, however, this venture had failed and its plantation was abandoned.

Export Trades in the 1990s & 2000s

Devastating natural and biological disasters largely explain why the 1980s stochastically dominated the 1990s for agricultural exports²⁷. They included Cyclone Ofa in February 1990 and Cyclone Val in December 1992, the latter being the most devastating cyclone to hit the country in a century, and the fungal disease of taro leaf blight in 1993. Despite major aid-funded efforts in the 1980s to rehabilitate the formerly major export industries of cocoa and bananas, chronic problems evident in previous decades persisted into the final decade in these industries.

The taro export industry was at its peak as the major export earner when Cyclone Ofa devastated the agricultural sector in 1990. To make matters worse, it was preceded by an extended dry season in 1989 and followed by a three-month drought. Exports declined sharply as output was diverted to meet domestic market requirements. The industry nevertheless briefly recovered fully from these setbacks. Official statistics show that the value of exports increased to US\$2.45 million in 1991, similar to export values prior to 1990. Taro exports were still buoyant in the first six months of 1993, when exports were valued at US\$2.65 million, but the onset of taro leaf blight from July of that year decimated the industry²⁸.

Taro leaf blight eroded two of the crop's advantageous attributes listed above, namely low use of purchased inputs and resilience to pests and diseases. Leaf blight now compels taro producers to become heavy users of plant protection inputs, placing the taro industry in the high-input category and putting it at a disadvantage to other South Pacific exporters free of leaf blight. The taro export industry thus struggled to regain its former export status in the latter years of the study. By 1999, however, the introduction of new disease resistant varieties was starting to pay dividends and, valued at US\$143k, exports had finally started to return to some significance²⁹.

Cyclones Ofa and Val badly damaged coconut production but the full extent of the damage is difficult to assess because of differences in tree loss estimates. Losses were probably in the range from 10 per cent to 15 per cent, but were as high as 80 per cent in some areas and were especially high in areas planted to hybrid palms. Along with weak export prices and management problems, the cyclones put an end to significant exports of either copra or coconut oil exports from 1991 until 1995 when production capacity of existing palms was restored.

²⁷ McGregor, A. and McGregor, I. 1999, Disaster and Agriculture in the Pacific Islands, South Pacific Disaster Reduction Program, UN Department for Economic and Social Affairs, New York.

²⁸ Central Bank of Samoa 2001, Central Bank of Samoa Bulletin (and previous issues), Apia.

²⁹ Fairbairn, T.I.J. 1985, Island Economies: Studies from the South Pacific, Institute of Pacific Studies, Suva.

Increased coconut oil prices between 1993 and 1995 encouraged a private company to lease the existing milling facilities and export US\$1.70 million of coconut oil in 1995. Export values were drastically reduced to US\$34 k in 1996, but recovered to US\$2.16 million in 1997 before declining quite steeply to just US\$0.79 million in 1999 as the industry struggled for survival. Exports of coconut oil ceased in October 1998 'pending resolution of some financial and corporate issues relating to the coconut oil mill before resuming in mid-1999. Copra meal exports waxed and waned with coconut oil exports. Negligible exports were recorded until 1996, when they were valued at US\$0.15 million, after which they tailed off for the remainder of the decade.

Table 1.4 Exports by Commodity (WS\$000).

Export	1994	1995	1996	1997	1998
Talo	83	162	98	99	125
Coconut Cream	4006	4833	4913	4772	3864
Kava	0	0	7.4	8.0	11.0
Copra	0	2193	4078	7882	6078
Coconut Oil	0	6431	6825	6761	4153
Banana	216	699	724	474	178
Taamu	23	128	190	74	105
Copra Meal	3	365	622	608	215
Coconuts	95	262	279	123	149
Vegetables	0	5	7	16	8
Samoan cocoa	4	65	116	190	70
Timber	92	208	831	124	5
Fresh Fish	209	431	2246	12327	28401
Dried sea-cucumber	129	73	31	28	25
Samco snacks	11	55	116	190	70
Purified water	9	19	0	0	1
Beer	1123	1129	1107	1603	2355
Cigarettes	658	698	268	0	0
Corned beef	239	0	134	0	67
Garments	119	16	282	83	6
Scrap metal	174	58	192	45	97
Total	7193	17830	23066.4	35407	45983

Source: Treasury Department 1999.

The sector performance of Samoa's local economy in the last few years is depicted in the

Tables 1.3 and 1.4.

Source: Export Performance in South Pacific Countries Marginally Endowed with Natural Resources: Samoa and Tonga, 1960 to 1999, Euan Fleming and Anita Blowes 2003.

Copra exports revived along with coconut oil as profitability returned to copra production following a world price recovery in the mid-1990s and loss of the more profitable alternative of taro production. Exports were valued at US\$0.67 million in 1995, peaked at US\$2.51 million in 1997 and were valued at US\$1.63 million in 1999, more than double the value of coconut oil exports and slightly higher than coconut cream exports. Coconut cream export values were maintained at reasonable levels during the 1990s, despite all the dramas that visited the agricultural sector, although some coconuts had to be imported to

maintain output following the cyclone damage. The industry finished the decade at US\$1.53 million, increasing from US\$1.25 million in 1998 despite a fall in export price³⁰.

The recovery in the export of coconut products in the second half of the 1990s is testimony to the resilience of the production base of the industries involved. But it also reflects a dearth of profitable alternative export industries for smallholders in the absence of taro production. The prospects for supplying coconuts into value-adding industries in the future are still clouded by many difficulties despite the recovery. Recorded woes of Samoan agriculture in the 1990s included low labor productivity; poor export marketing, falling soil fertility, declining labor supply, volatile and declining export prices and disease.

As indicated above, the future for banana exports looked bleak at the beginning of the 1990s, their problems aggravated by the cyclones early in the decade. Banana output was confined to supplying the domestic market. A small export recovery ensued in 1993 when bananas valued at US\$ 87 k were exported. The export value rose to US\$223 k in 1996 after which it fell back to US\$136 k in 1999. This brief revival in export activity was in part a response to the need to find alternative export outlets to taro³¹.

Samoa Agricultural Exports Status Quo.

The export market for various agricultural crops and crop products has dropped dramatically since the last decade due to the invasion of diverse pests and diseases, cyclones, quarantine restrictions and the increasing numbers of competitive suppliers of the same produce from other Pacific Island countries and especially Asian countries. The major export commodities namely taro, cocoa and coconut for Samoa currently has about less than 1 percent of the total market share in the major trading markets of New Zealand and Australia. Efforts have been steered towards reviving these major industries in the country with the aim of retaining its stance in the export market, however, it is believed that this will be a long shot for success. Papaya, Nonu and breadfruit have currently been exported overseas through the aid of Heat Treatment Forced Air (HTFA) and quality quarantine proceedings. Apart from that, some of the crops have high medicinal value such as the coconut.³²

Giant taro, yam, banana and breadfruit are other important staple food crops available throughout the year. Due to recent changes in climate, breadfruit trees have been bearing fruits all year round instead of its seasonal fruiting pattern. Despite the slight drop in numbers of staple crop growers as indicated in the 2005 Agricultural survey, plus

³⁰ Fairbairn, T.I.J. 1991, The Western Samoan Economy: Prospects for Recovery and Long-Term Growth, International Development Issues No. 17, Australian International Development Assistance Bureau, Canberra.

³¹ Central Bank of Samoa 2002, Foreign Trade Report August 2002, Apia.

³² Imo T.S & Cable J.W. 2012. SAMOA: Country Report To the FAO International Technical Conference on Plant Genetic Resources. Leipzig, Germany

increasing market prices, the overall quantity available to satisfy the local demand is fairly enough for food security purposes.³³ The diversity of cocoa in Samoa is slightly decreasing due to the drop in market demand. Major staples such as taro, breadfruit, bananas, yam and giant taro has increased in range. The improved varieties of taro from several breeding programs have contributed to the increase numbers and variety of taro. Recent percentage of major fruit trees grown is mostly on a smaller scale. The acceptance of papaya in the New Zealand markets has encouraged farmers to grow papaya.

Agriculture, along with forestry and fishing, contribute 9.5% to Samoa's GDP (2010) and 23.7% of land is given over to agricultural use. The primary agricultural products include coconuts, bananas, taro, yams, coffee and cocoa. The principal agricultural export products are fish, coconut oil and cream, copra, taro and beer, which go mainly to New Zealand, Australia, US and Indonesia. Samoan agriculture can be classified into three categories: subsistence farming, semi-commercial and commercial farming. The majority of farmers in Samoa fall into the subsistence category with surplus sold for cash. Development of commercial farming on a larger scale is held back by the lack of good quality soil and land, as well as the cost of export and the effects of the annual cyclone season. The country's traditional culture and the land tenure system influence the contemporary system which comprises of three types of land tenure: freehold, public and customary. The government ministry in charge of the sector is the Ministry of Agriculture and Fisheries.³⁴

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³³ Parham, B.E.V. 2010. Plants of Samoa. Information Ser. No. 85. New Zealand (NZ) Department of Scientific and Industrial Research, Wellington. 162pp.

³⁴ Commonwealth network on Samoa Exports 2010, retrieved from <u>www.commonwealthofnations.org/sectors-samoa/business/agriculture</u>

Analysis.

The trends in stochastic dominance of agricultural export values in Samoa were both consistently negative across decades, with first-degree dominance. They reflect the difficulties faced by a small and predominantly agrarian nation in upholding the performance of traditional export industries and introducing higher-value export products. Raw and processed agricultural products have continued to hold pride of place among commodity exports. Export performance over the study period typified the trend in most small economies, with an expansion in non-agricultural export values insufficient to offset a decline in agricultural export values.

Reason of Export failure.

Basically, the combination of environmental factors and human impact has affected our agricultural export very badly in the 1900s. The export industry was primarily affected by the involvement of Germany in the First World War as well as New Zealand and Great Britain in the Second World War as they were both administrators of our country under colonization. According to findings, our agricultural exports have maintained at sustainable rate after the Second World War and under New Zealand administration, the exports were beginning to flourish and it continued on until 1960s and 1970s where the change in export markets and the downfall of export prices began to increase simultaneously. With Independence in 1962 a new government was formed and therefore have the responsibility to boost the exports of Samoa, however the success only lasted for a short period of time as diseases hit our banana industry and the introduction of a variety of cocoa tumbles the cocoa industry. The taro export was affected by the Taro Leaf Blight and the coconuts were affected by tree cutting, pests and diseases that devastated these industries.

The devastating effects of Cyclones Ofa and Val, and the drought that followed Cyclone Ofa, compounded the negative impact of an extended period of low world prices and virtually destroyed the cocoa industry from 1990 until present. Tree losses were heavy due to the long duration of the cyclones and the long exposure to salt from sea water infiltration into land especially after cyclone Val.

Export Partners.

Export markets were of preference of the administrations that controlled Samoa during the 1900s, firstly German and then New Zealand. They were the main markets and partners for exports, as well as other powerful countries like the USA and the United Kingdom and nearby Australia. During the German governance, more than about two quarter of Samoa exports went to Germany and the other half to countries like New Zealand, Australia, UK and USA. When NZ took over Samoa from Germany they instantly ceased exporting to Germany and they became the major export market together with the USA. The USA were

mainly interested with copra and cocoa while NZ and Australia were importing Bananas and Taro. Prior to Independence NZ was still the biggest export market for Samoa and it continue on until the 1970s, where the export market and prices fell drastically and impacted our exports.

Government Response.

The main government response to the revival of exports during its downfall between the 1960s and 1970s, was the replanting, plantation approach and finding necessary prerequisites for the modernization of the agricultural sector are the introduction of high-yielding, disease resistant planting material and adoption of satisfactory agricultural practices related to land clearing and weeding, planting, fertilization and disease control.. Through these approaches, the government encouraged the replanting of crops around the country and adopting a variety of crops (e.g cocoa), that would be able to provide for the export markets. Also the government tried to revitalize the plantation approach which was mainly used by German administration and NZ during their time in Samoa. This approach would motivate the public and commercial farmers to establish huge plantations that would employ people and would focus on specific crops (taro, banana, coconuts) that could accommodate the exports of Samoa.

Alternative ways of transforming the traditional, low-productivity village agriculture into an efficient sector, therefore, need urgent and careful consideration. One possibility would be to start by introducing modern production techniques in the Western Samoa Trust Estates Corporation (WSTEC) and to use WSTEC to help develop village agriculture on a sustained basis. Regardless of what mechanism is chosen, however, it cannot be stressed too strongly that, with 80% of agricultural land under village control, the key to both a more rapid agricultural and overall economic development is the creation of a more efficient and effective village agriculture strategy.

Samoa Way forward with Agricultural Exports.

The Ministry of Agriculture and Fisheries is divided into six subsections which manage the development of various aspects of the industry in Samoa. The long term vision of the ministry is to see substantial growth by 2020 after a period of restructuring which is taking place from 2009-2014. More focused goals include increasing commercial production by 50%, doubling the area of mixed-crop land use and increasing food independence, particularly with regards to fruit and vegetable imports. To that end the ministry has issued a new Fruit and Vegetable Sector Plan which is a subsection of the Agriculture Sector Plan (ASP). The overall aim of the ASP – which includes plans for crops, livestock, forestry and fisheries – is to double the overall contribution made by these sectors to GDP over a period of four years.

Agriculture remains a prominent part of Samoa's development agenda - for improving rural livelihoods, ensuring food security and good nutrition, and its contribution to rural incomes. As an important economic sector agriculture provides outputs for the growth of the overall economy. The Strategy for the Development of Samoa (SDS) 2012-2016 emphasizes a commitment to pushing the productive sectors of the economy to revitalize growth and targets the achievement of strategic outcomes including: maintaining macroeconomic stability; re-invigorating agriculture and revitalizing exports; scaling up investment in tourism to promote Samoa as an attractive tourist destination; promoting a healthy and educated Samoa; improving the business environment; strengthening social cohesion and stability; improving infrastructural services; and the sustainable management of natural resources, increased investment in renewable energy sources, and mainstreaming climate change and disaster resilience.

The main industries in Samoa are food processing and the manufacture of building materials and auto parts, with the industrial production growth rate standing at 2% (CIA World Fact book, 2012). Exports tend to consist of fish, coconut produce, taro, automotive parts, garments and beer, with more than half of all exports going to American Samoa. In 2011, exports contributed US\$11.4 million to the Samoan economy.

Samoa have used its original agricultural exports (taro, banana, cocoa, coconuts) to produce other alternative exports and value added goods that would be accepted in the global market. This has shift the focus from exporting agricultural products to exporting manufactured goods but the government is still trying to revive agricultural exports to regain Samoa's status in an industry where it was one of the leading exporters.

However, as shown in findings, the government approaches only leads to little success as the preferences and the interests of the people are shifting from the agrarian society to non-agricultural lifestyles. This has proved to be a challenge for the efforts in reviving the agricultural export performance of Samoa including a combination of natural hazards with pests and diseases and Climate Change.

♣ Main Areas/Villages of Crop Production. (Estimation from 1950s & 1980s).

TABLE II

1954 VILLAGE LAND USE IN SOME UPOLU VILLAGES

Crop	Amaile	Satalo	Siuniu	Sa 'anapu	Sanatau
Coconuts	257.9*27.4**	554.4 53.2	271.0 60	304.9 25.8	264.1 29.1
Oscso	6.1 0.6	4.6 0.4	2.3 0.5	20.8 1.8	156.4 17.4
Bananas	95.4 10.1	23.0 2.2		117.8 100	4.5 0.5
Bananas-Coconuts	68.6 7.3	77.0 7.4	24.6 5.4	62.4 5.3	
Bananas-Cacao	29.3 3.1			177.9 15.1	28.5 3.2
Coconuts-Cacao	41.6 4.4	21.6 2.1	36.1 8.0	245.6 20.8	163.2 18.1
Bananas-Coconuts- Cacao	58.5 6.2			76.2 6.4	6.2 0.7
Taro	24.6 2.6				7.7 0.8
Scrub and Pasture	344.2 36.5	322.6 31.0	117.0 25.9	143.2 12.1	270.3 30.0
Village Area	14.4 1.6	38.5 3.7		31.6 2.7	10.5 1.1
Total Cropland Total Cleared Land	582 62 9 4 2	681 65 1042	334 74 451	1005 85 1180	631 70 911

*Acres **Percent Occupied Land

Source: J. W. fox and K. B. Cumberland, Wastern Samos, Land Life and Agriculture in Tropical Polynesia (Christchurch, 1962), p. 207; Brian Farrell (personal communication).

TABLE II (Continued)

1954 VILLAGE LAND USE IN SOME UPOLU VILLAGES

Crop	Tufu	lele	Pus	1	Fal	eAsto	Sal	1mu	Uaf	ato	Up	olu
Coconuts	89.3	*21.5*	* 90.9	24.8	73.2	11.7	80.8	43	124.0	51.6	2090	33
Cacao	33.9	8.2	14.6	4.0	2.3	0.3	-		-		233	4
Bananas	22.3	5.4	45.5	12.4	45.5	7.3	13.1	7.0	11.5	4.8	382	6
Bananas-Coconuts	-	-	31.6	8.6	277.2	44.5	38.5	20.5	37.0	15.4	616	10
Bananas-Cacao	27.7	6.7	11,6	3.2	-	-	-	-	-	-	275	5
Coconuts-Cacao	15.7	3.8	77.8	21.3	-	-	4.6	2.4	-	-	606	10
Bananas-Coconuts- Cacao	9.2	2,2	53.1	14.5	31.6	5.1	-	-	33.1	13.8	268	4
Taro	-	-	-	-	36.1	5.8	-	-	-	-	64	1
Scrub and Pasture	96.2	23.2	16.2	4.4	148.5	23.8	40.8	21.7	25.4	10.6	1667	26
Village Area	7.7	1.8	24.6	6.7	8.5	1.4	10.0	5.3	9.2	3.8	146	2
Total Cropland Total Cleared Land	310 114	75	325 336	89	466 623	75	137 188	73	206 240	86	4680 6347	

*Acres **Percent Occupied Land

Source: J. W. Fox and K. B. Cumberland, Western Samoa, Land Life and Agriculture in Proping Polynesis (Christchurch, 1962), p. 207; Brian Farrell (personal communication).

Table 2: ESTIMATED LAND USE /a
1975 estimate (acres)

	Village lands	WSTEC and other lands	Total
Coconuts alone or interplanted Cocoa, bananas and taro	92,000 32,000	10,000 6,000	102,000 38,000
Total harvested area	124,000	16,000	140,000
Other, including residential	30,000	14,000	44,000

Conclusion

Samoa has a long history of investing in agriculture for exports. The findings confirmed that the country had successes in the 1950s to the 1980s on export of dried copra, bananas and taro. It however went through turbulent times when the country's stable exports were hit badly by pesticides and diseases, and cyclones in the 1970s and years later. The findings further unveiled the struggles Samoa underwent in its hope to maintain stability of supply of its agricultural export products to its markets. The lessons learned from the experiences in the past enabled government to revive its the agriculture sector through scientific research, replanting programs for coconut and cocoa and continuing search for overseas markets. This has led to many government initiatives over the last 40 years such as the formulation of the SROS, the SACEP, the revival of the taro and banana that now have resumed exportation to Australia and New Zealand.

There are already projects in place to pursue the revitalization of Samoa's exports through the different stakeholders (MAF, SROS, Samoa Cocoa Industry Association) etc. This is primarily because Samoa was one of the main agricultural exporters in the early stages of trading with other countries and the government is aiming to reclaim that standard. However, at the same time the government are also exporting value added products produced from these crops in light of maintaining Samoa's significant impact on the export market.

Bibliography.

- 1. Apia Chamber of Commerce, Fourteenth Annual Report (1945), p 62 & 63.
- 2. Bryant Nevin, Stability under German Rule, Chapter Five, Administration rule prior to World War II, Change in the Agricultural Land Use in Samoa 1967, University of Hawaii Library, p 44.
- 3. Bryant Nevin, Stability under German Rule, Chapter Five, Administration rule prior to World War II, Change in the Agricultural Land Use in Samoa 1967, University of Hawaii Library, p 44.
- 4. Bryant Nevin, Stability under German Rule, Chapter Five, Administration rule prior to World War II, Change in the Agricultural Land Use in Samoa 1967, University of Hawaii Library, p 44.
- 5. Central Bank of Samoa 2001, Central Bank of Samoa Bulletin (and previous issues), Apia.
- Central Bank of Samoa 2000, Central Bank of Samoa Bulletin (and previous issues),Apia.
- 7. Central Bank of Samoa 2002, Foreign Trade Report August 2002, Apia.
- 8. CIA Factbook 2012, Industries in Samoa, retrieved from https://www.cia.gov/library/publications/download/
- 9. Commonwealth network on Samoa Exports 2010, retrieved from www.commonwealthofnations.org/sectors-samoa/business/agriculture
- **10.** Fairbairn, T.I.J. 1985, Island Economies: Studies from the South Pacific, Institute of Pacific Studies, Suva.
- **11.** Fairbairn, T.I.J. 1991, the Western Samoan Economy: Prospects for Recovery and Long-Term Growth, International Development Issues No. 17, Australian International Development Assistance Bureau, Canberra.
- **12.** Felix Keesing, Modern Samoa: Its Government and Changing Life, London, George Allen and Unwin Ltd, 1934, p 303.

- **13.** Fleming Euan etl, Export Performance in South Pacific Countries Marginally Endowed with Natural Resources: Samoa and Tonga, 1960 to 1999, 2003, p 7.
- 14. Government of Samoa, 1984.
- **15.** IMF 2002, International Financial Statistics, International Monetary Fund, Washington, DC.
- **16.** Imo T.S & Cable J.W. 2012. SAMOA: Country Report to the FAO International Technical Conference on Plant Genetic Resources. Leipzig, Germany
- **17.** ISNAR, 1983, the Agricultural Research System in Western Samoa: Report to the Government of Western Samoa, International Service for National Agricultural Research, The Hague.
- **18.** McGregor, A. and McGregor, I. 1999, Disaster and Agriculture in the Pacific Islands, South Pacific Disaster Reduction Program, UN Department for Economic and Social Affairs, New York.
- 19. Meleisea, M etl, Economic Policy, German Samoa 1900-1914, LAGAGA.
- **20.** Meleisea, M etl, Economic Policy, German Samoa 1900-1914, LAGAGA: A SHORT STORY OF Western Samoa, USP, 1987, pg 108.
- 21. Monthly Abstract of Statisctics, External Trade 1952/53.
- **22.** Mulder, Yvonne, Samoa and New Zealand: Small State- Large State Relations, Chapter 5: Trade and Investment, University of Canterbury, 1980, p 102.
- 23. Mulder, Yvonne, Samoa and New Zealand: Small State- Large State Relations, Chapter 5: Trade and Investment, University of Canterbury, 1980, p 108.
- **24.** NCDS 1995, South Pacific Economic and Social Database, National Centre for Development Studies, Australian National University, Canberra.
- 25. New Zealand Official Yearbook, 1961.
- **26.** NPO 1992, Samoa: Seventh Development Plan 1992-1994, National Planning Office, Prime Minister's Office, Apia Samoa.
- **27.** Pacific Islands Countries Trade Strategies and Agreements Handbook, Volume I, IBP Inc, in the period before German colonization, Samoa produced mostly copra. German merchants and settlers

- **28.** Parham, B.E.V. 2010. Plants of Samoa. Information Ser. No. 85. New Zealand (NZ) Department of Scientific and Industrial Research, Wellington. 162pp.
- **29.** Report of the Commission to Inquire into the Conditions of Trade between Tonga, Western Samoa, NZ, Fiji, 1920.
- 30. Trade and Aid, Samoa Travel Guide, http://samoa.southpacific.org/samoa/trade.html Accessed 18/10/2018.
- **31.** Unosa, D, Chapter 3: Post-Independence Progress, Social Policies in Samoa, pages 10 & 11.
- **32.** Ward R.G and Proctor, A (eds) 1980, South Pacific Agriculture; Choices and Constraints, Asian Development Bank and Australian National University Press, Manila and Canberra.