



Pacific Horticultural and Agricultural Market Access Program (PHAMA)

Technical Report 14: Developing Exports of Samoan Taro to New Zealand

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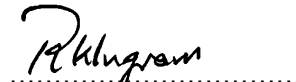
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Abbreviations

Abbreviation	Description
AusAID	The Australian Agency for International Development
CE	Conformité Européenne
CEO	Chief Executive Officer
FCLs	Full container loads
ISO	International Organization for Standardization
LCL	Less than container load
MAF	Ministry of Agriculture and Fisheries (Samoa)
MAWG	Market Access Working Group
MCIL	Ministry of Commerce, Industry and Labour (Samoa)
NZAP	New Zealand Aid Programme
NZD	New Zealand dollar
PCF	Pacific Cooperation Foundation
PHAMA	Pacific Horticultural and Agricultural Market Access Program
PSSF	Private Sector Support Facility
PT&I	Pacific Trade and Invest
SMS	Samoa Maritime Services Limited
SPC	Secretariat for the Pacific Community
STIC	Samoa Trade and Investment Commission
TLB	Taro leaf blight
URS	URS Australia Pty Ltd
USP	University of the South Pacific
WST	Samoa tala

Executive Summary

The occurrence of taro leaf blight (TLB) in 1993 effectively destroyed Samoa's taro industry and reduced exports to zero for a number of years. Following an extensive period of research and development, Samoa has now produced a range of TLB-resistant taro varieties. Government has directed that taro exports be considered as part of the industry's revitalisation. Intervening years have seen Fiji establish itself as the dominant taro exporter to New Zealand, with 95% market share. Samoa is now looking to re-establish itself in the New Zealand market through the export of the newly released taro varieties.

Samoa faces a considerable challenge in getting its new varieties back into the New Zealand market. In the course of researching both supply-side and demand-side aspects of the taro export trade from Samoa, a range of constraints have been identified which must be addressed before a full market launch is considered. Supply-side constraints are considerable. Farmers lack access to an adequate supply of planting materials from government, with strategic reserves held by Samoa's Ministry of Agriculture and Fisheries (MAF) currently at extremely low levels (less than 10,000 plants at the main research facility) and distribution restricted. Farmers are therefore using their own knowledge to propagate new materials. Knowledge among farmers of export opportunities remains limited, with most preferring to supply the local market. Those with experience of exporting claim that prices are uncompetitive compared with returns available from the local market. Transport of product from Savai'i (which has a large number of growers) to Upolu remains problematic. In Upolu, transportation of product faces a different range of constraints. The major issue for farmers looking to export is pricing and payment mechanisms.

Exporters remain keen to work on development of the export trade, but face continual supply problems with farmers unwilling to commit to supply. The launch of new varieties in New Zealand planned for late 2010 failed mainly off the back of supply problems, but also did not take enough time to assess the market in New Zealand. Exporters who do not have access to their own farms are forced to buy on the local market. With local prices of up to WST2.40 per kg, exporters are left at break-even after pricing in shipping, customs clearance, biosecurity checks and distribution costs in New Zealand. Fijian taro is supplied to New Zealand more consistently and at comparable or lower prices, further constraining the current *ad hoc* approach to market development. Exporters spoken to have plans to increase export volumes up to tens (if not dozens) of containers per month. However, without some form of supply agreement (and a guaranteed market in New Zealand or beyond), these plans are highly unlikely to succeed.

MAF's Crops Division provides a range of technical and extension services to farmers and is also in charge of ensuring that the new taro varieties are robust. It has produced a range of marketing materials and information on new varieties which are intended for use in the domestic and export markets. However, staff indicated that financial constraints limit their capacity to provide sufficient planting materials to farmers. The Acting CEO of Crops Division has put restrictions on the number of plants that farmers can be provided. An inspection of the current supply indicates very low reserve levels. These are considered totally inadequate to bring more farmers into the supply chain. It was noted that both the Minister of Agriculture and Fisheries and the Prime Minister are taking a personal interest in reviving exports. Access to additional financial resources from government is critical to ensuring that supplies can be increased.

Feedback from the New Zealand market indicates that Samoa faces a number of challenges in developing a sustainable export trade. Large importers are wary of engaging with Samoa due to historical concerns about quality and continuity of supply. Despite the export pathway being open, imports are still subject to a range of quarantine measures. Fumigation increases costs and decreases shelf life. Combined with longer shipping times from Samoa, import compliance measures mean that active shelf life is reduced, quality is compromised and commercial viability affected. Risks for importers and retailers are high. On the consumer side, anecdotal comment is that consumers do not have enough information about the new Samoan varieties to allow them to make an informed purchase choice. There remains a strong preference for *taro niue*, the traditional pink variety exported from Fiji. Funding for consumer education will need to be factored into any export development strategy. Consumer target groups will also need to be identified. While the Samoan community in New Zealand provides a core customer base, research indicates that the large Asian community in New Zealand is another group that traditionally consumes taro.

In examining a potential export strategy for Samoan taro, it is clear that supply-side issues must be addressed first and foremost. Exporters need access to large volumes of high quality product, and improved post-harvest and packing facilities. Farmers who are reliant on the local market need to be brought into the export supply chain and be provided with solid evidence of better or at least comparable commercial returns to those received in the local market. A cooperatives-style model was discussed with farmers and there is some support for this. For farmers, the key concern is getting paid at the farm gate and not waiting weeks for export receipts to be paid. Establishment of a cooperatives model could be one way forward. On post-harvest handling, MAF's current facilities are considered too small to handle large export volumes. Expanding the facilities at Atele would require government investment. Shipping facilities, on the other hand, appear good and assurances were given that higher freight volumes can be managed. Published schedules are available and a supply model could be established to meet these schedules.

The immediate demand-side issue is ensuring consistent supply of high quality product. Initial trial shipments of Samoan taro were distributed mainly to small-scale retailers with no clear indication of consistent pricing or promotion. Supermarket retail options could be developed, but the duopoly in New Zealand will require assurances that Samoa will be able to supply in-full and on-time throughout the year. Second tier retailers such as Fruit World could be an option, but these chains will not import directly. Weekend markets and small retailers (superettes, for example) are the third tier and could be supplied on an *ad hoc* basis. The Samoan Trade and Investment Commission (STIC) has raised the option of having a distribution/sales outlet in South Auckland, but is unclear on volumes, storage and pricing models. However, getting all the players in the Samoan taro industry to agree that exporting is the way forward is the key to this exercise. An integrated public/private sector strategy will be required, given that government views taro exports as a strategic economic development activity. There is discussion of a Brand Samoa for taro, but it should be noted that brand development is an expensive proposition. An export finance mechanism will also be required, given that access to commercial finance remains difficult for many exporters and farmers. Consumer education will be a critical feature of the overall strategy. Finally, Samoa must be prepared to counter a response from Fijian exporters. It is likely that Fiji will respond with aggressive discounting should Samoa be able to re-establish itself in the New Zealand market.

1 Background

Following suspension of taro exports after the outbreak of taro leaf blight (TLB) in 1993, Samoa has engaged in an extensive research program to develop TLB-resistant taro varieties. With the main research phase largely complete, attention has turned to developing a new export / market development strategy focussing on the New Zealand market. Since 1993, the market for taro in New Zealand has been largely taken up by Fiji, which supplies up to 95% of import requirements. The variety of taro is the traditional *taro niue* and is well accepted by consumers. Samoa is now looking to re-establish its traditional dominance of the New Zealand market through export of new varieties selected at the conclusion of the research phase. Exports to date have been very limited, as illustrated in Table 1.

Table 1 Samoa's taro exports 2002–2009 (tonnes)¹

Country	2002	2003	2004	2005	2006	2007	2008	2009
American Samoa	133	140	152	253	72	75	95	78
New Zealand	87	63	6	0	5	0	1	0
Tokelau	11	14	0	0	10	0	0	5
Australia	4	0	0	0	0	0	0	0
Total	235	217	158	253	87	75	96	83

* SPC Trade Database

An initial shipment of the new varieties was exported in October 2010 by P&A Trading. Volumes were limited as this was a trial to test acceptance of the new Samoan varieties in the market. Reaction was varied, with consumers unsure of taste, cooking methods and provenance. Although the shipment was able to be sold, distribution was done through small retailers and weekend markets, with the result that there was only limited profile achieved. Although some advertising was conducted on local Samoan language radio and media, results achieved in terms of profits generated are at best unclear.

Against this background, the Pacific Horticultural and Agricultural Market Access Program (PHAMA) undertook to develop a market development strategy, taking into account supply-side and demand-side characteristics in the New Zealand market. As part of this process, terms of reference were developed as follows:

1. Review the size, indicative returns, variety preferences, quality standards, market structure and current distribution channels associated with the fresh taro market in New Zealand (particularly the Auckland market).
2. Identify Samoa's main competition in re-entering this market and the strength of this competition. Identify any market niches that may be available for Samoan product.
3. Review and identify problems associated with Samoa's initial trial shipments to New Zealand.
4. Review supply-side constraints associated with re-establishing taro exports from Samoa, including volumes available (or likely to be available) for export; consistency of supply; product quality; local transport, grading/packing, packaging constraints and requirements, etc.
5. Prepare a market development strategy, including preferred sourcing arrangements; collection, packing and export arrangements; quality standards and quality control procedures;

¹ Pacific Island Trade Market Access Scoping Study, March 2011, P. 14

- import/distribution arrangements; product promotion; phasing of trial shipments, etc. This strategy should be costed, with roles and responsibilities for implementation clearly defined and agreed.
6. Oversee implementation of the development strategy for initial trial shipments.
 7. Provide updates to the Samoan Market Access Working Group (MAWG) and other key Samoan stakeholders on development and implementation of the strategy.

Consultations were held in New Zealand with the Samoan Trade and Investment Commission (STIC), Pacific Trade and Invest (PT&I), Pacific Cooperation Foundation (PCF), importers and distributors, retailers and the New Zealand Aid Programme (NZAP). In Samoa, consultations took place with the Ministry of Agriculture and Fisheries (MAF), the Ministry of Commerce, Industry and Labour (MCIL), exporters, shippers and farmers. Visits were made to farms on both Upolu and Savai'i to examine taro growing and to assess harvest, transport and post-harvest conditions firsthand. A list of persons met is attached as Appendix A, and the overall visit program as Appendix B.²

² The author would like to note his sincere appreciation to both Asuao Kirifi Pouono (PHAMA National Market Access Coordinator) and the MAF Crops Division representative in Savai'i for facilitating the visit and providing input to this report.

2 Key Demand-Side Perspectives and Issues

Consultations in the New Zealand market indicate major concerns about capacity to supply and the quality of that supply. A number of issues were raised from the demand-side, including:

- Supply-side capacity – importers and retailers have continuing concerns about quality and consistency of supply from Samoa. There are both historical and current instances of suppliers not meeting required levels of export professionalism. Samoan fresh produce exporters have a history of talking up their capacity to supply and then not being able to present their product to the market consistently. Unless this fundamental issue is addressed, importers will continue to tread warily with regards to the formal import of fresh product from Samoa. These issues need to be addressed before embarking on a full-scale marketing campaign.
- Development of marketing materials should include information on the new varieties and how they differ from *taro niue* and each other, and importantly offer advice on how to prepare and cook the new varieties. This is viewed as fundamental given that consumers are familiar with Fijian taro, but unfamiliar with the new Samoan varieties.
- To secure their commitment to market development, key New Zealand distributors will need support from STIC and PT&I with regards to troubleshooting in the case of compliance issues and with funding of promotional activities.
- Understanding of the full export supply chain needs to be developed among both growers and exporters to ensure that critical points which require more attention, notably in harvest and post-harvest handling and transportation, are fully understood by all the players prior to an export shipment leaving Samoa.
- Formal commitment is required from government and/or the private sector to provide funds for market development. This will ensure that the market entry plan can be funded on a medium to long term basis.
- Compliance and biosecurity is less of an issue/barrier for perishable exports than can be expected. Transportation links around the Pacific are more of a constraint to sustainable exports of agricultural and horticultural products. The issue for Pacific Island producers is not a lack of opportunity, but recognising that global supply chains are volume-based, price-sensitive and consumer-driven. Consistency, quality and timing are critical elements to business success. The 'Pacific Way' is not the global way, particularly when a pawpaw from the Philippines can be landed in New Zealand at a lower price than that from the Pacific. Questions of ownership, marketing, branding and transportation require work and education.
- It is up to stakeholders in Samoa, including the Samoan MAWG, to manage expectations at the supply side as to volumes and prices. It will take time to educate consumers, develop market share and compete against the established taro suppliers from Fiji and Tonga. Samoa can expect an aggressive response from Fiji in particular to any attempt to re-enter the New Zealand market.
- Importers and distributors will be crucial in terms of getting the product through to consumers. Larger retailers will only look to stocking volumes when there is conclusive proof of throughput. Any pricing strategy, marketing strategy or associated publicity will need to take account of importer/distributor margins.

3 Key Supply-Side Perspectives and Issues

Consultations in Samoa were designed to allow an on-the-ground assessment of supply capacity, to assess levels of export interest, examine taro at source, view harvest practice, view post-harvest facilities, speak directly with producers and exporters, visit shipping facilities and get government views on the expansion of taro exports. MAF was the nominated host for the visit. Meetings were arranged by the PHAMA National Market Access Coordinator in conjunction with the Crops Division of MAF, taking place over a five day period. Key aspects of the field visit are noted below.

3.1 Ministry of Agriculture and Fisheries

Consultations with MAF's Crops Division led to a number of useful insights. These include:

- Background on variety selection – work has been extensive and has included technical assistance from regional agencies such as the Secretariat for the Pacific Community (SPC). Research and development has been carried out mostly at the Nu'u facility, based on a multiplication strategy. To some degree, final selection of the five varieties was made by trial and error, but overall the science behind selection appeared to be fairly robust.
- The recent Agricultural Show provided a good opportunity to showcase progress on the taro rehabilitation program. Participating growers displayed produce and also gave Crops Division an opportunity to further assess potential for export.
- Throughout the trial process, considerable work has been done on taste testing to ensure that the new varieties have properties that are close to *taro niue*. Two of the five varieties selected for export were noted as having better taste and nutritional values than *taro niue*. Optimum weights for export quality taro are considered to be from 800 grams to 2 kilos. Samoa 2 and 3 varieties were described as the heaviest, Samoa 1 a little lighter, with Samoa 4 and 5 the lightest varieties. Growing times are about the same but optimum harvest time is around 8 months. Plants can stay in the ground for up to 15 months.
- Research is now at cycle 7, with evaluation of export quality varieties having been whittled down from 30 to 10 to 5. The main purpose of the research was noted as seeking an export quality variety.
- Crops Division monitors pricing in the local market. Product is sold by the bag, with bags of either 20 kg or 30 kg. Twenty kilogram bags vary in price from WST38 to WST45; and 30 kg bags from WST50 to WST55. This indicates a large variation in per kg domestic pricing, ranging from WST1.50 to WST2.25 per kg. Further investigation of the impact on the market is required.³
- Access to planting material is an ongoing issue for the rehabilitation program. The quality of planting material was described as variable. A visit to the Crops Division nursery was revealing. The amount of material on hand is small compared with demand from farmers, so much so that materials are being rationed out. MAF is currently able to supply only 2,000 plants per month to farmers, although the target is 10,000. MAF is keen to maintain a strategic reserve. Even with this reserve, the total amount available is clearly insufficient. MAF has been providing training for farmer groups on propagation and is looking towards communities developing their own propagation capabilities.
- MAF's Acting CEO for Crops noted that drought is affecting nursery production by limiting growth of taro suckers coming off the main crop. Growers are increasingly using corms for propagation. Until

³ These prices are those paid at the farm gate and require verification.

- a bigger reserve can be built up, distribution of planting materials has been suspended, starting in September 2011. Farmers were noted as having the capacity to develop plantings themselves.
- Staff noted that the Minister of Agriculture is actively screening taro exports with a view to reducing the varieties of export taro from five to two. There is also a move to define in more detail the essential characteristics of each variety. Some consideration is also being given to testing whether some varieties grow better in different districts.⁴
 - Initial trial exports of new varieties in 2010 were coordinated by P&A Trading, although other exporters were also invited to participate. Despite close monitoring on the supply side, an interception was made in New Zealand leading to additional fumigation, lessened shelf life and reduced quality. It was also noted that MAF did not have access to sufficient funding to support the launch.

3.2 Exporters

Meetings were held with exporters on Upolu and Savai'i. Exporters on Upolu noted a number of constraints to developing a sustainable level of exports, both in terms of supply and demand:

- The initial trial shipment in late 2010 was beset with problems both at the Samoan and New Zealand ends of the supply chain. In New Zealand, there is low retailer confidence due to historical concerns about consistent supply. In addition, there were negative comments from consumers. One of the New Zealand supermarket duopoly, Progressive Enterprises, was reluctant to take product given these issues, but there have been indications recently of renewed interest. However, prices being offered by the big New Zealand retailers are low, with estimates of NZD1 per kg equating to a farm gate price of WST1.8 per kg. As previously noted, local market prices are between WST 2.00 to 2.50 per kg.
- The strong domestic market for taro is viewed as one of the biggest constraints to establishing a viable taro export trade. Education on the long-term benefits of exporting would be very useful for farmers. Farmers being offered WST2.75 per kg are reported to be unwilling to supply exporters, as the local market is considered a better option in terms of ease of access and immediate cash payment. One exporter noted that even with guaranteed prices, full container loads (FCLs) cannot be obtained and less than container load (LCL) / mixed containers have to be exported. Combined with continued discounting by Fijian exporters in the New Zealand market, it is hardly worth the effort. Yams and cassava are considered to have better margins.
- Exporters need more information and certainty on growing cycles in order to develop their export plans. With some varieties available for harvest after 8 months but some (like the number 2 variety) good after 10 months, it is difficult to develop a proper supply schedule. Maturity of the taro can affect taste; this also needs to be factored into consumer education. Data is now starting to be collected on this. Although mixed bags are currently going into New Zealand, there is evidence emerging (unverified to date) that Samoa 1 and 2 varieties have the best consumer reaction.
- P&A Trading noted that Progressive Enterprises is interested in importing 20 containers of Samoan taro per month (300 tonnes per month) under a supply contract being negotiated through Nezmark Dynamics, as part of a five year development plan. These volumes are large relative to market size and probably unrealistic given present supply-side constraints. If production can be increased to the level of satisfying the local market, excess (and good quality product) could be channelled into the export trade. However, the present pricing differential between local and export prices would

⁴ Some consideration might be given to geographic indicators. See <http://www.origin-gi.com/> for further details.

need to be considerably reduced for this to be attractive for growers. It is unlikely that export prices can be improved to any great degree, being determined by the price of Fijian imports into New Zealand. This means that local market prices would need to reduce in response to increased supply (quite possible), but the question remains whether growers would be prepared to produce at these lower prices. Some exporters would like to see a level of control established over local market prices but this would require government intervention and would artificially distort the market.

- Shipping transit time was noted as a key constraint. Estimates of getting product to market from harvest are 16 days (5 days of preparation, 9 days transit time and 2 days for import clearance). If there is a compliance issue requiring fumigation, this can add another four days to getting the product on the shelf. Biosecurity is still regarded as a critical issue for Samoan taro.
- Fumigation significantly reduces shelf life. A worst case scenario means that shelf life can be reduced to 8 days, making throughput difficult and the likelihood of wastage and discounting very high.
- New Zealand retailers do not see much profit, if any, in taro. Retail strategy is more about taro as a loss leader to get consumers into the store for other products. The issue of 'route trade' and supply to small stores is of concern. This is viewed as distorting the market and making it easier for Fijian exports to continue their market domination.
- Traceability is viewed as a possible marketing tool, providing reassurance to both consumers and retailers. Taro in Samoa was noted to be going through ISO22000 certification. Some importers are already certified, but this is something which would be more beneficial if it is right through the supply chain. New Zealand retailers are starting to demand certification as a prerequisite for listing product.
- The five varieties currently slated for export may be too many, given that consumers need further information on properties, taste and cooking methods. While exporters could work with this scenario, supply contracts would help to mitigate some of the risk. Whether supermarket chains will require exclusivity is a further consideration.

3.3 Producers

Farm visits were conducted on both Savai'i and Upolu. Average area of production is around one acre, although some of the larger producers on Savai'i have access to between 40 and 50 acres.

On Upolu, the two farms visited varied markedly in terms of production, size, harvesting techniques, soil and ground quality, and varieties being grown. Farmers noted that the current drought situation was restricting growth of plants, although it appears that planting was proceeding well. Most of the production looks to be harvestable in the first quarter of 2012.

Farmers seem generally happy with the new varieties of taro and noted that in general all the varieties are growing well, drought conditions notwithstanding. There was considerable debate as to which variety is best in terms of time to harvest, harvested weight, appearance, taste and keeping qualities. Samoa 1 and Samoa 2 were observed in large numbers in Upolu, along with Samoa 5.

In Savai'i, Samoa 1 and Samoa 2 were more prominent, although there is no real preference expressed for which is the better variety. Further discussion indicated that Samoa 1, 2 and 3 are the most popular; Samoa 4 and 5 are less so as the corms are not as robust. In general, farmers will grow what they feel will give the best harvest return through a system of trial and error.

Upolu farmers noted that their primary export experience recently has been to American Samoa. Trade was described as steady with prices at the farm gate in the region of WST2.00 to WST2.25 per kg, although it is difficult to determine an accurate per kg price given that taro is bagged for sale and prices are set per bag. There are fewer biosecurity requirements for export to American Samoa and farmers are able to transport the taro relatively easily. Given the short transit time, quality is also a lot higher. Feedback from consumers in American Samoa is generally positive. In Savai'i, farmers were more inclined to supply the local market, although some are exporting, again to American Samoa. Some were involved with the initial shipment to New Zealand but had limited knowledge of the results of the exercise.

Farmers remain uncertain as to the real value of exporting, given that prices in the local market are good and demand remains strong. The lack of knowledge about the benefits of exporting is of concern, as is farmers' reluctance to work towards an export standard. Most farmers spoken to have relatives in New Zealand who have commented that the Samoa 2 variety is most preferred (although this comment will need verification at the New Zealand end). During discussions with farmers, MAF staff were keen to reinforce the need for consistency of supply and quality for those willing to look at exporting.

Moving product into a regular export cycle was also the subject of discussion with farmers, i.e. getting farmers to provide exporters with a coordinated and programmed supply was acknowledged as critical. In general, farmers spoken with recognise that a national approach to exporting is the best way forward. One suggested that a core group of between 150 to 200 farms could be selected to focus on export. The key to success was to have farmers committed to regular supply and for extension officers and exporters to work with them on a continuing basis. Information on the market is important to farmers, given the preference to supply locally (and get paid quickly), but a good level of interest in exporting still exists. The bottom line though is that farmers are risk averse and would prefer not to be directly involved in exporting.

Savai'i farmers noted that access to planting materials is not really a problem for them. Farmers were observed making their own cuttings and using these for new planting areas. The number of taro in the ground is extensive (some farms have 50,000 plants in the ground). On the export front though, even getting product to Upolu remains a challenge. It can take up to two days to fill a container which is then sent to Upolu for further cleaning and sorting. There is no packhouse as such on Savai'i, so it is difficult to keep quality consistent. Exporting to American Samoa is an option, but with shipping only available on a weekly basis this trade is *ad hoc* rather than core to their business. As noted above, what farmers would like to see is more suppliers being brought into some kind of formal or semi-formal structure to build export volumes. Farmers remain wary about exporting in terms of payment cycles, pricing, adherence to standards and continuity of the business. With the local market offering WST2 per kg year round there is little incentive to export. Previous attempts to secure supply for export offered WST1.5 to WST1.8 per kg. While some might be willing to take this option, higher-priced local markets will always have first call on product.

Savai'i farmers in general seemed to have a more homogenous world view than those met on Upolu. Although somewhat risk averse, they are keen to take a longer term view of exporting as a viable business option. The idea of an export cooperative was generally well received. The key to this is getting a core group of growers together who will provide both volume and leadership for an export growth strategy to be implemented. Farmers are already talking among themselves of developing a cooperative. Bringing in the exporters will be an essential part of a cooperatives arrangement, as

financing will be required, along with transportation links and access to post-harvest training and facilities. Consistent pricing will be required that at least matches that on offer in the local market, and payment will need to be made up front. In this kind of model, the risk then sits with the exporter, who must negotiate terms of trade with their customer. Nonetheless, farmers are confident that they can build up supply with little difficulty. Supplying one to two containers a week is considered doable, but they need assurances that there is a market for the product. The last thing they want to do is to flood the local market with unwanted export product. In essence, they are interested but their enthusiasm is tempered by concerns as to when payment is made. Too often in the past they have seen lengthy delays in payment, or non-payment.

Throughout the visits to farms it was clear that producers are keeping a wary eye on exporting as a business option. As a group, farmers will only look to exporting if it makes good business sense to them. The continuing high prices and high demand for taro in the local markets means there is a reduced incentive for farmers to focus exclusively on export. What is interesting is that they have good market intelligence from their own family networks in New Zealand. Comments on the preferred varieties came from the farmers without prompting, demonstrating that they are in touch with the realities of the market. Their reluctance to take the next step towards exporting is more about profitability and cashflow concerns than it is about their ability to produce.

4 Support Agency Perspectives

4.1 University of the South Pacific (USP)

USP provided several pertinent observations on Samoa's taro industry:

- Current volumes of taro are viewed as insufficient for both food security and export. USP's view is that Samoa is unable to reach a sustainable threshold and provide consistent supply to both the local market and the export market. In current circumstances, a strategic choice needs to be made as to which market has priority.
- A choice needs to be made as to which variety has the best growing potential. Having several varieties does mitigate TLB risk, but consumers need to be able to make an informed choice and have a degree of certainty about what they are eating. Samoa's climate provides for good growing conditions (drought notwithstanding).
- Cultural factors have to be taken into account when developing an export strategy. The best way forward is to take a cooperative approach to ensure that volumes can be supplied. Productivity is another issue, with a tendency to only plant what is required to maintain a work/life balance. The concept of having large surpluses (which would allow export of excess volume) has still not been fully thought through.
- Adding value to taro is another option which requires further investigation. Sending the product out in raw form is easier, but exposes exporters to higher levels of risk given ongoing quarantine issues.
- Further thought should also be given to a diversification strategy. Taro is not the only product being grown in Samoa. Pawpaw, pineapple, other root crops and higher-value commodities like cocoa and coffee offer viable alternatives to the relatively low-value taro.
- The supply cycle needs to be sorted out. There is little point in pushing forward with an export development strategy for taro without addressing this issue. A peaks and troughs approach is not what the demand side is looking for. The market needs to have certainty that Samoa can supply the right taro at the right time (i.e. when the market wants it). Support from government for farmer education is critical.

4.2 Samoa Trade and Investment Commission

STIC can play a vital role in the development of taro exports. The Trade Commissioner noted that the current situation is not satisfactory. The October 2010 re-launch had a number of issues (involving supply, quality, consistency and MAF quarantine requirements) which made the exercise a non-starter. Pre-shipment publicity included radio advertising and general word-of-mouth marketing. The outlets for the product were small corner stores, superettes and local markets, with distribution done directly by the importer. As a follow-up, the importer has worked with STIC to develop an import plan, including volumes, for a period through the beginning of 2011. However, with exporters struggling to get supplies, the quality of the taro has been too variable with poor consumer reaction. The Prime Minister was kept fully informed of the launch progress and had noted his concern that the re-entry into New Zealand of Samoan taro on a commercial basis after a gap of 17 years needs to be done in a professional, targeted manner. In addition, he noted continuing concerns with supply-side issues.

STIC also noted that in Samoa there is little evidence of exporters working together. The Trade Commissioner noted continuing problems with exporters getting product on a regular basis. Producers are either holding product back or putting it into the local market, which has consistently better pricing.

Government is considering getting involved throughout the supply chain (including putting equity in), with consideration being given to taking an active role in taro exports on a commercial basis. Against this background, a Cabinet paper was drafted in July 2011 outlining a proposal for how government could assist. The underlying reason for this is that government does not feel that the private sector in Samoa can get taro exports moving. STIC noted that Samoa is in the process of developing a large complex in South Auckland which will house the Consulate General, Trade and Investment Commission, and a 'one stop shop' for all Samoan product coming into New Zealand. Land has already been purchased, with the Consulate General working through resource consents with the Auckland Council. Part of the proposed 'one stop shop' concept is to lease out the ground floor for importers and distributors.

Government is looking at some form of cooperative model, including a pricing structure and purchasing powers. The concern here is to address supply-side issues such as farmers not being paid for export product until payment has been received by the exporter. Cashflow remains a major issue for both producers and exporters, with no party willing to take excessive financial risk. Government also feels that if it can manage taro exports, it will be better placed to develop Brand Samoa taro, which it sees as a key part of any market entry strategy into New Zealand and other markets. Government sees cultural, Fairtrade and organics certification as a key part of this brand strategy. There is also concern as to which variety should be promoted. With five varieties available, a decision is required on the best export prospect. The initial shipments included all five, with prices and quality varying considerably.

4.3 Pacific Trade and Invest

PT&I is the Pacific Islands Forum trade promotion arm. Their office in Auckland has supported Pacific export development for a number of years and has had recent experience with Samoan taro exports, including with the initial shipment of new varieties in 2010. PT&I is aware that a longer term strategy is under development. Key PT&I observations include:

- What is the intergenerational link with taro? Data suggests that consumption is not growing, with second or third generation Pacific Islanders turning away from taro as a staple food. If this is the case, what is the strategy to promote taro going to look like?
- Taro still retains a strong cultural factor for many Pacific Islanders but this does not necessarily mean that they will purchase it on a consistent basis. Per capita consumption volumes in New Zealand are sitting at around 20 kg per year. Even at this level, current market capacity is only 2,600 tonnes per annum if the per capita consumption is applied to Samoans only. This calls into question the projected export levels from Samoa (see export perspectives above).
- Preparation time and cooking time is a factor. In an era of fast food, do second generation Samoans have the time or inclination to prepare and cook taro? Consumer education will be a vital part of any market entry strategy, particularly given that the varieties are largely unknown.
- Value adding needs to be considered as part of any export development strategy. Investment would be costly but exports of fresh product face biosecurity risks and low value returns.
- Are there other crops that Samoa should be looking at? Is taro the only game in town? Export diversification should be considered given that it is 17 years since commercial scale exports have taken place in any volume. PT&I is aware that mixed containers have been shipped to New Zealand recently.
- What is the overall export capacity of Samoa? Have internal market considerations been taken into account?

- PT&I would like to see more Samoan taro coming into New Zealand, but the prevalence of Fijian product will make it difficult to achieve good returns, at least in the short term.
- If there is a move towards government intervention in the taro export trade, consideration should be given to approaching donors to underwrite aspects of the trade. Export credit is a key factor in this.
- Vertical integration could be a consideration for Samoa. Fresh Direct (which currently deals with a number of Pacific exporters) is working in Tonga with a producer group whereby all elements of the export supply chain are in effect a joint venture

Although PT&I does not currently have a direct role with Samoan taro, they are open to approaches for market assistance. In general, their work could be in the area of market research and market contacts. If a full scale marketing program is to be developed, PT&I could be in a position to contribute to this. It is unlikely this could extend to funding given their limited resources. PT&I would like to be kept informed of further developments.

4.4 Pacific Cooperation Foundation

PCF has been working over the past three years to develop the True Pacific Quality Mark. This has included contacts with Samoa across a number of product areas. There may be scope for True Pacific accreditation at some point in the future for Samoan taro. PCF is aware that Samoa is looking to increase exports of taro to New Zealand and would be willing to provide advice as far as it can. PCF recently hosted and managed the Pacific Showcase as part of the Pacific Forum in Auckland and maintains close links with retailers and distributors in the main centres of New Zealand. This could be a useful option in the medium term.

5 Shipping

The meeting with Samoa Maritime Services Limited (SMS) was useful in terms of learning about outbound shipping requirements and capacity. Key observations included:

- SMS has warehousing available for all export products, fresh or processed. Refrigerated containers (reefers) are available on standby. The company is set up to receive and consolidate product for different consignees. They are able to assist with packing and storage of containers prior to shipping (at set charges). Reefers are plugged in on site and at the wharf. Daily checks are conducted by qualified refrigeration engineers. Pre-tripping (setting required temperatures before shipping) is a core service. Sailing schedules are published in the newspaper, online or at the SMS office (located adjacent to the main wharf).
- Containers are set out on a special quarantine zone similar to a bonded area. Full Conformité Européenne (CE) level hygiene processes are followed and audits conducted every six months. Containers sent out for packing are cleaned beforehand and then cleaned again when they are returned full for shipment. Given the improved compliance measures, inspections are now down to around 5% of all shipments (whereas 5 years ago, 100% of shipments were being inspected).
- Levels of exports from Samoa were described as low. Around 90% of containers are re-exported empty, so there is considerable capacity available. 30–35% of all containers sent back are reefers, indicating that imports of food products remain high. As a result of this, costs for shipping are relatively high, with each container costing around WST630 for clearance. Ocean freight costs are estimated at NZD2,000 per container, excluding pre-shipment charges and handling costs at the destination (which are met by the importer). Shipping times are 9 days, but ships go via Pago Pago and Nuku'alofa prior to sailing on to Auckland.
- Shipping schedules are strictly adhered to, with sailings every 17 days. Exporters are well aware of the timings. In terms of getting taro ready for export, SMS noted that timing needs to be perfect. Any delays in getting the product cleaned, packed and transported to their facility means missing the ship. Ships do not wait for late arrivals. While SMS is keen to see taro exports increase, they do not want to compromise on their levels of service or be subject to increased audits due to pests found on or in sealed containers. SMS said that it would be willing to contribute to any exporter or farmer education program on exporting if asked.

6 Marketing Strategy

Samoa's MAWG has identified the development of taro exports as a high priority. Feedback from stakeholders in Samoa (farmers, government, exporters) and from the market (importers, retailers, consumers) indicates that further work is required on the supply side to mitigate risk and increase the chances of exports being successful. This work needs to be commenced before the development and implementation of a marketing strategy.

6.1 Major Constraints

There are a number of factors to consider prior to a full marketing strategy being put in place:

- **Supply-side constraints.** A range of constraints have been identified in the course of this study. Production cycles need to be rationalised in order to fit with export cycles. At present, exporters are struggling to get access to product, given local market demand, high local prices and unwillingness on the part of farmers to commit to supply. Exporters need to prove to farmers that they are able to pay at the farm gate for product and offer prices that are at least as good as farmers receive in the local market. Without this level of financial security, supply will remain the biggest constraint to export.
- **Exporter education.** Farmers do have some export experience, with a number indicating that they are supplying to American Samoa on a regular basis. However, this is not the same as exporting to New Zealand, where biosecurity requirements, quality standards, delivery standards and consumer expectations are much higher. There is anecdotal evidence that farmers are receiving informal market intelligence from expatriates living in New Zealand, but this is not the same as having formal feedback from exporters and their agents in the market.
- **Government resources.** Government has indicated that taro exports form a key part of Samoa's export development strategy. However, funding for fundamental items such as planting materials appears to be low to non-existent. Having such a low strategic reserve of plants available for purchase by farmers has a long-term impact on their capacity to plant and harvest taro. Without reliable access to adequate volumes of planting material, any strategy is likely to fail. To a certain degree, farmers are using their own initiative to propagate planting material, but there needs to be a much clearer demonstration of government commitment. The need for adequate packhouse facilities should also be noted, and there may also be a role for government in this area.
- **Farmer commitment.** As noted above, some degree of exporter education is required. However, farmers themselves need to commit to exporting as a viable business option. There is a level of interest but there is a corresponding risk aversion given the security that the local market offers. One way forward is to examine a cooperative approach to exporting. This will allow risk to be spread, allow for volumes to be built up at source and allow exporters access to product on a sustainable basis. There will be a cost involved, but there are funding sources available – for example, the Private Sector Support Facility (PSSF) – that could support the development of cooperatives. In discussions with MCIL, it was noted that this fund is consistently underspent. A strong case could be built for taro exporters to access funding if done as an industry-based approach.
- **Demand-side requirements.** Importers and retailers in New Zealand are adamant on this point: the export pathway for taro into New Zealand is open. The market is there, and able to be accessed, even if Fijian taro dominates at present. The issue is this: can Samoa prove it has the capacity to supply in full and on time, month in and month out? History shows that this is not the

case and as a result the big retailers in New Zealand are wary about getting into long-term supply contracts. Given the likely reaction from Fiji if Samoa is able to ramp up taro exports (supply-side constraints notwithstanding), long-term supply contracts will be the primary mechanism for ensuring a long-term foothold in New Zealand.

- **Control of exports.** The Cabinet Paper on 'Taro Export for the New Zealand Market' gave two options for the industry: either government fully controls all aspects of export development, or the private sector takes responsibility, with technical support from government agencies. A final decision needs to be made before any market strategy is put in place. An alternative is to formally define the roles of respective agencies, exporters and importers at MAWG level and present this to government Ministers for endorsement. This will then allow for clear management of the export pathway.

6.2 Key Elements of a Marketing Strategy

Key elements of a marketing strategy need to include:

- **Preferred sourcing arrangements.** The first aspect of sourcing is to ensure that there is a core group of farmers committed to exporting. In order to maintain farmer supply to exporters, payment mechanisms need to be put in place so that farmers are not out of pocket. The key to the strategy is continuity of supply. Locking farmers into export contracts should mitigate volume concerns. Any surplus can then be supplied into the local market. As exports develop, additional suppliers can be added to the roster. As part of the preferred sourcing arrangements, establishment of exporter cooperatives is recommended. These will enable the consolidation of product as it is harvested and allow initial monitoring of volumes, quality and continuity of supply. It should also be noted that if farmers have to wait for payment, they will invariably turn to the local market.
- **Collection.** Investment in storage/packhouse facilities will be required, particularly on Savai'i. At present, harvesting is done on an as-required basis, spoilage rates are high and quality is compromised. If following the cooperatives model, facility costs could be shared among producers or donor funding could be sought to finance construction. PSSF is a possible funding source. Collection points in Upolu could also be considered, although logistics there are a little easier.
- **Packing and exporting arrangements.** Both MAF and export representatives need to be on hand during harvest and post-harvest. Establishment of a separate quarantine facility on Savai'i is probably not viable, but reducing inspection and cleaning times when product arrives on Upolu is critical. Export timetables need to work back from scheduled shipping times. Exporters need to take responsibility for documentation, final packing and delivery to the wharf. MAF may need to make additional investment in its quarantine facilities on Upolu. If export volumes increased beyond four containers per week, current facilities would be stretched.
- **Quality standards and quality control.** This will need a coordinated effort. MAF has primary responsibility for aspects related to pest monitoring, biosecurity and disease. It will be the role of the exporters to educate farmers on what the market requires in terms of size, weight, appearance and presentation. It is critical that quality standards be applied rigorously. Every shipment needs to be uniform in terms of quality. This is not something that can be compromised. As noted throughout this report, Samoan taro exports will be competing directly with Fiji and will face a tough time getting market acceptance. If New Zealand importers or retailers are unsatisfied at any point, they will quickly revert to tried and trusted Fijian suppliers.
- **Import/distribution arrangements.** This is where the exporters need to cooperate. The ideal situation would be to have a single desk seller, a concept that the government is examining. In the

absence of a single desk, exporters need to come to an arrangement whereby they do not undercut each other in the New Zealand market. Research indicates that taro consumption in New Zealand has plateaued. A market entry strategy for Samoan taro needs to be carefully managed, i.e. not only is quality important, as is consumer acceptance, but pricing needs to be equally consistent. If exporters go off in different directions with a range of importers, there will be inconsistent pricing, head-to-head competition in the market, limited opportunities for brand development and difficulties in monitoring market conditions. It is a recipe for failure, even if the supply side is functioning well. The options are as follows: (i) exporters cooperate on supplying two or a maximum of three trusted importers; and/or (ii) supply contracts are negotiated directly with major retailers such as Progressive Enterprises or Foodstuffs. The latter is unlikely given that taro is viewed as a low value item with limited cross-market appeal, but it could be something to aim for in the longer term. Certainly, if contracts can be put in place with retailers, margins will increase as there is one less link in the supply chain.

- **Product promotion.** There are no hard and fast rules about product promotion. Taro is a known product among Pacific Island consumers. What is not known is the characteristics of the new Samoan varieties, especially how it should be prepared and cooked. Promotion strategies will need to include print media, radio and possibly access to Pacific-focussed TV (Tagata Pasifika or Maori TV). STIC could play a central role in promotional activities, but would need to be financed to do this. As much as possible, the promotion strategy would need to include telling a story of recovery of the Samoan taro industry, the economic importance of taro, what it means to the growers to see their produce exported and the impact sales in New Zealand will have in terms of livelihoods and economic growth in Samoa. It would be a compelling story.
- **Trial shipments.** The initial trial shipment in 2010 was relatively unsuccessful commercially. Although it proved that Samoan taro can get into the New Zealand market, a much better planned and more structured approach is necessary next time around. Trial shipments should include product of the highest quality. A comprehensive plan needs to be developed and executed and, if possible, include full product traceability. The trial shipments are a demonstration of capacity but also one of intent. The mantra should be: this is how we intend to start and continue. Included with the trial shipments should be clear evidence of continuity of supply (indications of plants in the ground, harvesting schedules, packing dates, shipping schedules).

6.3 Cost

There is little merit in costing the implementation of a market development strategy until such time as decisions and actions to address the critical supply-side constraints outlined earlier in the report have been taken. Clearly, if supply-side requirements such as packhouses and improvements to post-harvest and inspection facilities are included, costs will be well into six figures.

On the market side, costs will be more modest and to a large degree can be managed. Media exposure (radio and TV) can be done at no cost. Print media would come at a cost. Newspaper rates range from NZD8,000 for a quarter page through to NZD30,000 for a full page. Advertorials in magazines can run to NZD4,000 but will include three months of additional advertising. Community newspapers are also a good option in the main centres, with much lower advertising rates and high readership levels given that they are free. Online advertising is another option, with rates contingent on clicks made through. A final marketing option to consider is a dedicated website, including an e-commerce facility. Depending on the style and functionality of the site, costs range from NZD9,000 to NZD20,000.

7 Limitations

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Appendix A

Appendix A Key Persons Met

Samoa

- Asuao Kirifi Pouono, National Market Access Coordinator Samoa, PHAMA
 - Toilolo Pueata Tanielu, Crops Division, MAF
 - Fata Alo Fania, Crops Divisions, MAF
 - Emele Ainuu, Crops Division, MAF
 - Faalelei Tunupopo Laiti, Crops Division, MAF
 - Joseph Seuseu, Crops Division, MAF
 - Keneti Leavasa, Crops Division, MAF
 - Pulotu Lyndon Chu Ling, MCIL
 - Leatigaga Suafoa Tali, MAF Savai'i
-
- Peni Reuelu, P&A Trading Limited
 - Ben Ah Liki, Taro Exports
-
- Mohammed Umar, USP
-
- Lemalu Mikaele, Peti, Samoa Maritime Services Limited
 - Teuila Eteuati, Samoa Maritime Services Limited
-
- John Mapusua, Farmer (Upolu)
 - Lina Aumua, Farmer (Upolu)
-
- Paila Tauloa Tiatia, Farmer (Savai'i)
 - Tapuai Laina, Farmer (Savai'i)
 - Ropati Satuala, Farmer (Savai'i)
 - Tusani Samotu, Farmer (Savai'i)
 - Tulafili Faifuaina, Farmer (Savai'i)

New Zealand

- Markerita (Meg) Poutasi, Chief Executive, Pacific Cooperation Foundation
- Adam Denniss, Trade Commissioner, Pacific Trade & Invest
- Pa'o Luteru, Trade Commissioner, Samoan Consulate General, Auckland

Appendix B

Appendix B In-Country Program

Monday 17 October

- Briefing with Kirifi Pouono
- Meeting with CEO, MAF (cancelled)
- Meeting with Crops Division, MAF
- Visit to taro nursery
- Visit to taro producer

Tuesday 18 October

- Meeting with CEO, MAF (cancelled)
- Visit to taro producer
- Meeting with P&A Trading
- Visit to MAF Atele (quarantine centre)
- Travel to Savai'i

Wednesday 19 October

- Farm visits on Savai'i

Thursday 20 October

- Travel to Upolu
- Meeting with USP
- Meeting with Crops Division, MAF
- Meeting with CEO, MAF (cancelled)
- Apia market visit

Friday 21 October

- Meeting with Samoa Maritime Services
- Meeting with Ben Ah Liki
- Meeting with MCIL
- Debriefing with Kirifi Pouono

Saturday 22 October

- Visit to Apia market
- Travel to New Zealand



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