



# Quarterly Newsletter

Issue 9 – August 1<sup>st</sup> 2012

## Bula Vinaka!

Welcome to the 9<sup>th</sup> quarterly newsletter of the Nature's Way Cooperative Fiji Papaya Project (FPP). The objective of these newsletters is to provide up-to-date information on the project to farmers, exporters, and other interested stakeholders.

The FPP is an applied research project aimed at improving the competitiveness of our industry for the benefit of its members.

## Post-flood papaya rehabilitation is well underway

Rehabilitation of the Fiji Papaya industry after the January and March 2012 floods is starting to show success. Rehabilitation has been a collaborative effort led by the Ministry of Primary Industries (MPI), Nature's Way Cooperative (NWC), the Fiji Papaya Project (FPP) and the Taiwan Technical Mission (TTM).

According to the MPI Flood Damage Assessment report, a total of 81 acres of papaya was completely destroyed by the floods in the Nadroga/Navosa and Ba provinces. Figures compiled by the Fiji Papaya Project indicate that an estimated 80,930 papaya seedlings would have been supplied to affected farmers by mid August 2012. With a planting density of 500 trees per acre, these seedlings represent around 161 acres of papaya that has been established following the floods.

Papaya rehabilitation efforts have been boosted by several private seedling nurseries contracted by NWC to grow papaya and eggplant seedlings. Financial support provided by AusAID through NWC, has also allowed the Cooperative to have a much more active role in natural disaster rehabilitation and preparedness activities.



*Farmer, Sangeeta Keshni, receives papaya seedlings under the NWC Disaster Preparedness and Rehabilitation scheme.*

## Fiji Papaya Seed Producers Scheme – A critical step for the sustainability of the industry

With a dependency on imported seed from the University of Hawaii, the Fiji Papaya industry has made itself vulnerable to disruptions in supply as well as potential disease introductions. This vulnerability has been directly felt following the recent flooding in Fiji which coincided with a period of seed non-availability from the University of Hawaii. The industry was faced with a shortage of seeds that has hindered rehabilitation activities.

The Fiji Papaya Project working in close collaboration with the Ministry of Primary Industries and other



partners has established a Fiji Papaya Seed standard that will allow for local seed production under a certified scheme. The package of practices surrounding this seed standard has been trialled by the Fiji Papaya Project over the past 24 months and has proven to meet the objectives of true to type, high quality seeds.



*Fiji Papaya Project (FPP) seed production block at Votua Levu, Nadi. The FPP has established 7 seed blocks in Sigatoka, Nadi and Taveuni.*

The Ministry of Primary Industries is now in the process of integrating this seed production standard as part of developing the Fiji Seed Policy. It is envisioned that the MPI research division will have a critical role to play in training and auditing of seed producers according to this standard.

NWC through the Fiji Papaya Project has helped to establish seven seed production blocks between Sigatoka and Nadi. These seed production blocks were established with collaborating farmers to help ensure the availability of high quality papaya seeds as well as to encourage private sector interest in the scheme. The Fiji Papaya Project is also working closely with the Tutu Rural Training Centre on Taveuni, to establish a seed production block to further diversify seed supply in the face of disasters.

## **Trial on long term storage of papaya with and without modified atmosphere packaging (MAP)**

Despite the current shortage of papaya available for exports, replanting figures indicate there will be a substantial amount of papaya available in the early part of 2013. With ample supply, sea freight of papaya becomes a significant area of interest to exporters due to the availability of freight space and lower freight cost, as compared to air freight.

Following an in-depth freight study looking at the different shipping lines, transit times, historical delays and freight costs for sea freighting papaya to Australia, the FPP in collaboration with the Queensland DAFF, is implementing a trial to simulate long term sea freight with and without modified atmosphere packaging (MAP). The average transit time for sea freight Lautoka – Melbourne is 15 days and therefore the trial will be investigating three storage times: 21, 14 and 7 days.

The MAP component of trial is evaluating several bag types that will allow for the appropriate gas exchange of CO<sub>2</sub> and O<sub>2</sub>, slowing down respiration and arresting the ripening of the papaya. The trial is also evaluating the effectiveness of potassium permanganate (KMNO<sub>4</sub>) as an ethylene absorber in the carton.

## **Industry moving ahead with hot water treatment of papaya for disease control**

Following the positive results from the FPP trial on various post-harvest treatments for the control of fungal diseases (March 2012), the industry has decided to move ahead with hot water treatments for disease control. The results of the trial indicate that the hot water treatment (48°C for 20 minutes) provides very good control of disease with no adverse effects on fruit quality.

The Fiji Papaya Project has designed and constructed a semi-commercial hot water unit that is being used for further trial work on hot water dipping for disease control. With continued positive results, it is envisioned that a commercial hot water unit will be constructed at NWC in preparation for the next rainy season.



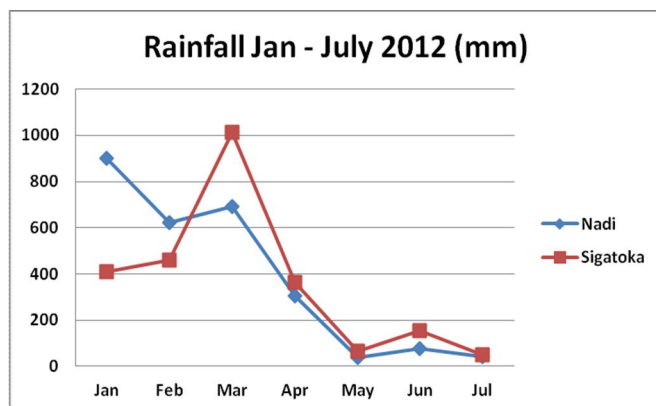
*Semi-commercial hot water treatment trial unit at NWC. Papaya dipped in 48° C water for 20 minutes has shown a reduction in post-harvest disease severity compared to untreated fruit.*

## Fiji Papaya Project reaches the three year mark

Core funding for the Fiji Papaya Project is coming to an end in June 2013 and as a result the project will be externally reviewed in August/September 2012. With an expected positive review, a proposal has been developed for submission to ACIAR for a Phase II. The Phase II ACIAR project will focus on four primary applied research themes:

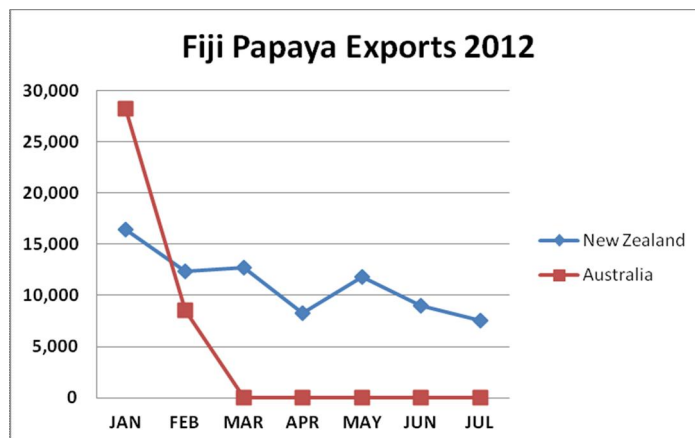
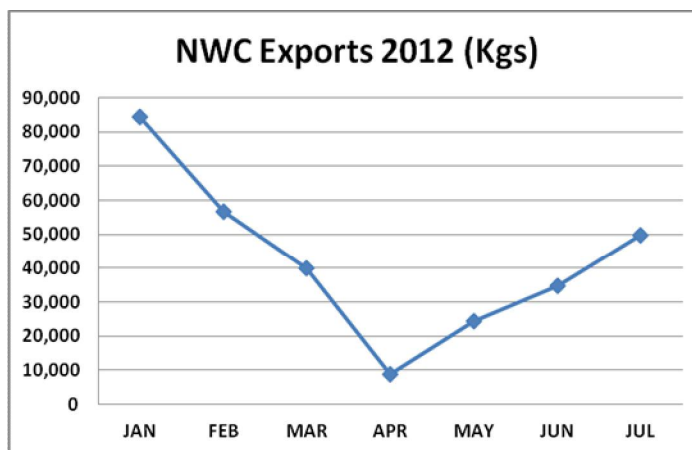
1. Sustainable production systems in the face of climate extremes and climate change.
2. Improving post-harvest handling and supply chain systems.
3. Value chain improvement.
4. Papaya value adding and processing.

## Rainfall data



## Export performance

Although fresh produce exports have shown a steady increase since the month of April 2012 (figure 1 below), this increase has been primarily from eggplant exports. Papaya exports continue to decline with no exports going to Australia since February 2012 (figure 2 below).



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