

Quarantine E-News

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Trials of the Giant African Snail using Methyl Bromide Vs. Methyl Iodide

The Ministry for Primary Industries New Zealand (MPI) seeks to evaluate a replacement fumigant for methyl bromide as needed for quarantine and pre-shipment use in New Zealand. This follows a world-wide phase-out of methyl bromide as it is a severe ozone depletor. **Currently New Zealand's use of Methyl bromide is increasing due to log exports and scrap metal imports where mandatory fumigation is required to kill insects and other unwanted pests such as the giant African snail (*Achatina fulica*).** One such compound for consideration to possibly replace methyl bromide is methyl iodide, a non-ozone depleting fumigant that is considered effective in controlling *A. fulica* and other biosecurity targeted pests.



FBA Consulting and Genera were commissioned by MPI to undertake trials in Samoa to determine the effectiveness of methyl iodide. Due to various last minute logistical issues including methyl iodide being pulled out of use in Australasia for quarantine use, it was decided that the trial was progressed too far and hence some work was also contemplated using methyl bromide.

The GAS were collected by the Nuu Crops division personnel, and on-site analysis was done at the Matautu-tai wharf as depicted in the pictures above.

Fatu o Aiga Program Enhances Awareness levels to the general public

The Fatu o Aiga Program, a ministry Public Awareness initiative on the TV3 channel, prepared the **Quarantine for its' first episode this year. The first episode consisted of discussions on the Certification of Exports. Focus was mainly on the exports of coconut products, which included husked coconuts, copra meal and coconut oil. The filming was done mostly at the Pacific Oil premises at Nuu, as this was a good location and example to showcase the Coconut and all its' by-products for exports and local sale. Coconut is a natural resource that is grown in many families' backyard. Hence its supply is abundant but it is the safe and certified products that are allowed for trade in the export market.**

The televised episode for this commodity and export certification showed our people the importance of the coconut production industry, and also elaborated on the effective contribution this commodity has towards market access for Samoa. Importing country's requirements determines what treatment regimes must be carried out on exports prior to shipment. Importing country at often times require inspection and certification from Quarantine.

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Keep in Mind!

- ◆ The toxic effects of Methyl bromide can be prolonged or delayed
- ◆ New import of agricultural plant and animal commodities are to undergo a Post Entry Quarantine
- ◆ All imported honey are not allowed into Samoa
- ◆ Awareness enhances the profile of the Ministry
- ◆ Pest List Database update ensures market access risk and product analysis

Post Entry Quarantine for Macadamia Nuts from Australia

The illegal importation of plant material poses a great risk to our horticultural industry. Plant material may harbor exotic pests and diseases that may not be visually detected, but if released, have the potential to increase in numbers, destroy crops and permanently cripple the industry. Post Entry Quarantine for plants have been put in place to allow the safe importation of plant material. Imported material is housed in an appropriate and approved quarantine facility for a specified period of time where they are continually monitored for the presence of pests and diseases. Once these plants have shown to be disease-free, they are released to the owner who can be confident that their new plant imports are not harboring exotic pests and diseases.

An Import Permit was recently issued for the importation of macadamia nuts from Australia. An Import Risk Analysis (IRA) was conducted to determine the potential risks associated with the importation of this commodity. The seeds arrived via DHL and it was inspected by a Quarantine official. It was securely wrapped in a vacuum packed envelope, with 3 net packing of the 3 different varieties. The seeds were then accompanied by the importers and Quarantine officials to the Crops Research station at Nu'u, where they have been planted to undergo a quarantine period at which the plants will be monitored closely for any disease symptoms.

A total of 164 Macadamia seeds were imported, where a trial of randomly selected seeds of 55, from the 3 different varieties were planted in small plant bags. The soil used was a mixture of top soil, grinded fibre and NPK fertilizer (8:1:1). These were all laid on the cement ground inside a greenhouse at Nu'u, where daily watering by sprinkler will be carried out. The Post Entry Quarantine provides an opportunity for Samoan tropical horticultural operators to source new stock, continue to introduce innovative materials and expand the industry while ensuring that there are no unwanted introductions of exotic pests and diseases into the country.



The pictures showing the various stages in the Day One of the planting of the Macadamia seeds from Australia. There were 3 different varieties, where random selection from each, were planted. The remaining seeds were taken back to the Quarantine office, and securely and hygienically storage in the refrigerator at a controlled temperature. During the time period in which the seeds are to have its first visual site of germination, they are watered with sprinkler at least twice a day everyday.



Possible presence of the American Foulbrood disease endanger our local bee population

The American foulbrood (AFB), caused by the spore-forming *Paenibacillus larvae spp.* (formerly classified as *Bacillus larvae*), is the most widespread and destructive of the bee brood diseases. *Paenibacillus larvae* is a rod-shaped bacterium, which is visible only under a high power microscope. Larvae up to 3 days old become infected by ingesting spores that are present in their food. Young larvae less than 24 hours old are most susceptible to infection. Spores germinate in the gut of the larva and the vegetative form of the bacteria begins to grow, taking its nourishment from the larva. Spores will not germinate in larvae over 3 days old. Infected larvae normally die after their cell is sealed. The vegetative form of the bacterium will die but not before it produces many millions of spores. Each dead larva may contain as many as 100 million spores. This disease only affects the bee larvae but is highly infectious and deadly to bee brood.

Any imported honey from overseas is considered Prohibited, so as to avoid the risk of the spread of this particular disease.

A case of American foulbrood (AFB) was discovered in one hive in Tula'ele, in Apia, on the afternoon of 12 July 2012, during a survey on the bee health status in Samoa funded by AusAid and PHAMA. The bees were destroyed with petrol on the morning of the 13 July and the hive was strapped up and removed to a safe site at Saleimoa for burning. The complete hive was burnt in a prepared hole and subsequently buried. **Bee keepers and MAF propose to inspect hives in various apiaries at monthly intervals for the next 6-12 months to monitor for any further outbreaks of AFB.**

There is a possibility that an importer may have smuggled honey into the country causing this product to slip through the border undetected.



Samoa's very own local honey is considered one of the most disease-free within the Pacific region, and for such a disease to be present in our country would result in market access export barriers.

*Field tests for the American foulbrood
Done by extraction from the honey hive*



*CCK Honey exported to overseas markets
are favoured by many foreigners.*

SPC Conducts Pest List Database Training

As part of SPC funded implementation activity, a local training was conducted for the Quarantine staff and 2 representatives from the Nuu Crop Division who are involved in the research and entry of the Pest List Database (PLD). The PLD has similar functions to the Samoa Quarantine Information Database (SQID) system, but for the PLD, it records all pests and diseases that are present in a country or pests and diseases that have been intercepted at the border or during surveillance work. The Pest List Database is vital for Quarantine as it could identify possible pests that are present in Samoa, could also assist in compiling reports, and assist in research and survey analysis purposes.

The 1 week training was conducted by Mr. Richard Singh, an official from the SPC, who is a PLD Technician. Various sections and links in the system were examined and discussed with simulated exercises carried out to ensure understanding among the participants. The training was an effective and learning experience for some, but a refresher for most, as it has been a few years since the last training on PLD was conducted.



Group photo of the participants with the trainer, Mr. Richard Singh of SPC, Fiji.

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Protect Samoa from Pests and Diseases