The Ministry of Agriculture and Livestock (MAL) is pooling its available resources in an effort to address the latest discovery of the destructive Giant African Snails in the Foxwood area, east of Honiara. Solomon Islands Quarantine Service officers visited the site and found two large Giant African Snails. The snails were found by two farmers whose food gardens are not far from each other.

Quarantine officers confirmed that a thorough search around the area was made without any further discovery of additional snails.

A plan of action is now put in place for a surveillance team to be dispatched to Foxwood area tomorrow evening to assess the presence of Giant African Snail. The team will be conducting night surveillance by setting up baits in different locations.

Ministry of Agriculture and Livestock is now gearing up all its resources to ensure the Giant African Snails population is under control. This will include posting officers at different locations at night with baits.

As part of the effort to contain the presence of this destructive pest, the Ministry is now working on radio programmes to tell the public to come forward with information about any sight of the snails in other places. The programmes which will also include radio spots will be able to create awareness about the extent of damage that this pest will cause to economic crops.

Recent discovery of the Giant African Snails in the Ranadi area resulted in a nationwide survey which confirmed negative presence in other parts of the country.

The size of the snails means that already breeding had taken place and the population could be increased.

Young snails become sexually mature after 3 – 5 months. One adult can lay up to 400 eggs but may increase to 1200 eggs when adults are fully matured.

The snails can cause severe damage to vegetables and other crops, including young fruit trees, particularly when snail populations are high.
Ram’s Valley Fresh Produce an emerging exporter

Farming can be one of the best business venture if all tricks of the trade are played well, believes the Managing Director of Ram’s Valley Fresh Produce Mr Sugga Ram.

Ram, 52 who hails from Salad Bowl of Fiji, Sigatoka Valley, is living testimony of successful agro business.

His hard work and dedication was rewarded last year when he won the Prime Minister’s Emerging Exporter of the Year Award.

He cultivates 17 acres of land and employs four experienced labourers.

The magnitude of his venture with very minimal number of labourers requires high managerial skills and Ram is the master of that art.

The company specializes in farming and export of fresh and frozen vegetables, seafood and root crops.

Speaking at a recent field day in Bilalevu Sigatoka, Mr Ram expressed his sincere gratitude for the opportunity to showcase his produce to the public.

“I have always believed in hard work and dedication and I am reaping the rewards.” Mr Ram said.

“We have four varieties of eggplant; Chahat, long purple, round purple, and black beauty round and also red and white cowpea varieties.”

Vegetables, fruits and root crops cultivated and exported from his farm includes cowpea, french bean, butter bean, peanuts, tumeric, chillies, jackfruit, breadfruit, cassava, pumpkin, kava, dalo, dalo leaves, lime citrus, curry leaves, bitter gourd, mango, pawpaw, eggplant, amaranthus, bele, long bean, okra, prawns and fish.

In addition mango sticks, husked coconuts, betel leaves are also exported for religious purpose.

“These commodities are in demand but specifically during Diwali,” said Mr Ram.

Mr Ram said they do value adding on selected commodities before exporting.

He exports pawpaw curry, jackfruit curry, pumpkin curry, drumstick curry and also frozen drumsticks leaves.

Farmers from the Valley and Nadi area also supply him with the fruits and vegetables for export.

“There is no standard price for these produce since every time supply and demand fluctuates,” he commented.

“It is very important to weed, apply fertilizer, and use chemicals to control insect, pests and spray at the right time,” emphasized the farmer.

“We have our own irrigation equipment and we are also thankful to the Agriculture Ministry for the assistance in setting up the Irrigation System”.

Mr Ram exports his produce mainly to New Zealand and Canada and is very thankful to Agriculture Ministry for technical advice.
Vanuatu checks out organic farming in the Solomons

Based on report by Joy A Rikitme

A visiting agricultural delegation from Vanuatu has been amazed with organic farming practices as conducted by the Kastom Gaden in the Solomon Islands.

Led by Vanuatu’s Minister of Agriculture, Quarantine, Forestry and Fisheries Donna Brownie, the delegation is in Solomon Islands on a familiarisation visit and also made a donation to help the organisation’s daily activities.

He said what the Kastom Gaden is doing is a good example of what Vanuatu and other Pacific island countries should do.

Mr Brownie said their visit to Kastom Gaden was to learn new things and see the variety of plants and crops Solomon Islands have.

Mr Brownie’s adviser Yoan Mariasua said Vanuatu had been using chemicals in its subsistence and commercial farming of vegetables and fruits as well as on animals. However, he said now the country is trying to promote organic farming because it is cheaper for people in rural areas.

Other members of the five-men delegation said Solomon Islands has a lot of different varieties of plants, vegetables and fruits in the local market than in Vanuatu.

Kastom Gaden representative Claudie Watoto said the association’s effort is aimed at promoting organic farming as well as promoting networking - domestically and regionally.

“We also try to preserve and distribute locally, the old and new varieties of plants, root crops, vegetable and fruit trees that Solomon Islands have,” Ms Watoto said.

She said the association’s network is mainly with people in rural areas. In the region, she said the network was through the Melanesian Farmers First Network based in Vanuatu. Melanesian Farmers First Network was formed to help Pacific island countries exchange expert advice and help each other in farming.

Mr Brownie said his delegation had really learnt a lot from its visit.

In appreciation to the effort of Kastom Gaden, the delegation gave US$100 (SB$800) and SB$100.

The Vanuatu delegation will be visiting Solomon Islands for a week.

The right veggie at the right time

Market Watch report
Fiji Ministry of Agriculture and Primary Industries

Committed research efforts have resulted in an increase or abundant supply of fruits and vegetables for Fiji’s local market.

The Ministry’s Research Department over some time, conducted research to find out what vegetables grows or yields well and at which season of the year.

Acting Principal Research Officer, Sigatoka Research Station (SRS), Poasa Nauluvula said that the concerted effort of the Research Division in terms of introducing the improved recommended varieties is finally showing the results.

Mr Nauluvula said that in local markets, improved varieties of vegetables such as tomatoes, cucumber and English cabbages are available.

“The newly improved varieties for tomatoes are Raising Sun No 2, cucumber is Bountiful No 2 and an English cabbage is FS Cross”.

He said that this cooler season contributes to higher yields and so the fruits and vegetables easily get adapted to these conditions.

The vegetables that are abundant in supply at the local markets are tomatoes, English cabbage, cucumber, French bean, Butter bean, radish together with fruits watermelon, mango, pawpaw and pineapple.

Mr Nauluvula said the open pollinated seed varieties of eggplant, tomatoes and chillies are available for sale from SRS to the farmers with the following prices of $0.66, $1.99, $1.18 respectively for the 25grams pack.

“Farmers interested in buying the seeds can contact their Agriculture Officers and SRS will supply them with the recommended seed varieties”, said Mr Nauluvula.

He said that during the main
season these varieties can grow in any condition but during the off season farmers have to implement new practices such as planting on slopes, raising seed beds and using salon cloth.

"Also note that off season vegetables when managed and cultivated properly yields quality produce.

Mr Nauluvula advised the farmers to apply recommended cultural practices such as crop rotation, use of recommended varieties, proper land preparation and spacing and timely application of fertilizers.

Meanwhile the Senior Agriculture Officer, Rajesh Prasad said farmers should focus on supplying quality fruits and vegetables into the local markets.

Mr Prasad said consumers are becoming more quality and health conscious and it is important for farmers to meet these needs to sell more produce.

He added that farmers should ensure proper post harvest handling techniques to minimize crop damages by using plastic crates for transportation.

"Extension Officers should also assist the farmers on having business plans that farmers should follow," said Mr Prasad.

Mr Prasad added that the Ministry also advises farmers on growing improved varieties that have longer shelf life.

A recent market survey carried out by the Agriculture Ministry’s Agtrade Section revealed that prices of tomatoes, bongo chilies, french beans, long bean, okra, lettuce, cowpea, and capsicum have decreased when compared to two weeks ago.

Tomatoes are now selling at an average price of $2.20 per kilogram compared to $2.50 per kilogram in the previous survey.

Similarly French bean is fetching $1.69 per kilogram when compared to $2.13 per kilogram in the previous survey.

Long beans and cowpeas are selling at $1.22 and $1.50 per bundle when compared to $2.46 and $2.00 respectively.

Prices of other vegetables such as bongo chilies, okra, lettuce, and capsicum are $3.67, $2.28, $5.50, $8.20 per kg when compared to last survey of $4.50, $2.89, $6.00 and $8.20 per kilogram respectively.

Fruits such as banana sell at an average price of $1.15 per kilogram, pawpaw at $1.14 per kilogram, watermelon at $1.60 per kilogram, lemon at $0.94 per kilogram and pineapple at $1.64 per kilogram.

A former chief livestock advisor with the Department of Agriculture and Livestock has said that livestock needs to be given priority in agriculture strategic interventions.

Siva Supiramaniam said an important element of diversification is the inclusion of small livestock particularly pigs, goats, sheep, poultry, rabbits and honey bees which can provide comparatively rapid returns on investment.

“For poor farmers with limited resources they give excellent opportunities for improving food security, dietary nutrition and increasing income in return for modest inputs,” he said.

During a seminar presentation to DAL staff, Mr Siva said that diversification is now an accepted strategy for agriculture development in poorer countries and forms a major component of the Special Programme for Food Security (SPFS) initiated by the Food and Agriculture Organisation.

Mr Siva said his proposals are contained in a report which includes a plan of action for the livestock component for incorporation into the up-scaled SPFS program to achieve the overall goal of the program. The success of both the pilot and the expansion phases has prompted PNG to up-scale the SPFS into a national food security program.

Mr Siva said PNG has an abundance of natural resources suitable for livestock production and an enviable low disease risk status compared to its Asian neighbors.

Despite this domestic production has not increased significantly in the recent past. On the other hand, meat consumption is increasing steadily and is predicted to increase at a conservative rate of five per cent per annum. The volume and cost of imported meat and other animal products has increased significantly over the last five years, and at present exceeds K130 million. He has suggested that more emphasis is needed to support the short cycle species of livestock such as pigs, goats, sheep, poultry, rabbits and honey bees.

Submitted by Nicks Maniha, ALO PNG

Fiji Fantastic sheep now raised by countries like Samoa and others
Expert calls to improve livestock.....from page 4

The small-scale poultry production for live bird trade should also be assisted and promoted to enhance protein supply and create income earning opportunities. Goat farming has become popular in some parts of the country and needs to be promoted widely for both milk and meat. Goat milk is more digestible and hence more suitable for young children. The potential of the apiculture (honey bee) industry is high and also needs to be promoted under the SPFS.

Mr Siva said draught and pack animals should be promoted to enhance farm production and productivity and to improve market access in areas where transport facilities are not available. Households in remote areas are facing difficulties to market their agriculture produce due to poor transport.

Under such situations pack animals are of immense use.

In rural PNG, pigs are a major potential source of meat in the local diets and can be promoted further.

Other small livestock such as sheep, rabbits, guinea pigs and quails should be promoted depending on physical constraints, resource availability and farmer preferences and capabilities.

Mr Siva pointed out that some general constraints affecting small livestock development include lack of access to breeding stock, lack of animal husbandry skills, poor support services, high cost of imported feeds, lack of information, limited markets and low animal productivity due to inter-related causes of poor nutrition and management.

“In many situations, these constraints can be minimised using relatively low-cost interventions, thus providing opportunities for enhancing the food security and livelihood of the rural poor with modest cost and effort.”

Solomon talks national agriculture policy

A National Agriculture Policy was one widely discussed issues at the Senior Agriculture Extension Staff Conference held in Honiara this month.

Ministry of Agriculture and Livestock permanent secretary Edward Kingmele said the ministry is now looking at a National Agriculture Policy for the next 20 years.

Mr Kingmele said for years the ministry only had three year work plans.

However, he said now that the government had revitalised the ministry it is important that a long-term development plan is formed.

“A long term plan will really enhance work on upcoming national projects, especially when the government is embarking on the Bottom Up Approach Policy,” Mr Kingmele said.

Work on the development plan is now part of the Agriculture Rural Development Strategy (ARDs).

Mr Kingmele said so far a committee had been established to work on the project proposal plan. This plan is to be called the National Development Plan for the next 20 years.

Work on the national plan has started and expected to go on for another five months.

But Mr Kingmele said more consultation is needed for the establishment of the proposed plan, which would also need the provincial contributions.

He said the national plan would be based on provincial plans because these would help draw up the national plan.

Provinces are expected to present their work plans during this workshop. These work plans will be based on their development priorities for three years.

Mr Kingmele said all provinces must present their work plans because these are what his ministry would take into consideration when addressing provincial livelihood in the national plan.

Knowledge to improve quality

Twenty eight course participants from Bougainville attended a week-long cocoa assessor’s course held in Arawa, Central Bougainville.

The course, which was conducted by the regional manager of the PNG Cocoa Board in Bougainville, Jacob Banas, and senior field officer Moses Burin, was attended by cocoa buyers, exporters and farmers from Bougainville.

According to Mr Banas, the main aim of the course is to teach the participants the skills and knowledge to ferment and export quality dried cocoa beans which is acceptable to the world market.

“The main aim of this course is to equip the participants with the knowledge and skills to assess and control the quality of cocoa that farmers are producing,” Mr Banas said.

“After completing this course the participants are now certified to become quality cocoa assessors.”

Mr Banas said most of the participants appreciated the course, saying they were looking forward to producing and exporting quality dried cocoa beans.

“Many of the course participants appreciated the course. They said they will now use the knowledge that they had gained to improve the quality of cocoa in the region,” Mr Banas said.

Materials used during the cocoa assessors’ course were funded by the CBPNG.
Good roads for farmers

Based on Rural Industry Weekly reports

Subsistence farmers in East and West Sepik provinces will transport their garden produce easily to nearby markets, thanks to the recent completion of a highway dubbed as the “East-West Sepik Highway”.

Farmers in East and West Sepik this week congratulated their leaders Sandaun Governor Simon Solo and Sandaun Administrator Joseph Sungi for negotiating the construction of a major road linking the capital towns of Vanimo in West Sepik and Wewak in East Sepik.

The road dubbed the East and West Sepik Highway was “a present” for the people of these two provinces from the Vanimo Forest Products Limited (VFP), a logging company in Sandaun. It is working on the 114km highway while completing roads going to the coastal and interior villages. All villages in the Vanimo, Bewani and Amanab districts are linked to the highway.

“This is the best thing that ever happened to us, especially the simple farmers of Wewak and Vanimo. “Now we can have our garden produce sold at any outlets and junctions, especially for a living,” the farmers said. “We thank VFP for constructing the highway thus providing the most important linkage for the two Sepik provinces. They said: “We commend our leaders for successfully negotiating with VFP to link the villages around Vanimo to the highway, something many of our leaders had failed to do.”

Funds for cattle revival released

Based on report by Joy A Rikimae

Taiwan has released more than SB$7 million to the Solomon Islands Government to rehabilitate the country’s cattle industry. Taiwanese Ambassador George Chan formally announced the million dollar assistance during a brief meeting with Prime Minister Sogavare. A first trench of over SB$4 million towards the rehabilitation programme was released in June this year. Prime Minister Sogavare said the funding will enable rural dwellers to partake in development by running their own cattle projects. He said this will improve their livelihood and boost the national economy.

Selected farmers in Malaita and Guadalcanal provinces are expected to receive their first herds of cattle from the Government in December this year. The cattle will be distributed under the Government-initiated Solomon Islands Cattle Rehabilitation Programme. The programme was aimed at reviving the once thriving cattle industry in the country.

The Permanent Secretary of the Department of Agriculture, Dr Israel Wore earlier said that under the programme, selected farmers in the two provinces would benefit. He said more than 700 pregnant cows will be shipped into the country from Australia. He said the shipment should arrive by the end of November and distributed to farmers before Christmas.

Research vital for agriculture

The National reports

Submitted by Nicks Maniha

Agricultural research can make an important contribution to productivity improvements, provided it is well-targeted and responsive to the needs of the PNG farmers.

This message was from minister counsellor, Australian Agency for International Development (AusAID) in Port Moresby, Margaret Thomas.

Ms Thomas was welcoming participants to a two-day Economic Research workshop on Pacific Agriculture being held at the National Agricultural Research Institute’s conference centre at Bubia outside Lae.

Ms Thomas said AusAID understands the importance of agricultural research for development and in May this year, it launched a five-year K$90 million investment in the agriculture sector which extended its support to a broader range of agencies and this included the PNG National Agricultural Research System.

She said the agricultural research development Support Facility aims to build the capacity of the primary agricultural research and commodity institutes of PNG to deliver improved service to the rural stakeholders.

She said for this reason, AusAID was happy to support the Economic Research workshop on Pacific Agriculture.

“We’re pleased to support the workshop because today is about economics research - a vital component of agricultural research. Many of the papers to be presented over the next two days would help link what we know from agricultural science to improve agricultural performance in the Pacific,” she said.

Ms Thomas said the timing for such a workshop was right as PNG recently launched its ten year National Agricultural development Plan with the government committing K$100 million per year for the next 10 years.

She said as the country heads towards a post election government, it was for academics and others to influence policy makers to make the right decisions in taking this important sector forward.

She said agriculture will always have a vital role to play in sustaining the livelihood of the Pacific people but it could mean more than that and the workshop must look at what was needed to unleash its full potential in the Pacific.

Funding for the workshop came from AusAID. NARI’s Director General, Dr Raghunath Ghodake thanked AusAID for its financial support.

Dr Ghodake said NARI was honoured to co-host the workshop with the Crawford School of Economics and the Australian National University.

The workshop is attended by a diverse group of professionals and experts in various fields such as strategic planning, policy development, economics, agriculture and agribusiness, credit and banking, and governance from PNG, other Pacific countries and Australia.
**Fiji anticipate market for banana leaves**

**Fiji Ministry of Agriculture reports**

Fiji will be the first island country to be exporting banana leaves if the first shipment suits the quality required by the markets. The Agriculture Marketing Authority is hopeful the first shipment of banana leaves that left for the United States of America meets the satisfaction of its importers and opens the door to a promising new market for Fiji.

“If the importers are happy with it, then we can increase the amount we send to a 20ft container a month,” said the authority’s executive chairman Ravi Swamy.

The first shipment contained 100kg of banana leaves. “The leaves, which are sold at US$2.80 US$3 a kilogram, are frozen before they are exported because of the quarantine requirements.”

He said the US imports banana leaves from South America and Fiji would be the first country out of the Pacific region if all goes well. US buyers who visited the country earlier this year were amazed at the abundance of banana leaves and asked AMA to send samples, said Mr Swamy. He said banana leaves were used to wrap tamale which is a favourite dish for Latin Americans in the US.

Mr Swamy said AMA believed agricultural exports to the US would increase by diversifying into new products. He said AMA also exported dried seaweed to the Phillipines and Korea.

The demand for dried seaweed was very high but the AMA was not in a position to meet the export quota because seaweed was only farmed in the Lau Group.

Mr Swamy said they would be liaising with the Ministry of Fisheries to encourage and help villagers in the outer islands to undertake seaweed farming for export.

**Honey industry growing well for Fiji**

**Fiji Ministry of Agriculture reports**

The growing honey industry in Fiji is foreseen to grow even bigger and better as according to Agriculture Bee Industry official Apisai Ucuboi.

He said our national production had reached 300 tonnes annually, which was still insufficient to fulfill the local demand because he estimated the local demand to be 800 tonnes.

The industry has spread all over Fiji in recent years among keen entrepreneurs.

Mr Ucuboi, director of the industry’s research, acknowledged that the honey production in Fiji has been increasing tremendously.

There are 362 types of bees all over the world and the most recommended one is the Italian queen bee. National Co-ordinator (Apiculture), Kamal Prasad said demands for honey was increasing daily.

He said honey markets had gradually developed with improved packaging and labelling.

“Farmers have ventured into small holder income generating project which has become very much successful,” said Mr Prasad.
**Honey industry growing well for Fiji**

There are around 10,000 bee hives with more than 7000 farms producing 300 tonnes annually.

He estimated national production for this year to be around 400 tonnes.

Mr Prasad said one hive can produce 30kg of honey per year and Fiji had a potential of 50,000 bee hives.

"Honey industry values around $4million and it employs more than 3000 people directly and indirectly. "Fiji’s tropical climate provides an ideal environment for higher quality production.

"Bee farming can be easily integrated with other farming systems to diversify and increase farm income".

The Agriculture Ministry has recently set up a production centre at Dauilevu Research Station supplying good quality Italian queen bees to the farmers. The ministry also built an incubation centre in Nadave, Nausori to train people on maintaining the honey business.

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**Leadership skills boost for future farmers**

Considering the invaluable contribution of youth through agriculture to our country’s development it has also been considered important that they are equipped with skills and knowledge to lead and decide.

This was the main focus of a training organized jointly by the he Future Farmers of Samoa program (FFS), the Government of Samoa and the Food and Agriculture Organization of the United Nations (FAO)

The Leadership and Agribusiness Training invited 10 FFS youth group enterprises. The groups included Sale’imoa, Gagaifo Lefaga, Salamumu, Piu and Sapunaoa from Upolu and Pu’apu’a, Sasina, Saleaula, Itu Asau College and Samata from Savaii.

Training for the Savaii participants was conducted on September 20 to 21 at Vacations Beach Fales in Manase and for the Upolu participants on September 27 and 28 at Maninoa Surf Camp.

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**Tonga Ministry of Agriculture reports**

The Ministry of Agriculture is stepping into the Squash Industry for the first time this year, as one of the growers, in order to boost declining squash production.

Peni Vea the Chief Executive Officer of the Ministry of Agriculture has confirmed, that they have planted 100 acres of squash on a plot of land behind the Fua’amotu International Airport.

Peni said the main reason they have stepped in is to help the Tongan Squash Council maintain the minimum yield for the industry since many local growers withdrew.

The Ministry became a grower simply to help fill in the gap left by some of the local growers that withdrew, so that Tonga maintains its squash industry as well as its overseas market like Japan and Korea,” he added.

He said that the tonnage of squash exported per year is around 12-15,000 tonnes, but this year a much lower yield of around 6-7,000 metric tonnes is expected.

Peni said that they had not decided which local Squash Export Company they would export their squash with once their yield is harvested.

**Lower Yield**

The Tongan Squash Council is also expecting a low yield for Tongan squash this year.

Stephen Edwards the Secretary General of the Tongan Squash Council said today that the production would decrease dramatically and they are looking at exporting a total of 6,355 tonnes.

He explained that many of the growers had withdrawn leaving mainly the squash exporters as growers.

There are 14 exporters this year, and the first vessel will depart Tongatapu on October 24 with an estimated 2,500 tonnes. The second vessel will be confirmed in a council meeting on September 14.

Steve said squash exports have been gradually declining and in 2005 Tonga exported about 12,000 tonnes, which last year decreased to only 10,215 tonnes.

He added that other factors contributing to the decline, included the high costs of freight, fertilisers, seeds, chemicals, the decreasing value of the Tongan pa’anga against foreign currencies and the increased rate for hiring labourers and tractors.

But our objective is to maintain the industry and keep it alive because we have an obligation to the overseas market and to our local industry.

In regards to the Ministry of Agriculture, he said everyone has a right to grow squash. But they will have to export their yield through one of the export companies because they do not have an export licence.

The harvesting of Tongan squash began on October 1.
Introduction

- A vegetable nursery needs tools, techniques and resources for efficient operation
- This will be identified and discussed for nurseries recommended for PICs

Nursery resources

Every nursery should have the following:
- Potting shed.
- Store potting material and protect from rain
- Consist of roof iron with wooden supporting structures
- Size depend on level of nursery operations

Propagating benches

- Required where budding or grafting are involved maybe in a greenhouse setup.
- Consist of benches, 1.5m x 2m

Staking boxes.

- Used to propagate plants by cuttings
- Place under 90-100% RH, 20-24 degrees Celsius temp with coarse sand
- Made from concrete or wooden material or simple tray.
- Maybe under sarlon shade or green house.

Germinating boxes.

- Ideal to have germinating beds or germinating boxes
- Place under shade with adequate water
- Have maximum width of 1.2 m, length up to 2 m.
- Bottom plats have 2mm gaps for drainage
- Fig 4 shows germinating box used in nursery
- Media consists of 6 to 7 parts river sand, 2 to 1 part course organic material (sawdust, etc) & 2 to 1 part fertile soil

Propagation tools & Accessories.

1) Grafting knife
   - Figure 5 shows grafting knife
   - If absent, small kitchen knife can be used (e.g. toddy knife)

2) Secateurs
   - Always needed to trim leaves, branches & cutting of shoots. (Figure 6) Secateurs & other tools.

3) Grafting tape
   - Special tape (2-3mm wide) for budding & grafting
   - If absent, microfilm plastic maybe used.

4) Rooting hormones
   - Various blends for raising cuttings, e.g. 1AA, 1BA & NAA

5) Clear plastic bags
   - 3cm x 12 cm, 0.06 mm gauge for placing & taping on already propagated seedlings to protect grafted plants.

Following basic tools are required for media preparation:
1) Basic tools
   - Wheel barrow, shovels, digging fork, small hand shovels, small hand forks, bush knives etc.
2) Potting media mixes
   - Concrete mixer can be used for large scale operations.
Soil, sand, organic substrates & inorganic fertilizers can be mixed at required proportions for potting.

3) Pot fillers
   - Semi – mechanized pot fillers maybe used in large nurseries
   - Rotary system media placed in barrel from which soil fill pots

4) Media pots
   - Large range of pots in various sizes etc for potting of soil; e.g. bamboo, basket, hanging baskets, plastic bags.

5) Polyvinyl pots.
   - Wide range of make, shapes and sizes.

6) Ceramic pots
   - Wide range available
   - Sterilize potting media
   - Soil steam sterilizers may be made of drum
   - For small scale even ovens can be used

Potting media
Vital components of nursery management, raise seedlings.
   - Ingredients are as follow:
1) Fertile sandy loam soil
   - Friable high nutritional status
2) Sand
   - River sand (fine) used
   - Sea sand but washed, also alkaline
3) Organic materials
   - Wide range, e.g. composts, etc…
4) Gravel
   - River Gravel used
   - River stones for striking box
   - About 50% lower bottom layer is stones
5) Fertilizers
   - Should include slow release fertilizers.
QAS Information Form

For the latest information on any aspects of agriculture, fill in the form below and send it to IRETA

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Purpose you need the Information for:

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Please contact the following address:

Director, Institute for Research, Extension and Training in Agriculture (IRETA)
Private Mail Bag, APIA, SAMOA, ph:(685) 21882, fx: (685) 22347
Email:uspireta@samoa.usp.ac.fj
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