

Supporting Agribusiness in the Cook Islands



AGRI BUSINESS

Simple management. Clever farming.

Giovanni Marsters Hawaiian Gold pineapple plot using a method of farming that reduces ongoing maintenance.

Giovanni Marsters of Vaimaanga reflects on the old way of planting and the way he plants now.

“Planting with the old man, everything was hard.”

And this is the perception you get from a lot of Cook Islanders who grew up working the family farms with their dads and grandfathers.

“It’s totally different his kind of planting [referring to Paxton the FAO Chamber of Commerce agribusiness consultant who is also a close friend], planting watermelon, it looks after itself.”

This is the new type of commercial farming that many young people are now embracing and that Paxton is assisting him with.

“It’s not new, he teaches practises that are used in orchards all around the world,” says Giovanni.

Brian Paxton has a commercial orchard on the backroad of Aroa which many of you have seen. And it looks very

professional. How to get your orchard looking like that is what Paxton has been sharing with Giovanni, who has now set up a passionfruit plot using plants supplied by Paxton and which are among Australia’s top 3 commercial passionfruit. This is a plot of 20 plants, but is only one of the many fruits that Giovanni is planting and experimenting with.

He also has a pineapple plot (pictured above) planted using a way that Paxton has taught him lining it with polythene and installing irrigation so as to reduce maintenance. According to Giovanni, he won’t have to weed around his pineapples for 5 years. There is some extra work done under the polythene as well which you can learn about if you also signed up to this program.

Giovanni has also teamed up with his Uncle and long-time planter Sabu Matapo, to produce commercial farms on

the family land.

Giovanni is just one example, but the Chamber of Commerce and the FAO are trying to encourage the next generation of farmers because many of our farmers are aging. The labourious nature of agriculture is one of the reasons that young people are not interested in agriculture - hard work and long hours in the sun.

Furthermore, there can be disappointments especially when crop is affected by theft, extreme weather, and animals. But there are mechanisms for dealing with these kind of problems.

Sometimes the returns on your hard work is not reflected due to the market being flooded with the same crop all at the same time. This is a problem the country has been talking about for years but nothing really done about it, so all the tomatoes continue to come onto the market at the same time, and

then there are periods when there are no tomatoes at all. The local market can deal with these kind of fluctuations as most people just eat what is available. However, for our tourism industry, consistent supply of fruits and vegetables is really important. When you put something on your menu, you can’t say that you ran out. Commercial farming addresses all these issues. It is a bit difficult teaching this kind of way of planting to long-time farmers as they pretty much are use to their own ways of planting. But for younger people, intending to make a living from agribusiness, this is an attractive way of farming. Currently, the country imports millions of dollars of fruits and vegetables from New Zealand a year. This money can be kept in the country if we can cater for the demand for the various kinds of crops, and provide a consistent supply all year around, and this is what Giovanni would like to do.



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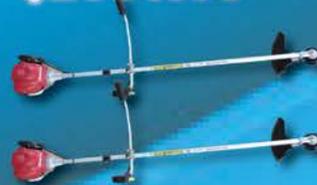
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Flowers, flowers everywhere

Victoria's passion for flowers is evident. There are literally thousands of plants tucked into every available space around her family home. There is obviously lots of love in her garden too, as the flowers are all in bloom, thanks to all the attention she and her dad gives them. With that much beauty and variety around you, it is no wonder her wedding bouquets and flower arrangements are highly revered.

When asked whether she had enough flowers to meet the orders that would be expected from export demands, she said, "you come and see", and with that walked around to the rear of the house. "12 years" of planting she says, as we walked through her garden. It looked more like a lifetime of planting. There were literally 'flowers, flowers everywhere.' What was noticeable though was that she only had 2



Victoria Ruaporo has her favourites, but it is the flatter, uni-coloured ones that are exportable

While she plants a wide variety of plants she clearly has a love for anthuriums. It is these, that she has been told has potential as a good export flower. On the overseas market, a stem of anthurium can fetch around \$15 each.

However, it is not a matter of cutting her flowers and sending them overseas. She first needs to produce anthuriums of uniform size so that if they ask for one hundred 5cm diameter flowers, she will be able to give them a hundred of exactly the same sized flower.

To achieve this, Victoria shares that it has to do with the feeding program, and this is something that the FAO Chamber of Commerce agribusiness consultant Brian Paxton will be teaching her.

Quality is also important. According to Victoria, she has learnt that a flatter blemish-free anthurium is preferred over the curly or fancier ones which can be regarded as 'deformed.'

But of all the types she has, Paxton has identified 5 colours from her current range (pictured inset above) that would be ideal for export. Victoria says that Paxton will also be helping her to study the plant itself to understand the health aspects of the plant so that she will know how to care for them better. She shares that there is a fungus that likes to attach to anthuriums so she will have to be able to treat these so that the quality of her plants are not affected.

greenhouses, one at the front of the house next to her shop, and one at the back of the house. There were hundreds of plants that still needed a home. Victoria had pretty much used up every bit of shade there was to be a home for her plants.

But parts of her life and the way she grows is about to change. As part of the FAO Chamber of Commerce agribusiness project she is about to get another greenhouse 18x21 meters which will be a home to 9 rows of anthuriums but with flowers sitting on a bed rather than in pot plants as she has now. She believes you can get about 50 flowers comfortably into one row but it could be more. The cost of her greenhouse project is about \$20,000. She is excited about the new additional greenhouse but she admits to me that she really needs another 5 of them in order to house all the other plants she has around the back of the house. Part of the greenhouse which will house her export flowers will also have a packing and storage facility. So she is really excited about this new journey that she is on as she will be learning things she hasn't before.

According to Victoria, it will only take about 8 months before she will be able to produce her first lot of export flowers once her greenhouse, packing house and storage are ready. This is excellent news for a country that doesn't export cut flowers.

One with nature

Eddie Henry has come full circle. As a young boy, his grandpa took him with him to do all his planting and it was tough. In fact, this hardship is resonated by many other children who grew up here in the Cook Islands in the 1970s and 1980s where agriculture was an important part of life. It is also the reason many young people have opted to stay overseas and not return home as per a UNESCO funded study on why people leave in 2006.

But your true calling does tend to find you in the end, and for Eddie it is planting. In fact he has been trying to get back into agriculture for the last 10 years.

He has purchased plants that the Agriculture department was giving out. He has even tried to import plants from other countries. But about a month ago the opportunity opened up for him to be a part of the FAO Chamber of Commerce Agribusiness project and he jumped at it. He had actually been wanting to be a part of this project for the last couple of months. And after Eddie explained the benefits of this program to me, I can understand why. Pretty much he debunks all the myths we have about agriculture.

"It all comes down to management," says Eddie who has been learning off mentor Brian Paxton.

He shares that if you follow the schedules set for your crop in terms of feeding, maintenance then you only need to work a couple of hours a day. But before you get to that stage your plantation must be prepared well. This involves clearing, grading, leveling, rolling the ground and developing a lawn. This is basically weed management, as well as, keeping it tidy. Furthermore, grass from the lawn gets mowed back onto the trees as fertiliser. And pretty much you use a ride on mower which makes work a lot easier.

A hedge is necessary for orchards as it serves as a wind break and protects the flowers. Fencing is also important to keep out the animals, which can upset your hard work.

Ensuring that the land is yours is important as it is going to be a 10 year investment and you don't want to have to move your project off the land when the landowner wants it back.

It is only after all this that you can then work out your plot plan. This includes the plot layout and irrigation. Once your plants are in the ground then you have a feeding, pest management and maintenance plan. At the moment Eddie is creating root stock for mangoes and avocados which are going to be the two trees he will be planting in his orchard. So he's planted a whole lot of seeds, which after 7 months will be ready for grafting. Paxton will then assist Eddie by grafting a commercial mango and avocado onto his root stock. Basically, you need to use local root stock as it survives better in our soil and climate says Eddie.

So Eddie will be ready for grafting in about February/March. Grafting ensures you get exactly what you want. The graft only stays in the bag for 2 months then it can be planted.

For now, the orchard is a part time job. He needs to keep his full time job while his orchard is growing.

The orchard trees won't be ready for another couple of years. One day he hopes to supply the local market, and if he has excess may look at exporting either raw fruit or concentrate.

The potential of land

Jessie Sword and her siblings are looking at the legacy their mother has left them, and how they can turn it into something meaningful and productive. She says that if you are not going to live on it, you should at least plant on it. Jessie is referring to her mother's land in Atiu.

This is the very kind of thinking the FAO Chamber of Commerce agribusiness project is trying to encourage given that there are lots of vacant pieces of land in Atiu, and other pa enua with landowners either residing on Rarotonga or overseas.

So Jessie has had her initial meeting with FAO Chamber of Commerce agribusiness consultant Brian Paxton to see how she and her siblings can cultivate their mother's land and transport the food back to Rarotonga where there is an unmet demand.

She would like to do the full range of vegetables and fruit like mangoes, avocados, chillies, vegetables but is willing to work with a co-op further down the line to ensure that the market doesn't get flooded with the same crop. This is important as "usually when there is an oversupply on the market, you won't get a good price for your crops." At the moment, it is quite hard to get most fruits and vegetables in Atiu. She has seen beles, potatoes, and some cabbage.

At this stage they are in the planning phase. Paxton has visited them in Atiu. Now they have a number of issues to work through such as: which land to use, how to get water to the land, how to protect the crops from wild goats and pigs which are prolific on Atiu, planting hedges which will be a wind break, then there is root stock that needs to be planted.

Jessie says that you don't realise but it is quite an investment to become a farmer. You have to be prepared to put in some of your own money to get it up and running.

Once they have gotten through that initial phase, Paxton will assist them with how to plant and look after their farm so that it produces continuously and is manageable.

Further down the track, she may look at processing some of the crops.

Taking care of business



Neo of Tangimetua Vanilla, pollinating the flowers. Inset: Neo picks the beans when they are half brown to dry.

Kapiri Tangimetua comes from a family of planters. She is actually one of 8 children and the only daughter. Interestingly, her father a highly-regarded farmer in Ngatangiia wasn't sure if he should let his daughter run their family vanilla plantation. "It's boy's work" he told her. But with the unfortunate passing of her brother Sepa who established the family vanilla plot, someone needed to step up and manage it, and that was Kapiri. Now she says, her father sees her as a capable young woman and very dedicated along with the help of her brothers to manage the farm.

Admittedly, with her whole family having full time jobs, they haven't been able to give the 1700 vanilla plants the attention that is needed. Usually, she and her nephews who are only 7 and 8 would spend Saturdays pollinating. But now that they have a full time worker, she feels it is time to move the farm along further.

There are two different plots on the Tangimetua farm. The first plot of 900 plants was planted in 2011 and was ready for harvest in 2014, the new plot was planted in 2013 but some of them are already producing.

Vanilla pollination is a time-conscious activity. The flowers come out every morning and by 2pm they have closed so if you aren't pollinating them then you miss that opportunity to produce a bean.

Hand pollination is the common means of producing each bean.

She says they have a Tahitian variety of plant.

There was one time when the leaves on some of their plants were yellow and they were told that this may be a virus. But what intrigued the family was that with a virus, the plants would not produce any beans but theirs still did. Her father believed that the reason for the discolouration was that particular row being on the outer edge of the shadehouse and getting more sun compared to those on the innerside which remained green. Despite this they took out the row of yellowed plants and planted new ones. She says that the FAO Chamber of Commerce agribusiness consultant Bill Paxton said to her that it is possible that she may have received bad advice.

The Tangimetua vanilla farm is extremely neat, but she said that one day the neighbour's coconut tree fell on to part of the shadehouse and when the people who removed it took the tree away, they damaged the shadehouse dragging the cloth rather than lifting the tree off it.

It was fortunate that her then business mentor told her about the FAO Chamber of Commerce funding which she applied for. The \$10,000 funding helped her to buy the materials to repair the shade

house, as well as, buy a storage container to store equipment, supplies and dry beans, as well as, to take power to the site. The power should be connected to the container this week.

Now that she has a full time worker pollinating and maintaining the plot every day, her efforts can now turn to marketing. Currently, Framhein Koteka buys her C grade beans for essence. She dries the A and B grade beans and has sold 15kg of it to Heilala Vanilla for about \$90 per kg. Each kilo consists of 250 beans which is quite a lot. Heilala Vanilla is interested in purchasing all her A and B grade beans. She will spend more time to learn about markets and market prices over the next few months.

In the near future, her family will also be expanding and putting up a new plot exactly the same size as the existing one on the adjacent piece of land. She says her brothers would like to do this next year. With a 3 year wait period for harvesting it would make sense.

Drying, packing, sealing will also have to be set up within the container.

According to Kapiri, vanilla farming is not hard work it is just time consuming. And if you are maintaining it every day it is very easy. You only need to water them once a week, and they already have irrigation set up for that. And you don't fertilise it, you just use mulch.

Encouraging the younger generation



Mataio Mokoroa, learning the trade from his grandfather and grandmother, Mr & Mrs James Heather

Mataio Mokoroa may not have spent a large part of his life here, but his grandfather James Heather is ensuring that he transfers all of his and his wife's agricultural skills and knowledge to him. When we visited them, Mataio was working quietly and diligently with his grandparents to contain the weeds while his grandmother was tying up the tomatoes.

Mataio doesn't know many other boys his age that are doing agriculture type work apart from his other two brothers.

His grandparents are highly skilled. His grandfather was an engineer and worked with steel. His grandmother worked in the orchards of Hawkesbay and knows everything about the process of commercial agriculture. Apples, strawberries, carrots, potatoes, courgettes etc, pruning - she knows it all. They had lived in New Zealand for 17 years, returning home in 1985.

Over the last 30 years, planting has become a way of life. Grandpa James even has a large hydroponics garden that can produce 1800 lettuce a week which he can't operate as he hasn't got a market for them.

But he would like to keep it in case he does get a market.

James says he would love to build a smaller hydroponics farm that will produce only 300 lettuce a week. This would be an ideal size hydroponics farm for his grandson Mataio. He has the skills to build the farm himself as he built his other one himself. He would like to also look at branching out into hydroponics watercress as this could be a different market than that already being catered for at the moment.

He likes hydroponics as you can control the output by controlling the feeding. You can harvest a lettuce plant in 5 weeks by controlling the feeding process. He says the FAO Chamber of Commerce agribusiness consultant Brian Paxton has visited them, and James says he knows most of the things Paxton shared with them, but what was great about it was Mataio was able to hear from someone else that Grandpa James does know what he is talking about.

For now, they are doing outdoor planting and they do have a market for their herbs, tomatoes, beans and other vegetables.



Working together

The Te Mou Enea group is looking forward to getting their greenhouse done so that they can get onto achieving their goal of supply seedlings for the village of Puaikura.

They were fortunate to have received \$10,000 of the \$17,000 needed to start their greenhouse project from the FAO funded Chamber of Commerce agribusiness project. This enabled them to buy the materials needed to build the greenhouse.

There is still much work to be done such as irrigation, building benches, and purchasing seedling trays. Despite this the members plant seedlings at their home and were able to program harvest of crops for the FAO World Food Day last year and this year, as well as, the BTIB Market Day during the Te Maeva Nui festival.

The Te Mou Enea group which has only been in existence for 2 years is looking at planting citrus and avocados.



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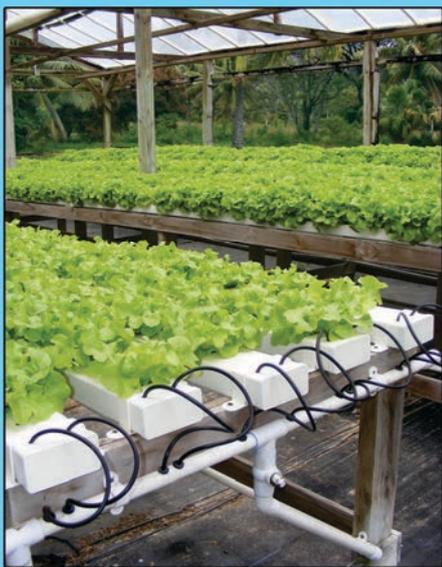
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Organic is better



Jason Uka, straining noni juice - Cook Islands noni is one of the better tasting in the world

Becoming organic is not as hard as one would believe it to be. According to Brad Stafford, owner of CI Noni Marketing, it involves checking the land and that it is ok to be grown upon, then organising a soil test that has a \$180 one off cost, filling out some forms, and then every year being subject to an audit. Being organic means your land can't have had chemicals used on it for 3 years prior to growing and chemicals are not allowed at all. Perhaps the toughest part of becoming organic is the fee that has to be paid every year. CI Noni Marketing pays about \$30,000 a year to get it's 42 noni farmers certified with ACO (Australian Certified Organic) and Chinese certified.

So assistance from the FAO Chamber of Commerce agribusiness project of \$5,000 was really appreciated in helping to keep farmers certified. He is also grateful for the help from the project's Lynne, Teresa and Massimo.

The certification is accepted by the countries that the company exports to namely Japan, China, Australia, New Zealand, Norway and Pakistan.

Realistically, the company can produce 20 tonnes of noni per month. But for 2015, he would have exported a total of 150

tonne.

The Cook Islands is the only country producing noni at the moment says Stafford, our other Pacific neighbours are being affected by the El Nino. "We have been fortunate to have had some rain" even from the recent cyclone Tuni which will put natural noni production in good stead. Despite this Stafford says they will continue to supply their customers with noni at prices they have always sold it at in order to keep a good working relationship with his customers.

Stafford likes the original Cook Islands noni to the current Kiribasi version that is a favourite of farmers here. The Kiribasi fruit is larger. The Cook Islands noni is a lot smaller and tastes better says Stafford. Over the next year, Stafford plans to plant 20,000 trees to increase the supply and availability of noni for export. He is also keen to keep the quality of our noni as is as his customers are saying that it is much better than other noni on the market where some are mixing juice from different countries, or moving production to countries that can produce noni at cheaper rates.

Small plates, tasting menu

If anything Philip Nordt comes across as a chef who cares. He is extremely concerned about what exactly he serves you with, and how much of it. This is why he has joined organics farmers and has himself established his own organic plot. This is something the FAO Chamber of Commerce agribusiness project is assisting him with.

He is mainly planting things that he needs at the CITTI training school because he has not been able to get a consistent supply of them. He has the first organic avocado plot on the island. And he has a plot of 400 organic silverbeet plants. He also has a number of other plants such as edible flowers which is used a lot on degustation menus. Edible flowers taste like watercress he says. Degustation menus are small plates of tasty food. The focus of degustation menus is that it appeals to your taste buds.

He believes that we need to mix up the styles of eating available. Buffets are very common here and there is always too much food on it which can send your pancreas into overdrive if you take too much. Degustation menus consist of basically 4 small plates of different tasty food that you can enjoy separately without mixing up.

For his degustation menu, he would like to introduce baby vegetables like baby beets, baby carrots, which look attractive on degustation plates. These he is farming himself.

"I will do anything to make a nice meal."

Wild chickens that noone likes to catch and clean anymore have the best meat. They are completely organic, and are really good for you says Nordt. He would like to create menus with wild chickens.

The new apprenticeship program that CITTI are offering next year looks at growing your own food and using it to make tasty meals. The program is now open for registration to any individuals interested.

Doing extra studies not only advances a person, but has other benefits in terms of getting better pay. CITTI courses have a huge success rate, "there is not one student that won't say its not worth it," says Nordt

Information about the course is available from the CITTI office in Ngatangiaa.