

the Nutshell

MPC'S NEWSLETTER FOR MACADAMIA GROWERS



JUNE 2010

From the GM

Welcome

Welcome to the new growers who have joined us this year on the back of our strong performances over the last two years. We hope you like the new look Nutshell.

In this edition, we have some very good material on the value of drainage, organic conversion and organic farm management. We will follow this in the next edition with support material for growers on pest and disease management.

What a difference twelve months makes

The 2010 harvest season is well underway with improved kernel prices in the market allowing for more reasonable NIS prices. Thankfully the volatility in world markets has not affected the macadamia market much, probably due to the global short supply of kernel.

We are achieving good prices in US dollars & Euro compared to last year, but it has led to smaller gains in Australian dollar terms since the exchange rate has been working against us.

The recent fall of the AUD: \$US exchange rate is good for the industry but due to the smaller than expected 2010 Australian crop, much of this year's kernel is already sold.

The short supply of kernel has seen kernel prices rise but the lack of kernel is stifling market growth. Next year's prices are likely to remain firm as long as the underlying demand is still there. MPC is working hard to position our customers so that they can promote and sell kernel as soon as the next big crop occurs, with a view to making the dips shorter and less severe.

2010 crop size down

Overall the Northern Rivers crop this year is patchy. The general expectation is for a small crop with only a few exceptions. Bundaberg experienced rain throughout the early harvest season resulting in larger than normal crop loss. The result is that the 2010 crop appears to be significantly smaller than 2009 with some estimates for the industry crop as low as 30,000t, down from 38,000t last year. Compounding this is the drought on the main Island of Hawaii that will significantly reduce their crop this year. The result is that kernel is now in very short supply.

We need every kg of NIS

Every kilogram of NIS you deliver results in better returns to you. Some things that you might do to help:

- Don't discard lower quality NIS without giving us a sample. Many growers have received excellent prices for this product
- Do that extra harvest-round to clean up at the end
- Get your neighbours and friends to deliver to us, we pay well and we pay fast.

2010 crop quality

The good news is the quality of the 2010 crop has been better than 2009 allowing the factory to work more efficiently. Total kernel recoveries are also better than last year allowing us to produce more kernel from each kilogram of NIS. That's good for our growers and both these things will help us weather the short crop.

Invitation to next board meeting

The MPC board invites all shareholders to meet with them on the 30th June 2010 at the Factory between 3 and 5pm. This meeting is your chance to discuss matters directly with the MPC Board and to gain a better understanding of what is happening in the company and the industry in general. We encourage you to take advantage of this opportunity

Larry McHugh
General Manager

In this issue

Marketing Snapshot	2	For Sale	3
Factory Operations – with Steven Lee	2	Heads and Tails – the value of drainage	3
Courses and Field Days	2	Going Organic Information Afternoon	4
New Spray drift Principles – take note	3	The organic macadamia market	5
Do you want faster Consignment Quality Reports?	3	Steps to certification and the process of certification	5
Buying power	3	More Organic info	8



Marketing Snapshot

This year the MPC marketing team is delivering added value through new products that utilise traditionally lower value kernel and previously unused parts of the crop. This will enhance margins and further improve the premium positioning macadamias deliver.

We have introduced macadamias to numerous new markets across the Middle East & Asia and these customers are introducing new products to consumers. The good news is they look to be sustainable long term markets where we will experience growth.

We are also working with the AMS to reposition macadamias as a health and wellbeing premium product that attracts higher selling prices for retailers, and higher margins for all in the supply chain.

Factory Operations – with Steven Lee

The start to the 2010 processing season has been solid; with good quality NIS delivered allowing us to achieve high processing rates. The higher quality NIS has been welcomed by growers, factory staff and all at MPC.

During the off season we installed an additional colour sorter on our kernel chip line, resulting in a significant reduction in sorting labour for kernel chip. Coupled with the existing colour sorters on our main kernel line, the streamlining of our cracking room and the expansion of our Growers Choice brand, MPC continues increasing its efficiency. These changes are delivering and will continue to deliver more money to our growers.

MPC is now a Certified Organic Processor. Whilst Organic growing is not necessarily for everyone this certification allows us to give all of our growers the opportunity to tap into this niche market.

Courses and Field Days

2010 MPC Farm Chemical Users Re-accreditation Course

MPC shareholders and their staff who need to update their farm chemical user's qualification in 2010, will benefit from this half day course conducted again this year.

Date: Wednesday 10 November, 2010.

Venue: MPC Factory Board Room

Time: 8.30am to 12.30pm

Trainer: Phil Harvey from TAFE Wollongbar Campus

Cost: \$120.00 payable to TAFE NSW

RSVP: to Tracey at MPC on 02 66243900 or email reception@mpcmacs.com.au by Friday 29th October (Notes for the course have to be sent to participants from TAFE). More information - contact Jim Patch at MPC on 66 256309.



Shareholders and their staff at the 2009 MPC Farm Chemical users' re-accreditation course.

For Sale

TORNADO AIRBLAST SPRAYER Very light use, hydraulic tilt, 1 metre fan, 2000Lt tank, narrow angle shaft, 2 speed gear box. Excellent working order. **\$10,000**

LARGE DROP SIDED TRAILER Suitable to carry two field bins (1.7m x 3.1m) **\$150**

WOODEN FIELD BINS (New now cost \$200) **\$80 each**

SOLO 15Lt BACK PACK SPRAY UNIT \$60

TREE INJECTOR UNIT For use in injecting sick tees -original cost \$500 **\$200**

SALTER HANGING SCALES top quality, excellent condition almost new – cost \$175 **\$100**

DELMHORST NUT MOISTURE MONITOR battery operated, hand held, hardly used – cost \$365 **\$150**

CUSTOM TROLLEY TO MOVE 200 Lt DRUMS - original cost \$220 **\$80**

NUT CRACKER hand operated with fly-wheel – cost \$300 **\$100**

SLOPING RACK-STYLE SORTING TABLE with reverse sloping discard tray **\$100** **GRUNDFOS 240V PUMP** – suitable for attachment to a water sorter – brand new, still in box – (normally \$437) **\$250**

PELTOR EAR MUFFS \$20

QUAT – sanitiser for cleaning food production tables etc – costs \$82 per 20lt drum – almost full drum **\$40**

WELDING HELMET - near new **\$20**

LONG HANDLED PRUNING SHEARS \$30

HYDRAULIC CONTROL LEVER \$100

pH SOIL TESTER - probe style - in carry case **\$20**

VARIOUS DRAG CHAINS – Various prices

Contact: - Shaun and Gina Murray on 02 66 895104 or murraykirkwood@harboursat.com.au

Do you want faster Consignment Quality Reports?

Did you know MPC can email your quality reports? By receiving your reports electronically, they will arrive on average 1-2 days faster than the traditional mail route. This can be very handy when you are trying to make decisions, such as whether to sort or not.

If you would like to receive your consignment reports via email, contact Tracey at MPC reception reception@mpcmacs.com.au, via phone 02 6624 3900 or pop in to sign up.

Technology Support

If you require assistance to setup an email account or open the electronic reports, please contact Jim Patch or Kevin Quinlan on 6624 3900.

Buying power

The next MPC's Buying Group is scheduled for mid to late July 2010. After the 2009 success, which saw reduced prices offered to growers through the Group (and subsequently by all industry resellers) we plan to offer this fantastic service again in 2010.

Right now we are negotiating with suppliers to get the best prices and anticipate securing special prices through the Group in early July.

Heads and tails – the value of drainage

In the early hours of the June 3rd, a strong East Coast low delivered the now well publicised tornado to Lennox Head, accompanied by heavy rainfall across the growing region of the Northern Rivers.

At Rous, 280mm of rainfall fell, most in just 2 hours. Alstonville recorded 174mm, while Clunes received 160mm. These figures highlight the tremendous variability in rainfall across our growing region. Unfortunately the high intensity of rainfall caused significant levels of damage across orchards. There was considerable run-on and run-off from farms.

Good drainage is key

Drainage is a key part of managing the effects of such events. Greg James from Bushnut Enterprises knows firsthand what heavy rain can do and the value of good drains. "After last year's flood we decided that we needed to improve the water control on our farm. We'd suffered damage and felt we needed to start controlling water flow. Heavy water flows can move a considerable volume of nuts out of the blocks and into waterways. These nuts were lost and we couldn't harvest them. We knew this couldn't go on and so embarked upon building some drains and waterways to alleviate the problem" Greg said.

There are several types of waterways on the farm. The first are head drains – designed to stop water flowing from neighbours or other areas of the farm onto macadamia blocks. These drains reduce the amount of water that needs to be drained to only water that falls on the block. The water in a block is then directed into shallow v-drains (more like a spoon shape than a v) that takes the water from the tree row to the inter-row. This reduces the effects of water scouring out the soil around trees and exposing tree roots.

New spray drift principles – take note

The Australian Pesticides and Medicines Authority (APVMA) have introduced a new set of spray drift principles.

It includes the introduction of downwind buffer zones for chemical spraying. The buffer zones are based on a set of criteria, which includes the chemical used, the water volume applied and the droplet size recommended by the manufacturer to achieve satisfactory control. The changes could have a significant impact upon your ability to spray your crop.

The Victorian Department of Primary Industries is running an online survey to collect information that will be provided to the APVMA on the real volumes used by horticultural producers, to assist in producing no spray buffer zones relevant to current practices. This information will be crucial in developing practical no spray buffer zones. MPC supports the DPI initiative to gather and provide a report to the APVMA about water rates typically used in horticulture so the industry is not restricted by a worst case scenario of excessively high water rates.

The survey located at, <http://waterrate.questionpro.com/> provides an opportunity for the macadamia industry to have a voice in the decision making. **We encourage you to take the time (5 mins) to respond to this anonymous survey.**



Figure 1. Drain through a tree block created by removing a tree row.

Tail drains

Where there is adequate light, smothergrass has been established to stabilise drains. The farm also has tail drains. These drains are grassed waterways that take water from a block and direct it to a natural drainage line.

“This rainfall event was huge and although our drains are not perfect, the event has shown the value of our drainage works. Where we would have had water flowing through a block of trees and washing nuts and soil away, we suffered very little damage and the nuts have remained. If we didn’t have drains the damage would have been a lot worse” Greg said.

To achieve the drains Greg removed some trees. “It was hard to pull out trees to make drains. But, if removing 15 trees that produced 300kg of nuts stops water from running through a whole block of 120 trees and washing away more than 300kg, then I consider it a good investment. There are still areas on the farm where we need to put drains in, and in some areas we need to make the drains bigger but we will work on that over time. The recent large volume of water we had meant our drains couldn’t cope in all places and so we will look to make them bigger. I believe the work we have done so far is paying for itself” he said.



Figure 2. Head Drain for the block to the left and tail drain for the block to the right.



Figure 3. Top of block below the head drain, showing the crop still on the ground after the storm event.

Going Organic Information Afternoon

Forty growers attended the information afternoon on May 13 regarding growing macadamias organically. There were presentations on current market opportunities, the certification process, grower experiences of being organic and what information and assistance is available. The key messages from the day were:

- There is great potential in the organic kernel market, and MPC is committed to working with customers and growers to take advantage of this.
- It is possible to be successful at growing macadamias organically, as long as growers are aware of potential pitfalls.
- Variety selection impacts upon success. Some nut varieties are not considered suitable: thinner shelled varieties are more prone to insect damage, while sticktight varieties are more prone to Husk Spot.
- Healthy trees are more resistant to pest and disease attack. Improving and maintaining tree health through improved soil health is critical. The soil resource needs to be protected.

- As part of this, a healthy ground cover of grass on the orchard floor is important. This requires pruning the trees to allow light through. Be prepared for a lot of mowing!
- Harvesting equipment must be designed and managed to ensure it can cope with grass.
- It takes an average of three years to become certified organic. For the first 12 months, the farm is considered in a 'pre-certification' phase. During the second and third years the farm is called 'in conversion'. The 'pre-certification' period starts as soon as a grower lodges an application with the certification body.
- Good sources of information are the leaflets produced by universities and state Departments of Primary Industries. Before committing to a company's products, look for trial results that have controls in them to ensure they are providing a fair comparison.

Any growers needing assistance are invited to contact the team at MPC. We are only too willing to help.

There were 4 speakers at the information afternoon: 1. Larry McHugh, MPC General Manager spoke about the organic kernel market, 2. Andy Monk, Biological Farmers Australia talked to the steps to certification and key issues you must address to become certified organic, 3. Peter Fleming, Certified Organic Macadamia Grower shared his experiences farming macadamias under an organic management system, including the good and hard aspects of the system and 4. Kevin Quinlan, MPC Supply Chain Manager NIS, presented a number of websites and publications available that contain useful information on organic farming. Notes taken on the day are provided in the following summary that covers all presentations from the day.

The organic macadamia market – Larry McHugh, General Manager MPC

MPC's analysis of current market trends and opportunities shows there are great opportunities to be had in the organic kernel market. There is strong demand. Our research shows the market could be substantially larger but a lack of organic kernel has slowed growth.

Generally the organic market is one of the fastest growing niche food sectors in the world. Retailers want to have organic products on their shelves, but are finding it difficult to source enough product. This lack of supply is driving up prices for organic produce.

There is currently little competition in the global organic macadamia market. Countries such as South Africa have great difficulty controlling pests such as stink bugs. Australia's 'clean and green' image, combined with a strong regulatory framework, puts us in an ideal position to take advantage of markets with stringent requirements. It is also possible to create a strong brand by being an early entrant into the market.

Why is MPC interested in Organic Macadamias?

MPC believes that the elements are in place to make an organic line profitable, and that the timing is right to start the process. MPC is committed to helping growers get the information and resources they require to convert to organic methods, while developing the market for the new production.

Organic cultivation may be particularly suited to growers with small holdings, who face rising production costs, increasing urbanisation creating problems with spraying, and big price fluctuations for conventional kernel. Going organic may provide them with longer term viability.

How will MPC develop the market?

We already have customers who will take substantial quantities of kernel at very good prices. We are confident we can grow the market as kernel production increases over time. MPC also aims to create shorter and more innovative supply chains with fewer middlemen. This will also allow us to better manage the quality of macadamias reaching the consumer.

What are prices like currently and will prices fall as production increases?

At present, organic kernel is selling for over \$20/kg, while conventional kernel is selling about \$14/kg (average across all styles). This is a 43% price advantage for organic kernel, which is reflected in the current NIS price of around \$3.60/kg.

Prices for organic kernel are also more stable than for conventional kernel. Organic average NIS prices for the last three years have been well over \$3/kg, while conventional product has been below \$2/kg. As the price for conventional NIS rises, the price difference between conventional and organic reduces. The main difference is the stability of the price of organic kernel.

Typically as production increases, price falls, as supply meets demand. The long term key to success for organic nuts is finding the balance in price versus volume. This can be achieved by managing the growth of the organic market and developing a strategy to manage the situation. MPC believes it can maintain a good price for organic kernel by growing the market, and finding the right balance between the two.

Steps to certification and the process of certification

Andy Monk, Biological Farmers Australia and Australian Certified Organic

Andy and the Biological Farmers Australia (BFA) Chairman, Doug Haas, a vegetable grower from Yeppoon in Central Queensland, outlined the history of the BFA and its services. The BFA was established to represent the organic industry to government, as well as to provide advice and assistance to organic producers. BFA also owns a sub-group, Australian Certified Organic (ACO) – a company that was established to manage the certification and audit process for organic growers. ACO is responsible for ensuring compliance of all growers with the Australian Organic Standard.

There are multiple organic standards in operation throughout the world. Countries such as the USA have very particular requirements on what inputs that can be used. These variations need to be addressed when a grower is starting their certification process to ensure access to the country they or their processor will be supplying. It is suggested they seek the advice of MPC before signing up.

What are the requirements to be a certified organic producer?

To be a certified organic producer there is a prohibition on the use of synthetic pesticides (herbicides, fungicides, insecticides) and synthetic fertilizers on lands and crops managed that are to be certified.

There are approved inputs that can be used for pest and disease management and fertilising. These inputs are products that companies have had approved by BFA as complying with the Australian Organic Standards. There may be products that are not on the approved list that you wish to use and you can seek approval to use the product on your farm from ACO. IMPORTANT NOTE: Particularly for pest management, a product maybe approved by ACO for use in organic farming systems, but it may not be registered with the Australian Pesticides and Medicines Authority (APVMA) for a specific crop purpose. Before using the product, you need to ensure that you are not in breach of any laws or regulations. A good first step is to seek clarification from the manufacturer on the product and also from your local Department of Primary Industries.

There is a need to have very good records to demonstrate your compliance with the organic standards. This includes developing an organic plan (there are templates available to use) and keeping records of products applied to the farm.

What is the certification process?

In most cases it takes three years before you can be classified as certified organic.

The steps to certification are:

1. Complete the application form for organic certification from ACO. This can be completed online at www.aco.com.au or with the office directly.
2. You will then be sent a farm questionnaire to complete, which is in the form of a statutory declaration. Once this is completed and sent to ACO, your 12 month "pre-certification" period commences.
3. You then need to complete an organic management plan, either using the templates supplied or using your own system
4. For the first 12 months, your farm will be classified as in a 'pre-certification' process. During this period you can not sell your product with any reference to being organic.
5. For the next two years you will be 'certified organic in conversion', as long as you meet the conditions of certification. If you can demonstrate that you have been using organic principles and following the standard before you signed up for certification, then this period of 2 years may be shortened. This is assessed on a case by case basis. After the third year, you will be classified as 'certified organic'.

The time taken to achieve certification may be shorter than the time taken to get your farms organic ecosystem and soil biology working functionally.

What does certification cost?

It is good to develop a budget of the costs for your conversion process. The following are the costs ACO charge:

It is best to budget on \$800 per annum for ACO audits. This figure includes support and assistance from the ACO team on any questions you may have regarding the program.

There is a promotional contributions charge of 1% of turnover of certified sales only, capped at \$4000 per annum. This is currently under review and it has been recommended to reduce this to 0.5%.

My neighbour is a conventional macadamia grower, what buffer zones do I need?

There is no prescribed requirement for a buffer zone, but the Australian Organic Standard specifies that you should carry out an assessment of the risk of contamination from areas off your farm and put in place strategies (such as buffer zones) to avoid potential contamination. This may include

planting windbreaks or having a section of the macadamia orchards trees (using them as a buffer zone) that is considered uncertified.

How you address this issue will be on a case by case basis, and advice on strategies available can be obtained from the ACO office.

Do I have to convert my whole farm or can I convert over a portion?

Running a portion of a farm as organic and a portion as conventional is termed parallel production. Parallel production is only allowed where the organic and conventional produced crops can be distinguished by visual appearance and varietal difference. There are some exemptions to this rule, which are covered in the Australian Organic Standard. The ultimate aim is to have the entire farm certified as organic.

The Organic leap of faith – Peter Fleming, Organic Macadamia Producer-ACO 10448A

I own a 17ha macadamia farm with approximately 5000 trees – older Hawaiian varieties and approximately 20 years of age.

I grew macadamias conventionally for 10 years, before converting to 'certified organic status'. Overtime I moved progressively towards organic farming principles, before finally deciding to take the 'organic leap of faith'.

The major driver for me to convert to an organic was that I had concerns over the unseen long term effects of sprays used on macadamias.

Having a young family at the time, I decided organic farming principles were the best way forward for me. Another significant challenge that became obvious was that despite applying synthetic fertilizers at recommended rates I failed to see a corresponding improvement in yield and soil health. This caused me to question my conventional soil nutrition program. A further motivation was that I was seeking greater returns for the effort I was putting into my macadamia farm.

Nutrition program

The aim of my nutrition program is to build healthy trees from healthy soil. My premise is that healthy soils through balanced nutrition and maximizing soil biology, provides the basis for sustainable management. By this, I mean that the micro-organisms that fix nitrogen in the soil and other microfauna and micro-flora should start the process of cycling



The production of compost is an integral part of the nutrition program.

nutrients to the tree. This will result in a greater resistance to pest and disease attack.

A substantial part of my early nutrition program was to make compost. This required a large area to build the pile and a very significant labour requirement to turn and process composting material. The aim of applying the compost was to build up the soil reserves of nutrients and enhance my soil biology, to re-establish a healthy soil system.

In a certified organic system there are allowable inputs you can use for nutritional soil mineral balance. If my soil testing shows I am deficient in phosphorus I will apply an "allowed input" of soft rock phosphate, or sulphate of potash for potassium. I apply trace elements through foliar applications.

I still use soil testing as a tool to ensure I have the correct balance of nutrients in my soil. However I have a greater awareness of the biological influence on soil nutrition and the subsequent tree health and insect resistance this brings.

Where I have good light levels reaching my orchard floor I plant legumes to increase the nitrogen levels and increase living plant biodiversity that is subsequently slashed to provide organic material to the orchard floor. This provides good nutrition to the microbes in the soil and also to my trees.

Pest Management

A key part to my organic system is making sure I maintain the soil health and tree health relationship. Part of my pest management strategy relies upon the belief that by maximizing light in the orchard and through my trees there is better air flow and growth of orchard floor ground covers. This in turn reduces fungal disease prevalence and provides greater habitat areas for beneficial insect populations thereby reducing damaging insect pressure. Part of the pest management program has been to remove trees, to increase the light entering and to encourage grass growth.



Orchard prior to tree removal.



Tree Removal in Progress.

I do not have a husk spot problem, as I do not have stick tight varieties and the openness of my trees has allowed air to flow through.

I do not have high kernel recovery varieties and so have found that I do not have a problem with insect damage levels although seasonal fluctuations do vary insect population pressure. My main loss from insect damage is due to fruit spotting bug. My overall table sorting reject level runs at 5%, while my factory average reject levels are between 1-3%.

Orchard floor

The protection of the soil resource from erosion is a critical part of my farming operation. I have planted smothergrass across the farm and it creates its own management challenges. I spend a lot of time mowing the orchard to keep the grass under control and often have to cross mow to keep the grass down between trees. There is a section around the base of the tree that is difficult to manage but the nuts that get trapped there are few and I do not have them being washed away in heavy rain.

I allow different weeds and plants to grow in my interrow. The aim is to provide a food source for pollinators and beneficial insects.

The large amount of grass I have can and definitely does make my harvesting slower (especially early in the season). You need the right type of harvester for grass. My preference is for mid size harvester wheels as they tend to reach deeper into the grass. Longer harvesting intervals, especially in a wet season can make the levels of germination and discoloration increase.



Specialised harvesting machinery is required to harvest from grass.

Yields

Making a comparison between the yields from an organic farm compared to a conventional farm is a very difficult thing to do. There are many variables that impact upon the yield of a farm: location, soil type, varieties etc. In my orchard I aim for a yield between 2-3 tonnes per hectare. I have heard of suggested figures of 20% lower yield from an organic farm compared to a conventional farm. This is contentious and highly variable based on your farm location, soils etc. I do however receive a premium price for the product I produce.

Other benefits

I believe my farm is a far healthier place to work now and that workers are not exposed to chemicals. I see this is a major plus. There is greater biological diversity on my farm, with increased insect population balance in the orchard and great diversity of soil micro-organisms.

Overcoming the fear factor

A major part of converting to organic farming is overcoming the fear factor. To change to organic management practices involves some challenges and is not a short term process. I have had to work at my farming system for a number of years and I find that I still constantly have to modify management practices. The choice to grow macadamias organically is a commitment that goes beyond economic returns. Your whole management system must focus upon improving all aspects of orchard health for the system to work effectively. The audit process that you must go through to attain an organically certified farm is very committing. This system does however make you more accountable for the total management plan of your orchard.

More Organic info - Kevin Quinlan, MPC Supply Chain Manager NIS

There are multiple information sources on organic farming. A quick Google search for organic farming returns 2.7 million hits. Many of these pages contain information that may not be relevant. The following are some good websites with information supported by science. Please note that as the website address for some of these sites are very long, I have used a tool available on the internet that shortens the address. If you type in the addresses as written below, they will take you to the appropriate page.

Victorian DPI - <http://tiny.cc/c6r9m> - The Victorian DPI website has good information on the certification process and a good article on the types of covercrops that can be grown, especially for nitrogen fixation.

NSW Department of Primary Industries - <http://tiny.cc/dt0q> - The NSW DPI website has a large section on organic farming, including an article on organic macadamia growing.

Rural Industries Research and Development Corporation (RIRDC) - <http://tiny.cc/ip8a4> - RIRDC has funded many research projects organic farming. In their publications section you can either purchase a copy of research reports or download the reports for free. They have two reports worth reading, the first "Using Pyrethrum to Control Fruitspotting Bugs in Organic Tropical Fruit Production" and "pest Management for Organic Agriculture". Note: before using any insect control product, you must ensure that it has the appropriate registrations in place (eg APVMA) and its use does not breach any laws or regulations.

Biological Farmers of Australia – BFA - www.bfa.com.au - The BFA website contains a large amount of information on organic farming. They also have good information on the market trends in organic agriculture and reports on why people do and do not purchase organic products.

National Sustainable Agriculture Information Service ATTRA - <http://www.attra.ncat.org/organic.html> - ATTRA is funded by the USDA and provides a wide range of information on organic production. There are some very useful fact sheets available on organic soil and fertilizer management, especially compost teas.

International Plant Nutrition Institute - <http://www.ipni.net/organic/references> - As the name suggests, this organisation is focused upon plant nutrition information. The series of fact sheets on Nitrogen, Phosphorus and Potassium in soil and how plants take them up is very useful.

Certified Organic Association of British Columbia - <http://www.certifiedorganic.bc.ca/rcbtoa/> - This website termed "cyber help for organic farmers" has been constructed to provide links to different topics in organic farming, such as soil management and on farm food safety.

Australasian Biological Control - <http://www.goodbugs.org.au/> - This web site is hosted by The Association of Beneficial Arthropod Producers Inc (ABC Inc) - better know as the good bug producers. Contains a range of information on beneficial bugs available commercially for the control of pests.

Pestweb - <http://www.pestweb.org.au/> - PestWeb is a regional insect pest-monitoring program and web based information-sharing tool for farmers and researchers in the Northern Rivers Region of NSW. Farmer volunteers monitor insect populations during the season and the results are uploaded to an online database where the information is stored and shared with other volunteer monitors and researchers.

TAFE NSW Short courses - <http://tinyurl.com/28yl8e2> - TAFE NSW offers a range of courses in organic farming and includes visits to farms currently certified organic so that you can see how current growers manage their farm and the challenges they face.

What assistance is MPC offering?

For any shareholders who wish to become certified organic, MPC will assist with the development of the organic farm plan required for certification. MPC is currently investigating the option of a 'bulk buy' on soil testing required for certification purposes.

In addition, MPC offers any shareholder access to a library of information on organic and conventional macadamia production and also information on specific farming topics such as soil management. MPC staff are available to assist you in finding information or putting you in touch with the person who does have the information you require.



Disclaimer

The contents of this publication are subject to copyright and may not be reproduced in any form without written permission from Macadamia Processing Co. Limited.

The publication is intended to provide general information only, and while all care has been taken to ensure that the information contained in this publication is true and accurate, no responsibility or liability is accepted by Macadamia Processing Co. Limited or its staff for any claim which may arise from any person acting in reliance on the information set out in this publication.

Editorial Policy

The editorial committee reserves the right to edit, withhold or reject all material.

