



## General Managers Report by Steve Lee

Dear Growers,

Welcome to the September edition of the Nutshell.

Whilst the factory is still receiving and processing the 2014 crop, for many growers their focus has shifted to the 2015 crop.

It's pleasing many growers have surpassed their early 2014 crop estimates with many still harvesting, albeit cleanup rounds for most.

Deliveries have started to taper off with the quality remaining good. The low reject levels have made processing a pleasant change from the weather affected crops in recent years.

With good prices and strong market demand for product I encourage growers to deliver every nut possible this year to us. Not only will this improve your 2014 revenue stream it reduces the food source for many pests in your orchard during summer with less reject nut in your pre-harvest rounds next year.

Kernel recoveries remain high which has also seen improved financial returns to growers.

With good quality kernel the factory is regularly cracking in excess of 400t per week, allowing us to bring customer orders forward where possible.

There is a shortage of kernel in the market worldwide which Larry will elaborate on further in the MMI market report.

### Chinese Demand

The Chinese NIS market is drawing increasing supply from all origins. Some estimates suggest the Chinese will take 11,000t from Australia this year and 26,000t or 65% of the South African crop exported as Nut In Shell.

This has placed significant pressure on kernel to meet the requirement of existing markets. It's a massive change in world consumption and it needs to be monitored to avoid the pitfalls experienced by the US Pecan industry.

### 2014 Crop Size

The overall 2014 Australian crop is still forecast at 40,000t with all regions performing well. This figure will be firmed up in coming months as the last of deliveries are received by processors.

### Drying Room Fully Operational

I'm pleased to report all of MPC's nut in shell is now dried by the heat derived from burning macadamia shell.

### MPC AGM

On the 28th August 2014 the MPC Annual General Meeting was held at Ballina RSL Club. It was well attended and presentations were heard on improvements made to the factory over the last 12 months and how Macadamia Marketing International (MMI) is changing the face of marketing by removing middlemen in the supply chain.

MPC Chairman Chris Ford highlighted the ongoing strong financial position of MPC compared to other macadamia processing operations, as demonstrated in the 2013/14 financial reports. MPC posted a pre-tax profit of \$705,000 and maintains a strong balance sheet.

There was an election held for 4 Board positions, with Chris Ford, Peter Costi, Scott Norval and Peter Zadro being elected. Chris thanked the outgoing directors, Peter Shepherd and Bill Moorhouse for their service to MPC.



*The new drying room is now operational. It was filled within 2 weeks of being completed.*

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The LPG burners on our bulk silos have been disconnected and we are looking forward to a future with low cost, low temperature, environmentally friendly drying.

The additional storage capacity the room provides also became available just in time as the 1,500t room was filled in just over two weeks and only just kept ahead of deliveries.

#### Dividend

A \$0.15 fully franked dividend was paid on all ordinary shares on the 8th August 2014. Since 2010 MPC shares have attracted dividends totalling \$0.80 which is a solid rate of return and at the same time our NIS prices continue to be amongst the best in the industry. In combination these provide MPC shareholders with great benefits.

#### 2014 Progress Payment Plan

During August we sent out our forecast payment plans which show our intention to pay to the full notional price by Christmas. When achieved it will be the 7th year in succession MPC growers have received this level of payment prior to Christmas. This payment plan is for all growers and for all of the crop delivered, not just a 'special deal' for some growers for a part of their crop.

#### Field Day— spray focus

At the recent field day on Insect pest management it was great to see more than 100 people attend. On hand were demonstrations and presentations on various aspects of insect control. Much of the focus was on Lace Bug and Sigastus weevil which can cause major loss of crop if not controlled.

The application of sprays is a science in itself, with the real take home message being if you have any doubt seek experienced professional advice on how to achieve the best control.

Spraying can be an expensive exercise, but spraying without achieving control can be devastating for next season's crop. A special thanks to Eric and Mark Balmer who hosted the event on their farm.

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## Marketing Report

Larry McHugh, MMI

2014 has been a very interesting year for macadamias.

Demand for kernel and in shell from around the world has escalated and the Chinese NIS market looks like it will consume at least 30,000 to 40,000t of in shell this year.

South African estimates suggest that 50-70% of their crop will be sold as in shell this year. We estimate approximately 25% of the Australian in shell will go to that market.

The overall effect of this, when combined with very low carry in kernel stock at the beginning of 2014, is significantly reduced kernel availability.

Macadamia users throughout the world have been alerted to the lack of kernel and as a result large amounts of the world kernel crop were contracted in April and May. It appears that the only kernel now left available for sale is the bits and pieces that remain uncommitted as processors wait to see what they actually produce in addition to their forecast.

Given the huge amount of enquiry still coming in from the kernel market it is likely that these small amounts of kernel will be sold as they become available. We anticipate going into next year with virtually no stock and with customers anxiously awaiting receipt of the 2015 crop.

The strong demand and low availability has meant prices continue to move upward for the small amount of kernel that remains to be sold.

The challenge for macadamia sellers (and growers) is to concentrate on the long term and ensure the market receives enough kernel at a viable price to ensure products remain on the shelf.

Deletion of products would lead to reduced kernel demand and could cause downward price pressure in the future.

Our markets continue to diversify with kernel demand in many Asian countries increasing even at the higher prices.

At present indications are that consumer purchasing has not slowed dramatically in any markets despite the higher prices.

The Chinese kernel market is showing a lot of potential and the unprecedented exposure that macadamias are enjoying through increased NIS sales is providing opportunities to launch new kernel products.

At present the outlook for 2015 is good although it is still early days. A large amount of NIS has entered the Chinese market across the last few months and much of it will only start moving to consumers in the coming months.

If these sales proceed well the outlook for 2015 is promising, but if the China NIS market slows dramatically, then we will have more work to do in the kernel market.

The expected unfulfilled demand for kernel at the beginning of 2015 should enable larger volumes of kernel to be sold if it becomes available.

The challenge for all of us over the next few years is to maintain a balance between NIS and kernel sales whilst ensuring that both markets remain healthy. To do this we need to provide sustainable pricing and enough product to keep markets on the boil.

## MPC Field Day Report – Insect Management

More than 110 growers attended the recent August field day at Eric and Mark Balmer's farm.

The focus was on insect management, specifically lacebug and sigastus weevil and the use of spreaders and wetters in pest and disease management.

Key points from the day were:

- Sigastus Weevil is a new pest that has been found in the Northern Rivers Region;
- Effective control of Sigastus Weevil requires an integrated approach using insecticides and cultural (mulching infested nuts) control;

- The selection of insecticide for *Sigastus* Weevil control needs to be considered in the context of an IPM program. If one insecticide is continually used, it could create other pest problems such as thrips and mites;

- Changes by the Australian Pesticides and Veterinary Medicines Authority (APVMA) to label and application requirements means larger droplets will need to be produced from an airblast sprayer to avoid drift. When larger droplets are used, it is not possible to rely upon droplet number to achieve coverage. You must ensure your sprayer is 'hitting the target' (nut);

- Once you hit the target with a droplet, there are new spray adjuvants available that assist in getting that droplet to cover the target (nut);

- You can check your sprayer coverage simply by adding a 'dye' type product (eg Screen) to water and applying it. After a few minutes it will dry and you can see where the spray has gone;

Anyone who wants to check their sprayers coverage can contact Jim Patch at MPC who can supply the dye and assist with carrying out the coverage check.

### Sigastus Weevil Research

*Craig Maddox, NSW DPI*

Craig outlined the research NSW DPI has undertaken on *Sigastus* Weevil.

They found *Sigastus* Weevils are long lived.

In an experiment to understand the lifecycle of the pest, female *Sigastus* Weevils live on average for 68 days (just under 10 weeks) but can live for up to 156 days (just over 22 weeks). One female can lay between 10 to 40 eggs per week, but egg laying will only happen if the nuts do not have hardened shells in them.

Generally the female only lays one egg per nut, and chews through the stalk of the nut, which causes the nut to drop to the orchard floor. The female will sometimes only chew partway through the stalk, with the nut dying and hanging in the tree.



*Sigastus* Weevil feeding and egg laying site. Note the triangular shape mark, indicating an egg laying site. Photo Courtesy Craig Maddox, NSW DPI



*Sigastus* Weevil feeding on macadamias. Photo courtesy Craig Maddox, NSW DPI

Generally it takes 40 days from egg laying to emergence of the weevil from a nut. This is a fairly long cycle, making a multi pronged management strategy critical for the control of the pest.

For macadamias, *Sigastus* weevil will only lay its eggs into the husk of nuts that are pre-shell hardening.

Being long lived *Sigastus* weevil spends the rest of the time in the orchard feeding on leaves and bark – waiting for the next crop to commence so they can begin breeding.

If out of season flowering and nutset occurs, the weevil will breed. If out of season flowering and nutset doesn't occur, it assists with control as there is only one opportunity per year for the weevils to breed.

### Crop loss

In a trial at Clunes, it was found that up to 30% of the crop can be lost from *Sigastus* weevil damage. This trial was on a farm where spraying had been undertaken to control the insect.



*Sigastus* Weevil Larvae and damage inside a developing nutlet. Photo Courtesy Craig Maddox, NSW DPI.

## Monitoring

From research and pest consultant feedback, it has been found there are different monitoring tools available. These include:

**Collecting** nuts from the ground and checking for signs of sigastus weevil damage. When a female lays an egg in a nut she will scarify the husk in a triangular shape, inserting the egg deep into the husk, normally on the edge of the husk and developing nut layer. When the shell has hardened, the female will not lay eggs in the nut, but will continue to feed on the husk. The damage at this time will be seen as a 'half spherical crater'.

**Cutting open nuts** – when you cut open a nut that has been fed on and had an egg laid in it, you will find the larvae inside the developing nut or damage and/or an egg in the bottom of the husk layer (against where the developing nut would sit).

**Sticky traps** – in a trial on other insect pests, sigastus weevils were found on sticky traps. Sticky traps haven't been used as a tool for monitoring sigastus weevil on a large scale, but they may be a useful tool in providing some information on the insects activity.

## Chemical screening

Craig emphasised their screening of insecticides for the control of sigastus weevil is only in the early stages and needs further testing. One critical aspect found in their testing is that direct contact of an insecticide will only result in low levels of control (around 40%).

What they did find however is that feeding for several days on nuts that have been sprayed with insecticide will provide good levels of control. This means that good coverage is essential for the control of sigastus weevil.

Craig emphasised based on early testing results, life cycle analysis and the experience of growers in the Atherton tablelands area (where this pest originates from), chemical applications alone will not provide adequate control. You also need cultural control to get good control.

Cultural control options include mulching sigastus damaged nuts and sweeping out and harvesting.

The control of sigastus weevil needs to be considered in the overall insect management program – IPM.

Craig showed results from a trial on variety A16 examining thrip and mite damage on new flush. Although only the first seasons data, the results showed that the over use of Beta Cyfluthrin (Bulldock) can increase the thrip and mite problem. The key point Craig emphasised is that it is critical to rotate your insecticides to avoid creating an insect problem you could have avoided. He suggested that you only use 2 Beta Cyflthrin sprays in a season and if you need another insect spray (especially during spring) an alternative to use is Acephate (Lancer).

**Biological control of Sigastus Weevil**  
As reported in the May edition of *The Nutshell*, NSW DPI has isolated a fungus that kills sigastus weevils. The fungus, *Beauvaria bassiana* is effective against a range of beetle species, but requires humid weather to survive.

Craig highlighted that fungicides applied to control husk spot will also kill the *Beauvaria* fungus, so an integrated approach to pest and disease management will be needed.

This research work is in its early stages, but it is showing there is a fungus that attacks sigastus weevil with potential to use it as part of the overall management system to control and limit nut loss.

## Sigastus Weevil Experiences

*Mark Balmer, Burrawong Orchard*

Mark Balmer and his father Eric own and manage Burrawong, a 20ha Macadamia farm at Clunes.

For the past two years they have dealt with sigastus weevil and Mark has developed an extensive knowledge of the pest, sharing it with growers at the field day.

Mark found the best time to look for sigastus weevil is late afternoon as this is when they are most active.

Most damage was found on the edges of the orchard. Mark found most nuts fall to the ground after being fed on and having an egg laid in them, but not all nuts fall.

Sometimes the female has only partly

chewed through the stalk and it hangs in the tree. As the egg and larvae in the nut are protected from any insecticide application, Mark has found that mulching is a critical part of the management program.

He initially tried blowing small nutlets out from the tree row, but this hasn't been effective as the nuts won't roll if they get caught by something such an exposed tree root or large stick.

He then tried sweeping the nuts out of the tree row with the sweeper on his toro harvester. He found this was successful as it moved all the nuts out from the tree row to where he could mulch them up.

With his mulcher, Mark found that worn hammers were not very effective at smashing up the small nutlets (egg pea sized) so he replaced them and then found he got good results. The new hammers meant the nutlets were smashed into very small pieces.

"Although mulching is slow and uses a fair amount of diesel, just relying on chemical control wouldn't be effective as we would still get continual emergence of new weevils", said Mark.

Mark has collected lots of samples in jars to observe the sigastus weevils. As part of this work he has been placing sigastus weevils into jars with ones that are infected with *beauvaria* fungus.

After a few days, he has then released them back into the orchard, as they are then infected with the fungus. "As the humidity increased I found the rate of death increased rapidly. Initially I would put them in the jar and after about a week they would be starting to show signs of infection. Then as the humidity increased within about 2-3 days I would see signs. I was a bit sceptical about the whole thing but thought it would be worth a try. When I found a dead sigastus weevil with fungus growing out of it over 600m from where I was releasing them, I thought this might be useful."

During winter Mark still found sigastus weevils in groups and not moving around. "I think they don't like the cold weather. They are trying to survive the cold by not moving around a lot and keeping themselves dry. They can't reproduce and so are just waiting for

the next lot of nuts to come so they can breed”.

Mark has found weevils are strongly attached to the nut, branch or leaf they are on. “I found them on a branch the other day. I cut the branch off and took it on the motor bike back to the office. When I got back they were still on the branch – they hadn’t moved”.

Mark found that although sigastus weevil can fly they tend to move around the orchard by walking. The only time he has seen them flying is on a hot day with a strong wind blowing.

Mark said sigastus weevil did not appear to have any preference for particular macadamia varieties “but attacked varieties planted on the orchard boundary first. In my case these varieties are A4, 344,H2 and Nutty Glen.”

He estimates his crop loss was about 12% from Sigastus weevil. “It is really hard to estimate how much I lost as it was worse in some areas than others. From what I saw, I think it was about 10t I lost. That 10t would have been worth over \$30,000 and so there is no doubt this is a serious pest for me”.

Mark believes it will take a combination of control measures to control the weevil. “I don’t think chemical control alone will work. From what I have learnt and done, I believe ground control is really important. If you just spray and don’t smash the nuts up that the weevils are in on the ground, they will just keep breeding”.

### Spray Adjuvants—what are they and where do they fit?

Matt Moyle, Nufarm Australia

Matt spoke about the spray adjuvants available and the changes the APVMA are introducing for drift management.

Adjuvants fall into the following broad range of categories:

- Non-ionic wetters (spreaders);
- Oils (spreaders with insecticidal activity);
- Rainfastening agents (stickers);
- Silicon based (Super Spreaders)
- Buffers (Acidifiers).

Each category has a fit within a pest and disease management program.



The effect of a spray adjuvant on the amount of drift generated from a nozzle. Note how some non-ionic wetters increase the amount of drift (eg Chemwet) while others can reduce drift (eg Activator).

#### Non-ionic wetters (spreaders)

Non-ionic wetters work by breaking the surface tension, which causes a droplet to spread. They do not generally provide penetration into the plants tissue, only spreading the spray. They can increase drift of sprays and cause spray mixtures to foam heavily.

#### Oils

Spray oils are a good spreader to use at times as they have insecticidal activity. They work by smothering pests, making them useful against small insects such as leaf miner and scale. When used in a spray mixture for their insecticidal properties, oils are cost effective, but if they are added just as a spreader, they are not very cost effective. Oils are excellent in aiding drift reduction.

When oils are used at low rates they can have compatibility issues with Spin Flo and some copper based products. When using oils with these products you often need to add extra wetter to help keep the products in solution.

#### Rainfastening agents

As their name suggests, rainfastening agents are designed to protect pesticides from being washed off by rain. Examples of rain fastening agents are Bond, Nu-Film and Designer.

#### Why is rainfastness important?

Rain fastening agents either contain latex type compounds or are made from natural substances such as pinene (pine resin). They work by forming a “stocking” over pesticides, which prevents washing off. They

allow normal breakdown processes of the pesticide to occur (except Nufilm at very high rates). If Nu-film is used at a very high rate, the with-holding period may not be as stated on the label. Nu-film also requires two hours of sunlight to “activate”, to achieve full rainfastness.

#### Silicon Based (Super Spreaders)

These products assist with penetration into the leaf surface and achieve improved coverage.

When selecting a penetrant, you must be careful to ensure you are using it for the job it was designed for.

For example, Pulse was designed to assist with woody weed control and is very effective at breaking down the waxy cuticle, to assist the product enter the plant leaf. If used when applying a foliar spray, it can cause burning of the leaf. Pulse is however very effective at assisting the uptake of any chemicals applied to the trunk of a tree.

Du-wett is a super spreader. It breaks the surface tension of the spray droplet and spreads the droplets over the leaf or outlet. It has excellent crop safety – it won’t cause leaf burning problems if used correctly.

Designer is a combination product – it is like a mix of a Bond like product (rainfastner) and Du-wett (super spreader). It has a low drift level and is low foaming. This product is very usefull in assisting with the spread of chemicals, especially when using large droplets.

## Acidifiers and Buffers

As the name suggests, these products can either acidify the tank mixture or buffer it.

This is extremely important when using pesticides that suffer alkaline hydrolysis.

L1700 acidifies spray tank mixtures and is extremely important to use when applying Lepidex. L1700 has a low drift rating, can increase the uptake of foliar fertilisers and is often used with herbicides to improve the effectiveness.

Another effective product is Agri-Buffer, which changes colour when the pH goes below 7. A pH of less than 7 will generally negate problems of alkaline hydrolysis and a product like Agri-buffer makes it easy to see if your spray tank mixture is at the correct pH.

Warning – copper can burn foliage when acidified too low and copper can

fall out of solution. It is recommended that when using an acidifying agent not to add copper based products to the spray tank.

## Du-Wett

Du-Wett is an organosilicone based super-spreader designed specifically for the application of crop protection products to horticultural and arable crops.

Du-Wett is a blend of organosilicone and other organic fluids, formulated to not only give super-spreading properties on plant foliage, but also to improve retention and deposition of spray droplets on all plant surfaces.

Du-wett Spreads eight times better than non-ionic wetters. Due to the strong spreading ability of Du-wett, it is critical to use at the correct rate. It does however foam strongly in tank mixes. If it is used with very fine droplets it can increase drift.

## What rate do I use?

It's best to trial Du-Wett before using it for spray applications.

It is recommended you start at 75ml/1000L (Dilute volumes) and assess the coverage/spread achieved. If you are using a concentrated spray volume (eg 2X)

Start at 150ml/1000L for 2X. The best way to assess coverage is to use a product like Surround or Screen as a 'visual indicator'.

By adding one of these products when testing, you can quickly see if coverage has been achieved.

Matt suggested to spray with only water, Du- Wett and Screen on half a row and then assess the coverage (get off the tractor!).

If spray is running off the leaf and onto the ground (compared to a normal spray) then you reduce the Du-Wett rate by 30% and re-assess.

If you do your first trial and the spray application isn't at the point of run-off, i.e. droplets have not joined together into a single even sheen, then you should increase the Du-Wett rate by 30%.

## Designer

Designer is a blend of an organosilicone super-spreader and a latex polymer. This combination gives the product unique properties:

\* Super-spreading ability over three times greater than conventional nonionic spreaders

\* Improved deposition of droplets due to unique "anti-bounce" chemistry which absorbs energy when a droplet hits the surface;

Designer does not encapsulate pesticides so will not lock up active ingredients nor slow them down, nor will it increase residues.

Good rainfastness improves adhesion of chemicals dramatically in wet weather. It is rainfast as soon as it dries.

Matt Suggested just like Du-Wett, trial some Designer on an area and assess its effectiveness.

He suggested starting at 150ml/1000L (Dilute volumes) or 300ml/1000L for concentrate (2X) sprayer setups. Or more simply, Designer is double your Du-Wett rate.

ACTIVE	BRAND NAME	COMMENTS
dimethoate	Dimethoate, Roger <sup>®</sup> , Sabotuer <sup>®</sup>	pH 9 – 45 min until 50% breakdown
carbaryl	Bugmaster <sup>®</sup>	pH 9 – 3.2 hours until 50% breakdown
phosmet	Imidan <sup>®</sup>	pH 10 – 1 min until 50% breakdown
dicofol	Kelthane <sup>®</sup>	pH 10 – 15 min until 50% breakdown
trichlorfon	Dipterex <sup>®</sup> , Lepidex 500	pH 8 – 63 min until 50% breakdown
alpha-cypermethrin	Fastac <sup>®</sup> Duo, Dominex <sup>®</sup>	Hydrolysis under strong alkaline conditions
iprodione	Rovral <sup>®</sup>	pH 9 – less than 1 hour until 50% breakdown

Examples of pesticides subject to alkaline hydrolysis. Note the short half life for trichlorfon (eg Lepidex)

## Without Duwett



## With Duwett



The spray coverage achieved on macadamia leaves without and with Du-Wett. Note same water volume per tree used.

## NEW APVMA Regulations

The Australian Pesticides and Veterinary Medicines Authority (APVMA) implemented new policy on 1 March 2010 that requires all new pesticides to be assessed for the potential risk of spray drift.

The labels of currently registered pesticides are being reviewed to include comprehensive instructions for managing spray drift. Label statements of new products will include information on factors such as:

- Droplet size;
- Weather conditions;
- No spray zones;
- Record keeping requirements.

These changes are significant. You must read and understand these new statements before using any product which has been through the process.

Older chemistry products that haven't had their label changed in recent years currently do not have the new drift restraints on the label (e.g. Lepidex, Lancer...) but the changes will come!

An example of these new requirements is the Cabrio Label:

MANDATORY NO-SPRAY ZONES	
DO NOT apply if there are aquatic and wetland areas including aquacultural ponds, surface streams and rivers downwind from the application area and within the mandatory no-spray zones shown in Table 1 below: Table 1 – No-Spray Zones for Protection of the Aquatic Environment	
FOR GROUND APPLICATION	
Crop	Downwind Mandatory No-Spray Zone
Macadamias	120 metres

Other information that is contained on new labels includes the droplet sizes to be used.

With the new label requirements, Matt indicated that larger droplet sizes will be the normal on labels and it will be essential to use these to meet the label requirements.

As larger droplets will now be used and you will have fewer droplets being produced by your sprayer, it is critical to ensure your sprayer is setup to

### SPRAY DRIFT RESTRAINTS

**DO NOT** apply with spray droplets smaller than a **COARSE** spray droplet size category according to "APVMA Compliance Instructions for Mandatory **COARSE** or Larger Droplet Size Categories" located under this title in the GENERAL INSTRUCTIONS section of this label.

**DO NOT** apply when wind speed is less than 3 or more than 20 kilometres per hour as measured at the application site.

**DO NOT** apply during surface temperature inversion conditions at the application site.

Users of this product **MUST make an accurate written record** of the details of each spray application within 24 hours following application and **KEEP** this record for a minimum of 2 years. The spray application details that must be recorded are: **1** date with start and finish times of application; **2** location address and paddock/s sprayed; **3** full name of this product; **4** amount of product used per hectare and number of hectares applied to; **5** crop/situation and weed/pest; **6** wind speed and direction during application; **7** air temperature and relative humidity during application; **8** nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application; **9** name and address of person applying this product. (Additional record details may be required by the state or territory where this product is used.)

An example of the new label requirements. Note the larger droplet size requirement.

achieve good coverage (droplets hit the target—developing macadamia nuts).

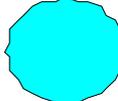
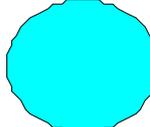
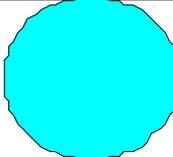
Once your droplet is there, the new adjuvants like Designer have the ability to take over and complete the coverage process by distributing the droplet across the surface of the nut.

Why is coverage so important?

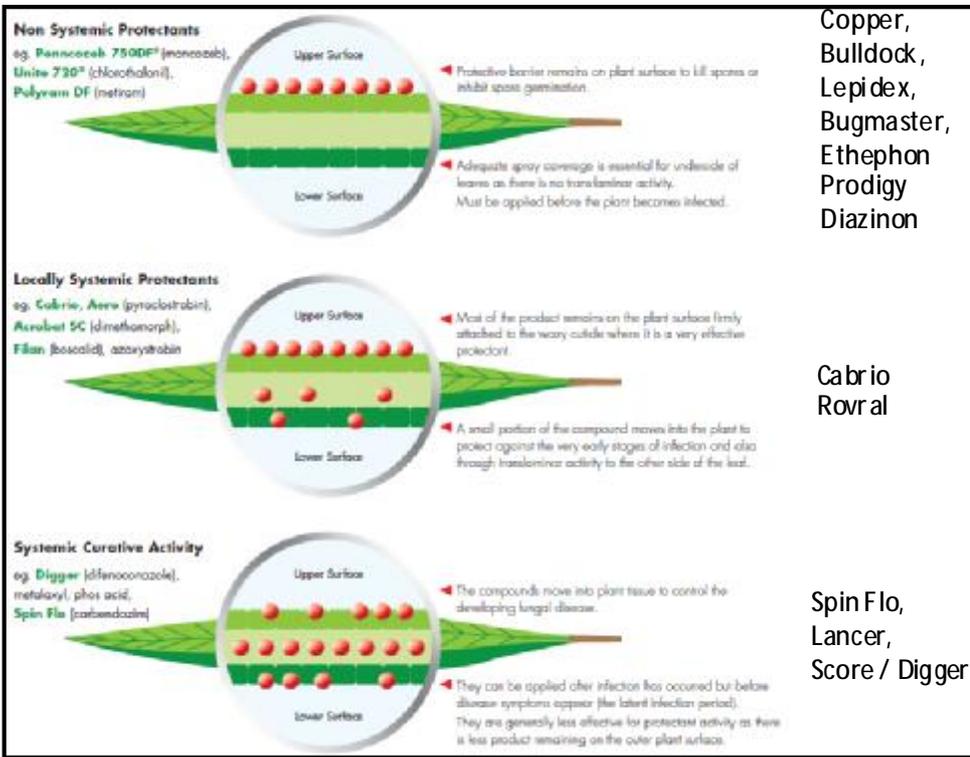
Matt outlined that coverage is crucial because most of the pesticides products used in macadamia crops are non systemic protectants.

This means they have very little movement into the plant and so rely upon coverage of the (nut) surface to provide control.

## Droplet sizes

VERY FINE	VF		< 150 µm (Fog)
FINE	F		177 - 237 µm
MEDIUM	M		238 - 307 µm (Light Rain)
COARSE	C		308 - 459 µm
VERY COARSE	VC		459 - 600 µm
EXTREMELY COARSE	EC		> 600 µm (Heavy Rain)

Definition of the different droplet sizes produced by airblast sprayers. Note coarse droplets size is 308-459µm (0.3mm—0.4mm) and will need to be produced under the changes introduced by the APVMA



Copper,  
 Bulldock,  
 Lepidex,  
 Bugmaster,  
 Ethephon  
 Prodigy  
 Diazinon

*Pesticide performance can be influenced by how they behave on a plant—whether they stay on the surface or enter the plant. Note that most commonly used macadamia pesticides are non systemic protectants and so stay where they are applied. This makes coverage crucial to get the best results from them.*

Cabrio  
 Rovral

Spin Flo,  
 Lancer,  
 Score / Digger

## MPC Drying Room Construction



Left—Site Prior to Construction.



Right—Frames being installed.



Left—The room in action drying nut-in-shell



Right—The shell fired boiler used to supply all the heat energy for drying.

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