

## Richard Bawden appointed to head Fruitfed Supplies

With Stephen Guerin, former general manager of Fruitfed Supplies, having been appointed as the general manager of Rural Supplies for PGG Wrightson, Richard Bawden now steps into a new position as the Fruitfed Supplies national manager.



Formerly New Zealand technical manager, heading a team of five, Richard took on his new responsibilities for the wider Fruitfed Supplies group in July.

Stephen's new position sees him now with overall responsibility for PGG Wrightson's 105 stores across New Zealand as well as the Fruitfed business. The new role of Fruitfed Supplies national manager reports to Stephen who says Richard has the credentials to ensure the business achieves its objectives and to continue developing the strong brand presence of the Fruitfed Supplies business in New Zealand's horticultural marketplace.

Stephen says: "I'm very pleased Richard accepted this appointment as he has a very good grounding across the Fruitfed Supplies business, with clients and sales as a branch manager in Katikati and most recently as the national technical manager. He is well connected in the industry, across the regions, with numerous clients and across all crops. I look forward to supporting him in his vision for Fruitfed Supplies to remain the leader in the horticultural sector, and his strengthened focus on the technical aspects of this business and how we add value for clients."

There are several key elements underpinning Fruitfed Supplies in the market, says Richard, including the Technical and Crop Monitoring Services teams, and how they work with Fruitfed's talented field and customer service representatives.

"I believe strongly that Fruitfed Supplies is differentiated from our competitors with the expertise, knowledge and ability of the personnel we have in our Technical and CMS teams. Add these elements to the knowledge and expertise of our field and customer service reps, and there is a significant resource dedicated to supporting our clients in their businesses. We seek to continue improving the depth and breadth of our technical expertise and how we deliver this knowledge to clients via our own staff and other means of communication such as grower meetings."

Richard adds: "I have a great personal understanding of these elements of the business and enjoy the challenges that come with enhancing our skills across the wider Fruitfed Supplies team.

"We have great people working for the company. How we retain them and how we recruit talented new people to join us is another area of focus. We want to add value for clients by focussing on people, their skills and what we can deliver to our clients."

Richard says he took the new position because he believes wholeheartedly in the Fruitfed Supplies business. "We're here to help our clients be more productive and more profitable in their business through technology, products and services at competitive prices."

Over the next few years Richard sees considerable scope for improved technology within the business. "Through advances in software and hardware, the methods we use to communicate and deliver information to staff and clients and how our team operates in the field will continue to change and improve."

Coming into spring, Richard aims to ensure the Fruitfed Supplies team is equipped to deliver the stock that growers need during this important growing period.

"Stock management is tight – we're not expecting shortages, but it's certainly important to keep talking with your reps about specific requirements you expect to have so we can plan accordingly.

"We see that some sectors, such as avocados and stonefruit, are going pretty well, while other sectors, such as pipfruit and kiwifruit are under particular pressure. The high value of the New Zealand dollar is obviously having an effect for both sectors, while kiwifruit growers have the additional pressure of dealing with Psa. We continue to work with Zespri to source and research the best products and knowledge to assist growers as we go into spring."

Richard's replacement in the technical manager's role is currently being sought. "With the Technical team and their work such an important and valued part of our business, the priority is to get the right person in this role as soon as we reasonably can. We look forward to introducing the successful applicant in due course." **F**

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## Vege Tech Bytes

A monthly technical update from **Tim Herman**, the Fruitfed Supplies regional technical adviser specialising in vegetable crops.



I am well into planning, along with my fellow Technical team members, the coming season of research.

Part of this involves talking with our suppliers about what they are doing with products they plan to bring into the market so we can align our research with theirs where there is a fit. Another facet in our planning is communicating with local scientists to ascertain research outcomes from the previous season. This includes attending industry seminars, meetings and relevant conferences. At the annual Plant Protection Society conference we learnt of research on a range of pests and

diseases of vegetable crops. Some aspects of research done will be incorporated into our own work this season.

The Society also worked with Potatoes New Zealand to run a mini-symposium on tomato potato psyllid and liberibacter. Being a member of the executive committee, I was tasked with convening the mini-symposium and facilitating the panel discussion at the end. A lot of new information was imparted by the invited speakers and offered papers which is helping us all to develop an understanding of this significant pest and associated disease and how best to control it. **F**

## Avid and Karate Zeon approved for psyllid control in potatoes

Two respected insecticides from Syngenta – Avid® and Karate® Zeon – are now fully approved for use in potatoes against the tomato potato psyllid.



A TPP trial in progress in Hastings last season

“Avid was already being used by many potato growers for psyllid control, but some growers were unwilling to use it because it was ‘off-label,’ having no registration for potato crops,” explains Syngenta marketing manager John Yates.

“Last year potato industry representatives approached us to ask if we could register Avid on potatoes for psyllid control, and we agreed to do this.

“It’s a good example of a grower group working with a chemical proprietor, in this case Syngenta, who was able to generate the data and make a submission for registration.”

Karate Zeon was already registered for use in potatoes to control potato tuber moth, but Syngenta trials showed the 40ml/ha rate for tuber moth was too low for optimum TPP control.

“The higher label rate of 100ml/ha to control TPP required additional residue data, which Syngenta was able to provide which supports the approved 14-day PHI for potato crops.

To get the best results with both Avid and Karate Zeon, the Syngenta team stresses the importance of close spraying intervals, i.e. 7 days, at times of peak TPP pressure. Good coverage is also essential with both products, so high water rates and a suitable adjuvant are required.

Avid is compatible with IPM programmes, so its use at a rate of 600ml/ha with an adjuvant is recommended earlier in the season, allowing predator numbers to build-up.

John notes: “Both products target the nymph and adult growth stages and should be applied at the first sign of TPP in a crop. The addition of a crop oil like D-C-Tron Plus to Avid may provide some ovicidal activity and increased activity on nymphs. However we recommend growers seek advice when adding a crop oil to the spray mix, as temperature can affect crop safety.

“The important thing for the coming season is that the approval of Avid and Karate Zeon gives potato growers two good registered options in the fight against the tomato potato psyllid.” **F**



\* Avid and Karate with Zeon Technology are the registered trademarks of a Syngenta Group Company. Avid and Karate Zeon are registered pursuant to the ACVM Act 1997, No's P4648 and P3495 respectively.





## Aphids in New Zealand

There are about 130 species of aphid in New Zealand and less than 10% of these are endemic, writes Tim Herman, Fruitfed Supplies technical advisor.

All aphids that infest our vegetable crops are introduced species, commonly from the Northern Hemisphere, and they find our mild maritime climate much to their liking.

Aphids have a number of unique features which contribute to their pest status in outdoor vegetable crops. Because of our mild climate, they do not have to indulge in sexual reproduction. In the colder continental climates they originate from, the eggs, the result of sexual reproduction, are the overwintering stage. In New Zealand, the winters are mild enough for them not to have to produce eggs and the 'summer' hosts, e.g. annual and biennial weeds, are present year round. Males are redundant in this case and are rarely seen.

Aphids have the ability to telescope the generations, this is where the adult wingless aphid that is feeding on a plant has her daughters developing inside her, but these daughter embryos, in turn, have their daughters already developing inside of them. The result of this is the time between an aphid being born and it starting to reproduce is shortened.

Not all aphids have wings. Many aphids do not need to fly. If the host plant is a suitable food source, why bother leaving it? Wings require a stronger thorax and a thicker cuticle to anchor the large muscles needed for flying. If wings are not needed, the resources that would have been used to produce them are instead utilized to maximize reproduction. Winged aphids are only produced when environmental factors trigger the need for it, e.g. crowding

from too many aphids on the host plant, or nutritional changes in the plant's sap (aphid's food) as it goes to seed. The next generation of aphids will then develop into the winged form to migrate away to find new hosts.

These unique features allow aphids to put their resources where they are most needed. When conditions are most favourable for exploiting a new crop host, they produce offspring in the shortest time possible. The end result is crops that rapidly become heavily infested with aphids.

Aphids tend to be at their worst in spring when there is a flush of fresh new growth in crops, weeds and other plant hosts. But at the same time natural enemies of aphids, lacewings and ladybirds, in particular, are also in abundance and can have a considerable suppressing effect on aphid populations, if they are allowed to build in numbers and are not disrupted by broad spectrum insecticides. In many instances the natural enemies can maintain good control of the aphids, preventing yield-damaging numbers from developing. Crop monitoring should be used to survey populations of aphids and natural enemies in crops to determine if control is being achieved.

There will be times when insecticide applications are required to control aphids to prevent economic loss. As much as possible growers are encouraged to use selective insecticides to minimise the impact on natural enemies. Two such products that are registered in a number of vegetable crops are Chess® and Pirimor®. These compounds are mainly active on aphids and have minimal impact on non-target insects. **F**



## New Mantrac Pro from Yara

YaraVita™ Mantrac Pro will replace Yara's flagship manganese product YaraVita Mantrac 500 during the upcoming season, following grower requests for a product that is even easier to handle and work with.



Yara New Zealand's Michael Waites says that YaraVita Mantrac Pro represents a new generation of suspension formulation with proven superior characteristics.

"Yara asked growers what improvements could be made to the existing range of YaraVita products and when considering suspension concentrates, there was a clear desire to have even better storage and handling characteristics. Then, in a separate survey, growers were asked what was the most important feature they wanted in a spray product – ease of use was a frequent response," says Michael.

"So Yara's product development team improved the current 500g/l manganese suspension concentrate and created a product with proven superior characteristics. Key improvements in handling of the product include ease of rinsing from the pack and storage stability.

"Already YaraVita Mantrac Pro has demonstrated superior field performance over the old formulation. Independent field trials in Sweden on spring wheat saw YaraVita Mantrac Pro outperform an untreated control by 460kg/ha and its predecessor by 150kg/ha. At today's price levels, that represents an increased return of nearly \$176/ha and \$58/ha respectively."

Features of YaraVita Mantrac Pro:

- Easier to use – new thickeners and stabilising agents mean product quality is maintained. Improvements in handling of the product include ease of rinsing from the pack and storage stability.
- New REACH regulations no longer classify manganese suspensions as harmful and so Mantrac Pro does not have to carry the warning symbol on the label. **F**



# Du-Wett Stainless contributes to erinose mite control in grapes

Etec Crop Solutions has patented the use of Du-Wett® Stainless super-spreader with lime sulphur for enhanced control of erinose mites in grape crops.

Growers know it's important to get control of erinose mite in grapes early in the season at the woolly bud growth stage. If not controlled and erinose mite populations become high, the characteristic leaf-blistering effect can become debilitating across the vineyard, says Etec territory manager Pete de Jong.

"Many growers have successfully used lime sulphur at a 7% concentration at woolly bud timing. However with a pH greater than 10, lime sulphur destroys adjuvants within a few hours. This high alkalinity means that until recently lime sulphur performance could not be improved by any adjuvant technology that aided spray droplet deposition, spread and use with lower water rates," says Pete.

After several years' work, Etec Crop Solutions has just released and patented Du-Wett Stainless<sup>(P)</sup> for use with lime sulphur in vineyards.

"Du-Wett Stainless offers the twin benefits of half the amount of lime sulphur per hectare being needed for the same effect and ensuring many more hectares can be covered with each spray tank. It is an acid and alkaline tolerant super-spreader adjuvant that reduces spray droplet bounce and shatter, and increases deposition on the difficult-to-reach hard, convex canes and developing buds."

Once the Du-Wett Stainless-loaded droplets reach the canes and buds, says Pete, the excellent spreading effect (5-10 times better than no adjuvant) starts moving the lime sulphur into the bud scale areas where the erinose mites rest, waiting for the new season's growth to develop.

"A key attribute of using super-spreaders like Du-Wett Stainless is that they work best with low water rates, so growers can reduce their water rate from the typical 200–300l/ha to 100l/ha\*."

*\*Please note: growers applying lime sulphur to contain a major erinose site outbreak from the previous season will need higher water rates. Refer to label rates.*

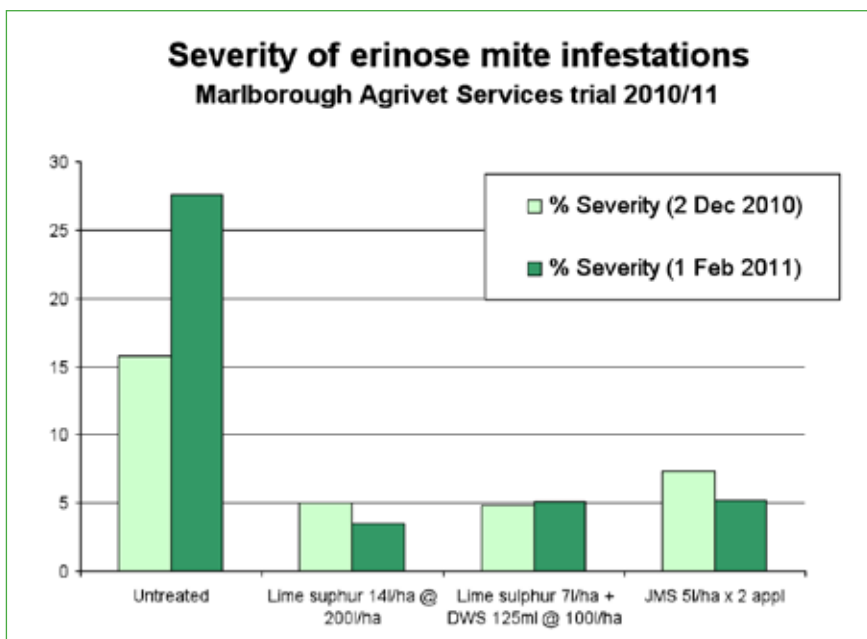


Du-Wett Stainless grape lime sulphur trials over the last few seasons also tested Organic JMS Stylet Oil® as a commercial standard treatment for erinose mite control. Excellent control of erinose mite was achieved in an independent trial conducted in Marlborough over the 2010/11 season, where two applications of JMS were applied at woolly bud and again 14 days later. As well as erinose mite control, JMS also has an excellent anti-sporulant activity stopping any over-wintering powdery mildew infection of the flag leaf buds from spreading to other foliage.

For more information on Du-Wett Stainless or Organic JMS Stylet Oil, contact your local Fruitfed Supplies representative. **F**

<sup>(P)</sup> NZ patent application No. 572464.

\* Du-Wett is a registered trademark of Elliott Chemicals Ltd. Organic JMS Stylet Oil is a registered trademark of JMS Flower Farms Inc, USA.



## Vegetable grower takes **Young Grower** title

Ben Smith, from Pukekohe, has won the Young Grower of the Year title.

The Young Grower of the Year competition was a day-long event held in Rotorua as part of this year's Horticulture New Zealand conference. It tested four regional finalists on a range of essential horticulture business and practical skills, including driving a tractor, employment relations and public speaking to more than 400 conference delegates.

Ben, (29), was excited by the win, saying it was a privilege to receive the award, especially given the calibre of his competitors. Ben works for Status Produce in Pukekohe and earned his place at the competition after taking out the Young Vegetable Grower title earlier this year. He now wins \$4,000 and a trip to Australia to visit other tomato crop growers.

Ben beat three fruit growers to win the title. Kevin Withington, from Nelson, won best speech and the Young Fruit Grower of the Year title; Campbell Wood, from Bay of Plenty, won best practical. Ben also took the award for the Ballance leadership panel as well as the title of Young Vegetable Grower of the Year.

This is the third year that the Young Grower competition has been held. Run by Horticulture New Zealand, the competition is supported by Fruitfed Supplies and other organisations which recognise and celebrate the industry's young leaders, who have both excellent technical skills and leadership capabilities.

Fruitfed Supplies' new national manager Richard Bawden says: "We send our congratulations to Ben and all the competitors who put themselves forward. From here Ben goes onto the Young Horticulturist of the Year competition in Auckland on 9 and 10 November. We wish him and fellow competitors well and trust they will gain excellent personal and professional skills and contacts from the whole experience." **F**



This year's Young Grower competitors, L-R, Chris Treneman, Kevin Withington, Campbell Wood and Ben Smith



Pukekohe's Ben Smith took the 2011 Young Grower title

## TECH-KNOW TIPS

### AVOCADO



#### Reminders for September:

- ✓ Continue to maintain a **fungicide cover** on fruit with copper products such as Kocide® Opti, which offers fungicidal protection for fruit while resulting in little visible residue; a consideration prior to harvest.
- ✓ **Foliar nitrogen**, e.g. Yara Safe-N or low-biuret (max 0.4%) urea, may need to be applied to remedy nitrogen deficiencies that often show as yellowing foliage through winter and into spring. This issue is more common on trees carrying a heavy crop, and is often exacerbated as we approach flowering. Add magnesium sulphate to improve leaf-greening as required, but do not mix foliar boron products with nitrogen as research has shown reduced fruit set from this combination. Foliar nitrogen should last be utilised around 2-3 weeks before foliar boron sprays are first applied in October.
- ✓ Recommended soil applications of **Fruitfed Avocado Mix** and boron should continue during September as trees become more active with increasing temperatures. Consider using Organibor as a slow-release boron option.
- ✓ As mentioned last month, watch for **six-spotted mite**, **leaf roller** and **greenhouse thrips** in spring, especially on those blocks

carrying a crop ready for harvest. **SSM**, in particular, should be controlled pre-flower to reduce the risk of population explosions during flowering. DC Tron® Plus (2-3 applications at monthly intervals) is a good option at this time of year, particularly when mixed with other agrichemicals. Alternatively, apply Mit é mec plus DC Tron Plus for highly effective control of adults, nymphs and eggs, as the active ingredient milbemectin gives good ovicidal activity, a point of differentiation from other miticides.

**Prodigy®** is now registered for leafroller control in avocados. The active ingredient methoxyfenozide is very effective on leafroller larvae and egg masses, while being incredibly safe for beneficial insects including bees. Success® Naturalyte® and Proclaim® also have a good fit for leafroller control at this time of year. The short pre-harvest intervals of these products for most markets allow flexibility of use around harvest. Be aware of MRL and PHI requirements when applying products approaching harvest. In if doubt, check with your exporter for clarification. Structured **crop monitoring** will help ensure you have the best information for crop management decisions and your crop is compliant with Avogreen for export. Please contact your local branch for information on crop monitoring as various options are available.



Leafroller larva causing damage to flower truss

## CITRUS



### Reminders for September:

- ✓ As weather begins to warm in spring, watch for increasing pest populations, particularly **greenhouse thrips** (where fruit are still present) and **armoured scale**.
- ✓ **Monitoring** for these insect pests to determine control requirements allows justified use of agrichemicals, without the risk of unnecessary applications. For further details on crop monitoring, contact your nearest Fruited Supplies branch.
- ✓ Maintain a **fungicide** programme up to and post-flowering to protect against scab and melanose infection of young shoots and fruitlets.
- ✓ With cool spring weather limiting nutrient uptake, **foliar fertilisers** such as Citrac should be considered to promote strong flowering and fruit-set.

Pruning trees from September onwards, when **lemon tree borer** adults are flying, may result in infestation as the adults are attracted to the fresh cuts (see photo). Chemical control options are largely ineffective against this pest, so pruning should be avoided between September and March as best practice.



Lemon tree borer damage

## GRAPES



### Reminders for September:

- ✓ The **mealybug** spray programme on problematic conventional blocks should begin with a high volume, dilute application of Tokuthion plus 1% oil before bud-break. Aim to wet down the entire vine.
- ✓ When combining oil with insecticides in a tank-mix, remember to add the oil last when the spray tank is nearly full. Also, make sure the spray is agitated throughout the mixing and application process.
- ✓ Start spraying for **powdery mildew** soon after bud-break, when shoots are approximately 2cm in length, to protect vine foliage from early infection.

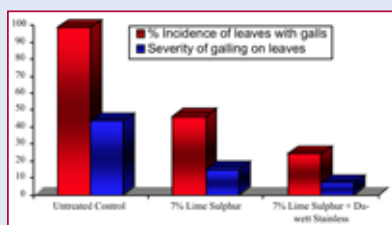
**Erinose mite** is a perpetual nuisance in New Zealand's grape growing regions. The leaf-feeding activity of this mite elicits a hypertrophic response in the plant, resulting in the production of unsightly galls on the lower leaf surface while blister-like bulges appear on the upper surface. If warm, humid weather coincides with a period of rapid leaf growth, galling may be severe and, in rare instances, the entire leaf blade may be covered. High levels of infestation like this can inhibit growth, reduce photosynthetic function and induce premature leaf drop. Economic damage is, however, most commonly associated with young vines.



Erinose mite galls on underside of grape leaf

Good control of this pest relies on prudent spray decisions in the very early part of the season. The timing of the first two sprays of the season is critical, particularly at the woolly bud growth stage.

Research in recent seasons has focused on optimising the level of control achieved at the woolly bud stage. Du-Wett® Stainless is a recent addition to the Etec Crop Solutions adjuvant range. It's a wetter/spreader surfactant which has good stability across a wide pH range. This unique attribute presented an



opportunity to assess whether the activity of lime sulphur on erinose mite could be increased with the addition of Duwett® Stainless to the spray mix. The results we generated were conclusive – in the 2010-11 trial, 22% fewer leaves expressed erinose mite galls when treated with 7% lime sulphur plus Du-Wett Stainless, compared with the standard 7% lime sulphur treatment (refer to graph). This is a statistically-significant difference and demonstrated the adjuvant's ability to efficiently spread the lime sulphur solution to the hard-to-reach parts of the vine, thereby enhancing its potency. The crop safety of this treatment was also carefully assessed and phytotoxicity has never been observed in our trials, or in those run by others. This approach is a good option for high-pressure blocks.

## KIWIFRUIT



### Reminders for September:

- ✓ Beware of **potential frost** events following bud-break. Ideally, overhead water or Orchard-Rite® wind machines should be utilised for frost control. If these are not available, consider applications of low-biuret urea (<0.4% biuret) immediately prior to risk periods to assist frost fighting. For further details on frost fighting options to best suit your situation, please contact your Fruited Supplies representative.
- ✓ An application of copper, such as **Champ®** or **Cuprofix®**, should be made to all blocks prior to bud-break to give protection from a number of fungal and bacterial diseases. If applying copper products, remember not to apply for at least seven days after Hi-Cane application as there is a theoretical risk that copper residues around Hi-Cane® application may reduce efficacy, resulting in poorer bud-break. Fruited Supplies Technical are completing trial work this winter to determine what, if any, risk exists in applying copper products too close to Hi-Cane application.
- ✓ To reduce lichen and over-wintering bacterial populations on vines, consider the application of **Graphic® Biocide** which contains copper and also a powerful sanitiser compound, benzylnonium chloride. If using Graphic Biocide, apply at least seven days after Hi-Cane but before any green tissue is present on vines.
- ✓ Foliar fertilisers such as **Croplift Plus** and/or seaweed products such as **Calibra®** are often used after bud-break, as cold spring soil temperatures suppress nutrient uptake by the roots. Application at this timing promotes healthy leaf growth and early leaf size.
- ✓ **Base fertiliser** applications should be made this month, if not already completed, and the first side-dressings should be applied to Hort16A.



Young, new-season kiwifruit growth damaged by frost

Following bud-break, growers again need to focus on **pre-flower control of scale**. Effort should be made to identify any sources of scale outside the vines – shelterbelts, for instance – and these should be sprayed before bud-break with an oil, such as DC Tron Plus, and an insecticide. To reduce potential hiding places on vines for scale infestations, lichen should be removed by applying Graphic Biocide or lime sulphur after Hi-Cane applications, but before bud-break, i.e. before any green tissue is present. An application of insecticide should then be made after bud-break. Note that Movento®, which has proven to be an extremely effective scale insecticide, is best applied nearer to flowering as efficacy of this chemistry depends on the presence of as much green leaf tissue as possible. For further information on best scale control practices in your situation, please contact your local Fruited Supplies branch or representative.

## PIPFRUIT



### Reminders for September:

- ✓ If **mealybug** and/or **scale** were problematic last season, early season management is important to gain control of these pests this season. Buprofezin, a selective insecticide, is highly recommended.
- ✓ If woolly apple aphid problems were experienced last autumn, apply oil plus an appropriate insecticide at late dormant or green tip.
- ✓ Where overwintering primary mildew is present, apply the DMI fungicide Systhane® 40WP in combination with a black spot protectant around open cluster to provide antisporeulant and eradicator control. Systhane 40WP uptake is positively influenced by temperature so optimise its effect by applying on a warm day, or during the warmest part of the day.



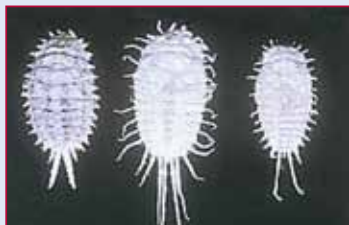
Green tip on apple tree

Your **black spot** control programme should begin with the first fungicide application timed for green tip (early bud-burst) for each variety. It is vital to protect new emerging leaves, which are very susceptible to black spot despite their small surface area. Cool temperatures and extended bud-break necessitate tight interval spraying to ensure rapidly-expanding, newly-opened buds throughout trees are protected. It is equally important to recognise that fruit may also become infected at any stage of development, even as early as the green tip stage. Apical portions of sepals and of leaves are the first susceptible parts exposed as fruit buds open. Adjust spray intervals to suit weather conditions, aim not to exceed seven days and use closer intervals, if warranted.

In the very early part of the growing season, when conditions are cool and there is rapid tissue growth, the systemic, cool-weather specialist black spot fungicides have a particularly good fit. Syllit® Plus is a good option early in the season due to its translaminar movement in the leaf, which assists spray coverage and provides rainfastness; it also has both curative and protectant activity. Uptake of the Syllit Plus active ingredient is not significantly influenced by temperature, so cool spring conditions don't impact efficacy as can happen with other fungicides. NB: Syllit Plus requires a minimum of three hours' drying time. Also remember the maximum of three applications per season for dodine products.

Mealybugs are actionable pests in some key export markets and populations appear to be increasing in some pipfruit growing areas, notably Nelson. Their habit of crawling into the calyx cavity of apples (around January) means it's difficult to accurately assess the infestation level in the block. Our research shows that blackened calyxes, a characteristic symptom of infestation caused by sooty mould colonising their excreted honey dew, is a relatively poor predictor of actual infestation levels at harvest. The best measure of block pressure is to collect fruit from January onwards and cut them in half through the centre of the calyx and then use a 10x hand lens to inspect the cavity for juveniles and adults.

**Mealybugs** are cryptic insects and over-winter within cracks, crevices and burrs of trees and the soil line where they inhabit roots of apples and alternative host plants. At bud-break they migrate from overwintering sites onto foliage to begin feeding on highly nutritious young leaves. Once they migrate into the calyx, foliar-sprayed insecticides are not effective so early season control is paramount.



L-R: *Citrophilus*, long-tailed and obscure mealybugs. [ARC Infruitec-Nietvoorbij, Stellenbosch, South Africa]

Bud-burst to pre-boom is a critical spray window if good control is to be attained. More susceptible juveniles are well-represented at this time and tree canopies are not yet complete, so good spray penetration can be achieved. If your block was over mealybug thresholds last season, begin your insecticide programme with buprofezin, such as Mortar™ or Ovation®, in combination with Boost® between tight cluster and open cluster. A second application should be made at pink. There are many published research studies on pipfruit and other crops, highlighting the benefits of using two buprofezin applications, rather than one, when targeting mealybug. Remember to use a water rate that delivers the insecticide to the hard-to-wet, centre of the trees. Consider a double pass down each row, from opposite directions, to minimise spray shadows and optimise coverage. NB: High water rate spraying with Boost is not a recommended practice with fungicides. Buprofezin will need to be applied as a separate spray to any fungicide application.

## SUMMERFRUIT



### Reminders for September:

- ✓ The first **bloom fungicide application**, as flowers are opening, should ideally be a systemic one, e.g. Folicur® or Chorus® (NB: Chorus for peaches, nectarines and apricots only).
- ✓ During bloom, KeyStrepto™ (streptomycin) for **bacterial blast** control is most effective when used in conjunction with a suitable adjuvant and when applied in anticipation of favourable infection conditions. Application immediately after frosts, hail or strong wind may also be wise to prevent disease establishment on damaged tissue.
- ✓ Monitor for **thrips** during the flowering period. If thresholds are exceeded, apply Mavrik® Aquaflo. Studies have confirmed Mavrik Aquaflo is safe to bees. However, best practice is to apply agrichemicals when bees are not foraging.

The foundation of an effective **brown rot** control strategy is the protectant spray schedule during the bloom period. Floral parts are very susceptible to brown rot infection and are also efficient spore traps. Wet events during bloom may induce blossom blight (resulting in a direct crop loss) as well as wood cankers which serve as an inoculum source later in the season. When rain is forecast, start applying fungicide covers as the first flowers are opening. Products that have a systemic mode of action, such as Chorus® or Folicur®, are favoured for this first spray as they will contribute disease control as flowers are starting to open. NB: Use Chorus only on peaches, nectarines and apricots. Use Chorus in preference to Folicur if you want to reserve the option of using the maximum three DMIs in the pre-harvest window.

Pristine® has an excellent fit in the mid-late bloom window, offering high level efficacy against brown rot and *Botrytis*, as well as very good persistence and rainfastness. It combines two active ingredients, pyraclostrobin and boscalid, which both interfere with pre-infection stages of disease development. Therefore Pristine suits being used as a protectant, applied before infection events. It can now be applied a maximum of three times over bloom, but only twice in succession. If you intend to use Pristine three times during the flowering window, a product from an alternative chemical group must be used either after application one or two. Pristine has a 100% petal-fall PHI. For best practice over bloom, maintain a maximum 7-day interval between applications.



Anthers exposed at full bloom

## Frequently asked questions about **Serenade Max**

Over the past few years Serenade® Max has become the most successful biofungicide on the New Zealand market. However there is still some confusion surrounding the features and benefits of using biofungicides to protect your crop from bacteria and fungal disease. The team from BASF has put together the following question and answer list to address the more frequently asked questions surrounding Serenade Max.

### What makes Serenade Max different from other *Bacillus subtilis* products?

Serenade Max is unique as it is the only biofungicide available which contains the patented QST713 strain of *Bacillus subtilis*. Unlike other products, this strain contains a unique series of molecules known as 'lipopeptides' which are responsible for the superior performance of Serenade Max.

### Is Serenade Max effective immediately or do I have to wait for some sort of colonising effect to occur once it is sprayed on the crop?

Unlike many other biofungicides, Serenade Max is active straight out of the spray tank and does not need to wait for some kind of colonizing effect to take place before the product begins to work.

### Will Serenade Max also control bacteria and bacterial diseases?

Yes, Serenade Max has been shown to have powerful bactericidal activity on some bacterial pathogens. For more information regarding using Serenade Max to prevent bacterial infection, speak with your Fruitfed Supplies representative.

### Will Serenade Max leave a chemical residue on my crop at harvest time?

No, Serenade Max leaves no chemical residue on the crop and generally has a very short pre-harvest interval.

### What are the key things I need to know to get the best out of Serenade Max?

Thorough coverage of the crop is essential for the excellent protectant activity of Serenade Max. It should only be used in preventative situations as a protectant before disease is present on the crop.

### How does the efficacy of Serenade Max compare to conventional products based on synthetic chemistry?

You should not try and compare the efficacy of biofungicides with traditional, synthetic-based chemistry as biofungicides will struggle to match the control of some traditional chemicals. However, when used in conjunction with conventional chemistry as part of a robust spray programme, Serenade Max will deliver excellent protection from

fungal disease, while removing the issues surrounding chemical residues that come with using conventional chemistry.

### Will Serenade Max leave a white deposit on my fruit?

Serenade Max should not leave any visible residues on the crop. However in some situations, where evenness of coverage has been less than optimal, a white deposit has been noticed in some instances. This residue is harmless and should wash off after a rainfall event. If it is likely to be an issue, discuss the best application methods and surfactant use for your situation with your Fruitfed Supplies representative.

### Is Serenade Max a systemic product?

No, Serenade Max is not systemic. It has contact activity only so thorough coverage of the crop is essential for good performance.

### How long can I leave Serenade Max in a spray solution?

You should use Serenade Max immediately after preparing the spray solution. Any spray mixes that have been left for more than 24 hours should be discarded.

### Can Serenade Max be mixed with other products such as copper?

Yes, Serenade Max can be mixed with copper and this tank-mix has been used successfully in other parts of the world. As with any tank-mix, you should NOT mix Serenade Max with any other crop protection products unless prior experience has shown the combination to be compatible.

### Is Serenade Max toxic to bees or other off-target animals?

Serenade Max is not toxic to bees and other non-target organisms.

### Does Serenade Max have organic certification?

Yes, Serenade Max has BioGro™ certification and so is certified for use in organic production.

For more information regarding Serenade Max, contact your local Fruitfed Supplies representative. **F**

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