

## New level of insect control for NZ orchardists

*DuPont has received registration approval for a new orchard insecticide that raises the bar in terms of safety to users and non-target species.*

DuPont™ Altacor® is registered for the control of leaf roller caterpillar and codling moth in apples, pears and nashis. Of particular interest to growers will be the high degree of safety that Altacor offers with respect to the beneficial insect *Aphelinus mali* – the woolly apple aphid parasitoid, a long-time orchard ally.

DuPont Altacor is powered by DuPont Rynaxypyr®, a new active ingredient with a breakthrough mode of action. Mark Christie, country manager, DuPont New Zealand, explains.

"Rynaxypyr interacts with the caterpillar's ryanodine receptors causing the release of calcium from muscles and leaving the caterpillar unable to contract and expand.

"The ryanodine receptors in insects are structurally different from those in mammals and are 400 to 3,000 times more sensitive to Rynaxypyr. This means Altacor has very low toxicity to most non-target organisms, providing a very favourable environmental profile," says Mark.

Altacor is extremely potent on target caterpillars and provides excellent residual control in the orchard. This unique mode of action means Altacor is an excellent alternative to all current insecticides used in spray programmes and a vital tool for resistance management.

"Once the caterpillar ingests the insecticide, it stops feeding almost immediately and will die within 72 hours. "Altacor is an ideal product for integrated fruit production (IFP) and now plays a major role in many apple-growing regions around the world including North America, Europe and Australia.

"Research has demonstrated outstanding performance for Altacor against codling moth. It will cause high levels of mortality when applied to codling moth eggs and any surviving larvae are controlled during hatching with the ingestion of treated fragments of the egg capsule. During the larvae stage of development, caterpillar mortality will occur quickly when the pest ingests treated plant material."

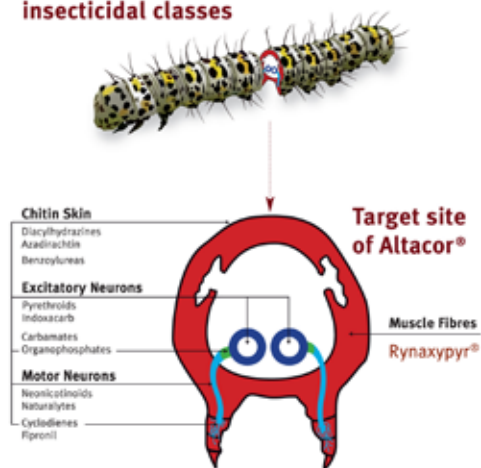
DuPont Altacor is a granular formulation packed in specially-designed 90g foil sachets. The use rate is very low – a 540g pack can treat up to three hectares of orchard. The product has high levels of crop safety and will not cause blemishes or russets on sensitive fruit varieties. ➡

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Codling moth (adult this photo; larvae above) and leaf roller are the prime targets for Altacor

### Target sites of currently available insecticidal classes



### In this issue:

- ✓ Onion registrations for Revus and Amistar
- ✓ Biogro registration for Kumulus
- ✓ Bio-start's Foliacin improves vine health

# Onions well protected with expanded Syngenta offering

*Syngenta is pleased to have gained approval for two products to be used in onions crops this season: Revus to control downy mildew and Amistar to control botrytis neck rot as well as downy mildew.*

Revus® is a novel fungicide which was first released last season for the control of potato late blight.

"It is an exceptional performer in potatoes and we're sure growers will be glad they can use it on onions as well this year," says Craig Thompson, Syngenta's horticulture market manager.

In onion crops, Revus provides three key benefits in the control of downy mildew:

- Powerful protection
- Exceptional rainfastness
- Reliable disease control

"The basis for this is the unique way Revus acts both on and in the plant – Syngenta have termed this Lok+Flo™ action," explains Craig. "Essentially it is the combination of highly active chemistry, strong and rapid bonding to plant waxy surfaces and gradual filtering of product into plant tissue."

Revus must be used as a protective spray and may be applied at 7 to 10 day intervals depending on rate and disease pressure.



Amistar® WG is a standard in most programmes for control of early and late blight in potatoes and for onion downy mildew control. This season Amistar has the additional approval for use to control onion *botrytis* neck rot.

*Botrytis* can be a significant problem in stored onions for New Zealand growers. Amistar WG will be best used at the key early application timing of flag-fall to two true leaves, where it will help prevent *botrytis* entering the young plant through the flag leaf wound.

For further information on the use of Revus or Amistar in onions, contact your Fruitfed Supplies representative or visit [www.syngenta.co.nz](http://www.syngenta.co.nz).

® Revus and Amistar WG are the registered trademarks of a Syngenta Group Company.

™ Lok+Flo is the trademark of a Syngenta Group Company.

Registered pursuant to the ACVM Act 1997, No.'s 7598 and 4841.

## New Rainmaster resists wash-off

*A new, more effective spreader-sticker called Du-Wett Rainmaster has been launched by New Zealand-owned Elliott Technologies, a leader in adjuvant technology.*

Elliott Technologies' Du-Wett® is a well-researched adjuvant proven to give more efficient and effective application of crop protection products. Using water volumes that are 25-30% of the full dilution rate, Du-Wett ensures that the spread and deposition of agrichemicals is optimised without the risk of stomatal uptake which occurs when herbicidal silicon super spreaders are used. Stomatal uptake into plant tissue can cause serious injury, so should be avoided. Du-Wett must be used with low water volumes to avoid excessive run-off. With Du-Wett in the tank, coverage and deposition is dramatically improved and the spray mix covers a greater crop area, thus saving time, fuel and labour costs.

"However," says Pete de Jong from Elliott Technologies, "because Du-Wett can be removed by heavy rain, Bond® Xtra was used in place of Du-Wett when rain was forecast. Whilst the spreading properties of Bond Xtra were better than any other sticker unfortunately the spreading was only about 25% of Du-Wett."

Over the last three years, a new, more effective spreader sticker has been developed which spreads twice as far as Bond Xtra but still gives the same outstanding wash-off resistance.



# Stellar year for vintage fungicide



*Sales of the iconic BASF fungicide Kumulus® DF reached record levels in 2008 as more and more growers realise its potential for improving the profitability of their business.*

Already a long-time trustworthy product in spray programmes, Kumulus continues to offer outstanding protection against powdery mildew in grapes and apples, along with a number of other crops. Kumulus is also active against some mite species – notably Erinose mites on grapevines – and acts as a plant nutrient booster by supplying sulphur to the sprayed crop.

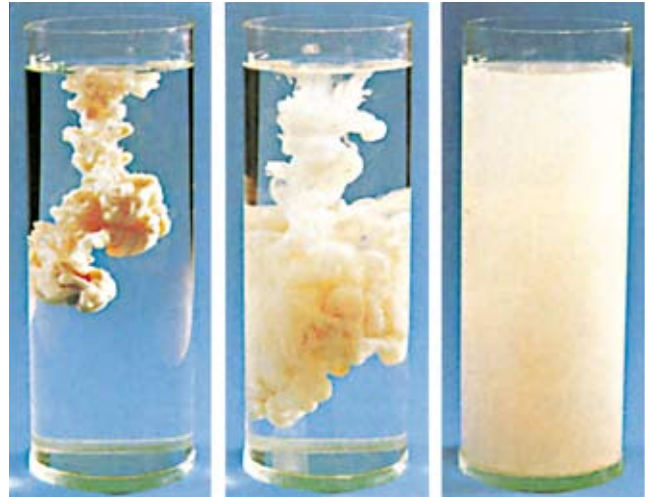
The key to the effectiveness of the product lies in its physical properties. Kumulus is a dry flowable (DF) micro-granular fungicide which means it flows like a liquid for easy measuring and handling while the granules are still coarse enough to provide dust-free mixing. As seen in the image, the moment Kumulus is added to water it disperses rapidly to form a homogenous solution that will not settle inside the spray tank.

To get to the heart of what is going on here you really need to look inside an individual Kumulus sulphur granule where you will be surprised to find ... nothing at all. Each DF granule is completely hollow with a porous outer shell, so the moment water encloses the granule it explodes to be dispersed widely into the surrounding liquid. Multiply this effect by the hundreds of thousands of granules in each bag and you soon see why Kumulus mixes so readily and sprays with such consistent coverage.

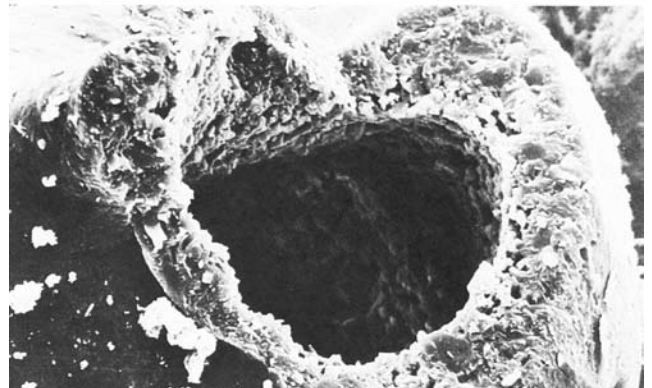
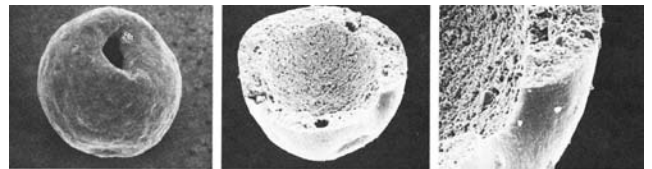
Kumulus has recently obtained Biogro™ certification in New Zealand which is great news for organic growers and those involved in the Apple Futures programme who can use Kumulus with complete confidence that it will meet their requirements. ⇨

Kumulus is registered pursuant to the ACVM Act 1997, No. P3493

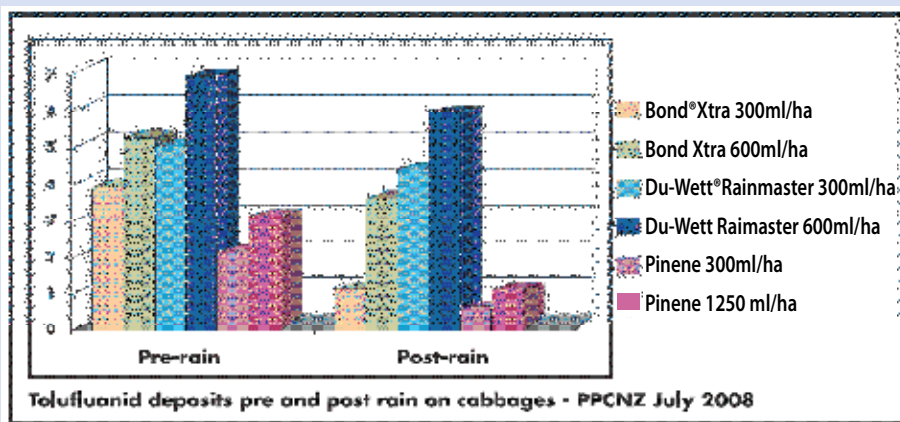
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*This image highlights the rapid dispersion of Kumulus DF in water*



*A high-powered electron microscope image of a Kumulus sulphur granule*



Du-Wett® and Du-Wett® Rainmaster™ are registered trademarks of Elliott Chemicals Limited.  
Bond® Xtra is a registered trademark of Loveland Products

"Du-Wett Rainmaster's™ improved spreading and sticking characteristics complement Du-Wett whenever rain is threatening.

"We see Du-Wett Rainmaster as being ideal for growers wanting a spreader with good rainfastness, who spray with low to medium water rate volumes. If using medium to high water rates, using Bond Xtra, which spreads and sticks exceptionally well at higher water rates."

For more information on Du-Wett or Du-Wett Rainmaster, contact your FruitFed Supplies representative. ⇨

## Proactive nutrition from Foliacin elicitor

*Prime your plants' own defence mechanisms before they come under stress or pathogenic attack.*

Plants, like humans, have a number of mechanisms for protecting themselves against periods of stress and pathogenic attack. The problem is that many of these mechanisms don't react fast enough to prevent crop damage.

"An application of Foliacin primes the plant's defence mechanism prior to periods of stress or pathogenic pressure," explains Stephen Wrigley, BioStart's marketing manager. "With its immune system fully engaged, the plant can better defend itself, and maintain growth through periods of stress."

The key to Foliacin's effectiveness is its combination of two unique actives: powerful



*Tyrone Yianakis, Marlborough Fruitfed Supplies field representative with Nick Winter, viticulturist at Giesen Wines*

elicitors and defence proteins derived from a 'precise biological fermentation process'.

"These two actives work in very different ways. The fermentation extracts assist in maintaining the plant's first line of defence, the leaf bio-film. Just like in the soil, leaves are teeming with biological life in a complex ecosystem. Healthy leaves are dominated by beneficial bacteria and fungi. The fermentation extracts shift the balance of power by applying selective pressure on the leaf bio-film to ensure the beneficial microbes dominate.

"The elicitors mimic the presence of pathogens and induce both short and

## KIWIFRUIT SECTOR

### Use Flint early against sclerotinia

*Registered for use against sclerotinia in kiwifruit two years ago, Bayer's Flint fungicide is proving its value in growers' disease control programmes.*

Flint® was the first strobilurin fungicide to be registered for use in kiwifruit and has proved to be very effective against sclerotinia when applied during flowering.

John Phelps, Te Puna orchard manager for Direct Management Services (DMS) in the Bay of Plenty, says Flint has delivered a good level of control of sclerotinia.

"It's very effective, especially in gold – the effect is very noticeable," says John. "Spray early for maximum protection; it's better to hit early before fruit set. We also like that you can spray for leaf roller and sclerotinia at the same time, which saves the associated costs of having to make a separate spray application."

"Once applied, Flint is absorbed rapidly into the waxy layers of the plant and is therefore not washed away by rain or dew – a real advantage in spring's changeable weather," adds Phil Bertram, Bayer CropScience regional sales manager for Waikato and Bay of Plenty.

Non-toxic to bees, Flint is also harmless to many beneficials, including the mite predator *Typhlodromus pyri*. Its packaging has been tailor-made for kiwifruit growers. Coming in 1.8kg boxes containing six convenient 300g packs, each 300g pack is enough to do one canopy hectare of crop.

#### Key points for Flint's use against sclerotinia:

- Apply 15g/100 litres of water (minimum 300g/ha) during flowering.
- Flint is compatible with most of the commonly-used insecticides including Prodigy™ and fungicides.
- DO NOT add other products to Flint when used over the flowering – early fruit set period.
- Withholding period: do NOT apply after flowering. ⇄



#### WHAT IS SCLEROTINIA?

Caused by the fungus *Sclerotinia sclerotiorum*, this disease causes crop losses in three ways: flower blight; premature fruit drop; and fruit scarring which results in rejection from export. It affects kiwifruit only over the flowering period with the fungus establishing in petals and other plant parts then infecting very small fruitlets and leaves. Most affected fruit drop to the ground soon after becoming infected. Superficial fruit infections often dry out, especially if drier weather follows, resulting in scarred fruit, which is unmarketable.

long term responses, including a change in cell wall composition and the production of specific antimicrobial compounds such as photoalexins."

One grower who has seen the practical advantages of using Foliacin is Nick Winter, viticulturalist for Giesen Wines.

"We've taken a little-and-often approach with our Foliacin applications over the last four seasons," says Nick. "We started using Foliacin on the advice of Geoff Warmouth, BioStart's local rep here in Blenheim when we wanted something to improve our leaf health. We start with the first cover spray and add 500ml/ha with every spray for the season. It's easy to use and we can see a definite improvement particularly when we know the vines are under a bit of stress."

Foliacin is suitable for use with grapes, kiwifruit, pip and stone fruit, and vegetables, and mixes with any cover spray. Talk to your Fruitfed Supplies representative for more information or visit [www.biostart.co.nz](http://www.biostart.co.nz). ➔

Receive a \$50 gift voucher to spend in any Hunting & Fishing New Zealand store with every 20-litre container of Foliacin sold through Fruitfed Supplies in November and December. Conditions apply see details instore.

Visit [www.huntingandfishing.co.nz](http://www.huntingandfishing.co.nz) for store locations.



## TECH-KNOW TIPS

### ASPARAGUS



#### Reminders for November:

- ✓ **Inspect** asparagus beds regularly for pests and diseases.
- ✓ Take a **root sample** from young (2-3 years) crops to determine carbohydrate levels. Enter information in Crop & Food Research's AspireNZ model to determine date of close-up.

### AVOCADOS



#### Reminders for November:

- ✓ **Leaf roller control** is a priority as pressure on avocado fruitlets is usually high in spring. Once leaf roller become established amongst mature fruit, they are difficult to control. Monitor and if thresholds are exceeded, control as necessary. Success Naturalyte offers excellent efficacy, short pre-harvest intervals and little effect on non-target organisms. Proclaim is now also registered for leaf roller control in avocados, offering a new option.
- ✓ Use of **Du-Wett** super spreader will help improve coverage and deposition on both leaves and fruit bunches. Recent research shows the benefit of adding Du-Wett, allowing reduced water rates while actually improving coverage. Ask at your nearest Fruitfed Supplies branch for further details.
- ✓ Heavy fruit set may also require feeding to ensure fruitlets are retained; apply **Fruitfed Supplies Avocado Fertiliser** as recommended. Please note we also now have **fertigation grades** of avocado fertiliser available.
- ✓ Monitor soil moisture and maintain **irrigation** to ensure trees are not

under stress at this important growth stage. Our irrigation designers can assist with scheme design – ask in-store for further details.

On average, **six spotted mite** numbers have been higher in a number of blocks this season (see photo). If SSM were an issue in your block during flowering, control with Mit é mec plus DC Tron Plus as soon as flowering is finished. Uptake of avermectin chemistry such as Mit é mec is best with newly developed leaves, maintaining a reservoir of active ingredient on the plant and increasing longevity of control. This helps to ensure leaves are retained as long as possible to assist fruit set and early fruitlet growth.



Leaf fall following heavy SSM infestation over flowering

### BRASSICAS



#### Reminders for November:

- ✓ **Monitor** crops for pests and diseases.
- ✓ Spring flights of aphids will be reaching their peak.
- ✓ **Cutworm, wireworm and springtails** may damage young transplants.
- ✓ If **diamond back moth and white butterfly** populations exceed the action thresholds apply a selective insecticide from the first window of the resistance management strategy e.g. Delfin or Success Naturalyte.

# TECH-KNOW TIPS

## CITRUS



### Reminders for November:

✓ Keep an eye out for **Kelly's citrus thrips** on developing fruitlets (see photo). **Armoured scale** insects may also appear at this time.



*Kelly's citrus thrips damage on Satsuma mandarin prior to harvest*

✓ Research presented by Dr. Lisa Jamieson at the citrus conference held in September shows adult **citrus whitefly** start flying in October and begin laying eggs.

Controlling adults reduces the numbers of eggs laid and summer populations. However, crawlers – the most susceptible life stage – appear in numbers in November, giving an opportunity for improved control.

✓ The **fungicide** programme needs to be maintained up to and post-flowering, to protect against scab and melanose infection of young shoots and fruitlets. Through petal fall and early fruitlet growth, tangelos and tangors are susceptible to **Alternaria** infection. An application of Rovral Gold or Rovral Flo is indicated at petal-fall.

✓ With cool spring weather limiting nutrient uptake, foliar fertilisers such as Citrac help promote strong flowering and fruit set. **Citrac** is very well suited to citrus, supplying magnesium, zinc and manganese, all of which are often lacking. Timing is critical, so please check with your Fruitfed Supplies representative for optimum application timing for your block.

## GRAPES



### Reminders for November:

✓ For the best control of **powdery mildew and erinose mite**, maintain a tight sulphur or Organic JMS oil or Biocover LS oil cover through till pre-bloom.

✓ For best results with wettable sulphur, apply only on warm days or the warmest part of the day.

✓ Apply a DMI fungicide at 10-14 days prebloom to protect vines from powdery mildew infection when disease pressure is rapidly increasing. Try to time the application to co-incide with warm conditions and do not mix these products with sulphur.

✓ To protect vines from diseases like black spot, phomopsis and downy mildew, apply a suitable broad-spectrum protectant fungicide in anticipation of rainfall events. Ensure good coverage.

DMI fungicides such as Systhane™ 200EW are, at present, perhaps our most valuable tool for protecting vines from **powdery mildew** infection, due primarily to their xylem-systemic action and high level of efficacy. But because DMI fungicides are single-site inhibitors, specific populations of powdery mildew may readily develop resistance if fungicides are poorly managed. It's important to follow the guidelines recommended by the International Fungicide Resistance Action Committee (FRAC). These are:

- The total number of DMI applications per season should not exceed four.



*Powdery mildew infection at pre-bunch closure*

- Use DMI fungicides in a protective manner when the risk of disease is high but the incidence is low, i.e. just before and after flowering.
- Always follow the label directions with regards to timing and product rate.

For detailed recommendations on all aspects of pest and disease control in your vineyard, contact your local Fruitfed Supplies field representative.

## KIWIFRUIT



### Reminders for November:

✓ Following last years' changes to the Zespri Crop Protection Program, **pre-flower control of scale** is important. Make two pre-flower applications of insecticide with preference for the chloronicotinyl chemistry (Actara or Calypso), products with the best efficacy and systemic activity. Calypso has an added advantage of excellent bee-safety, making it first choice for the period immediately prior to flowering. Consider also using a surfactant (or mineral oil such as DC Tron Plus) with pre-flower insecticide applications to improve coverage and efficacy and focus on effective coverage of the entire canopy. Last season saw significant area treated with **Du-Wett**, a specialist adjuvant which increases greatly the spread of applied spray even at low water rates. Contact your local Fruitfed Supplies branch or representative for more information.

✓ Following flowering, an application of **DC Tron Plus** is recommended during the period from fruit set to 14 days later (Hayward) or from fruit set to 21 days later (Hort 16A). While this timing is relatively safe, label directions and best practice guidelines must be followed. Please contact your Fruitfed Supplies representative or local branch for further details.

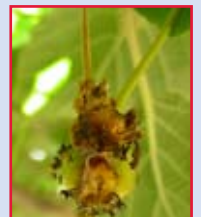
✓ The period immediately following petal fall to January is the most critical **leaf roller** control period. Apply Prodigy during flowering or at fruit set to protect developing fruitlets. Prodigy has excellent activity on leaf roller larvae as well as leaf roller egg rafts, while being extremely safe to all other insect species, including bees.

✓ The last few seasons have seen increased use of foliar fertilisers, such as **PentaFlo**, after fruit set to increase fruit calcium and assist with fruit quality and development.

✓ Specially formulated seaweed fertilisers such as **SM6 or Calibra** should also be considered from petal-fall onward to assist early fruitlet growth and fruitlet and leaf quality.

✓ **Supplementary pollination** should be considered over flowering to improve fruit size and shape and reduce variability within a crop. Excellent results have been seen with this technology over the last few seasons on a number of blocks. Please contact your Fruitfed Supplies representative to discuss how this technology may best be used in your situation.

**Sclerotinia** is likely to be an issue if conditions are warm and wet through the flowering/post-flowering periods. Apply Flint or Rovral Gold prior to these wet periods, to provide optimum sclerotinia control, maintaining fruit yield and quality. A new option this season is Pristine, a dual-active fungicide with two modes of action, offering excellent **sclerotinia** control. Talk to your Fruitfed Supplies representative for further details.



*Sclerotinia infection destroying young Hayward fruitlets*

## LETTUCE



### Reminders for November:

✓ **Monitor** crops for the lettuce aphid and other pests and diseases.

- ✓ Flights of **lettuce aphid** are possible during November. Keep close watch on crops for populations of lettuce aphid and natural enemies – **lacewings, hoverflies and ladybirds**. Research by Crop & Food Research has found that natural enemies can maintain economic control of the aphid in spring crops.
- ✓ Young transplants should be inspected for damage by **cutworm, wireworm or springtails**.

## ONIONS



### Reminders for November:

- ✓ Monitor crops every week for **thrips** and apply an insecticide if more than five thrips are found on 50 plants. Follow the resistance management strategy.
- ✓ Continue applications of Cereous™ for **white rot** control at 3-4 weeks intervals (maximum of 2-3 applications per crop).
- ✓ **Strategic herbicide applications** can be made from 4th leaf through bulbing depending on weed species present.
- ✓ Take a **leaf test** at 3-4 leaves, prior to fungicide applications starting. Side dress to correct any nutrient imbalances identified.

## PIPFruit



### Reminders for November:

- ✓ Maintain regular **black spot** fungicide covers to protect rapid plant growth following fruit set. Apply Flint, Stroby or Systhane plus a protectant (Polyram or Delan) early and mid-November.
- ✓ Control **powdery mildew** over this period of rapid growth. Systhane or Flint, as applied for black spot, are very effective on powdery mildew. Euparen Multi applications for mildew and black spot control can commence after 25 November.
- ✓ Novagib will reduce fruit russet on susceptible fruit cultivars when applied from late bloom followed by 2-3 further applications at 10-day intervals.
- ✓ Monitor codling moth and refer to GDD bulletin on the PNZI website for application timing for your district. Apply Prodigy at biofix date plus 80-110 GDD. Note: Prodigy PHI 1 December.
- ✓ If **San Jose scale** detected at harvest, apply Calypso in November. Crawlers of the first generation move onto fruit in November and December.
- ✓ Monitor for **European red mite** in late November.

The application of Prodigy just prior to **codling moth** egg hatch 80-110 GDD from your regional biofix date is highly recommended (check PNZI website). Prodigy provides both ovicidal and larvicidal action on codling moth and leafroller; combined with its long residual life that makes this moulting-accelerating compound (MAC) ideal for early timing.



Adult codling moth

Fruitfed Supplies technical team's extensive R&D programme with Prodigy started a decade ago. We have found Prodigy outperformed the industry standard, Mimic, and that there was no adverse effects on beneficial insects or bees, important early season when predators like *Typhlodromus pyri* and parasitoids like *Aphelinus mali* and *Platygaster demades* are low in number. From a new class of chemistry, the anthranilic diamides, **Altacor** has recently been registered for codling moth and leaf roller control in apples, pears and

nashi in New Zealand. (See article in this issue of *Facts*.) In addition to larvicidal activity, Altacor also has ovicidal activity on eggs. It is resistant to photo-degradation and has translaminar movement into leaves to provide good residual protection and resistance to rainfall. Fruitfed Supplies' research over past five years confirms Altacor's excellent leaf roller and codling moth control in apples. Fruit finish was also excellent. This compound offers an alternative IPM tool with its low use rate and safety to beneficial insects. Pipfruit NZ has set a 70 day PHI.

Depending on your initial application date of **Regalis**, the second application will be due in 21-28 days (i.e. mid-late November). Fruitfed Supplies' extensive research over the last seven years highlights the many attributes of this PGR. Remember to check water pH, and if too alkaline, add Li -700 to maximise uptake. The EPA has classified it to be a reduced risk pesticide in the US due to its benign toxicological profile and its extremely short environmental half life. Discuss optimum timing for your second Regalis application with your Fruitfed Supplies representative.

## POTATOES



### Reminders for November:

- ✓ **Magister®** can be added to other **pre-emergence herbicides** to broaden the range of weeds controlled, particularly if cleavers are a problem.
- ✓ **Monitor** crops for pests and diseases, e.g. cutworm and *Rhizoctonia*.
- ✓ **Aphid** flights peak in mid-late spring depending on the season, but so do populations of key aphid predators, e.g. ladybirds and lacewings. Monitor populations of both groups.
- ✓ If **late blight** is present in any early crops, there is a new fungicide with curative activity registered for use. **Nautile®** can control late blight for up to 48 hours after infection.

## SUMMERFRUIT



### Reminders for November:

- ✓ Apply a suitable protectant fungicide for **brown rot** and maintain effective cover while fruitlets are susceptible.
- ✓ Monitor for **leaf roller** and apply Success Naturalyte if thresholds are exceeded. Check PHI periods with your exporter.
- ✓ Continue to monitor for **aphid** infestations. Early season control prevents large population build-ups.

**Mit é mec** has recently been registered for the control of **European red mite and two-spotted mite** in stonefruit. The active ingredient, milbemectin, is produced by fermentation of an Actinomycetes soil bacteria discovered in the Hokkaido district, Japan. This compound is not systemic, but has translaminar action and tends to reservoir within the leaf tissue, while surface residues dissipate quickly after application. It has a unique mode of action and is active on eggs, larvae, nymphs and adults with a suppressive effect on reproduction even at sub-lethal rates. Mit é mec has a low mammal toxicity, and is recognised as a US EPA reduced risk pesticide. Fruitfed Supplies technical team's research studies demonstrated excellent mite control with little effect on mite predators *Typhlodromus pyri* and *Phytoseiulus persimilis* making it suitable for IPM programmes. Mit é mec 14 day PHI in New Zealand; check export crop PHI periods with your exporter.



European red mite and egg

## Goëmar BM86 proving popular in NZ vineyards

*With a patented production process, Goëmar BM86 GA14 (Goëmar Ascophyllum 14) seaweed cream offers New Zealand growers two specific benefits.*

In 1974, no one was able to explain the fortifying/stimulating effects of algae on crops. Since then Goëmar's research demonstrated algae contain sugars (oligosaccharides), hormones like cytokinins and auxins, amino-acids, trace elements and vitamins. Oligosaccharides are also referred to as 'elicitors' which act as messengers to tell plants to grow, flower, fruit, and fight off certain pathogens.

The proven benefits of Goëmar BM86 GA14 are:

1. **To stimulate the plant's metabolism** helping the uptake of more available elements from the soil. Studies have shown BM86 induces better nutrient absorption at root level, as well as preferential diffusion of nutrients to the areas experiencing strong growth.
2. **Polyamines** are plant growth regulators involved during pollination and fruit formation. Studies show BM86 GA14 seaweed cream has a marked effect on the polyamine composition of flowers and fruits allowing this delicate period to be made more secure.

Some of the many observations and studies made after applying Goëmar GA14 cream include:

- Stronger, healthier growth as a result of improved cell division
- Better stress/drought/frost/wind tolerance
- Improved photosynthesis and chlorophyll production'
- More efficient uptake of nutrients
- Larger root biomass
- Improved fruit set
- Improved yields
- Increased resistance to pests and diseases

Yealands Estate in Marlborough is just one of the many New Zealand operations seeing the benefits of using BM86. Vineyard manager Gareth Goodsir explains: "This is a challenging site above the Awatere River at the end of Seaview Road where we regularly experience strong southerly and nor-west winds. This places extra stress on the vines, so it is very important to maintain optimum plant health."

Over the last two seasons, Gareth has been applying Goëmar BM86 to try and improve fruit set in some of the more difficult sites. "We've had some variable sets in some of the more exposed areas. Last season we achieved much improved berry set, so we are keen to use the product again on a larger scale this coming season."

Fruitfed Supplies is the exclusive New Zealand distributor for Goëmar BM86 GA14. ❖



*The application of Goëmar BM86 seaweed cream to wind-affected sites has improved fruit set at Yealands Estate vineyard in Marlborough*

## Success in kiwifruit with Goëmar Calibra

*Following the success of BM86, last year Goëmar launched its new bio-stimulant seaweed Calibra into the New Zealand horticultural market.*

Calibra is a highly concentrated seaweed filtrate (GA142) designed to stimulate nutrition to improve fruit health and size at harvest.

"We needed to introduce a product that could be used throughout the growing season as a tonic to stimulate the plant and improve leaf condition," says Glen Baylis, North Island manager for Yara New Zealand. "Calibra is applied at 1-2 l/ha prior to flowering with two to three applications after flowering. Applications can also be made during times of stress, e.g. frost, high winds, or drought. Last year Calibra was applied to kiwifruit, vegetables, citrus, avocado, pip and stonefruit, and I've already had a lot of positive feedback."

Andrew Webb from Webb Orchard Contracting comments: "I used Calibra on my own kiwifruit orchards for the first time last year and I was extremely impressed with the health of my vines compared to previous seasons. This year I have already recommended Calibra to many of my customers; it mixes well in the spray tank, it's safe and it works!"

Calibra is a natural product based on seaweed extract from ascophyllum nodosum (GA142) and contains phytohormones (auxins, cytokinins, gibberellins), amino acids, vitamins, bêtaines and polysaccharides with oligosaccharides making up 50% of the dry matter. ❖



**Fruitfed Supplies**

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