

## Prodigy now registered for avocado leafroller control

*Prodigy™ insecticide has recently been registered for leafroller control in avocados and research trials show its effectiveness.*

Prodigy, a second generation moult-accelerating compound (MAC) from Dow AgroSciences, is well known for its effectiveness against leafroller in apples, grapes and kiwifruit. Now Prodigy is registered for use in avocados where the maintenance of residue on the surface of foliage and fruit provides effective leafroller control for a minimum of four weeks.

Bernard Harris, Dow AgroSciences technical specialist, says long-term leafroller control is essential for avocados as fruit remains on the tree for a greater period of time than other top fruit.

"Overseas studies have shown Prodigy is up to five times more ovicidal than Mimic™ because eggs are controlled whether Prodigy is sprayed directly onto the eggs or whether the eggs are laid onto Prodigy residues."

Fruitfed Supplies' Technical team has trialled Prodigy in avocados and demonstrated the product's effectiveness as illustrated in the data tables below.

### LEAFROLLER DAMAGE AND INFESTATION IN AVOCADOS FROM FRUITFED SUPPLIES TECHNICAL TRIALS CONDUCTED IN NEW ZEALAND

#### 2003/04 SEASON

##### Leafroller-damaged avocados and presence on fruit at January harvest\*

Programme	% damaged avocados	No. larvae on fruit
Untreated	17.3	0
Prodigy	4.0	0
Standard programme	6.7	0

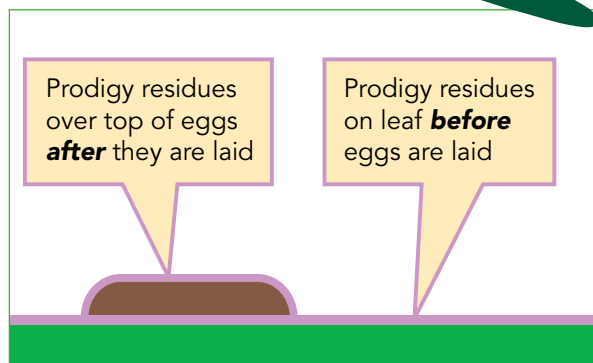
\* After a season-long leafroller control programme. Standard programme was Mimic x3 followed by Attack® x2 followed by Success™ Naturalyte™ x5. There was no significant difference between insecticide treatments.

#### 2005/06 SEASON

##### Leafroller-damaged avocados and presence on shoots at July assessment\*

Programme	% damaged avocados	No. larvae on shoots
Untreated	15.5	19
Prodigy	4.0	0
Success Naturalyte	2.8	1

After 4 applications at 4 week intervals from February to June. There was no significant difference between insecticide treatments.



"Prodigy is the latest advance in leafroller control in avocados," adds Bernard. "Extensive research in New Zealand and overseas confirms that Prodigy provides superior control of this pest. Prodigy has a very favourable environmental and toxicological profile, is active only against juvenile Lepidoptera (eggs and caterpillars), and will not harm beneficial insects. It's suitable for use in AvoGreen programmes.

"Prodigy has a 14 day pre-harvest interval for the New Zealand market with a MRL of 0.5 mg/kg. MRLs have been established in the USA (0.6 mg/kg), Australia (0.5 mg/kg), the EU and some other markets. Use of the 14 day PHI allows export to Australia and USA, but always consult with your exporter." ⇄

™ trademarks of Dow AgroSciences. Prodigy is registered pursuant to the ACVM Act 1997 No. P7154. Success™ Naturalyte™, No. P5237. Mimic, P4642. Attack® is a registered trademark of Nufarm Technologies USA Pty Ltd and registered pursuant to the ACVM Act 1997, No. P2912.

### STORE MERGERS

In Gisborne the Fruitfed Supplies team has joined with the PGG Wrightson Rural Supplies team to create a single merged business located at the Rural Supplies store in Solander Street, Gisborne.

New contact details for Fruitfed Supplies are:  
**PGG Wrightson/ Fruitfed Supplies**  
 21 Solander Street  
 PO Box 1240  
 GISBORNE 4040  
 Tel: 06 863 1660  
 Fax: 06 867 4715

In Palmerston North, the Fruitfed Supplies team has relocated to Feilding where they have merged with the PGG Wrightson Rural Supplies team at the Manchester Street store.

New contact details for Fruitfed Supplies are:  
**PGG Wrightson/ Fruitfed Supplies**  
 18 Manchester Street  
 Private Bag 10002  
 FEILDING 4743  
 Tel: 06 323 0062  
 Fax: 06 323 0621

## Control the three major fungal diseases in grapes with Pristine

*Pristine® controls a range of diseases in apples, pears and stonefruit, but perhaps its most suitable fit is in the grape market where it controls all three major diseases at once: Botrytis, powdery mildew and downy mildew.*

BASF horticultural specialist Weston Hazelwood believes Pristine's three targets give growers a powerful yet cost-effective option when planning their vineyard spray programme this year.

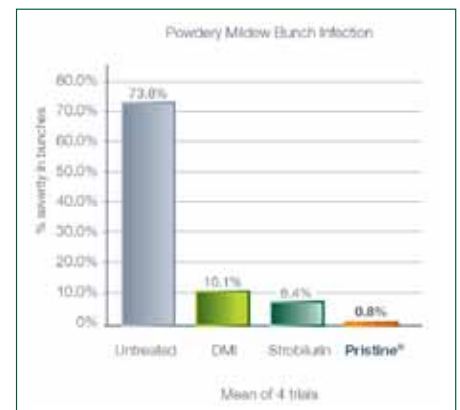
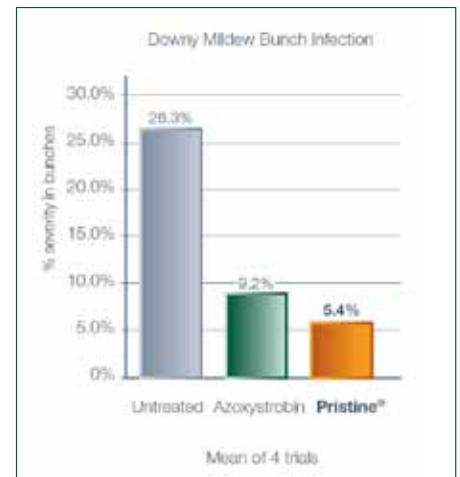
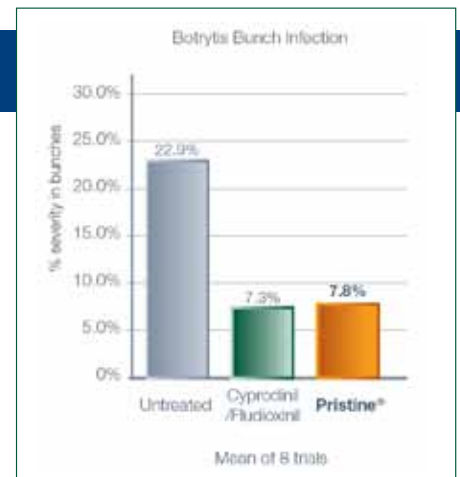
"The key to Pristine's effectiveness in grapes is its combination of two unique active ingredients: F500®, the latest generation strobilurin, and boscalid, a new anilide molecule from BASF," says Weston. "These two active ingredients work in very different ways to produce a truly unique fungicide. F500 provides fast acting, long lasting disease control by blocking the energy production of the fungal cell at the Complex 3 enzyme in the fungal respiration chain, while boscalid inhibits the Complex 2 enzyme of the respiration chain. Boscalid not only stops energy production but also stops synthesis of the amino acids and lipids that are critical for fungal growth. Another major benefit of Pristine is that because boscalid works on a different site of action than F500, there is little risk of cross-resistance to Pristine giving growers an in-built resistance management strategy. Pristine's mode of action sees F500 work in a translaminar manner; it's also locally systemic while boscalid is translaminar and acropetally systemic. "These effects give a level of protection into new growth as well."

A large number of independent trials have shown that in grapes, Pristine matches the performance of the current market standard for the control of *Botrytis*, while exceeding the performance of the current market standards in the control of powdery mildew and downy mildew.

"This eliminates the need to tank-mix as is often needed with other grape fungicides. However, Pristine is able to be tank-mixed with a wide range of insecticides and does not require the use of an adjuvant, thereby saving growers further time and money."

The launch of Pristine into the grape market adds to BASF's already impressive range of proven grape products such as the fungicides Kumulus®, Polyram®, Acrobat® and Delan® as well as the herbicide Stomp® Xtra and the newly acquired Serenade Max (see note below).

For more information on Pristine or any products in the BASF range speak to your local Fruited Supplies representative. ➡



### DID YOU KNOW?

The global research team at BASF named the newly created anilide molecule 'boscalid' after the excellent activity it showed on a range of fungal pathogens: **Botrytis**, **Sclerotinia**, **Alternaria anilide**. Who said scientists have no imagination!

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## Change of supplier for Serenade Max



*BASF, the world's largest chemical company, has taken over distribution of Serenade® Max, one of the best selling biological fungicides in the world.*

Previously distributed by Elliott Technologies Ltd (ETL, now Etec Crop Solutions), Serenade Max protects numerous horticultural crops from a wide range of fungal diseases late in the growing season. Serenade Max was developed by small research-based American company AgraQuest USA, which worked closely with ETL with the product in New Zealand.

"BASF now distributes Serenade Max globally. We're excited to gain access to the product and acknowledge the good work done by ETL and Fruited Supplies to date. Serenade Max has grown to be a key input in the

horticultural spray diary, particularly in the grape market. We now look to further increase the product's success with the benefit of BASF's extensive global research capability and the solid working relationship we have in place with Fruited Supplies," says BASF New Zealand marketing manager Tim Loughnane.

All customer enquiries relating to Serenade Max can be directed to your local Fruited Supplies store. ➡

Serenade Max is registered pursuant to the ACVM act 1997, No. P5809

## Quintec fungicide brings Christmas cheer!

*Following six seasons of commercial use in New Zealand, Quintec™ has demonstrated reliable protection of grapes against powdery mildew.*



Quintec's active ingredient is distributed throughout the grape canopy as a vapour. Continuous slow release from sprayed surfaces, followed by rapid re-adsorption by green tissue means new growth and areas not directly sprayed during application will still receive superior protection against powdery mildew. Vapour redistribution is unaffected by rain or temperature variations. Flexible use rates allow growers the ability to vary the spray interval. Use of the higher rate provides protection against powdery mildew for 10 to 14 days or more.

While Quintec is looking after your grapes during the Christmas holiday period, Fruitfed Supplies and Dow AgroSciences would like to look after you! Our popular Christmas promotion is running again this year. A \$50 New World gift voucher is offered with every five litres of Quintec purchased during the promotion leading up to Christmas. Conditions apply, so talk to your local Fruitfed Supplies representative for details.

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## Safe calcium applications with Stopit

*YaraVita Stopit was the original foliar calcium and has been used on fruit and vegetable crops around the world for almost 30 years.*



It's a well established fact – calcium plays a key role in fruit physiology and that increasing fruit calcium levels can reduce physiological disorders such as bitter pit in apples. However, the challenge is getting calcium into the fruit safely without damaging the crop.

The main focus when developing Stopit was crop safety. Other materials and products containing calcium were available but getting reasonable levels into the fruit often caused damage.

The secret of YaraVita Stopit's unmatched safety profile is in the formulation. Yara's production process converts the raw material to a formulation that delivers a high, yet safe concentration of calcium. Stopit is safe to use even at application rates as high as 10 l/ha. The fact that this process is not reproducible by other manufacturers means that YaraVita Stopit truly is a unique product.

## New rates for Du-Wett on kiwifruit

*Du-Wett is approved for pre and post-flower use in kiwifruit with new rates now introduced.*

Du-Wett super-spreader has been a breakthrough innovation for kiwifruit spray applications, enabling growers to halve the amount of water required to spray per hectare, says Darren Faire, regional sales manager for Etec Crop Solutions.

"This season, new use rates of Du-Wett for kiwifruit applications have been introduced. Based on the latest findings from Robyn Gaskin of Plant Protection Chemistry and others, the rate of Du-Wett to use per hectare in 1,000 litres of water has reduced from one litre to 350 ml for pre and post-flower foliage sprays," says Darren.

"Considerable research, both industry and government-funded, is being conducted to improve spray application techniques and practices on kiwifruit vines."

Key points for Du-Wett use in 2010-11 season

- New use rate for pre and post-flower applications is 350 ml/ha of Du-Wett applied in 1,000 litres of water.
- Do not apply Du-Wett with Movento® insecticide and Partner® until further trials are completed.
- Further trials are being conducted with oil sprays to confirm the appropriate Du-Wett and oil dilution rates and timing.

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© Movento and Partner are registered trademarks of Bayer CropSciences.

## Superior summer rot management with Mizar

*Referencing research from the mid-1990s highlights Mizar's effectiveness against bitter rot.*

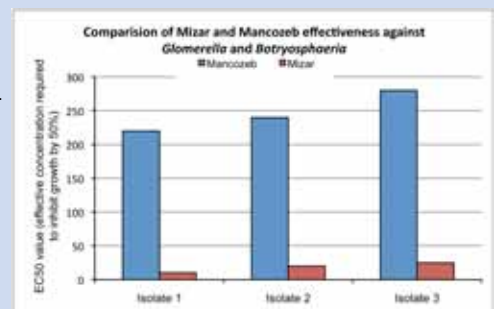
David Lingan, regional manager for Etec Crop Solutions, emphasises vigilance. "*Glomerella cingulata*, or bitter rot, is the most prevalent strain of pipfruit summer rot diseases. This is the time to think about Mizar, once an industry standard for summer rots control."

The 1995/96 HortResearch Waikato summer rot study looked at the effectiveness of Mizar and mancozeb against a number of isolates of the fungi *Glomerella* and *Botryosphaeria*. Tests involved measuring the growth of isolates on agar plates individually treated with varying rates of each fungicide.

"The graphed results show Mizar was ten to twenty times more effective than mancozeb in controlling *Glomerella cingulata*."

David also notes that Mizar provides very good protection against black spot, offering a mid-to-late season alternative to captan. "Reducing the number of captan applications may help minimise captan residue without compromising disease control. There is also very little disruption to predatory mites if no more than three applications are used per season."

Mizar is a registered trademark of Taminco, Belgium. Registered pursuant to the ACVM Act 1997, No. P4176.





## Vegetable Tech Bytes

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

As vegetable crop monitoring for the season commences across the country I have had a large focus on training of crop monitoring scouts in recent weeks. Fruitfed Technical work closely with Fruitfed Crop Monitoring Services to ensure scouts are well trained to identify pests and diseases in monitored crops, are familiar with how to walk the crops so that we can ensure the information gathered is a true reflection of what is happening in the crop,

and to ensure industry monitoring protocols are followed. My involvement in various industry IPM working groups ensures we are at the forefront of implementing new monitoring protocols and industry best practice, so growers can rest assured that the monitoring they receive is thorough and well tested. Having confirmed trial protocols for the coming seasons, we are now setting up trial sites in crops and getting trials underway. ❖

### Larger squash pack well received

*The larger sized tank-mix squash pack made available from Dow AgroSciences last season was well received by New Zealand growers. Treating 25 hectares of squash, the larger pack offers greater convenience and less packaging waste for bigger users.*



Following its registration four years ago, the tank-mix of Quintec™ and Systhane™ 200EW has demonstrated its ability to control both strains of powdery mildew present in New Zealand. "Quintec's extended vapour action assists coverage and dispersion throughout the entire canopy, controlling powdery mildew when crops are most susceptible in the period from flowering to harvest," says Dow AgroSciences territory manager Jenna Sutton. "Alongside

Quintec, Systhane 200EW provides curative, protectant and systemic activity helping control low level infections that are not visible at application. The combination of the two different modes of action maximises disease control and reduces the potential for resistance." ❖

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### Coragen for caterpillar control in more green vegetable crops

*DuPont™ Coragen® insecticide has recently gained registration for caterpillar control in lettuce, leafy vegetables and potatoes.*

Already registered on vegetable brassicas, Coragen has demonstrated its effectiveness in the field for the past two seasons against diamondback moth and cabbage white butterfly. "We expect the same results in the additional crops this coming season," says greater Auckland territory manager for DuPont, Raeleen Watherston.

Coragen, like DuPont™ Steward® insecticide, is an IPM-friendly option to control soybean looper and Heliothis in head lettuces.

"Coragen's registration gives growers valuable new flexibility in terms of insect resistance management in lettuce crops. There are also very few products registered for use in leafy vegetable crops such as silver beet, spinach and Asian vegetables, so these additions to the Coragen label will be welcomed by many growers.



"For all crops we suggest two applications are made 10 to 14 days apart, depending on pest pressure. One application gives an excellent result, but two consecutive applications give more robust residual control. Coragen should be applied when protection is needed the most: during high pressure or when the heads are forming in the plant. Coragen's residual control ensures your plants are protected and marketable yield is maximised," says Raeleen.

For resistance management on all crop types, growers should make no more than three applications per crop, with no more than two consecutive applications. The pre-harvest interval is three days for lettuce and leafy vegetable crops, 14 days for potatoes, while the vegetable brassica PHI remains seven days. Coragen is available in a one-litre pack so at a use rate of 100 ml/ha, each pack treats 10 ha. ❖

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## Controlling late blight in potatoes

*Tim Herman outlines current best practice guidelines for late blight control.*

Late blight can cause 40 to 70% yield loss in potato crops. In recent years a second mating-type (strain) of the late blight pathogen, *Phytophthora infestans*, has spread through Europe, the US and Japan. With two mating types, sexual reproduction can occur allowing the pathogen to adapt and change more quickly and new, more aggressive strains have been identified. Of major concern is the greatly increased risk of fungicide-resistant strains developing through the recombination of genes in sexual reproduction. Luckily in New Zealand we currently have only the one mating type which precludes sexual reproduction in this pathogen.

To infect a host plant, each pathogen requires their climatic conditions to be met. Optimum conditions for *P. infestans* are 10-15°C nights accompanied by rain, heavy dew or fogs and 15-21°C days. After 4 to 5 days of these conditions, an epidemic can be well underway.

Late blight comes into a crop from alternate hosts outside the crop, e.g. volunteer potatoes, nightshade weeds, or on infected seed. Stems from infected seed tend to die, but may live long enough for the



Late blight on potato leaf

pathogen to sporulate (in favourable conditions) and infect other plants. Tubers can be infected when spores are washed off the foliage down on to exposed tubers, or via spore contamination at harvest.

Control starts with cultural strategies to reduce inoculum numbers present in a field, e.g. removing self-sets and alternate hosts, disposing of cull piles and using certified seed. Management practices, such as irrigation and fertiliser applications, can further

limit the susceptibility of a crop to late blight.

Ultimately fungicides offer the key means to protecting a crop from late blight. A protectant cover with Dithane® RainShield® NT on a 7 to 10 day schedule forms the basis of a fungicide programme. Systemic fungicides such as Nautil®e, Ridomil® Gold MZ, Acrobat® MZ 690 and Melody Duo® are also used strategically during periods of rapid growth or sustained infection pressure. Later, during tuber bulking, when top growth has stabilised, superior protectant fungicides, e.g. Revus® and Reason®, are used to hold the protection through to crop senescence. ➔

## Production scheduling underpins success of Wilcox's Perlas potatoes

*It's rare that a commodity product like potatoes achieves real brand recognition, but the team at AS Wilcox and Sons Ltd has done just that with their new season Perlas® potatoes.*

The Wilcox group is one of the largest producers of fresh vegetables in New Zealand. Alongside their well-established guaranteed supply contracts for retail and hospitality outlets, they have successfully developed branded produce lines, which rely entirely on being able to grow consistently high quality, uniform potatoes.

First, company director Henry Wilcox looked at options for new season salad potatoes, sourcing and trialling varieties that might deliver the taste, convenience, size and consistency he sought. From there, a Wilcox-branded salad potato line was successfully developed and then, in 2006, the Perlas range was launched.

At the heart of Perlas' success is the production schedule which ensures continuity of supply for the six-month-long Perlas season.

Potato production manager Monty Spencer says their progressive planting and harvesting plan means Perlas crops start in the far North, then move south to Pukekohe, Matamata, Ohakune and then mid-Canterbury to supply to retail outlets from October to March. "We have Perlas available six weeks before Jersey Bennes and the volume of Perlas consumed each year is likely to exceed Jersey Bennes."

Backed by an extensive marketing programme, the Wilcox team expects to see nearly 800,000 purchases of a Perlas-branded product in the 2010/11 season. ➔



## AVOCADOS



### Reminders for November:

- ✓ **Leafroller control** is a priority to protect avocado fruitlets as pressure is usually high during spring. Once leafroller become established between bunches of mature fruit, they are extremely difficult to control – the focus is on keeping them out. Monitor blocks and if thresholds are exceeded, control as necessary. Success Naturalyte or Proclaim have short PHIs, allowing flexibility around harvest. Prodigy is now registered for leafroller control in avocados – see the article on page 1.
- ✓ Heavy fruit set may also require feeding to ensure fruitlets are retained; apply **Fruitfed Supplies Avocado Fertiliser** as recommended. We also now have **fertigation grades** of avocado fertiliser available.

As is usual for this time of year, **six-spotted mite** populations have increased rapidly in avocado orchards, particularly in the Far North (see photo). If SSM was 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 in young newly-developed leaves and creates a reservoir of active ingredient in the plant, increasing longevity of control. Mit é mec is also the only registered miticide for avocados with ovicidal activity. Effective mite control at this time helps ensure leaves are retained as long as possible to assist fruit set and early fruitlet growth.



Leaf fall following heavy SSM infestation over flowering

## CITRUS



### Reminders for November:

- ✓ Research by Dr. Lisa Jamieson, Plant and Food Research, shows adult **citrus whitefly** start flying and laying eggs in October. Controlling adults reduces the number of eggs laid and therefore destructive populations going in to summer. However, larger numbers of the most susceptible life stages (crawlers and nymphs) appear in November, giving an important opportunity for further effective control measures before summer. Further information on control of these pests is available from your local Fruitfed Supplies branch.
- ✓ Keep an eye out for **Kelly's citrus thrips** on developing fruitlets (see photo of KCT damage). **Armoured scale** insects may also appear at this time.
- ✓ Maintain a **fungicide** programme 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. For these varieties, an application of Rovral Gold or Rovral Flo is indicated at petal-fall.
- ✓ Navel orange and mandarin growers now have a new tool for increasing fruit size, with the recent registration of **Corasil**. For further information on how this compound may effectively be used in your situation, please contact your local Fruitfed Supplies branch.



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

## GRAPES



### Reminders for November:

- ✓ For good control of **powdery mildew and erinose mite**, maintain a tight Kumulus or Organic JMS Stylet oil cover through until pre-bloom. For best results with wettable sulphur products such as Kumulus, apply only on warm days and during the warmest part of the day.
- ✓ Apply Systhane 200EW or Quintec at 10 to 14 days pre-bloom to protect vines during a highly susceptible growth stage for **powdery mildew** infection in inflorescences, when disease pressure is increasing rapidly. Time the application to coincide with warm conditions and do not mix with sulphur.
- ✓ To protect vines from **black spot and phomopsis**, apply a suitable broad-spectrum protectant fungicide, e.g. Dithane Rainshield, in anticipation of rainfall events. Ensure good coverage is achieved.
- ✓ If the **mealybug** threshold was triggered last season, best practice is to apply Applaud prior to flowering. Good timing and coverage is critical as the pest is cryptic and Applaud is effective only on juvenile stages. Add a suitable spreader to ensure coverage of green and woody parts of vines.

**Downy mildew** can attack all green grapevine parts. Severe infections around flowering can reduce harvestable yield considerably and leaf infections can result in premature vine defoliation.

Downy mildew establishment requires:

1. The presence of disease inoculum (resting spores can survive for 3–5 years in soil);
2. Vine susceptibility (green tissue present, absence of fungicide cover);
3. Conducive environmental conditions (minimum 10 mm rainfall, at least 24 hours of leaf wetness and a minimum average temperature of 10°C).

If these parameters are met, oil spots – the key symptom for downy mildew primary infection – may appear on the upper surface of leaves on a few isolated vines. If warm, humid nights follow, white downy mycelial growth will appear on the underside of the oil-spotted leaves. The secondary phase sees spores form on this growth which then spreads the disease throughout the block. Secondary infection, in contrast to primary infection, is extremely rapid and prolific with a few oil spots potentially able to generate tens of thousands of new lesions after a single night of favourable conditions.

To effectively manage downy mildew, prevent primary infection establishment. Watch weather conditions and monitor for oil spots from 3–4 weeks after bud-burst, through flowering, until berries are pea-sized especially if your block has a history of this disease.

When conditions suit the pathogen but oil spots are not present, apply a broad-spectrum protectant fungicide, such as Fruitfed Captan, Dithane, Delan and Kocide or Blue Shield, before rain. If heavy and prolonged rain is forecast consider using a rain-fastening adjuvant like Du-Wett Rainmaster. If oil spots are present, apply a protective/curative fungicide like Ridomil MZ WG immediately, with successive applications at 14-day intervals while conditions remain conducive to disease development, but check PHIs. Contact your local Fruitfed Supplies branch for more information.



Downy mildew mycelium on lower surface of Pinot Noir leaf

## KIWIFRUIT



### Reminders for November:

- ✓ **Supplementary pollination** should be considered over flowering to improve fruit size and shape and reduce variability within a crop. Talk

with your Fruitfed Supplies representative about how this technology may best be used in your situation.

- ✓ The period immediately following fruit-set to January is critical for **leafroller control**. Apply Prodigy prior to flowering to provide good early control and protect developing fruitlets with minimal residue risk. Prodigy has excellent activity against larvae and egg rafts (i.e. it's ovicidal) while being extremely safe to all other insect species, including bees. Last season's Fruitfed Supplies Technical research confirmed that excellent leafroller control is obtained from a pre-flower application of Prodigy, followed by Proclaim or Success Naturalyte around 3-4 weeks after flowering. This second application will be due on Hort 16A during November.
- ✓ **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 wet periods for optimum sclerotinia control. Flint provides excellent forward cover even when applied relatively early, i.e. 30% flowering, and its active ingredient trifloxystrobin (a strobilurin) has excellent rainfastness properties. Apply the chosen fungicide during flowering, as the Sclerotinia pathogen can colonise dead and dying flower parts and, from there, infect fruit. Please contact your Fruitfed Supplies representative for further details.
- ✓ Please consider **bee safety** when spraying kiwifruit vines or shelterbelts near to or during flowering. Ensure products with highest bee safety are chosen, that grass sward is mown so no flowers are present, be aware of flowering shelterbelts and time applications for late in the day or at night when bees are not working. Calypso, Prodigy and Movento have been shown to have high levels of bee safety.
- ✓ Foliar fertilisers such as **YaraVita Croplift** are useful before flowering when nutrient uptake by roots is suppressed by cold spring soil temperatures. Specially formulated seaweed fertilisers such as **SM6** or **Calibra** can also be considered prior to, during and after flowering to promote healthy leaf and fruit growth. **Pentaflo** has also been used in recent seasons, applied after fruit-set to increase fruit calcium levels and assist with fruit quality and development.

Following bud-break, re-focus on **pre-flower control of scale**. Identify any sources of scale outside the vines, like shelterbelts, and spray before bud-break with oil, e.g. DC Tron Plus, or a spreader like Du-Wett with an insecticide. Don't spray flowering willows as bees may be affected. Coverage of shelterbelts is easiest to achieve prior to canopy development, as new leaves inhibit spray penetration.

Then apply insecticide to vines, with preference being given to the chloronicotinyl chemistry (Actara or Calypso) which have the best efficacy, persistence on bark and systemic activity, while also being safer for workers and the environment than most alternatives. Wait until some canopy is present (new shoots are >100mm in length) to help ensure the full benefit of systemic uptake. An alternative is Talstar – it's a contact-active option controlling adult scale that over-wintered on vines.

**Movento** was also used extensively against scale last season with impressive results. It's the second compound registered in New Zealand from the ketoenol chemical group, but unlike its predecessor and most other insecticides, Movento has both phloem and xylem mobility within the plant. This two-way systemicity, coupled with excellent efficacy on piercing and sucking insects like scale, has delivered outstanding results in field trials and commercial blocks. Timing and application aspects are critical to getting the most from Movento. For further information on best scale control practices in your situation, please contact your local Fruitfed Supplies branch or representative. Zespri Gold growers, in particular, have limited options for scale control after flowering making a robust pre-flower programme essential in this cultivar.

## PIPFruit



### Reminders for November:

- ✓ Maintain regular protectant fungicide covers following fruit-set as the high proportion of newly emerged leaves and young, developing fruitlets are very susceptible to **black spot** infection.
- ✓ **Powdery mildew** control over this period of rapid growth post-fruit-set is vital. Both Systhane 400WP and Flint, applied with a black spot protectant, are effective against powdery mildew.
- ✓ Monitor for **European red mite** in mid-late November and spray Mit é mec if the threshold is exceeded.
- ✓ On russet-prone varieties, Novagib assists in reducing **russet** levels. Be sure to discuss best practice with Fruitfed staff.



Adult codling moth

The application of Prodigy just prior to **codling moth** egg hatch, 80-110 GDD from your regional bio-fix date, is highly recommended (check the PNZ website). Prodigy provides both ovicidal and larvicidal activity on codling moth and **leafroller**. This activity plus its long residual life on fruit and leaves makes it an ideal insecticide for this early timing. Our research aligns with overseas research and shows Prodigy had no adverse effects on beneficial insects or bees, an important attribute in the early season when populations of beneficial invertebrates like *Typhlodromus pyri*, *Aphelinus mali* and *Platygaster demades* are building.

Another option is Altacor, which has a novel mode of action, binding to the insect's ryanodine receptors that play a critical role in muscle function, resulting in a rapid cessation of feeding followed by death. Altacor's resistance to photo-degradation coupled with its translaminar movement into leaves provides good residual protection and rain fastness. Over the past five years, Fruitfed's independent research trials at our North and South Island pipfruit research sites confirm Altacor's excellent early season leafroller and codling moth control. For more information, please contact your local Fruitfed Supplies store.

## SUMMERFRUIT



### Reminders for November:

- ✓ Apply suitable protectant fungicides for **brown rot** while fruitlets are susceptible.
- ✓ Continue to monitor for **aphid** infestations, as early season control prevents large population build-ups.
- ✓ Monitor for **leafroller** and apply Success Naturalyte or Mimic 700WP if thresholds are exceeded. Check PHIs for export crops with your exporter.

Mit é mec is registered for **European red mite** and **two-spotted mite control** in stonefruit. The active ingredient, milbemectin, is produced by fermentation of a soil bacteria discovered in Japan's Hokkaido district. Milbemectin is not systemic but has translaminar action. It forms a reservoir within the leaf tissue, while surface residues dissipate quickly after application. Its unique mode of action is active on all mite life stages, with a suppressive effect on reproduction even at sub-lethal rates. Its low mammalian toxicity was recognised by the US EPA which assigned it a reduced risk status.



European red mite and egg

Extensive research by the Fruitfed Supplies Technical team demonstrates Mit é mec's excellent efficacy and selectivity. It is benign to the key mite natural enemies *Typhlodromus pyri* and *Phytoseiulus persimilis* making it suitable for IPM programmes. Monitor for ERM and TSM and apply Mit é mec if thresholds are exceeded. Mit é mec has a 14-day PHI for the local market. Check PHI figures for export crops with your exporter. For more information, please contact your local Fruitfed Supplies store.

## Good reception for Eco Trellis

*Several vineyards have successfully installed the Eco Trellis system, replacing wooden vineyard strainer posts with the new sustainable metal post option.*

Developed and manufactured by New Zealand Tube Mills, the Eco Trellis posts are proving popular with a number of vineyards in Marlborough, Waipara and Hawke's Bay opting to install the new system. Tyrone Yianakis, a field representative with Fruitfed Supplies Blenheim, says clients like the clean look of the posts. "The zinc-galvanised steel posts and their Rotolock clip system are easy to put in. The clips are more flexible than the usual clip used on a post-and-wire support structure and are able to be moved easily between the pre-formed holes in the post to ensure an optimum wire height."

Mike Skilton, export development and marketing manager with New Zealand Tube Mills that developed the Eco Trellis, sought Fruitfed Supplies support to sponsor the Organics Association NZ road show on sustainable post options.

"This involved well-received free public field days in Tauranga, Hawke's Bay, Marlborough, Christchurch and Invercargill," says Mike. "Although the system was originally developed with viticulture in mind, the fundamental components are still applicable to many other commercial crop and farming systems. We've developed the strainers to fit alongside standard farm fencing designs. Talk to your Fruitfed Supplies representative for more details." ⇨



*Johnathan Hamlet, Villa Maria's Joseph Soler vineyard manager, looks on as Trevor Manual of VinMan installs the Eco Trellis posts.*

## Teldor/Scala combi pack for grapes

*This season Bayer CropScience launches the new Teldor/Scala combi pack containing sufficient product to treat ten hectares of grapes.*



Most wine companies continue to look for ways to produce wine free of detectable residues, while not compromising disease control. In 2007 Bayer CropScience commenced trials with reduced rates of two very effective *Botrytis* fungicides – Teldor® and Scala®. Three seasons of replicated and split block trial work have led to a tank-mix combination which can meet the two objectives of excellent disease control and nil detectable residues of either product in the finished wine.

Using specially labelled rates for use as a tank-mix, the Teldor/Scala combination is targeted for use at 80% cap-fall using a minimum PHI to be advised by NZ Winegrowers in the near future, says Bayer CropScience's territory manager Marc Fox. "For those aiming to produce wine which meets MRLs of various export destinations we suggest using programmes based on Teldor and Scala applied in accordance with the withholding periods advised in the NZ Winegrowers Export Wine Grape Spray Schedule 2010/11."

Talk to your Fruitfed Supplies representative for advice on using Teldor/Scala combi on your grapes to control *Botrytis* this coming season. ⇨

Teldor® and Scala® are registered trademarks of Bayer CropScience. Teldor and Scala are registered pursuant to the ACVM Act 1997, Nos. P7020 and P4900.



## It's time for YaraVita Bud Builder

*YaraVita Bud Builder was developed in response to requests from New Zealand growers for a composite pre-flowering foliar formulation that delivered key nutrients at a specific time.*

**B**oron, zinc, magnesium and phosphorus are all very important nutrients involved in key functions such as flower initiation, pollination, cell division, calcium and sugar transport, formation and activity of chlorophyll, improved bud development, improved fruit quality, and cold tolerance.

YaraVita Bud Builder contains 24% Mg, 10% Zn, 3% B and 3% P and can be tank-mixed for application with many crop protection products for a cost effective way to boost eventual crop quality and yield. Talk to your Fruitfed Supplies representative about the recommended rate for your crop. ⇨