

1 January deadline for Approved Handlers

Fruitfed Supplies staff around the country are well prepared to help growers and their staff ensure compliance with the Hazardous Substances and New Organisms (HSNO) Act which now requires that all 'tracked' pesticides are purchased and applied by people holding a full five-year Approved Handler Certificate.

Andrew Fulford, compliance manager for PGG Wrightson Ltd, the parent company of Fruitfed Supplies, says Fruitfed Supplies staff have all relevant information regarding the legal requirements of HSNO.

"We must ensure our own compliance with the Act as resellers of pesticides requiring Approved Handler control, and our staff will help our clients ensure they also meet the Act's requirements," says Andrew.

"Now that the transitional Approved Handler period has ended, from 1 January 2007 each Fruitfed Supplies branch will need to hold a copy of the full 5-year Approved Handler's certificate for every grower who wishes to purchase a tracked pesticide – these are a relatively small number of the most toxic pesticides – as well as copies of certificates for all relevant staff members or agents, like spray contractors who may purchase pesticides on your behalf. Only then can tracked substances be sold to your organisation.

"By ensuring we have a copy of your full Approved Handlers certificate on file, we then don't need to sight the certificate each and every time you need to purchase a tracked pesticide."

A full list of tracked pesticides is available in each branch or from the HSNO website at <http://www.ermanz.govt.nz/resources/publications/pdfs/pahtr.pdf>

More information about HSNO is available on www.ermanz.govt.nz. If you need to book an Approved Handler course, call the Agriculture New Zealand regarding one of their FarmSafe or GrowSafe courses on 0800 545 747. ➔

In this issue, we profile:

- ✓ Export lemons from Kerifresh



- ✓ Young Horticulturist of the Year



- ✓ Grape disease control from Elliott Technologies



**CARBARYL
50F**

REGLONE

Shirlan®

Euparen®Multi

Hi-Cane®

NEMACUR®

Commonly-used products like Euparen Multi and Nemacur are now tracked pesticides under the HSNO Act and only growers or their representatives with a full 5-year Approved Handler certificate can purchase these products after 1 January 2007.



Residue-free fungicide options from Elliott Technologies

Three 'soft' fungicides – Serenade MAX®, Protector™ and Biocover® – offer grape growers flexible options to help prevent and control botrytis, powdery mildew and sour rot.

The broad spectrum contact and protectant action of Serenade MAX works against all three diseases. Based on a naturally-occurring soil bacterium, *Bacillus subtilis*, the new higher strength MAX formulation showed better disease efficacy in last season's trials in Hawke's Bay.

Serenade MAX:

- ✓ works by penetrating pathogen cell membranes, causing them to burst and die, and also prevents pathogen spores from infecting plant surfaces;
- ✓ can be used all season, but should be targeted at key grape botrytis timings;
- ✓ is particularly useful later in the season as it leaves no residues, i.e. it has no withholding period restrictions;

Recommendation: Two strategically-timed applications of Serenade Max at 4-5 weeks from harvest and again at 1 week from harvest; apply Protector in between.

Biocover can also be used all season to prevent and eradicate powdery mildew with no withholding period. Early season, at 6 litres/ha, it gives equal or better control than sulphur applications, particularly in cool temperatures. If powdery mildew gets established, apply twice within ten days at 2% with at least 500 litres/ha of water. Spray rows from opposite directions to improve coverage. Biocover also controls erinose mite and mealy bug, and has some suppressant activity on botrytis.

Soap-based Elliott Protector is a locally-discovered product with fungicidal and fungistatic properties to control and prevent the growth of botrytis. It can give equivalent disease control to standard spray programmes under light infection conditions. Available in 20l and 200l drums, its low pre-harvest interval of 14 days means Protector can be used until close to harvest. Apply Protector at 1-2% depending on water volumes to achieve 10-20 litres of product applied/ha. Recommendation: 1-2 applications work well between two Serenade Max applications late season, giving a soft but robust end-of-season botrytis management programme, with no impact on residues in wines. ⇨

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© Serenade Max is a registered trademark of Agrquest, USA. Registered pursuant to the ACVM Act, 1997. No. P5809.

Elliott Protector is a TM of Elliott Technologies Ltd. Registered pursuant to the ACVM Act, 1997. No. P7149.

2005-06 HAWKE'S BAY GRAPE TRIAL FOCUS VINEYARD PROJECT (Geelen Research, Mission Estates Vineyards, Napier)		
Elliott Technologies treatments & rates/ha	% botrytis crop loss at harvest 12 Apr '06	% botrytis control
Untreated control	9.7	0
Orthocide 1.25 kg (5)	0.5	89.8
SerenadeMax 2 kg (7)	2.2	73.5
SerenadeMax 4 kg (7)	0.5	93.8
Protector 2% (4)	2.3	76.1

Trial notes: Bracketed figures relate to the number of cover sprays of each treatment from pre-bunch closure. All treatments, excl. untreated control had a Euparen Multi, Teldor and Switch programme from flowering to pre-bunch closure. From pre-bunch closer to harvest, there were 8 light, 3 moderate and 11 severe botrytis infection periods.

New powdery mildew options from Bayer

Bayer CropScience has launched two new fungicides – Impulse® and Twist® – which work in slightly different ways to help protect grapes against powdery mildew.

Powdery mildew is one of the most damaging diseases in grapes. It survives between seasons on infected buds, becoming active in spring and attacking foliage, and bunches.

Impulse is a liquid fungicide with spiroxamine as its active ingredient which is rapidly taken up and translocated by foliage.

Peter Fisher, Bayer CropScience's marketing manager, says the rapid uptake of Impulse is an important characteristic. "It means Impulse becomes rainfast very quickly and that it is well-suited to use pre-flowering when growth is rapid and infection of buds for next season's flag shoots occurs."



Splitting of berries resulting from powdery mildew infection during flowering



The finalists with major sponsors HortFert Plus.



Marcus works through one of the tasks during the final, sorting and grading seeds.



"In contrast," Fisher adds, "Twist offers more locked-on resistance with strong activity on the plant surface to prevent fungal spore germination. It is swiftly absorbed into leaves and there is a localised redistribution of the active ingredient, a strobilurin, in a vapour phase."

Twist is the liquid formulation of Flint®, which is sold in many countries for the control of powdery mildew.

"Twist is ideally suited for use from early flowering, offering long-lasting protection against disease. Like Impulse, Twist is safe to beneficial insects, has demonstrated good crop tolerance and has no influence on the fermentation or taste of wine." ❖

Backing our young horticulturists

The 2006 Young Horticulturist of the Year competition was completed in November with Blenheim vineyard manager Marcus Wickham taking out the title.

Murray Ross, general manager of Fruitfed Supplies, says, an affiliated sponsor, the company is proud to support this initiative which aims to inspire and acknowledge the talents of young New Zealanders employed in the horticulture sector.

"It's very encouraging to see young people under the age of 30 from all different sectors of the horticultural industry putting themselves forward for this competition and we extend our sincere congratulations to Marcus and all the other finalists," says Murray.

The final was held during the Ellerslie Flower Show at Auckland's Botanic Gardens on 17 November and involved a number of practical and computer-based activities, as well as a short speech and a series of quick-fire questions during a dinner event.

The competition, which is supported by the NZ Horticulture Industry Training Organisation, is modelled on the Young Farmer of the Year event and prizes include overseas travel, an educational management course, a \$1,000 worth of vouchers redeemable at Fruitfed Supplies, clothing and tools.

Marcus' fellow finalists were: florist Renee Amodeo, of Auckland; public garden manager Rewi Elliot, of Wellington; landscaper Erin Farrow, of Auckland; cropping field manager Gareth Holder of Napier (placed second); nursery manager Paul Jameson of Nelson; orchid grower Carl Jaunay, of Hikurangi (placed third); arborist James King of Wellington and orchard manager Shaun Vickers of Hamilton. ❖



The winner of this year's Young Horticulturist of the Year is Marcus Wickham, seen here with his wife Samantha.

Proclaim: the natural partner for IPM

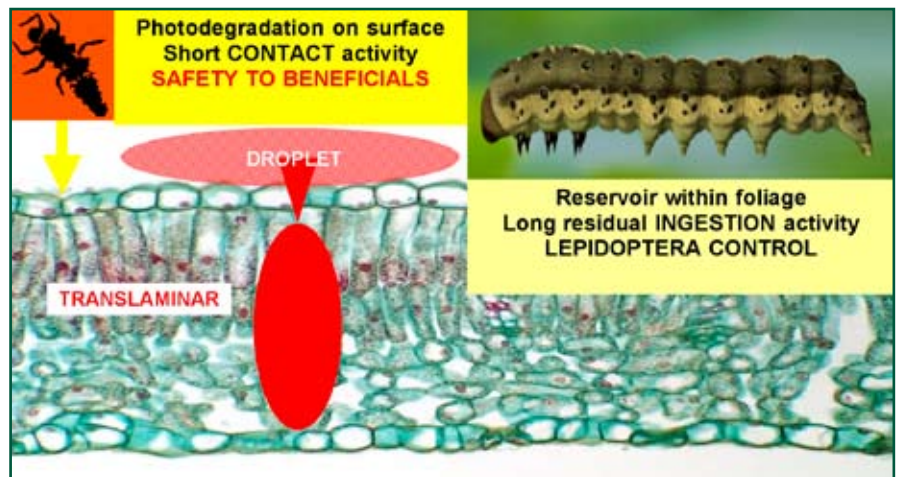
*With two seasons of use in kiwifruit, pipfruit and grapes, Proclaim has established itself as natural partner for the integrated control of leafroller. The active ingredient in Proclaim, emamectin benzoate, belongs to the avermectin family of products, derived from the naturally occurring soil bacteria *Streptomyces avermitilis*.*

Proclaim is ideal for use in IPM (known as IFP in pipfruit) because it is highly active against target species at low rates, yet causes minimal disruption to populations of beneficial species. This is due to Proclaim's high level of selectivity to leafroller.

Blake Mackie, Syngenta Horticultural Market Manager explains: "Proclaim has a higher toxicity to leafroller caterpillars compared to beneficial species due to its unique mode of action. In addition the manner in which Proclaim is taken up by the plant ensures that leafroller caterpillars have a higher level of exposure to product residues than beneficial species. Once applied Proclaim is rapidly taken up into leaves, forming a reservoir of product which is only available to leaf feeders such as leafroller caterpillars. Conversely surface residues rapidly break down. Beneficial species do not feed on the leaf (including the reservoir of product) and their exposure to Proclaim is consequently very limited."

Proclaim's high level of selectivity is supported by extensive trial work. A wide range of field trials were carried out by Fruitfed Supplies and Syngenta in kiwifruit, grape and pipfruit crops throughout the country from 1998-2005. Proclaim was found to have minimal impact on populations of beneficial species in all work conducted.

Mackie concludes: "A Fruitfed Supplies grower survey last year reaffirmed that users value products that provide safety to the environment. These users gave Proclaim a very favourable rating for its low environmental toxicity. It's encouraging to know that growers are utilising the unique benefits of Proclaim to enhance productivity while protecting the environment." ⇨



NURSERY NOTES

David Tong - National
Nursery Manager



Saving rhododendrons from thrips damage

New leaves
unaffected by thrips

Thrips are small insects reaching 1-2mm in length at maturity. If present in numbers and not controlled, they are very damaging. Thrips are a seasonal pest, causing most damage in mid to late summer. They live in dense colonies and cause symptoms of mottling and chlorosis as a result of their rasping of leaf tissue and sucking the contents of the leaf cells. The resultant signs of damage consist of a silvery appearance to the surface of leaves with distortions on growing points and flower buds. The immature forms of thrip often occur in large numbers on the underside leaves leaving small drops of excreta which reduce the photosynthetic potential of plants.

Early applications of an insecticide at the first signs such as Talstar 80SC, Mavrik Flo or Confidor 35SC when thrip numbers are low with subsequent sprays 2-3 times during spring and summer should give control. Effectiveness is directly related to the thoroughness of spray coverage particularly on the underside of leaves where the greatest populations will be found. When spray coverage is inadequate, more frequent applications will be required to get full control. ⇨



Thrip damaged leaves
showing silvery appearance

ASPARAGUS



Weed control issues should be addressed before the ferns close up. The choice of herbicide depends on factors such as age of the crop, soil type and weed spectrum present.

In warm humid weather **Stemphylium leaf spot** can defoliate the fern and cause dieback of above ground plant parts. Strategic applications of Score 250EC should be made if Stemphylium is seen in the crop and/or before favourable weather conditions. No more than three applications of Score should be made to active fern growth each season.



AVOCADOS



Reminders for January:

- ✓ Numbers of **six spotted mite** have been higher than average this season, both in Bay of Plenty and Northland orchards. Although we would expect **six spotted mite** pressure to ease during January, be sure to monitor for this pest and control with Mit é mec + DC Tron Plus if necessary.
- ✓ Remember also to maintain a fungicide cover with copper products such as **Kocide 2000LF**, as avocado fruit rot pathogens may infect the developing fruitlet at any stage.
- ✓ Fruitset is looking good at this stage; ensure adequate **nutrients** are available to promote summer flush and fruit growth. Your Fruitfed Supplies representative is fully trained in avocado nutrition; please contact them to discuss your situation.
- ✓ With El Nino weather conditions leading to a dry summer in eastern areas, monitor soil moisture and maintain **irrigation** during the summer months, to ensure developing fruitlets have adequate water during cell division. Renewing **mulch** beneath the trees at this point will also help conserve moisture and promote healthy root growth.

Leaf roller control is a priority for avocado fruitlets as pressure is usually high over the spring period. This pest will move between fruit as they start to size and form bunches, causing significant damage (see photo). Control should be ideally carried out with soft compounds such as Mimic 70W to preserve beneficial insect populations.



Leaf roller larvae and damage

BRASSICAS



At the end of January there is a change in the **diamond-back moth resistance management strategy** to the second window. For the rest of this month growers should continue to use Success Naturalyte or Bt products based on the kurstaki strain, e.g. Delfin. Registered organophosphates, carbamates or endosulfan can also be used (in either window). Insecticides should only be applied if pest numbers exceed thresholds. Apply Chess or Pirimor if the **aphid threshold** is exceeded.

CARROTS



Leaf spot diseases are more common in warm, wet, humid weather.

Monitor crops for the dark brown to black irregular shaped lesions of Alternaria leaf spot on older leaves and the tan, brown or gray small circular spots of Cercospora leaf spot on younger leaves. Apply Orthocide or Dithane Rainshield to protect foliage against Cercospora or Score 250EC for control of both Alternaria and Cercospora. No more than three Score applications should be made to a crop.

CITRUS



Reminders for January:

- ✓ Monitor young fruitlets closely for **Kelly's citrus thrips** right through January, controlling if necessary. A hand lens should be used to find KCT larvae beneath the calyx.
- ✓ Keep a lookout for **citrus red mite**, which often makes an appearance during mid-summer, particularly where hard compounds have been used to control KCT.
- ✓ Monitor closely also for **scale** crawler release through the summer period. The young stages are most easily controlled, whereas heavy adult populations are extremely difficult to remedy. For pest control options please contact your Fruitfed Supplies representative.
- ✓ The presence of soft new spring flush provides an ideal opportunity to apply **foliar fertilisers**; be especially aware of zinc and magnesium deficiencies, which often show at this time. Remedy with Phosyn Citrac, containing zinc, magnesium and manganese as a concentrated, safe, easy to use formulation.



Glomerella on mandarin
(Photo courtesy Keith Pyle)

The **fungicide** programme needs to be maintained post-flowering, to protect against scab and melanose infection of young shoots and fruitlets. NZCGI-funded research indicates that to assist prevention of **Glomerella** in Satsuma mandarins (see photo), Dithane DF Rainshield should be applied as soon as possible after hand-thinning. Hand-thinning will generally be necessary on blocks with heavy fruit set to ensure optimum fruit size at harvest.

GRAPES



Reminders for January:

- ✓ Pre-bunch closure is one of the critical spray windows for **botrytis** control. Apply a suitable fungicide e.g. Switch before bunches close up.
- ✓ Canopy management practices that improve air movement through the canopy will help improve foliage drying time and reduce humidity around the bunchline. This will reduce disease pressure.
- ✓ Monitor for **leafrollers** and if thresholds are breached apply a suitable insecticide.
- ✓ Monitor for **downy mildew**. Apply an appropriate fungicide in anticipation of conditions conducive for infection.

January is considered a high risk period for **powdery mildew** infection. Apply a protectant fungicide e.g. Quintec which is ideally suited over this period, being rainfast within 1 hour and its strong vapour phase for bunch protection. Quintec also fits integrated pest management programmes with its safety to beneficial insects.

At pre-bunch closure (PBC) berries are relatively immune to **botrytis** infection but it is nevertheless an important spray window for the management of this disease because it represents the last opportunity

TECH-KNOW TIPS

before harvest to achieve complete berry coverage. Berries are expanding rapidly in January, so to ensure the interior architecture of the bunch receives good coverage, it's better to be conservative and spray early than wait too long and find bunches have partially closed. The choice of PBC fungicide should take into account: previous fungicides used, weather conditions at fruit set, previous application timing in relation to infection events, resistance management (check pre-harvest interval with exporter before use).



Powdery mildew on leaves

KIWIFRUIT



Reminders for January:

- ✓ The period immediately following petal fall through January is the most critical period for control of **leafroller**. Apply a second application of insecticide such as Proclaim, approximately four weeks after the fruit-set application. Leafroller sprays applied more than five weeks (Hayward) or seven weeks (Gold) after fruit-set must be in response to monitoring.
- ✓ **Sclerotinia** may be an issue if conditions are warm and wet through the flowering/post-flowering periods. Apply Rovral prior to these wet periods, to provide optimum Sclerotinia control and to maintain fruit yield and quality (Rovral has a 100-day WHP).
- ✓ **Foliar fertilisers**, such as Kiwi K and Pentaflo, may be of use after fruit set to help maintain leaf condition and assist with fruit quality. Magnesium and zinc in particular have been showing as low in most spring leaf samples, which is best remedied with Pentaflo (also provides calcium to developing fruitlets). The organic seaweed fertiliser **SM6**, containing high levels of natural betaines, is also applied from petal-fall onward, to assist early fruitlet growth and fruitlet and leaf quality.

An application of Dew 500 is often also necessary at this timing for **scale** control (see photo). Scale sprays applied more than nine weeks after fruit set (Gold) or more than seven weeks after fruit set (Hayward) must be in response to monitoring.



Scale on fruit prior to harvest

ONIONS



Although the synthetic pyrethroids can be used now, research has shown that SP resistance is stable in the onion thrips populations, that is, although SPs may not be being used against a population, the SP resistance remains in the population and they continue to be ineffective. Crop & Food Research has found that one SP application will give some control, but that further 1-2 applications in a cluster will not work. Other products should be used.



PIPFRUIT



Reminders for January:

- ✓ The wet conditions experienced in most districts this spring have been conducive to the development of black spot. Continue to monitor for **black spot** lesions, if found apply a suitable eradicant fungicide e.g. Syllit, then maintain a protectant fungicide programme till harvest.
- ✓ Fruitlets are very susceptible to **summer rots** during this period, if rain and warm temperatures anticipated apply a protectant fungicide.
- ✓ Where **powdery mildew** monitoring has identified high risk blocks, maintain protectant fungicide covers e.g. Euparen Multi. Note: Euparen Multi 45 day PHI.
- ✓ Continue to monitor for **codling moth**. The recording of trapping activity and the maintenance of traps is essential for audit purposes. Apply Mimic if thresholds are exceeded. Note Mimic 14 day PHI, but only one application in the last 28 days.
- ✓ The first summer generation of **leafroller** larvae is active during January; monitor traps and, if thresholds exceeded, apply Mimic.
- ✓ Monitor for **European red mite** in early January. This timing is critical because, if thresholds are exceeded, the mite population is still relatively synchronised with juvenile developmental stages.
- ✓ In known high risk areas of the orchard or where **scale** infested fruit were detected in the previous season, the application of Calypso timed for crawler release is recommended for mid-late season varieties. Note: Calypso has a 42-day PHI.
- ✓ From mid-January to harvest, if **woolly apple aphid** is found infesting shoots then sample shoots every two weeks and apply Diazinon as soon as shoots infestation exceed 10% irrespective of *A. mali* populations.
- ✓ Continue with **regular calcium chloride applications**. Avoid spraying under hot, dry conditions or under slow drying conditions, as fruit and foliar injury can occur. Add a wetting agent if applied alone.

The results of your December **black spot** monitoring in conjunction with weather predictions will assist to determine the choice and frequency of subsequent protective fungicide covers for effective disease control. If the secondary phase is present, apply Syllit immediately lesions are noted, and repeat. This will assist in the reduction of viable conidia.

If a curative fungicide is required, apply Systhane plus a protectant fungicide. When applied 72-96 hours from the commencement of an infection period, Systhane will provide curative control before disease symptoms are visible.

Maintain a regular protective fungicide cover, e.g. Euparen Multi which also provides powdery mildew control, or Orthocide. Reapply protective fungicides after each rain. Please note: Euparen Multi 45 day PHI. Orthocide 14 day PHI and only one application in the last 28 days.



Black spot *Venturia inaequalis*

POTATOES



Potato tuber moth catches in pheromone traps fluctuate from week to week, but as the number of weekly records increases trends in catches should become apparent. Peaks of catches at approximately six week intervals may indicate potato tuber moth generations, with numbers of larval mines in potato foliage peaking up to 2 weeks following moth catch peaks. Use this information to time insecticide applications if the tubers are at risk of being infested.

Sclerotinia can start appearing in crops from row closure on as sclerotinia spores germinate and infect dead or dying plant tissue. Infected stems eventually die and dry out, turning a bleached tan colour. White fungal growth and hard black sclerotia may be found inside the dead stems. Management of this disease centres on crop rotation to minimise numbers of sclerotia in the soil. Irrigation management to avoid long periods of leaf wetness or high relative humidity within the crop canopy will help reduce disease pressure. Applications of Shirlan® around row closure may help prevent infection.

SQUASH



The aggressive **powdery mildew** pathogen, *Sphaerotheca fuliginea*, becomes dominant in the warmth of summer. This pathogen can rapidly develop to epidemic levels severely affecting the crop canopy. A tight fungicide programme is critical for the production of high quality squash for export. Another issue with *S. fuliginea* is resistance. Strains of this pathogen are resistant to benzimidazoles, e.g. carbendazim; DMI, e.g. Sapro®; and strobilurins, e.g. Flint®. Growers must rotate fungicide groups and follow the label instructions for each product used.

SUMMERFRUIT



Reminders for January:

- ✓ For **brown rot** control, apply your pre-harvest fungicides prior to any anticipated wet events. Folicur is now registered as a pre-harvest fungicide. Fruitfed Supplies research with Folicur demonstrated significantly higher levels of disease control than provided with industry standards.
- ✓ The first summer generation of **leafroller** larvae is active during January. The application of Mimic is recommended as it is selective to beneficial insects. Mimic has a 14 day PHI for New Zealand, and also a 14 day PHI period for Australia and Taiwan (not cherries).
- ✓ Continue to monitor for **thrips**. If thresholds are exceeded, apply an insecticide such as Carbaryl (not for Europe, Taiwan exports). Before application of Carbaryl or any insecticide, discuss product choice and PHI with your exporter.

The application of a pre-harvest protectant fungicide for **brown rot** control prior to an infection event is vital in the management of this disease pathogen. The registration of Folicur for late season pre-harvest use was extremely helpful for export growers with fruit destined for the USA. The EPA decision to revoke the Rovral MRL tolerances in a number of crops including summerfruit was a major concern to stonefruit exporters. Summerfruit NZ has managed to gain an extension with the EPA to allow one more season for apricots, for all other summerfruit Rovral MRLs in the USA are revoked.

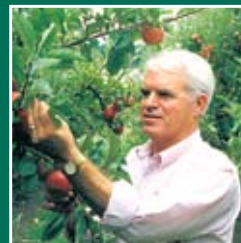
Fruitfed Supplies technical division carried out research trials with Folicur in summerfruit in this new pre-harvest use pattern and demonstrated

excellent brown rot control, significantly superior to other industry standards, confirming research carried out by USA universities. Folicur is a DMI fungicide from the azole chemistry group with systemic properties; studies have confirmed safety to beneficial insects. Folicur has a 1 day PHI in NZ, Australia and USA. Note: Folicur is not registered for apricots in USA (shuckfall PHI). Always check PHI with your exporter prior to application.

Brown rot infections occur to ripening fruit when the weather is wet in the 3-4 weeks prior to harvest. If wet weather occurs during this period, spores are produced abundantly on twig cankers and may infect ripening fruit. Under optimum conditions, decay of ripe peaches infected by brown rot may be visible within 48 hours of infection. Fruit infection may also occur during dry conditions, possibly from latent infections within the fruit. Such latent infections within the fruit are most serious if control has not been maintained over the bloom period.



Brown rot infection on a peach



Ken Jeffery – contributes for pipfruit and summerfruit.



Richard Bawden – contributes for avocados, citrus and kiwifruit.



Tim Herman – contributes for brassicas, onions, potatoes, squash and tomatoes.



Paul Hassan – contributes for grapes.

Chemical-free packhouse essential for Japanese exports

A stringent on-orchard fungicide programme combined with a fungicide-free packing facility has seen Northland's leading produce exporters Kerifresh maintain long-term contracts in the rewarding Japanese market.

Alan Thompson, group CEO for Kerifresh Ltd, explains that by developing a chemical-free grading and packing process, Kerikeri Cold Storage Ltd (or Kericold), the packhouse cooperative in which Kerifresh holds 76% of the shares, is able to sustain a strong relationship with their Japanese importers.

"Basically, for Japan-bound citrus, you're not allowed to apply anything other than chlorine and the bins and grading machines are also cleaned with a chlorine solution," says Alan, who is the founding director of the original Kerifresh partnership of Hendl & Thompson.

"Citrus not sold to Japan can be exported to Australia or Korea, but interestingly, the effort to maintain residue-free citrus for these key export markets appears to have had little benefit locally," adds Alan. "Our Japanese clients conduct audits each season to ensure their requirements for zero fungicides on exported lemons and mandarins are met, yet the fruit we don't export won't get a better price on the local market for being residue-free."

Kericold used to run one packing line fungicide-free and the other with fungicide treatments to prevent rots during storage – "Harvest time can coincide with rain so rots can be an issue" – but now both fruit packing lines are run without fungicides and fruit is stored in controlled atmosphere facilities.

Kerifresh grows a large proportion of the lemons and mandarins, mostly Satsuma, that are packed and exported through Kericold, but other growers also supply the company.

"Growers get good advice through Kerifresh personnel such as our technical manager, Andrew Harty, helping them maximise quantities of saleable produce," says Alan.

Andrew comments: "Growing citrus fruit for a post-harvest chemical-free market is a challenging business, and would not have been possible without many years of R&D.

"We now have a set of production practices which gives us surety that fruit will hold in good condition during shipment and into export market places. Every growing practice is geared towards this aim, including fertilising (ground-applied and foliar), irrigation and pest and disease control.

"Pruning is critical, and for mandarins, the techniques we use for crop thinning are very important. Careful harvest is vital for ensuring sound rinds of citrus fruit, and we monitor the picking process very stringently. The key to getting it right is careful attention to detail, and continual searching for better ways to ensure good out-turns of product overseas."

Alan says all of Kerifresh's lemons will be replanted over the next ten years. "The Japanese like Yen Ben, as a variety, but they also buy Meyer lemons. We've selected improved rootstock lines to help improve Yen Ben fruit size."

As the largest packhouse in Northland, Kericold processes considerable volumes of kiwifruit as well as citrus. "Kiwifruit is still our main crop, but we packed over 5000 tonnes of citrus last year, of which lemons made up about 3200 tonnes. About 30% is exported, all sea freight. It takes about 14 days for the ship to reach Japan."

Alan says Kerifresh has been working with importers and prospective customers in the United States for the past five or six years in an effort to establish a new export market for their citrus. "We've been waiting on an export protocol and hope to have this confirmed within the next six months. North Americans tend to prefer Clementines, due to the sweetness, and there will be quality considerations to work through as delivery takes 21 days by ship." ⇄

Lemons are checked for final quality before export



The green of Kerifresh's packaging appeals to Asian buyers

www.kerifresh.co.nz



Mandarins going into the chlorine bath

Fruitfed Supplies

Facts is a monthly publication of Fruitfed Supplies. Feedback to the editor is welcome. Please contact Kate Gordon, Relish Communications, c/o PO Box 2116, Auckland, email: kate@relishcomm.co.nz or mobile 021 587 227. Subscription details and address updates, please phone Fruitfed Supplies national office on 09 525 0420.

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