

Buzz from Northland apiary training

A new apiary training course for minimum security prisoners at the Northland Region Corrections Facility (NRCF) is proving positive on several levels.

With 17 hives now installed on the facility's 300 ha of land, the apiary course got underway in September and feedback from everyone involved – particularly the ten prisoners – is surpassing expectations.

Graham Fletcher, Principal Advisor Rehabilitation & Learning at the facility in Ngawha, near Kaikohe, says that the Corrections Department runs apiary training at other sites around the country, which also have associated farm and forestry blocks.

"We looked at the resources we have here, like tea tree, and with apiculture taking off in Northland, we could see there were opportunities for the prisoners to get training and possibly employment on release in that sector. That's the main motivation for the training."

The course is run in collaboration with NorthTec, which provides the programme content and the qualified tutor. Corrections provides the land, hives and staffing resources. "We have a good relationship with

NorthTec," says Graham. "They deliver several programmes for us, so this was an addition.

"The course has been going really well. Talking with the tutor and our staff member running the programme, the prisoners were a bit sceptical for first 2-3 days, but by day three, they were fully into it. They're doing great, well ahead of where they should be with their assessments. They're out there every day, going above and beyond the planned programme, things like rearing queens and more. They've really embraced it, taking on new tasks, and their learning is going really well. Their situation is that they are living in external care units, and are likely to be released fairly soon, so the possibility of getting jobs in the bee industry has helped them make some real changes with what they want to do when they get out."

NRCF runs numerous training programmes for prisoners with farming, horticulture and forestry courses utilising the land, and carpentry, construction, painting, automotive, business, occupational health and safety, culture and arts programmes among the other offerings.

Continued on next page...



Minimum security prisoners at the Northland Regional Corrections Facility are learning to be beekeepers



Thank you

I'd like to take this opportunity on behalf of the Fruitfed Supplies team to thank you for your support throughout the year.

We always aim to provide the level of support and service needed to enable you to meet the challenges of producing crops for the domestic and export markets.

We've observed further investment within the crop sectors and through the horticultural regions from the Far North down to Central Otago.

It's encouraging to us as a business to see the level of confidence our client base has for the future. It inspires us to continue to make our own investment in our people and the resources we need to remain relevant to you as a partner in your business.

We look forward to being alongside you again in 2019.

Have a very Happy Christmas and New Year, stay safe and enjoy.

Best wishes for a great season.

A handwritten signature in black ink, appearing to read 'Max Spence'.

**Max Spence
National Manager, Fruitfed Supplies**

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"Education is a huge part of what prison does," says Graham. "We look at a prisoner's requirements in terms of numeracy and literacy. We help them achieve NZQA levels 1, 2 and 3, as well as other skills and qualifications to help them get a job upon release. Each prisoner is individually assessed and helped to determine where they want to go."

The Kerikeri Fruitfed Supplies store sourced and supplied the apiary supplies required to set up and maintain the 17 hives currently onsite. Customer Service Representative Ellen Cornelius has taken the lead with the project, thanks to her own enthusiasm for beekeeping. Ellen completed a NZQA qualification in beekeeping and has researched a suitable product range for the store.

"At this point, not all Fruitfed Supplies or PGG Wrightson stores stock apiary supplies,

so when Corrections wanted to start this project they went to the Kaikohe store, then the staff there referred them to me," says Ellen. "I was happy to put together a quote for them, and they've been coming back ever since. Darren Faber, Corrections' Land Manager responsible for the hives, and I have formed a good working relationship. They have welcomed other suggestions I've made for products they might need. I'm thrilled to see the project is working so well for them."

Kerikeri Area Sales Manager Mark Robinson is also pleased to see the Northland Corrections beekeeping project gain such positive momentum. "There is such a demand for the manuka grade honey; the bee industry is growing all the time in Northland with hectares of manuka being planted. There's also growing interest from lifestyle clients having their own hives. It's fantastic to have Ellen as our in-store bee champion – her hands-on expertise and knowledge is of great value to this growing group of customers. We look

forward to hearing more of the successes of the first apiary course participants from Northland Corrections in the future." **F**



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Helping grow the country



Research and Development Manager
Kevin Manning contributes Tech-Know Tips for pipfruit.



Technical Advisor
Daniel Sutton contributes Vegetable Tech-Know Tips.



Technical Advisor
Sean Gresham contributes Tech-Know Tips for summerfruit and wine grapes.

For further information on best practice pest and disease control, crop monitoring and nutrient testing, please contact your local Fruited Supplies store or Technical Horticultural Representative.

Avocados

- » Fruit development and flowering put a large **nutrient demand** on trees. Following a heavy cropping year, it is important to ensure the trees are well fed. Take note of the **spring flush**. Where spring flush has been poor, some fertiliser such as potassium nitrate or calcium nitrate may be required. However, take care not to add excessive nitrogen. Help achieve high retention and good early growth of fruitlets by applying Fruited Supplies Avocado Fertiliser as recommended.
- » Warmer summer weather can favour rapid growth of **fruit rot disease pathogens**. Protect trees by maintaining a **fungicide cover** with copper products such as Kocide® Opti™ or Tri-Base Blue®. Kocide Opti offers the highest amount of bio-available copper (useful for disease control) for the lowest amount of elemental copper applied per hectare. Tri-Base Blue offers the convenience of a liquid formulation.
- » Some blocks may still experience **six-spotted mite pressure** into December. Where

mite problems are identified, control with Mit é mec® plus D-C-Tron Plus Organic.

- » **Monitor for leaf roller** and apply Prodigy®, Altacor®, or Proclaim®. Add surfactant such as Du-Wett® or Bond Xtra® as required.

Leaf roller is one of the most significant insect pests in avocados, and can cause widespread fruit damage if left unchecked.

The term 'leaf roller' encompasses a complex of native and introduced moth species. The key species include the brown-headed and black-lyre leaf roller (endemic to New Zealand), as well as the light brown apple moth.

In the North Island's warmer regions, the dominant species is the brown-headed leaf roller.

As new fruit begin to size, or existing crops wait for harvest, watch for leaf roller larvae (caterpillars) which may reside and feed between touching fruit, causing irreversible feeding damage. Leaf rollers can be present throughout most of the year, but populations tend to peak in summer.



Leaf roller larvae and feeding damage on avocado

Pipfruit

- » Maintain a protective fungicide cover for both **black spot** and the **summer rot** complex of diseases over this period, particularly if wet and warm conditions are anticipated. Fruited Captan 80WG provides good broad-spectrum disease control.
- » Monitor **codling moth** and **leaf roller** pheromone traps, if thresholds are exceeded apply an appropriate insecticide, such as Altacor, Voliam Targo, or Prodigy.
- » The first generation of **codling moth** flights peak in late December and leaf rollers are emerging, so it is highly recommended to apply an insecticide around Christmas to ensure these pests are effectively controlled.
- » With rapid fruitlet development during this period, it is important to continue **regular calcium applications** with a plant-safe calcium formulation such as Stopit or Brexil Calcium.

Remember **powdery mildew** control over this extension growth period is important, particularly for susceptible apple varieties such as Envy and Royal Gala. Talendo® is a high-efficacy powdery mildew fungicide to

fill the mid-season gap left by the withdrawal of previous products, and has performed impressively in our research trials.

Talendo can be applied a maximum of two times per season after second cover and has a 55 day PHI for nil detectable residues at harvest.

For excellent control up until 21 days before harvest, consider the new powdery mildew fungicide Esteem® which contains the novel active ingredient Polyoxin-D which is a 'generally recognised as safe' (GRAS) compound and has been shown to have very good control of powdery mildew.

Early December is a critical time for monitoring for **mite populations** as egg hatch occurs over this time.

If mite populations are elevated and predator ratios are low, then it is critical to control before a significant problem occurs and potentially restricts access to some markets. Mit-E-Mec® provides excellent control of eggs and adults and, because of its translaminar action, has excellent rainfastness, good persistence and low impact on the beneficial predator mite *Typhlodromas pyri*.



Powdery mildew Podosphaera leucotricha

Wine Grapes

- » Fortify your **powdery mildew** programme with protectant fungicides before, during and after the sensitive bloom period then maintain a protective cover on vines through until veraison.
- » **Downy mildew** requires careful management through December. Apply a specialist fungicide in anticipation of conditions conducive for infection.
- » For the best control of **leaf roller**, apply Prodigy® at 80% cap-fall. Monitoring is required by SWNZ to justify this application.
- » If the **mealy bug** threshold was triggered last season, best practice is to apply Movento® 100SC at 20-50cm and again at pre-flower.
- » Apply a fungicide with high **Botrytis** activity at early cap-fall if wet weather is anticipated. A late cap-fall botryticide application is vital to control latent infection of the disease. Carefully observe PHIs.
- » Apply MC Cream or Calibra as part of your nutrition programme to encourage general vine health.

Two key concerns for grape growers in December are **powdery mildew** and **Botrytis**. Wine grape vines are particularly sensitive to powdery mildew (PM) infection between pre-bloom and fruit-set. As well as negatively impacting on general vine health, yield and creating berry scars that offer potential infection sites for *Botrytis*, an uncontrolled PM infection may also introduce a taste taint to wine. This disease needs to be managed well.

Apply Luna Sensation®, a new co-formulation of an SDHI (Group 7) and QoI (Group 11) no later than 80% cap-fall. This fungicide is not influenced by low or high temperatures, has translaminar movement within tissue conferring excellent rainfastness, and a vapour action that aids coverage in the hard to reach areas of the vine. Talendo, Quintec

(Group 13), Impulse (Group 5), and Flute (Group U6) are other good alternative mode of action fungicides that can also be used during this period. These compounds have performed impressively in our research trials, providing unrivalled levels of preventative control. For resistance management, ensure that you alternate fungicides in different mode of action groups and do not exceed total number of applications for each chemical group.

As grapevine bloom advances, numerous micro-injuries develop and dead, decaying floral tissues build up within inflorescences. *Botrytis* will rapidly colonise these dying tissues but will rarely express as rot until harvest; such infections are called latent infection. The application of a suitable fungicide at 80% cap-fall is vital to prevent *Botrytis* establishing if environmental

conditions are favourable. Switch, from the anilino-pyrimidine chemical group, and Teldor or Prolectus, from the hydroxyanilide group, have both performed extremely well when applied at this time in our research trials over many years and can both be used in a nil residue programme. Another option is Pristine, which controls both *Botrytis* and powdery mildew. Pristine is the combination of two active ingredients: pyraclostrobin a strobilurin plus boscalid from the SDHI anilide group. Both control disease pathogens by blocking the energy production at different enzyme sites on the respiration chain. Pristine can only be used in an MRL based programme. Discuss the correct choice of fungicide and resistance management strategies for your vineyard with your Fruitfed Supplies representative and always check withholding periods with your winery prior to application.



Powdery mildew infection of a grape bunch

Summerfruit

- » Apply protectant fungicides for **brown rot** control prior to any infection period leading into harvest.
- » Continue to monitor for **aphids** and **mites** and apply an appropriate insecticide/miticide if required.
- » It is important to continue regular **calcium** applications through December with a plant-safe calcium formulation such as Stopit or Brexil Calcium.

The application of a pre-harvest protectant fungicide for **brown rot and Botrytis** control in cherries prior to an infection event is vital. Pristine™ is highly-effective against these diseases and is recommended for the pre-harvest period as it combines two active ingredients: pyraclostrobin (from the strobilurin group) with boscalid (from the anilide SDHI chemistry group). Both active ingredients confer control by blocking the energy production at different sites on

the respiration chain. Apply Pristine before infection events and make a maximum of two applications per season. Fruitfed Supplies' research trials have demonstrated extremely effective brown rot control from Pristine. If you're an export grower, check pre-harvest intervals on the cherry export spray schedule.

For **pre-harvest brown rot control** on peach, nectarine and plum cultivars, the DMI fungicide Follicur® has a proven track record. Fruitfed Supplies' technical team has carried out several research trials with Follicur and it has consistently demonstrated a very high level of disease control. Note that if three applications of Follicur have already been used (during flowering, for instance) then chemistry from a group other than DMI should be used pre-harvest instead. Follow good resistance management practices by alternating chemistry, limiting number of applications, knowing your resistance status, and tank-mixing where appropriate. Always check PHIs with your exporter prior to application.



Brown rot on cherries

Kiwifruit

- » The eight-week period following fruit-set is critical for ensuring **leaf rollers** are effectively controlled. Proclaim is the best available post-flowering option. Applications made five (Hayward) or seven weeks (Gold) after fruit-set must be justified by monitoring.
- » Warm and wet conditions during the flowering period are ideal for **Sclerotinia infection**. For those who didn't apply Luna® Privilege in the pre-flowering period, an effective fungicide needs to be applied during flowering. Flint® is a good option at this timing. Post-flowering options are very limited and if secondary infection requires control, talk to Zespri about options.
- » To encourage **canopy health** to support flowering and fruit-set, consider applying a specialist seaweed product such as Calibra or MC Cream.

» Application of the targeted biostimulant Benefit Kiwi during the early stages of fruit growth has been shown to **increase fruit size** without affecting fruit quality.

A pre-flower application of Movento® 100SC is a strong start to the **scale control programme**, but some higher pressure blocks may still require one or more oil applications post-flowering. An application of D-C-Tron Plus Organic is allowed during the period from fruit-set to 14 days later (Hayward). A second application window exists prior to monitoring starting in Hayward between 35-56 days after fruit-set (NB. from eight weeks after fruit-set, any applications in Hayward must be justified from monitoring results). While this early application timing is relatively safe on Hayward, label directions and best practice guidelines must be followed. Gold3 has proven particularly sensitive to oil applications at all stages of the

season, and phytotoxicity may result at any time on this variety.



Scale on fruit prior to harvest

Citrus

- » December's generally warmer weather and lush growth means it is important to maintain a **fungicide programme** up to and post-flowering to protect against scab and melanose infection of young shoots and fruitlets. Apply good protective chemistry such as Folpan® or Dithane® Rainshield™ prior to rainfall events, particularly while young leaf and fruit tissue is present.
- » The **rapid fruit growth stage** following flowering is nutritionally demanding on trees. Healthy, nutritionally balanced trees are better equipped to support this process, and generally produce bigger fruit with higher quality at harvest. After flowering, feed trees with Fruitfed Citrus Mix Fertiliser. Foliar fertilisers such as Yara Gramitrel can assist with the growth of new spring flush, an essential component for good fruitlet growth and

development. Specialist seaweed products such as Calibra or MC Cream may also provide extra benefit for this purpose, as well as encouraging general tree health.

- » Target a range of **problematic insect pests** early to prevent epidemics occurring over summer. Apply Movento® 100SC to control armoured scale, Australian citrus whitefly, and Kelly's citrus thrips. For best results, apply at the recommended label rate according to the target pest, and well before mature populations develop.

A number of key pests often start to appear in December. **Citrus whitefly** juveniles tend to hatch at this time, and some **scale species** will start to release crawlers. **Kelly's citrus thrips** may also be present after flowering. Getting the best result out of insecticide applications is all about timing. The new generation, selective insecticides such as Movento® 100SC, generally only

affect juveniles as they disrupt the moulting process. Accurate crop monitoring will assist to determine the best time for control. Fruitfed Supplies' knowledgeable crop monitoring scouts take note of the species present in your orchard, as well as the life-cycle stage, e.g. adult, crawler etc. Talk to your local Fruitfed Supplies representative to find out more about crop monitoring.



Kelly's citrus thrips can rapidly increase in population over summer if left unchecked

Vegetable Tech-Know Tips

As we come into summer, insect pests become more of a problem in vegetable crops around the country.

Onion thrips are the major pest in onions and in December's increasing heat, populations can increase very quickly. When temperatures average around 25°C, onion thrips can develop from an egg to an adult in thirteen days. If temperatures average 30°C, this reduces to just ten days.

Onion crop monitoring should begin early to identify when insect populations start to increase, as insecticide selection and application times will be determined by the level of infection. Early spray options for onion thrips include Confidor, Benevia and Solvigo for use on establishing populations, and not to control high populations. Selecting the correct product for the correct timing will help keep pest levels under control. Thorough coverage is important

with all thrips insecticides, as this pest is most commonly found in the centre of the plant where leaves are close together. The addition of a wetter or spreader, such as Du-Wett, is recommended to increase contact.

Once the thrips population starts to increase at a faster rate and greater control is required, switch to products such as Dicarzol and Sparta. Trial work over the last few years in Pukekohe and Canterbury has found these two products to be the most effective at controlling high populations of onion thrips. Other options also include Proteus or Ascend. Please contact your exporter regarding the maximum residue limit (MRL) of insecticides (and other agrochemicals) for the export markets you are supplying as this can vary for different actives, in different markets.

Onion thrips are prone to developing resistance to insecticides, and already some strains are resistant to synthetic pyrethroids and to a small

number of organophosphates. Because of this, spray options must be considered carefully and rotation of different active ingredients is vital.

For more information about controlling onion thrips or insect resistance management, contact your local Fruitfed Supplies Technical Horticultural Representative.



Preventing sooty mould on kiwifruit

The key to reducing sooty mould in your kiwifruit orchard is to monitor regularly for the first sign of adult passion vine hoppers (PVH) and cicadas. The dark, fungal mycelium of sooty mould grows on the sweet honeydew extracted by PVH and cicadas as they feed on the kiwifruit sap.

The resultant sooty mould staining often results in kiwifruit being rejected at the packhouse, but it can be reduced by using Biostart TripleX on your developing kiwifruit crop.

TripleX is unique in that, rather than just wiping out the sooty mould fungus, TripleX inoculates the plant with a microbe that out competes the fungal spores of sooty mould, says Phil Carter, BioStart Horticulture Territory Manager.

“Regular applications of TripleX is the best way to reduce the development of sooty mould on your developing kiwifruit. TripleX is the only ACVM-registered biofungicide for sooty mould prevention. The active ingredient in TripleX is the *Bacillus amyloliquefaciens* Bs1b microbe which inhibits both spore germination and

mycelial growth of the sooty mould fungi.”

Phil says: “The most effective way to use TripleX is to apply it as a preventative agent prior to sooty mould infections becoming established. Start applications prior to PVH or cicadas becoming active in your orchard. This will establish a population of Bs1b microbes on the leaves and fruit to help control sooty mould establishment and growth.”

The regular re-application of TripleX during peak sooty mould infection periods from January to March will ensure adequate coverage of the developing fruit is maintained.

Trials showed that TripleX significantly reduced the incidence of sooty mould in Green (Hayward) and Gold (G3) kiwifruit crops in Te Puke and Opotiki kiwifruit orchards. This has been observed on many commercial kiwifruit orchards over the last two seasons in the Bay of Plenty, Auckland and Northland.

TripleX is listed on the Zespri Crop Protection Standard has a 2-day PHI, and is compatible with a number of other sprays. Contact your Fruitfed Supplies Technical Horticultural Representative for more information.

Best use guidelines

- » Regularly monitor PVH nymphs in nearby hedges prior to adults emerging in late December/early January.
- » Apply TripleX at 2-3-weekly intervals in response to weather events, at a minimum of 3 L/ha. Add Du-Wett.
- » Apply TripleX regularly until PVH and cicada population numbers decrease when weather cools late March. **F**



Reduce the incidence of sooty mould with TripleX

Calcium – a key nutrient for quality

Most horticultural crops require an adequate supply of calcium to leaves and fruits to prevent disorders during crop growth, handling, and storage. Calcium is responsible for the structural and physiological stability of plant tissue. It forms strong cell walls and is vital to cell membrane integrity. It also helps maintain an optimum root environment for high yielding crops.

David Spencer, Agronomy and Crop Solutions Manager for Yara NZ, says: “The issue we have with fruit crops, is that calcium is taken up into the plant via the xylem vessels to the leaves, with no phloem mobility to the fruit. Therefore, it is vital that regular foliar applications are made directly to the developing fruit to ensure adequate nutrient supply. This needs to occur from the early cell division fruitlet stage, all the way through to harvest. Foliar applications mean the nutrient can be applied directly where and when it is required and in the necessary quantity.”

A proven source of high-quality calcium is YaraVita Stopit. It is formulated from food grade calcium chloride to ensure crop safety and freedom from harmful impurities, and performs as well today as it did when first introduced nearly 30 years ago.

David says trials have consistently shown YaraVita Stopit to be safer and more effective

than other chloride-based products. “It is used extensively on all key New Zealand fruit and vegetable crops, improving crop returns to growers. Stopit is commonly used to reduce bitter pit and improve fruit firmness in pipfruit, ensure less splitting and increased *Botrytis* tolerance in wine grapes, and improve firmness of stonefruit.”

Pete Bennie, Orchard Manager at Leaning Rock Cherries in Alexandra, says: “As a grower of export cherries and other stonefruit, it is important that we adopt a robust nutritional programme aimed at producing

top quality fruit. I have used the Yara range of foliar products, including Stopit, for over 20 years. I run an intensive foliar programme that needs to be safely incorporated into my standard spray programme. Product safety and tank mixability are absolutely key. I can't afford downtime or fruit finish issues.”

David adds: “Stopit's broad tank-mixability makes it easy to co-apply the products with agrochemicals, saving both time and money. Growers can also easily access tank-mix information online or via smart phone.” **F**

Healthy cell

Collapsed cell with calcium deficiency

Without sufficient calcium

a) Cells tend to collapse,
b) resulting in tissue death,
c) and unmarketable crops.

YaraVita Stopit analysis:
16% w/v = 160 g/l Ca
Pack sizes:
10, 210 and 1000 litre

Summer caterpillar control in green vege

With the season getting off to an early start, caterpillar numbers are already building so growers must be vigilant about protecting vegetable brassicas and heading lettuces.

FMC Area Business Manager Hayden Toy says last season's conditions led to consistent and prolonged pest pressure in the field, and two key FMC insecticides – Coragen® and Steward® eVo – continued to perform extremely well around the country.

“Coragen and Steward eVo are the perfect pair to protect vegetable brassicas and head lettuce when used in rotation. This provides a robust strategy for superior caterpillar control that also fits well in an IPM programme,” Hayden says. “Both products have been around for a few seasons, but they still play a significant role in spray programmes.”

Hayden reminds growers to follow resistance management guidelines by using and rotating

the two products appropriately to ensure they remain effective for years to come.

“These two products are from different insecticide groups, so if pest insects develop resistance to any one of these then it would place enormous pressure on the few remaining groups.”

Both Coragen and Steward eVo are applied as foliar sprays when crop monitoring shows pest thresholds are exceeded.

“This ensures pest populations are only exposed to an insecticide when their numbers threaten crop quality and it becomes economically viable for growers to treat.

“Growers who have previously used either Coragen or Steward eVo will be confident of the length of control they can provide. With other treatments being applied on brassica and lettuce crops, the addition of either Coragen or Steward eVo is a simple

and cost-effective way to address caterpillar populations as monitoring dictates.”

For best results and insecticide resistance management:

- » Coragen should be applied early, just as the heads starts to form
- » Two consecutive applications, a minimum of seven days apart can be made
- » Then rotate to a product from another insecticide group
- » A third application can then be made to maintain the quality of the crop.
- » Steward eVo can be applied either before or after Coragen depending on pest pressure, to rotate chemistry.

To find out more about Coragen and Steward eVo, speak with your local Fruitfed Supplies Technical Horticultural Representative. **F**



Time Coragen application at these key growth stages for the greatest impact on yield and quality

Left: Leafy brassica (cabbage) at leaf wrapping stage

Middle: Head brassica (cauliflower) at button head stage

Right: Lettuce at early head formation stage

How to optimise photosynthesis

Many growers know production benefits can be gained from using high quality biostimulants. The question is: how can you be confident what you are using is going to provide a proven benefit? The answer is to buy from companies which have invested in the science to support their product claims.

Nic Peters, Valagro's South Island Territory Manager, explains: “You'll know you are getting a proven product supported by objective science.”

When it comes to choosing a biostimulant it is better to have a formulation that has been developed for a specific purpose. The most important process undertaken by every plant is photosynthesis and New Zealand has some challenging light conditions – our summer sun has extremely high light intensity, while winter's very low light levels also impact plant photosynthesis.

“Regardless of the time of year, you want to make the most of the photosynthetic potential of your crop,” says Nic. “MC Cream is proven through genomic science to increase the plant's ability to utilise light and enhance

photosynthetic activity. This leads to increased carbohydrate production having a positive outcome on production levels, leaf condition and fruit development.”

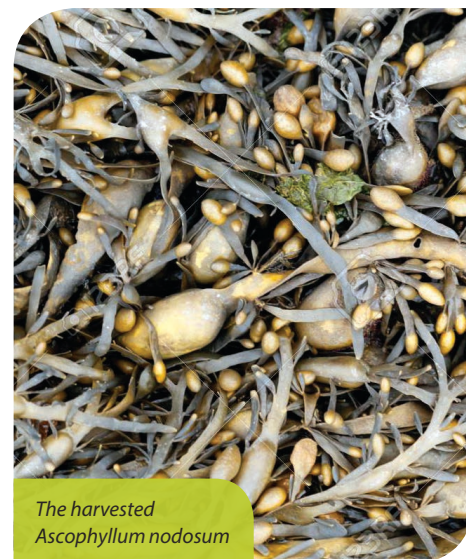
Active phyto-compounds in MC Cream are extracted from *Ascophyllum nodosum* and specifically combined and processed to stimulate the plant's metabolic activity.

“The location where the *A. nodosum* is harvested plays a critical role in the development of these active ingredients,” Nic adds. “At Valagro we only use Norwegian *A. nodosum*, which is subjected to some of the harshest environments - extreme cold, low winter light, strong tidal variability and sun exposure – all add to the complex makeup of this alga and is what gives *A. nodosum* its superior content of phyto-compounds.”

Valagro's infrastructure investment ensures the alga is harvested in a sustainable way, reducing any negative impact on the environment. “Harvest timing is also carefully managed with our deep knowledge of the changes in the amino acid content of *A. nodosum* over the year – it is only harvested for a short period when these vital

compounds are at their peak levels. Once harvested, it's processed quickly to ensure the extracts are as fresh and stable as possible.”

Your Fruitfed Supplies Technical Horticultural Representative is available to discuss how MC Cream can assist in your crop production programme. **F**



The harvested Ascophyllum nodosum

Top tips for getting your best apple harvest

For many growers, plant growth regulators are a valuable tool to manipulate harvest dates for different blocks and varieties.

Growers should use a naturally-occurring plant growth regulator which temporarily inhibits production of ethylene in fruit, slowing maturation, ripening and development of abscission tissue while allowing continued fruit growth. This can delay harvest by 7-10 days without affecting fruit quality.

Now's the time to start reviewing your schedule for applications as well as other key factors like planned calcium treatments and temperature data.

Nufarm Technical Specialist Cynthia Christie says correct timing is essential. Reviewing historical harvest dates is a useful planning tool along with monitoring this season's conditions. In Royal Gala, for example, it needs to be applied 21-28 days prior to the 'go date' for blocks that are treated. Monitoring

temperature conditions around the planned time of application is critical.

ReTain® is a great option and must be used with an organosilicone adjuvant such as Freeway® to work properly.

Applying the adjuvant to hot fruit is not advised," says Cynthia. "On the sunny side of the tree, on a hot sunny day, the interior temperature of apples can reach 40° Celsius just under the skin. And in those conditions, fruit stays hot into the evening. Spraying adjuvant onto hot fruit increases the risk of lenticel damage, which affects fruit quality. We always recommend ReTain be applied in the cool of the morning for this and a range of reasons."

The schedule of planned calcium applications pre-harvest also needs to be factored into planning for ReTain. Growers need to allow for a minimum 7-day interval between calcium sprays and ReTain, and it should not be applied if calcium residues are present.

Cynthia says these guidelines are designed to maximise ReTain's performance and minimise the risk of fruit spotting.

- » After applying ReTain, there needs to be a 24-hour interval before any other sprayed horticultural product or irrigation is applied.
- » Where foil mulch or reflective films are used, ReTain should be applied before these are laid down.
- » Do not apply ReTain if rain is expected in six hours.
- » ReTain must be used with Freeway organosilicone surfactant in order to obtain the optimum response.

For more advice on using ReTain to get the best out of your harvest this season, talk to your Fruited Supplies Technical Horticultural Representative. **F**

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