



# HORTFOCUS

## New product delivers magnesium needs



Magnesium deficiency showing in apple trees.

### Skeltons has developed a new foliar product to correct magnesium deficiencies in plants.

Magnesium is a macro nutrient and as such, crops require large amounts of this nutrient throughout the growing season in order to produce a quality yield. The most effective system to satisfy a plant's magnesium requirement is through root uptake from the soil. However due to many factors this is not always possible; that is when a foliar product that delivers enough available magnesium can be useful.

Having seen poor results from many foliar products, Skeltons technical advisors started looking into all of the formulations on the market (nitrates, sulphates, oxides and chelates), and how growers could get the best foliar magnesium product that would not simply mask the problem but would actually correct the deficiency.

Gro-Mag Super, developed by Skeltons in conjunction with Grochem, is suitable for foliar applications to apples, grapes and summerfruit, and this season trials are being carried out for Kiwifruit. Being high in available magnesium, the rates recommended supply sufficient elemental Mg to correct deficiencies in that season. The product has Biogro approval so is suitable for both conventional and organic production systems.

*Continued on page 3*

## Support and competitive advantage ensures the best prosper

The new season has begun in earnest and brings with it plenty of challenges for horticulturalists: a stubbornly high \$NZ affecting export returns, the global recession impacting demand, new pests causing problems in vegetable crops, the viticulture industry under pressure; and that is before we take into account the vagaries of weather that Mother Nature can throw at us.

Thankfully there are also positive signs with the world's economic malaise abating and indications of economy recovery visible. New Zealand has the ability to provide the world with high quality food with integrity of production and that, coupled with being close to emerging world markets, has to be our competitive advantage. We all need to be vigilant to ensure we continually capitalise on that advantage.

At Skeltons we understand your horticultural business. We know your need for quality production and ensure the advice we give and the

products we supply you, fits your consumer's requirements.

We empathise with your challenges as they are our challenges too. On your behalf, we help develop new solutions to production problems and encourage suppliers to reduce your costs. If your business is not successful, nor is ours and so we are as supportive as possible through these tougher times.

However, without your support we too are vulnerable. Ask yourself each time someone approaches you with products "Is this to assist my business or just to make a sale?" and support those that support you. That way, the best will prosper.

IAN GOLD Skeltons General Manager



## Skeltons expands into Waikato

Skeltons has now established a presence in the Waikato with the appointment of Brett Turner. Based at the new Farmlands Hautapu store, Brett is providing a technical advisory service to commercial growers throughout the region.

Brett has an extensive and esteemed career in horticulture spanning 25 years. With Certificates in Horticultural Management and Practice from the Royal New Zealand Institute of Horticulture, Brett's theoretical and practical knowledge and experience give him a solid base from which to provide technical advice to help growers improve productivity and quality.

### Waikato



Brett Turner  
027 660 1165

## Pollinating crops with honey bees

**A number of misconceptions exist regarding honey bee pollination of crops. Successful pollination is the culmination of good crop husbandry, management and a little bit of luck. For many crops, effective pollination is required to produce fruit of good size and mineral uptake into the fruit.**

### Role of the bee

The role of the honey bee in pollination is specifically to transfer pollen from one flower to another and, where cross pollination is required, from one variety of a fruit to another variety of the same fruit. For example, a Fuji apple may be cross pollinated by Royal Gala or vice versa; neither of these varieties may be satisfactorily pollinated by its own pollen.

### Effective hives

Hives need to contain sufficient bees to become an effective pollination unit; approximately 1.5 boxes of bees or more with six frames covered in brood. This amounts to approximately 35,000 bees as a minimum.

In early spring, the hive begins to build with bee numbers well under what is likely to be achieved in the height of summer.

Consequently, not all hives are suitable as pollination units in early spring and beekeepers need to manage beehives to reach minimum accepted bee populations. A hive of 35,000 bees has a field force of 10,000 to 15,000 collecting pollen and/or nectar. Two weak hives placed in the orchard will not give the equivalent of one good pollination unit.

### Cross pollination critical

Bees tend to work flowers from one variety of a fruit for the day and will only swap to



Bee pollination is not as simple as many believe.

another variety when there is no more pollen or nectar available from the original variety.

The pollination effect and orchard layout is an important factor for cross pollination. Research undertaken by the South Australian Department of Agriculture on almond crops showed that in spite of bees being present, no DNA material from the pollinator variety was evident only three trees away from the sample trees.

In Hawke's Bay, we see the same effect on fruit set of crops of Black Doris plums and large blocks of isolated apple trees, where fruit set can be much less than three trees or rows away from the cross pollinator trees or rows.

**To effect good pollination, a number of factors are important and are outlined fully on our website or speak to your Skeltons technical advisor.**

## Carpophilus beetle – a new control option

**Over the last three years, Skeltons has been developing an Attract and Kill (A&K) system for local conditions for the control of Carpophilus beetle.**

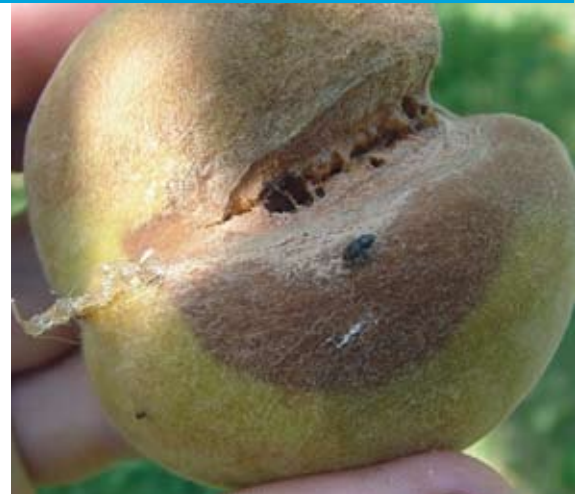
A serious pest of ripening Stonefruit and some berry crops, Carpophilus beetle can cause up to a 30 percent crop loss. Control options can be limited due to the beetle only attacking crops close to harvest and therefore causing a problem with pesticide residues.

The A&K system helps overcome this as no pesticide comes in contact with the crop so there is a nil withholding period. Trials over the past two years have resulted in a decrease in Carpophilus beetle populations with the resulting damage 17 times lower than in a chemically treated area.

The system utilises a pheromone in conjunction with a synthetic version of the smell of ripening fruit that is proven to be an attractant 12 times more powerful than the natural version.

Results to date have been positive with refinements made for different crops and individual blocks, to get adequate control. While not seeing 100 percent control, we are noting population decreases which is leading to reduced chemical inputs.

**For more information about this useful tool in the control of Carpophilus beetle, please contact a Skeltons technical advisor.**



A Carpophilus beetle on a peach with brown rot developing around its entry point.

## Managing temperature fluctuations in transit improves produce quality

Temperature variations during refrigerated export increase the risk to the producer/exporter, and reduce consistent quality as well as the product's shelf life.

Many importers now request that electronic time and temperature recorders be placed in all temperature-sensitive shipments to provide temperature history throughout transit.

### Benefits include:

- tracking products to meet HACCP and BRC compliance
- collecting facts to select reputable suppliers
- analysing conditions with instant time and temperature graphs
- collecting hard data for insurance purposes
- reducing product spoilage and expensive compensation issues

Post harvest produce protection through temperature monitoring is a natural extension for Skeltons given our strong consultative approach in terms of horticultural product stewardship.

### Tracking for success

Sensitech provides complete cold chain solutions for monitoring temperature-sensitive products through the



entire supply chain. This technology allows importers and exporters to gain control of what happens, where and when.

Sensitech has an impressive track record in seven of the top ten US supermarkets, and 18 of the top 20 multi-national pharmaceutical companies. Sensitech also supports HACCP compliance and food safety programmes in 10 of the top 15 restaurant chains in the USA.

### Monitoring options:

#### 1. Strip Chart Recorders

These are ideal for shipments into Asia and the Middle East where access to computers and the English language is limited.

#### 2. TempTale 4 Digital Monitors

These monitors provide complete time and temperature data for tracking perishable cargo. They are customisable and downloadable to a PC using TempTale® Manager Desktop. Each monitor is accuracy tested to NIST traceable standards.

TempTale® Manager Desktop software configures, downloads, displays, analyses and reports time-and-temperature data collected from any Sensitech's TempTale monitor.

**Skeltons stocks a range of Sensitech temperature recorders. For more information contact Skeltons technical advisor Evan Walsh mobile 027 201 3481.**



**Magnesium deficiency symptoms in apple leaves.**

*From front page*

The new product development came as a result of growers' frustration at not knowing how best to address historical magnesium deficiency in their crops, i.e. whether to apply products to the soil or to make foliar applications, and then which product to choose from the vast array available.

Results from trials conducted over the past two years, have shown large increases in canopy health without causing any russet or leaf toxicity. Growers involved in the trial work have been very pleased with the results.

**GroMag Super is available in 20kg bags and only from Skeltons Hastings and Farmlands stores.**

## New product releases

### Altacor

Last year Skeltons technical advisor, Lachlan McKay joined industry colleagues from Australia and New Zealand for the launch of Altacor in the USA.

Released by DuPont, the insecticide Altacor is used on pipfruit for the control of Leafroller and Codling moth. DuPont's Stine-Haskell Research Centre in Delaware that discovered Rynaxypyr, the active for Altacor, has invested \$10million on robotics to increase its compound screening capacity from 10,000 to 150,000 compounds per year.

Only three or four of these compounds make it out of the lab and only one or two make it to commercial release, at a cost of up to \$200million per compound. Rynaxypyr is the first active to be discovered after this investment.

Altacor is a new class of insecticide, (Class 28 Anthranilic Diamide), that acts on a caterpillar's muscle fibres (traditional insecticides act on the nervous system).

Rynaxypyr formulations have a new mode of action that works by activation of an insect's Ryanodine receptors which play a critical role in muscle function. Altacor causes an uncontrolled release and depletion of internal calcium, leading to muscle paralysis causing rapid cessation of feeding, and ultimately death.

Altacor has ovicidal and larvicidal effects on Codling moth and has translaminar activity in the leaf which provides robust, long term control of codling moth and leafroller.

Experiences in New Zealand last year suggest the same efficacy results are achieved as those overseas, with no impact on beneficials

and excellent control of Codling Moth and Leafroller.

Further research has been undertaken this year to determine shorter withholding periods for export crops both under IFP and Apple Futures.

### Coragen SC

Coragen SC is the Rynaxypyr formulation used in the vegetable brassica sector. This formulation is a liquid and provides good pest protection during the September to January resistance management rotation window.

Translaminar absorption and long residual activity combine to target all growth stages using Coragen's unique mode of action. Having a new family of insecticides will provide better control of caterpillar pests for brassica growers who now have an even better armory to protect their valuable crop.

# Potato industry treads carefully

**With the worst fears realised of lost yield, lost crop, and depressed prices, the potato industry goes into battle mode this spring due to the menace, Potato / Tomato psyllid.**

Control wise, overseas experience has shown the importance of the 'neonictanoid' family as an 'in-furrow' application using 'imidacloprid' and 'thiamethoxam'. New Zealand growers do not have the choice available currently of their US counterparts, so will be forced into older chemistry again for one more year at least.

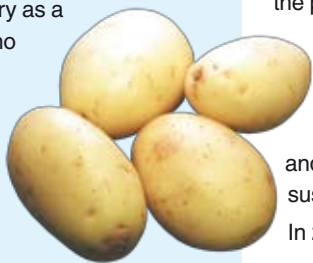
Organophosphate (OP) usage had been declining prior to the discovery of psyllid with predator build up. Now, growers have to wind the clock back, regardless of choice. OP spraying must target nymphs and adults on a weekly basis, irrespective of weather conditions. Coverage is vital to developing a rigorous programme.

Monitoring plays a part but a more calendar-structured approach must be taken to get an upper hand in this all-important battle.

Research now reveals little room for error in controlling the population at an early crop stage, so any ovicidal or chemical options with high systemicity must be preferred as the product of choice. New chemistry awaits on the horizon but good things take time!

Spring in the air and crops to plan for, the important thing for everyone is to have open forum discussion, attend workshops and generally collaborate across the industry as a

whole. There is no room for bias or commercialism. Growers' livelihoods depend on this.



# Joe Bell winner a man who says "No"

Rupert Ryan was awarded the Skeltons sponsored Joe Bell Trophy for his contributions to the fruit growing industry at this year's Hawke's Bay Fruitgrowers Awards. In announcing Rupert as the winner, HBBG president Leon Stallard used the current Steinlager television campaign to draw the analogy, that Rupert Ryan was a man who said "NO".

Some of the contributions that Rupert's "NO" stance has led to for the industry include the invention of the Maxi-Measure jugs to allow more precise measuring of sprays and other chemicals than the previously used "milk bottles, boots, and bean cans".

Another was vertical integration; Rupert was one of the first growers to build his own packhouse to deal with his own fruit.

He was also instrumental in pushing for a permit scheme for growers to market their own fruit, which ultimately proved a precursor for deregulation from the single desk exporter that Rupert did not believe was the best option.

Rupert also drove the 2005 campaign to take 400 growers and industry supporters to Wellington on a steam train to push politicians to take action against the Australian ban on importing New Zealand apples. The fact that the World Trade Organisation is considering the



**Ilan Gold, Skeltons general manager (left) with Rupert Ryan at the Hawke's Bay Fruitgrowers' Awards with the Joe Bell Trophy for services to the horticulture industry.**

issue is a solid legacy of the man.

"You can't be involved in the New Zealand pipfruit industry and not know of Rupert Ryan" says Ilan Gold, Skeltons general manager. "Skeltons is proud to recognise Rupert's efforts to the industry."

# Great grape ideas rewarded

**Grape growers will benefit from four research projects awarded Skeltons Viticulture Development Grant monies over the coming year.**

Two projects continue on from work started last year: MinusSix Ltd is expanding in-field trials on a frost protection system that has proved successful in bench trials and various vineyard situations this past year. A patent has been granted for the system and further refinement of the prototype is underway.

David Reid, a PhD student with Lincoln University, is continuing his research into Mealybug control using non-host cover crops. This year, David is trialing indigenous and exotic grass species for suitability as sustainable cover crop species.

In 2009, the Grant was extended to Gisborne

and Wairapara industry participants. A successful Gisborne project is being

conducted by Lewis Wright Valuation & Consultancy to study the use of Gibberellic acid to control sour rot in grapes.

The fourth project is looking at humidity management in the vineyard as a means to improve vine health and grape quality. Former Grant recipient Rob Beard (whose earlier Grant-funded project showed that wild hawks could be successfully used for bird control), is joined by fellow vineyard manager, Mark Dixon to develop and run in-situ trials.



Plant & Food RESEARCH  
RANGAHAU AHUMĀTEA KŪAI



Ballance



Bayer

# Want more information?

Should you require further information on any articles in this newsletter, or on any other matter relating to horticulture, please contact us.

## Skeltons

233 Ruahapia Road, Hastings.

Phone 06 876 8029

Email [info@skeltons.co.nz](mailto:info@skeltons.co.nz)

Or call one of our technical field team direct

## Hawke's Bay

Malcolm Crawford 027 442 8947

Jeff Kevern 027 442 8945

Andrew Whitworth 027 442 8946

Chris Herries

027 443 3910

Lachlan McKay

027 444 0838

Blake Herbison

027 284 4147

Evan Walsh

027 201 3481

James Cropper

027 442 8948

Martin Taylor

027 298 8800

Dave Llewellyn

027 227 2016

## Poverty Bay

Trevor Heard

027 555 6080

## Manawatu / Wanganui

Erin Kyle

027 558 2266

## Wairarapa

Sam Black

027 227 2052

## Horowhenua

Frazer Clarke

027 200 0025

## Waikato

Brett Turner

027 660 1165