



# PICK OF THE CROP

December 2009

## Season 09/10 underway - finally

Just like their southern cousins, this year growers around the North Island could have been forgiven for wondering when Spring would arrive and stay. As records show, it has been several decades since a year similar to this and the resultant chaos in planting programmes has occurred.

But there are benefits also, with water tables filled and cooler conditions reducing pest activity. The downside is the emergence of phytophthoras, sclerotinia in lettuce, pink root in onions, to name but a few.

Regardless, this spring has demonstrated the importance of focusing on ground preparation, good seed quality, planning, and a good early fungicide programme.

Fungicides in these conditions, can be worth their weight in gold, however very often the worth is not fully realised until it is too late and plant health and yield is lost.

Asparagus is a good case in point. Phytophthora is devastating on the crown health, and effects can last for several months. While the weather will improve, the damage to yield and crop is irrecoverable. Prevention is always better than cure, hence the preventative approach is always best.

The season is now underway with a rush on to get crops planted and sown in the hopes of achieving sufficient sunshine.

Foliar nutrition can help speed recovery and hopefully recoup lost opportunities. But as always, Mother Nature has the last say.

Good luck for the rest of the season.

**The Skeltons Team**



Apply Movento from 30 to 50 days after planting

## New chemistry for the control of potato psyllid

Bayer CropScience has recently obtained a label claim for the control of the potato/tomato psyllid on potatoes with its insecticide, Movento 240SC.

Movento is highly effective against a range of sucking insects, including psyllids. The unique mode of action (inhibition of lipid biosynthesis) of the product provides outstanding control of developmental stages (eg. nymphs) and has excellent effects on female adults, reducing their fecundity and the viability of eggs.

The product has a unique two-way systemicity a characteristic that means it is distributed in both the xylem and phloem system within the plant. This ability to move throughout the plant in both directions provides long lasting systemic protection.

It is recommended that Movento is applied as two applications at seven days intervals early in the season to a developing pest population as part of a season-long insecticide programme for psyllids.

For further information on the use of Movento in potatoes and other psyllid control options, contact your local Skeltons Technical Advisor.

Movento® is a registered trademark of Bayer.

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## Onion nutrition key driver for successful crop

Allium growers face many obstacles in the quest for a quality bulb, be it flood, pest, disease, drought. Some of these, such as maggots, thrips, and weeds are easily surmountable while other challenges such as flooding, drought and even downy mildew, can test strategies to the limit.

When focusing on quality, a successful onion crop must start with quality seed; nutrient pelleted to give it the best start; sown in good paddocks with sound structure, and assisted with the right base fertiliser programme.

It is critical to watch for maggot on emerging crops, as these can be devastating if undetected. A chlorpyrifos application is normally successful if applied early shortly after emergence, but depending on pressure, a second may be required.

At the third leaf stage, begin the quality programme by taking a leaf test to determine if key macro and micro nutrients are sufficient. Onions require the trace elements manganese (for skin colour), zinc (deficiency induced by cold and low pH soils), and some molybdenum (acid soils). They also require copper; not the fungicide but chelated or a readily available source, for properly formed bulb scales. Copper deficiency is normally induced by peaty or acid soils. Always apply foliar in the cool of the day to avoid leaf scorching.



Seasonal demand for nitrogen is around 15 to 19 weeks after sowing, while zinc is around 19 to 21 and copper from 17 to 23. Side dressings should not be applied after 20 days prior to bulbing. Side dressings of NPK fertiliser are normally applied at 10 to 20, 50 to 60, and 80 to 95 days after emergence.

Depending on the soil levels, extra calcium can be required for strong skins and hard bulbs. There has been much work done with foliar calcium, with varying results, to increase bulb levels but the soil remains the most important source of readily available calcium. Moisture levels determine the availability of this calcium. Calcium sprays should be applied with every second fungicide from the start of bulb initiation.

## Hywett – for superior coverage

Spray coverage is a loose term often used to refer to the coverage of a pesticide to the target pest or weed. In certain crops this 'coverage' is much more important than in others – for instance, hairy leaved plants such as pumpkin or hard to contact pests such as thrips down an onion neck, are particular challenges.

Since 2007, Hywett (organo-silicone nonionic blend) has improved coverage of a chemical significantly to a point where it is now industry standard practice to apply this type of wetting agent onto an onion crop for maximum coverage and insect thrip control.

Many trials and grower testimonials attest to the benefits of an organo-silicone over an ordinary non-ionic surfactant. In fact in comparison, the spread of a normal non-ionic surfactant is about 10 percent of the performance of an organo-silicone.

The use rate of Hywett depends on planting density, canopy size and, most importantly, water rate. Where the surface to be covered is large, then a higher water rate is required. Hywett can be used to reduce the water rate somewhat, possibly by up to 50 percent. In this situation the rate per hectare will be higher. In general, the rate of Hywett required is greater when low water volumes are required.

Another factor to bear in mind is pesticide load; in general Hywett rates increase with greater loading and this can depend on crop stage and requirements.

For safety's sake Hywett should be trialed first if in unknown mixtures and definitely not added to mixtures containing additional oils. Hywett should be added last to the spraytank.

In these cost conscious times, a proportionately small dollar amount per hectare can be good value.

Want more information? Contact your Skeltons vegetable / cropping advisory team:

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## Cucurbit nutrition – special crop with special needs

Temperature plays a vital part in the early life of a cucurbit plant more than most others, and special nutritional needs are often required to help this complex plant yield to its full potential. When a plant becomes stressed it can automatically shut down.



Zucchini require the best start possible.

Plants that suffer set backs from cold injury need to be triggered into growth. A good way is the use of Seaweeds that contain natural plant growth regulators. Some humic / fulvic acid with seaweed will also assist with root development and is a good combination. Nitrogen will kick start the growing process, but be aware that plants will look good yet may not sustain this ongoing growth.



Good quality crown hybrid varieties are now standard in the market.

Another factor to consider is nutrient uptake. Under wet conditions plants do not use much water, therefore calcium absorption will be affected. Roots may be damaged and only the fine root hairs be available for nutrient uptake. Stunted plants will have limited foliage and cannot photosynthesise well, resulting in limited energy, and limited yield.

Suggested options for aiding cucurbits are Humic Total at emergence, followed by Alga 600, metalosate boron, zinc and calcium at regular intervals. Leaf analysis is also a good idea for determining nitrogen, while manganese can be required especially on high pH soils.

As your crop nears harvest, avoid applying excessive nitrogen, either foliar or soil applied. Rapid growth can deplete the plant's calcium reserves and result in poor fruit storage. A good late foliar will have plenty of potassium, and only a little nitrogen.

The combination of a good programme of foliar products can be very beneficial for a cucurbit crop under stress from the elements.

## New product wrap

### 'Dovetail' from Syngenta

new combination of proven insecticides Karate and Pirimor. Registered on Cereals, Potatoes, and vegetable Brassicas.

### 'Folio Gold' from Syngenta

new combination of the highly systemic fungicide 'mefenoxam' and protectant 'chlorothalanyl'. Registered on Potatoes, Tomatoes, Grapes and Canefruit.

### 'Reason' from Bayer

liquid formulation of the active 'fenamidone'. Locally systemic it provides fast acting control against downy mildew and late blight. Registered for potatoes and onions.

### 'Frontier P' from BASF

newly formulated isomer of the popular active dimethamid. Registered for onions, squash, maize.

### 'Vivando' from BASF

new systemic fungicide for powdery mildew control in pumpkin and squash. Apply on a 14 day schedule with no more than 2 applications.

### 'Aramo' from BASF

the new post emergent selective herbicide for use on onions for grass weeds. Accepted by UK markets.



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## Strong options now for brassicas

Market gardeners now have some strong options when it comes to insecticides and caterpillar control. Coragen (released last season) found favour with many for its control of all the major caterpillar pests in vegetable brassicas.

Used properly in a good resistance management programme, Coragen should be applied in the September to January window, followed by Steward and Ascend in the late window. The unique mode of action of Coragen and efficacy within seven minutes, are two key features of this product. Gone are the days of organophosphates wiping out entire populations of predators. Modern strategies focus on working with nature not against it, and if results are anything to go by, this strategy seems conclusive.

In 2010, expect to see new label claims for Coragen on lettuce, spinach, silver beet and potatoes. As well, Syngenta has exciting chemistry with pre-plant drench applications for both caterpillar and aphid control that lasts for up to 42 days.



Erin Kyle, monitoring brassicas in the Manawatu.

## Potato growers face challenge

Whilst there is still much to learn this season on the tomato/potato psyllid (TPP), and its potential to infect a crop with psyllid yellows, liberabacter, and zebra chip – there are some measures we can take to minimise its effect.

### Monitoring

Using yellow sticky traps 25 to 35m inside from the crop edge and dotted evenly (like a playing card number five), and checked regularly, will give an indication on firstly when the pest has arrived in your crop and also the pressure. When checking individual plants, remember to cover the crop in a V, M, W or Z like pattern and sample 30 to 40 plants.

### Management and Control

Alternating the different chemical groups with modes of action in blocks of two to three sprays, seven to 10 days apart (depending on the chemistry), will aid in the minimisation of resistance being built up.

Use of higher water rates and spray for run-off targeting under the leaves and down the stems will aid in good coverage needed to reach nymphs, adults and eggs.

As previously seen, the TPP symptoms seemed to be concentrated in the outer regions / headlands of the crop which may be a lack of nutrition in these parts weakening the plant and thus making it susceptible to being attacked. This is yet to be established.

### Insecticides

In-furrow treatment will aid in protecting the plant with the unique modes of action of the neonicotinoids. Rotating modes of action with synthetic pyrethroids, avermectin, carbamates, and organophosphates that are registered for potatoes, will provide some control affecting the TPP during its different life cycles.

**Contact your local Skeltons Technical Advisor for the right recommendation for your situation.**

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