



# PICK OF THE CROP

May 2008

## A PRINCIPALLY CHALLENGING ONE!

Inspiration or new ideas are often born from the need to improve something or follow on from the success of others.

In the current climate of rising costs, cropping farmers could well do with some inspiration to capitalise or improve their growing systems **and** improve their margins.

One way to do this is to take on board the principles put together by Landwise since forming in 1999. Over the subsequent years, resources have been pooled successfully through scientists, growers, contractors and the like to help revolutionise the local cropping industry.

Many commercial benefits have since come to fruition including the adoption of GPS planting and cultivation systems. Several overseas speakers bring first hand knowledge that has been keenly adopted. Hew Dalrymple in the Manawatu is one example of someone who has benefited.

Now the winds of change blow stronger again. Increasing diesel costs and minimum tillage (and its benefits) go hand in hand. Getting back to carbon-filled large pea-size aggregate soils is achievable using the principles of Landwise and its members.

Since its inception, Landwise has successfully revolved its activities around the key drivers of soil health and grower bottom lines. We urge you to look at these closely to improve your soil and your profitability.

At no time has this been more important than now as our industry faces escalating costs on all fronts associated with growing a crop. These increases **can** be minimised if we observe some very important principles.

## HUMATES: HEALTHY SOILS AND CROPS

### What are humates?

Natural humates are widely regarded as a premier source of organic matter and thus regarded as the most effective of all soil conditioners as they have a very high CEC and water holding capacity of 60 percent.

Humates are not ground up coal, but found in a layer above Leonardite or Lignite coal. These plant-based residues contain two powerful biological acids (Humic and Fulvic) that enhance plant growth and yield.

### Benefits:

1. When Humates / Humic acid are combined with any fertiliser - DAP, MAP, Urea, SOP, SOA etc that fertiliser becomes much more stable in the soil. For example with urea, all 46 units are retained and the released pattern is extended by 60 to 80 days thus reducing nitrogen use by 10 to 40 percent.
2. Carbon increase: Research indicates that organic carbon (humus) is the single most important determinant to profitable farming. Humates-high organic carbon (humus) level (69 percent) also stimulates microbial populations that convert crop residues to organic carbon.
3. Soil: Humates can also help open up compact and clay soils thereby increasing root growth and drought tolerance. Overall soil structure, porosity and tilth are key benefits that impact on seed germination survival and hence yield.

Experience to date tells us that humates use will rise as understanding of its importance on soil quality in Hawke's Bay continues to evolve.

More trial work next season in various crops will further define this product and the important role it will play. Watch this space.



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## NEW PRODUCTS

**Kocide Opti:** The most 'bio-active' (bio-available) copper on the market. Major improvements in dispersion, suspensibility, and mixing.

**Fusilade Forte:** New liquid formulation of the worlds leading grass herbicide. Does not require extra adjuvants.

**Cobra:** Cleverly formulated systemic / protectant combination for onion and potato growers. Uses dimethomorph and chlorothalanil.

**Climax:** Combination systemic / protectant that provides excellent early attack against late blight in potatoes.

**Betanel Forte:** Advanced formula of the popular beetroot herbicide.

**Metalosate:** New nutrition range of chelated Amino acids very similar to naturally occurring types found in plants and humans. Main advantage of natural aminos is their rapid absorption and translocation.

## SQUASH CROPS COPE IN THE DRY

Like most cucurbit crops, squash and pumpkins largely enjoyed the dry conditions this season.

Foremost with squash is a good disease control programme and correct spray intervals (depending on planting time). Generally, early harvested crops (before February) will only require protectant copper and sulphur sprays. Heavy artillery is then applied at seven to 10 day intervals from February on.

The new product **Prostar** fits well in alternation with **Neptune**. Growers need to be aware though that the family that Prostar belongs to (or similar products containing the same active ingredient) should only be used twice (per crop) to comply with international regulations.

Chemical company policies are very clear when it comes to maximum number of applications therefore as an industry it is up to us to ensure this happens to prolong a registered chemical's life.

Overall the disease pressure experienced this past season could simply be called moderate and not the norm compared to past years. Put another way, most products worked extremely well with very clean crops; not a year to trial future mildew products! Or to see how current ones work under high pressure.

Nonetheless, information learnt, experience gained has led to programmes being tweaked. New chemical strategies next year will gain even higher degrees of control than we have currently.

## NEW TOMATO / POTATO PEST IN HB

Growers of solanaceous species will no doubt be aware that Hawke's Bay has a new pest – *the Tomato / Potato psyllid*.

Its full crop range includes capsicum, egg plant, potatoes and tomatoes and regrettably looks to have made an impact on process tomatoes (later crops).

The psyllid was discovered in Auckland tomato greenhouse crops and later in adjacent potato paddocks, although its arrival in New Zealand is unknown. IPM growers in Auckland are battling for control under a tight chemical regime that precludes the use of Lannate, Confidor, Success etc.

Crop damage exhibits as 'psyllid yellows' or 'purple-top' stunting via toxins injected into plants when feeding, very much like aphids. Symptoms appear as excreted waste (sugar) and honeydew. Plant growth is retarded and internodes shortened.

In potatoes and tomatoes, damage contributes to poor fruit and tuber size and quality, however in capsicums this is less severe.

Hawke's Bay has for many years operated an IPM approach particularly in Heinz Watties tomatoes where predacious wasps controlled heliothus populations. This new pest could spell a complete rethink and approach to that programme long deemed a success for its effect and cost.

Chemical strategies in future could employ the likes of **Oberon**, **Avid**, **Success** and oils. These products appear the most promising compared to their predator-damaging cousins, the pyrethroid and organo-phosphate products

So here it is. The Potato/Tomato psyllid is here to stay. They will survive our winters on host plants and greenhouse crops. For our industry to stay viable, we must come up with suitable effective and economic strategies to outwit this potentially debilitating pest.