



Winter UPDATE 2009

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PhotoMax Research
Etherics 1000& E7
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Mineral Activator
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New Fungal Products
Zespri breakthrough
Biodynamic Chemistry

Cost Effective

**No Stirring
Needed**

**Easy
Storage
Availability
Application**

EFFECTIVE

BdMax Products for Dairying

Etherics 1000

All the bd preps in one spray - aka 500 + CPC
pasture, effluent ponds, liquid manures, compost

SilicaMax

Homeopathic Horn Silica 501
Used as traditional 501 would be used

PhotoMax

Specific spray for increasing
photosynthesis during low light
lowers nitrates; improves pasture quality
in spring and autumn

E7

In effluent ponds
for activation and smell reduction

E15

Enhances Calcium and Phosphorus availability

Compare these prices

When purchased in 20 ltr lots or greater

**\$50/ltr for 4 ha. = \$12.50 /ha, \$5/ac.
NO STIRRING NEEDED**

**Certified Organic for use on
Organic and Biodynamic Farms**



Harnessing biological
forces for
commercial outcomes

PhotoMax (PM) – Dairy Trials

Nitrates reduction - Quality Increase in Pasture

PhotoMax is a specially designed combination of **Biodynamic preparations**, that have shown, via HortResearch testing, to increase plant photosynthesis by approximately 20%. Further testing has shown increases in dry matter (in kiwifruit) and a reduction in nitrate levels in dairy pasture, during low light periods.

From the Executive Summary of the HortResearch report

'PhotoMax' consistently increased the rate of leaf photosynthesis, measured one or two days after treatment. This increase was in the order of 20% compared to a water-treated control.'

Graph one is of three trials on dairy pasture. All show reduced nitrate levels in the PhotoMax treated areas last spring.

Our trials of PhotoMax on dairy pasture are continuing, with further positive results for nitrate reduction being achieved with this NZ autumn's testing.

Last year we began exploring the effect of PhotoMax on dairy pasture. The results we achieved from two trials in the UK and one in NZ showed between a 30% and 60% reduction in nitrate levels in pasture after PhotoMax had been applied.

During April of this year we have had a set of trials put in place in co-operation with Dairy NZ scientists. This trial is for repeats spread over a paddock that has come out of maize and is back in grass with usual nitrogen application for the task. The trials are performed before the cows are put back onto the pasture. The first samples have been taken two weeks after the application of PhotoMax. (graph two)

Recent results are showing an average of a 12% reduction in nitrate in the foliage after two weeks of cloudy and wet weather.

Grower feedback

Here is a brief summary of what we have observed after applying BdMax's PhotoMax. We applied it at 250mls/ha in 2 paddocks. In both paddocks we sprayed the back half of the paddocks, and not the front half.

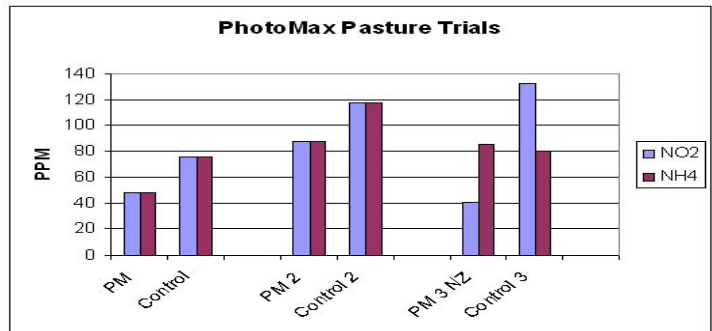
Our observations were:

"There was a definite preference from the animals to graze the 'PhotoMax' areas. This lasted for two grazing periods which were a month apart.

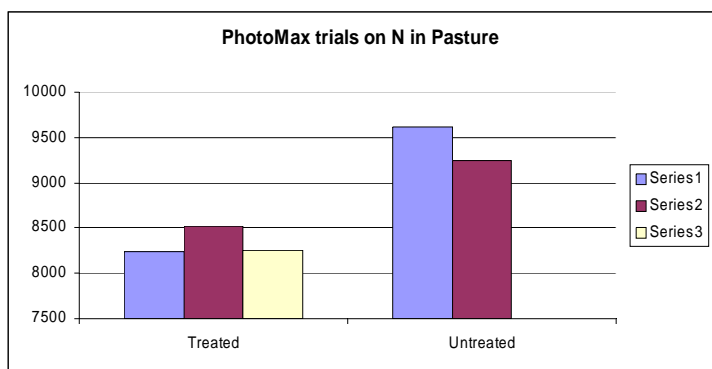
"Before the first grazing I also observed a brix difference of 2 points, I didn't measure it before the second grazing. There was 1000 litre increase in production after the 2nd grazing, compared to the previous 2-day pick up. This production subsequently held thereafter so I am unsure as to whether this was due to PhotoMax or seasonal variations.

I'm keen to try some more trials with the BdMax products as I think they can aid our dairy farm operation".

R.D - Dairy Farmer - Waikato NZ



Graph one



Graph two

The following trials will be ongoing throughout the winter and coming Spring

E7 -Effluent Ponds

PhotoMax on Dairy Farms

SilicaMax for Dairy Farms

"Have just grazed the PhotoMax sprayed pasture and see the cows spent most of the time on the treated side of the paddock. The cows had been having a little bloat but there was no sign of it while grazing that paddock".

J.B - Dairy Farmer - Waikato NZ

"I used PhotoMax once on some pasture and it lifted the brix reading significantly. It would seem that the greater the light deficit the more effectively it will work".

P.B - Consultant to Dairy Farmers NZ

Act Now to increase the
quality of your feed

E7

E7 - is a specially designed combination of Biodynamic preparations to be applied to Effluent Treatment ponds.

E7 has shown marked reduction of smell, reduced crusting, even distribution of solids throughout the pond and better utilisation of nutrients when applied to pasture.

Applied at one litre per 150,000lts plus 100mls per week via milking pad.

"We have used E7 in our slurry store and noticed various results from using it. One of the first was a definite reduction in odour, then when it came time to spread it we saw a lot less crusting and found that the crust there was, broke up easier than we have previously been use to.

Once it had gone onto the pasture and the milk cows were allowed back on we noticed that they seemed to like the area treated with E7 as they ate the grass lower there than the rest of the ground they had access to. We also noticed how well the grass grew. We have also put some onto ground now sown with winter wheat and are already seeing strong growth."

Nigel Potter – Nov 2007

"Since using E7 we have noticed a reduction of crusting on the slurry lagoon of at least 50%. We have also been aware of less odour both from the lagoon and as we spread the slurry onto the ground. In addition to this we have noticed that the field treated with the slurry onto looks well even late into the season."

Ken Ede - Nov 2007

Norman Bell harvested the grass and made silage from a paddock treated with E7 effluent. He says " It is a dense crop and is better than the field next door, which is not mine, but I know it had fertiliser on, as well as slurry, whereas the E7 field had no fertiliser just treated slurry.

Both fields have been harvested by the same contractor. He uses a haybob rowing machine. I usually put FIVE rows into one, before the forage harvester goes along. In the E7 field I could only get FOUR rows into one, because the crop is heavier."

Norman Bell – June 2008

ETHERICS 1000

All the Bd Preps in One Spray

Etherics 1000 may be applied on its own or with any liquid fertiliser, like seaweed, worm castings, fish or yard waste from milking shed or stand off pad.

It has a harmonising and balancing effect on soil development and plant growth.

Our experience shows **250mls. / ha.** to be the best value for money

Effluent and Pasture

Etherics 1000 may be applied directly to yards before flushing.

100mls sprayed over the milking pad before washing down 2 times a week, - and is especially helpful when the manure is being directly irrigated. It may also be applied to water troughs or water supply with or without tonic seaweed.

Due to the **Etherics 1000** balancing effect, it can reduce the effectiveness of specific BdMax products. There is an advantage in reapplying the specific remedy within two or three days of the **Etherics 1000** application. It is best to not apply **Etherics 1000** at the same time as the specific remedy

Etherics 1000 can be applied with any other spray application you are using, such as BT, liquid fertilisers, compost teas etc.

Compost

Use 1 ml of Etherics 1000 per litre of water. 10lts of water can be used per cubic metre of compost

Liquid Manure

Use 1 ml of Etherics 1000 per 2 litres of water.

ThermoMax FROST PROTECTION

continues to provide an extra 2 degrees to all other frost protection methods.

Now in its 9th season of saving valuable fruit crops

**Etherics
1000**

E7

**BdMax products can be purchased online and delivered by courier
Available through Farmlands , Horticulture or your local agent**

SilicaMax

SilicaMax is made from the Biodynamic Horn Silica / 501 preparation.

From our experience SilicaMax has the same effect as the traditionally stirred product, however SilicaMax needs no further stirring. It is therefore very easy to obtain, store and use.

SilicaMax

Silica is understood to bring a strong upright structure to a plant, by strengthening the cell wall. This has a wide range of benefits from increase plant health to an increase in plant nutritive quality. Interestingly trials carried out by various people, including some of our trials with HortResearch, have been unable to show any increase in photosynthesis through using 501.

However simple observation shows it inclines plants to stronger flowering and better taste. This tendency to increase flowering is one of the reasons that we developed PhotoMax. We noticed that 501 can only be used sparingly throughout the season or it will impact strongly on the plants growth habit. So we looked into the other BD preparations to see how we could strengthen the Silica process and photosynthesis without altering the plants growth habit. Over the years we have found PhotoMax achieves both these goals. It can be sprayed every few weeks throughout the whole season, especially in times of low light, without unduly effecting the basic growth habit. Trials have shown increases in dry matter, increases in brix and more recently reduction in leaf nitrates, without plants tending to seeding.

These two products perform different activities in the plant. SilicaMax provides the structure plants need, while PhotoMax works more on the internal chemistry of the plant through enhanced photosynthesis and all that this brings. We use both in our programs, however SilicaMax is usually only used once in the spring and then again once before harvest of any crop. We use PhotoMax mostly in regard to the available light. If there is a dull period then use PhotoMax regardless of the time of year. Early spring is naturally one of its prime periods as it helps plants get a very good start to the season.

E15

Due to SilicaMax being relatively severe in its action, it should only be used after **Etherics 1000** or prep 500. SilicaMax can be applied the next morning after either of these products, or even a couple of weeks after them if it suits your program better.

SilicaMax is applied at 250mls /ha

Use SilicaMax as you would traditional 501

New Mineral Activator Product

E15 Calcium and Phosphorus activator

Last Autumn we worked with a client on a project to address the phenomena described as high total soil levels of Calcium and Phosphorus, with very low plant availability of both these elements. In biological and chemical systems this 'problem' is 'addressed' by higher applications of fine lime and easily available phosphorus fertilisers.

Organic growers however do not have these options available to them.

We suspect that the often accompanying high Potassium levels in the soil, have a large part to play in this problem. We have made a product to address this problem which has been used on pasture, turf and orchard situations since mid summer. The 'eyeometer' is showing very good grass growth in these situations. If you have this problem then you may like to give this product a try.



Demeter Farms !!

BdMax products do not replace the preparation usage required by your Demeter certification

BdMax Dairy Spray Program 2009-10

MAY	Photomax - photosynthesis and nitrate reduction
JUNE	Photomax - photosynthesis and nitrate reduction
JULY	Photomax - photosynthesis and nitrate reduction
AUGUST	E 7 on yard to flush down. Daily for direct spray, weekly for sump system Photomax - photosynthesis and nitrate reduction
SEPTEMBER	Etherics 1000 on area shut for silage / hay SilicaMax - to harden plants for the summer
OCTOBER	Etherics 1000 on area shut for silage / hay
NOVEMBER	Silicamax one week before mowing E9 after silage hay or grazing
DECEMBER	Silicamax one week before mowing. E9 after silage, hay or grazing
JANUARY	holiday
FEBURARY	Etherics 1000 after autumn rain, Silicamax in the week before grazing
MARCH	Etherics 1000 after autumn rain, Silicamax in the week before grazing
APRIL	Photomax or E. 15 for low P. high K. or pasture pulling

These spraying suggestions are what CAN be used.

You should chose what is best for you and when.

For further questions or support please contact BdMax or Peter Bacchu:

Etherics 1000

Etherics 1000 is all of the biodynamic preparations 500-507 in one safe, balanced invigorating spray for plants and soil. It has been shown to speed up soil development and composting while strengthening the natural pest and disease resistance of plants.

SilicaMax

SilicaMax is commonly understood to harden and strengthen plants. This aids fungal control, nutrition, ripening, enhancement, keeping qualities and drought resistance.

PhotoMax

PhotoMax' has been shown to increase photosynthesis, which provides significant benefits for plants during low light periods.

E7

E7 has shown marked reduction of smell, reduced crusting, even distribution of solids throughout the pond and better utilisation of nutrients when applied to pasture.

E15

Improved activation of calcium and phosphorous

E9

Increased humus leads to better water holding capacity.

**Dairy
Spray
Program**

For on farm support of BdMax products

Soil to Soul

Peter Bacchus
Ph 027 263 2521
or 07 862 7929

air8tors

Clive umbers
Ph 027 24 22 866
0800 424 788

Also available through Farmlands and HortiCentre

BdMax products now free from Zespri limitations

Much to our surprise and our clients dismay Zespri – the kiwifruit marketing board – put all kinds of odd limitations on the use of our products over recent years. This ‘problem’ has been ongoing for some years, and has now reached a satisfactory conclusion for the coming season at least.

Each year we have found it necessary to clarify with Zespri, why they placed any limitations on their use, given BdMax products are BioGro registered and exempt from registration with the ACVM and in the case of BirdScare, ThermoMax, PhotoMax and ZeroIn all have scientifically credible trials, showing their efficacy. Nevertheless, each year we would find some new limitations. The tricky part was that we were never informed by Zespri, that there were restrictions. We would find out when growers called us telling us of them.

Zespri
Break
through

As it stands now

BirdScare – used on gold kiwifruit for a few weeks each spring – is free of any need for justified approval

Zeroln – used in the last two weeks before harvest – is free from any need for justified approval. We received this clarification from Zespri

“The Technical Review Group of Zespri has today cleared Zero-In for use on export kiwifruit this season up to 24 hours before harvest, in spite of a lack of conclusive evidence that it is effective. However while this information is missing, Zero-In is likely to be listed in future printed CPPs as being of unproven effectiveness.”

On Zeroln’s proven status.

We have presented in this newsletter, on our website and to Zespri, 8 trials, which are of both treated and control blocks, with testing done by reputable labs. The majority of these trials are on 1 ha blocks, with the remainder based upon 2 x 60 mt. orchard rows. By normal standards this should be considered sufficient proof, however not for Zespri.

ThermoMax – still has a minor restriction - it cannot be used after fruit set, without a justified approval – the reason for which is unclear. This however should be of little concern as its usual use period is from the 1st September till late October. After the last spray there is still three weeks of efficacy. We have therefore not pushed for any change to this status.

PhotoMax – we know of no restrictions on PhotoMax as it can be considered a liquid fertilizer and is used from bud burst till 2 weeks prior to harvest.

Etherics 5 (FruitMax) and **E15** are of the same status as PhotoMax.

Product
Pricing

Product pricing

With our exciting developments on pasture quality in dairy pasture, we have reassessed our pricing structure of some products, to reflect the realities of the broad acre farmer, due to their lower per acre inputs and greater product usage. As our main client base for many years has been the horticultural community, we have been geared for smaller production runs. With the larger production quantities. We are able to price all the products used by dairy farmers at a 50/litre cost price for the 20 lt containers.

This represents a \$12 per hectare per application cost.

For Etherics 1000 this is a very competitive price compared to similar alternatives.

Etherics 1000 is a combination of all the bd preparations and can be seen as being a similar application to applying BD 500 and CPC. Present pricing of these products is \$10.50 /ha for 500 and CPC costs \$7.50. This is a \$17 cost before any stirring and straining is undertaken, not to mention the time taken.

Etherics 1000 requires no further activation and can be added to any liquid fertilizer product you wish to use.

SilicaMax at our costing is more expensive, however once stirring costs are taken into account there is little advantage to using the traditional 501. The convenience of simple dilution and spraying you will find is worth any apparent cost saving.

PhotoMax is a unique BdMax product and as our testing and that of HortResearch show a 20% increase in photosynthesis. This provides very definable feed quality gains, which in turn lead to higher production and better cow health.

Online Purchasing

The BdMax website has an online shop, where all our products can be ordered and paid for. You have a choice of credit card or invoice payments. We attempt to dispatch on the same day as your order.

New Horticultural product

Huge advance in non copper or sulphur production of fruit, vegetables and grapes

FG4 – Fungal Reduction

We have been exploring fungal control for many years, however this effort went into recess some years ago when there was little interest from growers, especially organic growers due to the availability of Sulphur and Copper as their preferred options. With their use, of course, has come the realization in recent times of the negative effect these substances have on the soil, both through the killing of the soil biology and in their build up in the soil to toxic levels. Over the last three years we have made some developments in our understanding of Dr Steiner's suggestions regarding fungal incidence and have take practical steps to strengthen our fungal reduction methods.

We have had trials undertaken on our own garden and orchard on a variety of crops during this time. The results have been encouraging enough that in the 2008-09 season we extend our trials to include several vineyards. The results coming back from them has been very encouraging.

Biodynamic Agriculture looks to the basic causes of problems and because of this, when the cause is addressed the effect can be very wide ranging. Hence on our trial crops, we have had very little problem with nearly all the common fungal problems, over the last two seasons. We have used no other fungal controls than FG4 during this period. It should be noted we are using the Biodynamic preparations to address the soil conditions that lead to fungal situations rather than 'killing any fungus'. Dr Steiner describes this situation in the sixth lecture of his 'Agriculture Course' and provides some suggestions for its re mediation

Over the last two seasons in particular we have had very good control of fungal problems on apples, grapes (eating and wine grapes), peaches, tamarillos, potatoes, zucchini and pumpkin. Of particular note was our control on the grapes. Through february and march in the Te Puke area we had temperatures of around 28 deg C, high humidity and at least three rain events of around 280mm (once within 24 hrs.). No disease was seen on both the eating and wine grapes during this period.

Reports back from three commercial vineyards have also been very positive. As they still used some other fungal controls, we can not claim all their success, however all these growers said their incidence of particular diseases, were far less than their neighbours. Our suggestion to commercial growers is to reduce their usage of other products as they feel comfortable with the influence of FG4.

Based upon these successes we are making FG4 available for fruit growers. Our experience is that it needs to be applied from the beginning of the season every three weeks.

PS. As a result of our successful trials on potatoes, Bonn University in Germany, are now conducting formal trials to assess the effect FG4 has on phytophthora infestations in their organic potato crop.

FG4



Dr. Steiner's lectures can be found at the following address
<http://www.garudabd.org/node/23/>

Vineyard Spray Program

For Autumn, Winter and Spring

This program is designed to enhance ripening & brix levels (RipeMax), balance and soil development (Etherics 1000), photosynthesis enhancement (PhotoMax) and Frost Protection (ThermoMax)

	Times	Spray	Outcome
August	x1	Etherics 1000	
September	x 1	Etherics 1000	
	x 1	ThermoMax	If needed
	x 1	PhotoMax	In low light
October	x 2	ThermoMax	Frost
	x 1	FG4	
	x 1	PhotoMax	In low light
	x 1	SilicaMax Strengthening	
November Warmth	x 1	ThermoMax	Frost &
	x 1	PhotoMax	In low light
	x 2	FG4	
	x 1	Etherics 1000	
December	x 1	FG4	
	x 1	Etherics 1000	
January	x 2	FG4	
	x 1	SilicaMax Strengthening	
February	x 1	SilicaMax Strengthening	
	x 1	FG4	
	x 2	ZeroIn	Hold fruit size
March Ripening	x 2	RipeMax	Increase
	x 1	FG4	
	x 2	ZeroIn	Reduce
Splitting			
April	x 1	Etherics 1000	

Etherics 1000

Etherics 1000 is all of the biodynamic preparations 500-507 in one safe, balanced invigorating spray for plants and soil. It has been shown to speed up soil development and composting while strengthening the natural pest and disease resistance of plants.

ThermoMax

ThermoMax works by increasing the phosphorus metabolism of the plant. This provides an internal warming effect, not just useful to protect against frost, it also reduces the general effects of cold on fruit set. ThermoMax works best on plants that have adequate nutrition.

SilicaMax

SilicaMax is commonly understood to harden and strengthen plants. This aids fungal control, nutrition, ripening, enhancement, keeping qualities and drought resistance.

PhotoMax

PhotoMax' has been shown to increase photosynthesis, which provides significant benefits for plants during low light periods.

ZeroIn

Uses the plants' own growth process to naturally achieve a reduction in the amount of water moved upwards towards the fruit, thus reducing fruit splitting.

FG4

Helps control fungal attacks on your crop.

Grape Spray Program

www.bdmax.co.nz

Biodynamic Chemistry Seminar

<http://www.garudabd.org/node/21> namic agricultural ideas. This in turn has lead to suggestions for understanding the more dynamic workings of the chemical elements, along with identifying interactions between the elements, that are not usually seen or understood.

This work is still in its infancy, however it is far enough developed for me to want to place it in front of a group of interested people, as a generation for further discussion.

We had initially planned to hold a seminar for this in June 2009, however life has seen us busy with other commitments so it is unlikely we can organize it by then. We can however probably organize something for late July, if there is enough interest. We would like between 10 –20 people to take part in this weekend event. With these numbers we can hold this event at our property in Te Puke in a similar manner to the seminar we held last year. If you are interested in attending please contact us. If there is enough interest we will go ahead with it.

My initial thoughts on ‘Biodynamic Chemistry’ are available free of charge at

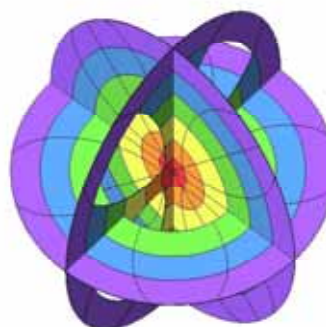
<http://www.garudabd.org/node/21>

GYROSCOPIC ORGANISATIONAL DEVICE A 3D sculpture of the Periodic Table

As part of the process of working with Biodynamic Chemistry, I have drawn several pictures and finally had some 3D gyroscopic pictures of the Periodic Table (PT) drawn for me. The next step has been to make physical 3D gyroscopic models, which began as paper and now made from weatherproof clear perspex. The ingenious way these fit together, was designed by Sol Atkinson, and it allows there to be no glue needed in its assembly. This adds to their ability to exist outside. An implicit aspect of this sculpture is it ‘needs to’ move and no better way than for it to be hung in a air stream.

There are two sizes presently available 10cm and 24cm. The 10cm one is excellent as a desk sculpture and for handling as a ‘toy’, while the larger one is good as a garden sculpture. These sculptures are available via our web shop or the office. 10cm - \$30 24cm - \$100

Seminar



International Contacts

United Kingdom	Mark Moodie
Spain	Daniel De conde Vila
Germany	Eco Tropic Consulting
Australia	Tasmania Larry Palmer
	Southern Australia EE Muir
Chile	Maria Prieto