



DAIRY
FARM NUTRITION SOLUTIONS



Welcome to AgriSea

Our family philosophy is simple:

"To provide highly effective products with bucket loads of integrity"

AgriSea NZ Ltd is a multi-award winning sustainable New Zealand company, family owned and operated. The company produces Seaweed concentrates and bioactive extracts for Soil, Foliar, Apiculture, Pasture and Animal Nutrition available in both liquid & solid form.

The New Zealand native seaweed species (*Ecklonia radiata*) is batch-brewed with specially selected essential herbs for up to 90 days. The natural fermentation process eliminates the use of processing with heat, chemicals, freezing or dehydration that might 'denature' the sensitive nutrient balance, allowing the natural growth stimulants, micro-nutrients and bioactive compounds to be released in an active form to enhance soil, plant and animal health. AgriSea's natural brewing methods are unique for commercial production.

Research into the benefits of seaweed has been more advanced internationally than in New Zealand, as seaweed products have been used internationally for generations. AgriSea would like to provide research that is specific to NZ seaweed. AgriSea is committed to funding ongoing research trials in NZ to establish accurate data relating to the efficacy of its products.

We stand behind our products...you can ring to speak to us on

0800 SEAWEED



A Kiwi company
through and through

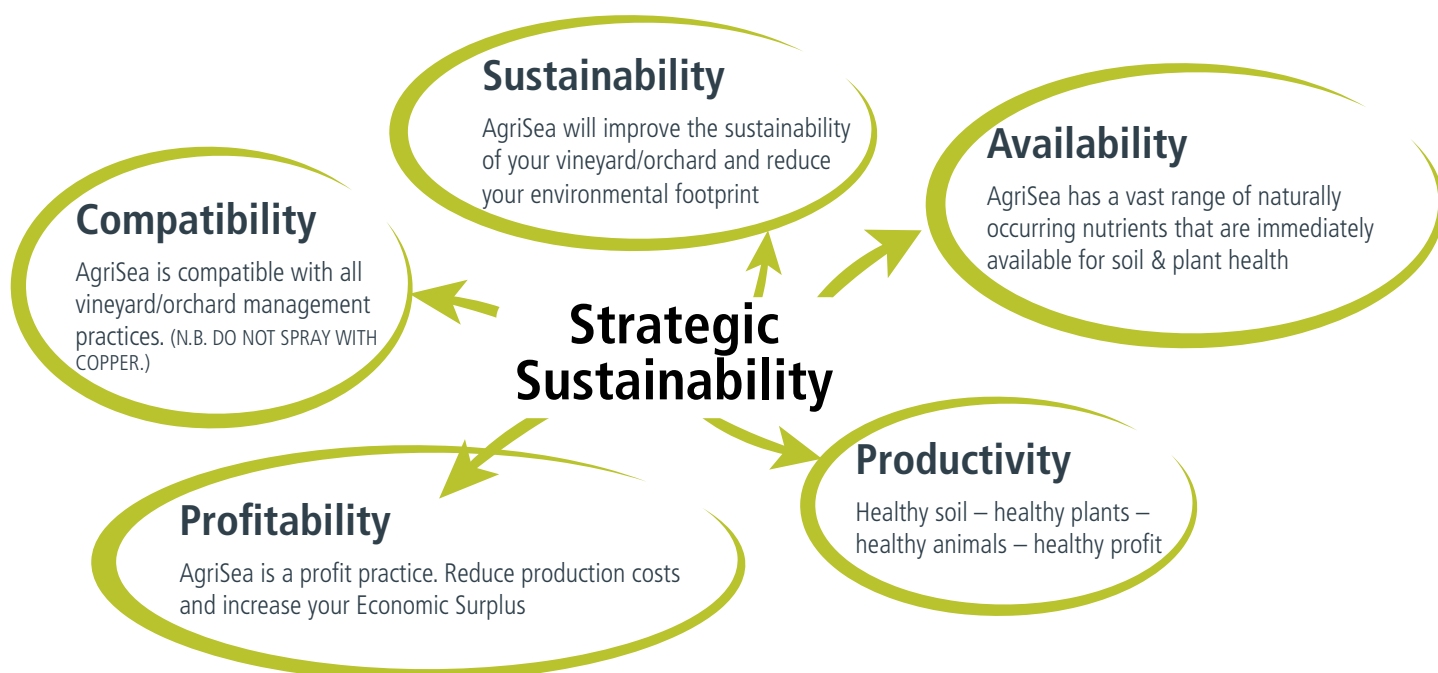
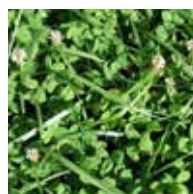




Why AgriSea?

There are significant economic and environmental challenges facing the Dairy industry today. AgriSea provides highly effective, financially and environmentally sustainable farming solutions. While all our products are certified organic, 98% of our farmers are non organic.

AgriSea maximises all farm management systems (conventional, biological or organic) resulting in significantly increased farm health, production and profitability. This is achieved via better:





AgriSea Soil Nutrition

Since the 1950's, farming practices have focused on the soil chemistry – high input, synthetic compounds to push production and yields. While the initial results were good, we are now increasingly aware of the long term effects of these practices – on the quality of our farms, our farm outputs, our land and waterways.

Healthy soil is the basis for agriculture and the necessary foundation for healthy plants and healthy animals.

AgriSea Soil Nutrition is a soil bio-stimulant which will feed your soil biology thereby improving your soil structure and soil fertility. Soil biology (or soil life) creates soil structure and produces soil nutrients in a plant available form.

An active and diverse soil biology ensures an ongoing feed source for your pasture and animals. AgriSea Soil Nutrition also allows for the numerous minerals and nutrients already in your soil to be utilised – ensuring the ongoing benefit of the previous solid / nitrogen investments made on your farm.

Healthy soil - Healthy pasture - Health animals

Soil +

Now available in a solid and liquid form

AgriSea Soil + is a unique blend of AgriSea liquid Soil concentrate and natural Zeolite allowing for a solid, sustained slow release, high nutrition product.

WHAT IS THE ROLE OF ZEOLITE?

Zeolite in Soil + is a high quality carrier for AgriSea liquid seaweed concentrates. Zeolite is a natural Aluminosilica formed by volcanic activity 200,000 years ago. All AgriSea Zeolite is mined locally in the central North Island of New Zealand.

Zeolite holds nutrients in the root zone for plants to use when required. The nutrient release from Zeolite is plant driven setting up a natural cycle for uptake. This leads to more efficient use of fertilisers and conditioners as the zeolite "recharges or reabsorbs" once its initial nutrients have been released.

Unlike other soil amendments it does not break down, remaining in the soil to help improve nutrient and water retention permanently.

The Benefits of AgriSea Soil Nutrition include:

- Huge increase in your soil biology and 'voluntary army' (microbes and earthworms)
- Increased root length and mass
- Increased soil quality and fertility
- Improved soil structure (aeration, drainage, can withstand traffic)
- Deeper humus layer (nutrient storehouse of your soil)
- Locked minerals and nutrients in the soil become bio-available
- Increased clover content – stable nitrogen source (reduced need for solids)
- Less pugging and pulling
- Increased germination rates for cropping and regrassing
- Increased crop yield and pasture quality
- Farm holds longer and recovers quicker in drought

Ease of Use

- Safe and non-toxic
- Spray or Spread – Boom, Rose, Jet, Chopper
- Compatible for use with other products
- Fine filtration ensures no clogged lines or spray nozzles





AgriSea Pasture Nutrition

Pasture **quantity** is important in terms of stocking rates and feed, but it is the pasture **quality** that significantly impacts on your overall animal health, production and profitability.

AgriSea Pasture Nutrition is an efficient method of delivering an instant nutrient lift directly to your pasture - significantly lifting the quality and fibre of your pasture, crops and stored feed. Pasture Nutrition is also a valuable tool for by-passing root absorption problems (such as nutrient leaching and poor soil structure) and a well known 'stress reliever' for pasture when strained by weather extremes or pest and disease pressure.

AgriSea Pasture Nutrition provides a natural balance of nutrients in a form your pasture and animals can readily absorb and convert – maximising your pasture quality, palatability and yield.

Combo +

Now available in a solid and liquid form

AgriSea Combo + is a unique blend of AgriSea Pasture Nutrition and Soil Nutrition all encapsulated in natural Zeolite allowing for an easy to apply sustained nutrient release. The unique blend of products allows for application efficiency.

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The Benefits of AgriSea Pasture Nutrition include:

- Greener, healthier pasture and crops due to increased chlorophyll levels
- Significant lift in the fibre, protein and overall nutritional value of your pasture
- Increased DM yields
- Increased brix (natural sugars) levels in pasture
- Increased natural nitrogen fixation
- Increased palatability in pasture and stored feed
- Pasture more vigorous and durable in times of stress
- Increased pasture resistance to disease and pests
- Healthy stock due to high nutritional value of grass
- Nutritional lift for herd in periods of low light - spray ahead of cows in winter
- No chemical additives; no residues; no withholding

Ease of Use

- Safe and non-toxic
- Spray or Spread – Boom, Rose, Jet, Chopper
- Compatible for use with other products
- Fine filtration ensures no clogged lines or spray nozzles





AgriSea

Animal Nutrition / Health Tonic

Most animal health problems are a direct result of nutritional deficiency including: Ketosis - Milk Fever - Grass Staggers - Lameness - Poor Cycling - Low conception rates - Retained Foetal Membranes - Mastitis - Scours - Bloat & Ill Thrift. AgriSea Animal Nutrition provides a vast range of natural nutrients, minerals, vitamins, trace elements and amino acids that are immediately bio-available to your animals. These include Vitamin A, Vitamin C, Vitamin E, Folic Acid, Vitamins B1, B2, B3, B5, and B12.



AgriSea Animal Health Tonic bolsters the immune system and prevents a variety of health problems directly related to nutritional deficiency. It increases resistance and recovery during periods of stress.

Animal+



Animal + is a unique blend of AgriSea Animal Health Tonic which contains a complex range of bio-available minerals and nutrients to support Animal Health combined with Optimate™ a natural occurring mineral.

These combined together allow for an easy to apply hard feed mineral supplement.

The resulting combined product (Animal+) is a free flowing product which is suitable for

- In-Shed feeding
- Adding to calf meal as mineral supplement
- Ideal for supplementing young stock on runoff blocks
- As mineral supplement on crop feeding rotations
- Spreading over PKE, silage etc
- Adding to loose salt
- Incorporating into meal pellets

The Benefits of AgriSea Animal Nutrition include:

- Optimise and improve overall livestock health
- Improved reproductive performance
- Aids with metabolic problems
- Increased rumen microbiology
- Improved feed conversion
- Greater resilience during times of stress
i.e. calving, mating, weather extremes
- Improved worm burdens
- Improved weight gains
- Improved immune system
- Enormous cost savings with health supplements

Ease of Use

- No sweeteners needed – stock love it
- No mixing required
- Add to water troughs, feed, in-line dispensers
- Will not clog lines, drench guns or foul troughs
- Can be used in conjunction with other oral products
- No withholding period



Drying Off

Optimal herd productivity, reproductive performance and farm profitability begins with effective drying off decisions.

Providing minerals and vitamins to the dry cow is necessary to minimise health problems.

Agrisea Animal Nutrition contains

Vitamin A, E, Iodine, Zinc, Copper and Calcuim to help with retained fetal membranes and also play a role in improving cow immune response.

“ Reproduction is more successful with a healthy cow in optimal condition. ”

Calving & Post Calving Recovery

Cows in poor condition with nutritional deficiencies are more likely to experience difficulties during the calving and post calving periods. Common problems include; difficult /assisted calvings, stillborns, RFM's, uterine infections, milk fever and grass staggers.

Cows affected by these issues during calving are at risk of poor reproductive performance in the future.

Pre-mating Cycling & Breeding / Mating

Facing the challenge of cycling and getting in-calf not too long after calving, any trace element or nutritional deficiency will make this a difficult task for most...

A return to normal heat cycles is more successful with a healthy cow in optimal condition.

“ Fertility & Reproductive Performance is enhanced with healthy cows in optimum condition, with a history of reproductive success. ”

Calves

“ Given a good head start, healthy calves grow into healthy heifers and healthy, productive cows. ”

Your calves are your future herd – getting them off to a good start is crucial.

Calves and young stock have high nutritional requirements.

Well-fed calves who receive all the necessary minerals and trace elements for optimum health will be more resistant to health problems, while rapidly achieving weaning weights with well-developed rumens.

Recommended Intake

Reproductive period:

(Drying off through to end of mating)
10mls per cow per day

Health maintenance: 5-10mls per cow per day

NB: Enhanced results will be observed at 10mls per cow per day



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(Drying off through to end of mating)
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Recommended Intake

Reproductive period:

(Drying off through to end of Mating)
10mls per cow per day

Health maintenance: 5-10mls per cow per day

NB: enhanced results will be observed at 10mls per cow per day



Recommended Intake

Health maintenance:

5-8mls per calf per day in calfateria
(through to weaning)

III Thrift calves: 50mls per calf as a drench

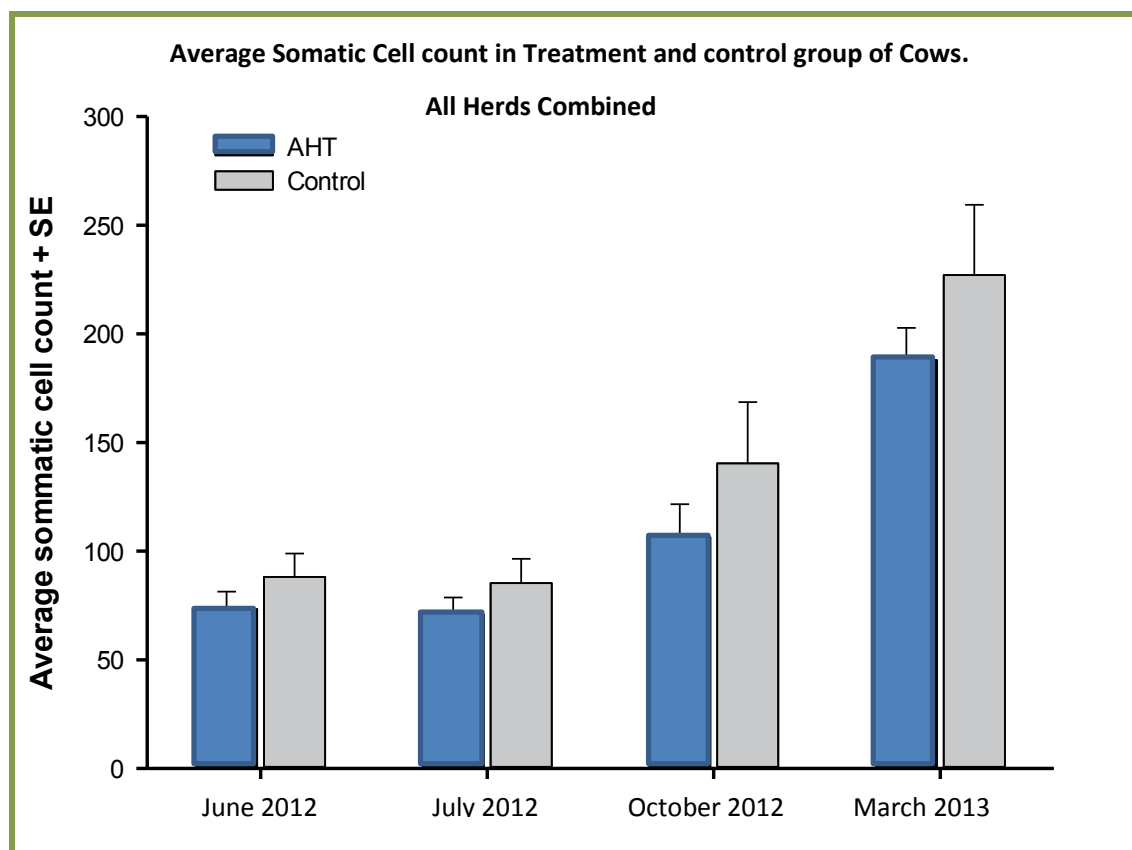
NB: enhanced results will be observed at 8mls per calf per day

On Farm Research Results

Cognosco – the research arm of Annexa Animal Health conducted research on the efficacy of AgriSea Animal Nutrition in 2012/2013. One thousand, three hundred and fifty-seven (1,357) cows were enrolled within commercial dairy herds located in the Waikato Region, New Zealand. The herds were split and half of the cows received AgriSea Animal Health Tonic – 60mls once per week by a trained technician.

High Somatic Cell Count Prevention - Results

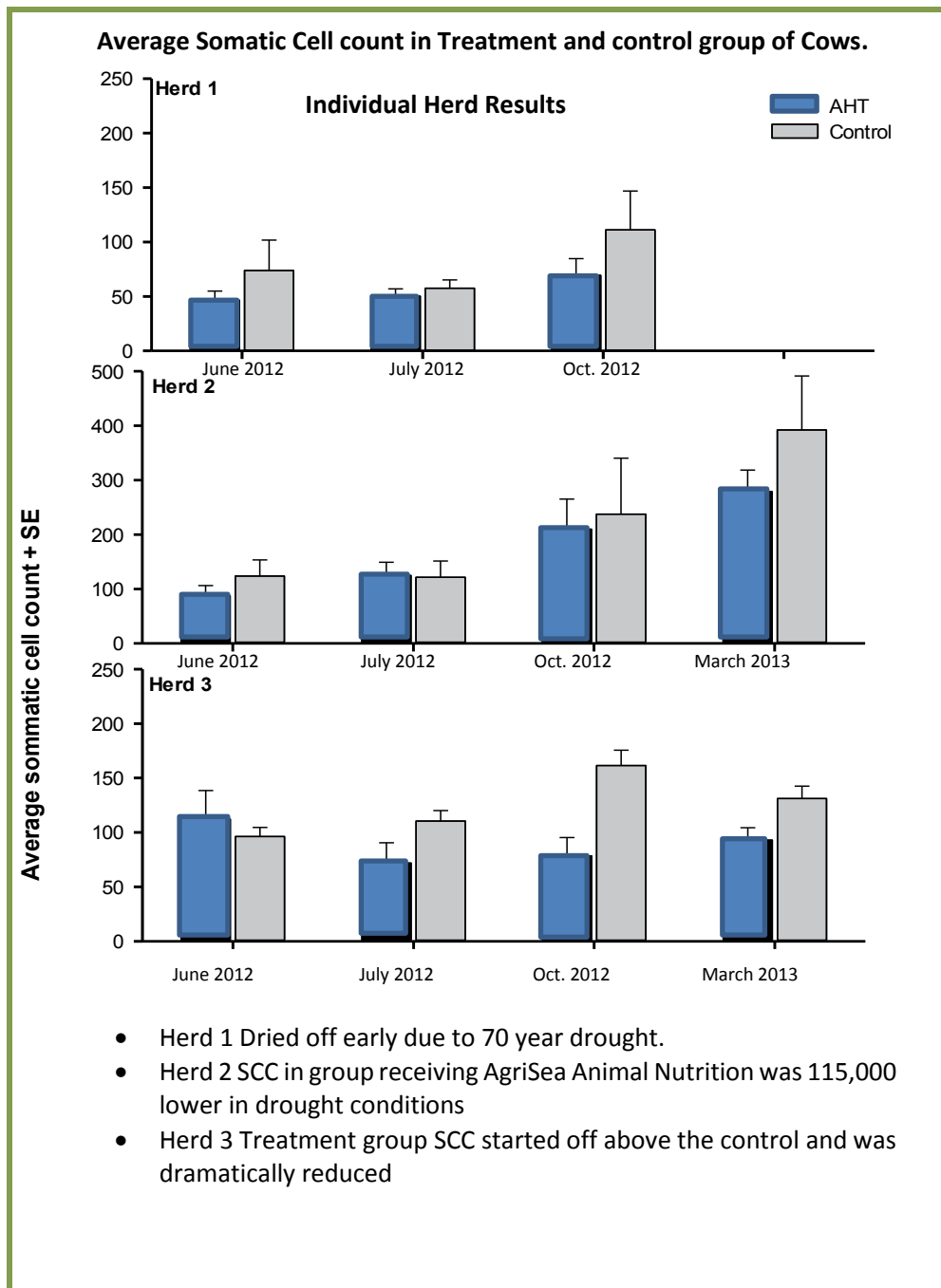
Overall the treatment group had a lower Somatic Cell count than the control group - spikes in SCC were prevented by using AgriSea Animal Nutrition. In some herds the AgriSea Animal Nutrition dramatically reduced the SCC.



Notes

- Due to 70 year drought, herds were under undue stress. In normal farming practices the dosage of AgriSea Animal Nutrition would have been increased over this period.
- AgriSea recommends increasing dose rates in response to mating/calving and during stress periods.

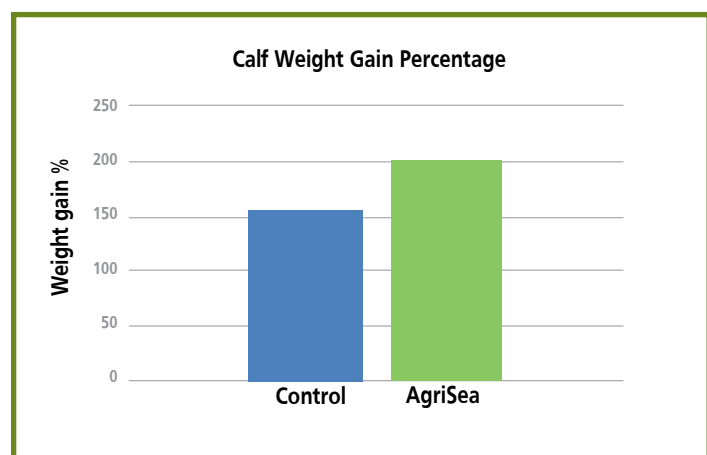




AgriSea helps increase calf weight gain and reduces scours

Results seen using; 20ml dose of Agrisea Animal Nutrition on arrival at the shed then 5ml per calf per day for 12 weeks.

Cost per calf: \$3.52 for 12 weeks – based on a 1000L drum

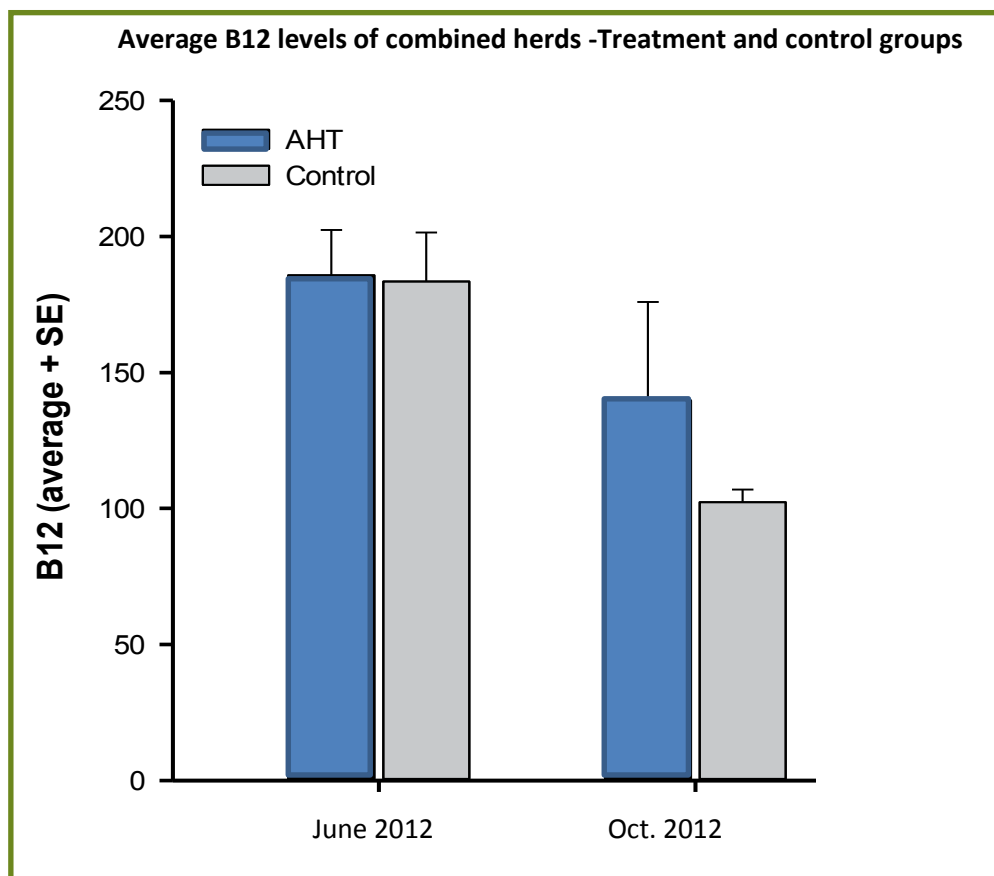


AgriSea Animal Nutrition Provides Trace Elements – Results

20 trial animals from each herd were blood & liver sampled for measurements of trace element concentrations. Significant increases were seen in both B12 and Copper levels. Positive trends were also seen in Zinc and Selenium levels of the treatment group.

The individual amount of each trace element is very small in each dose but it is very effective. For example there is 0.000384 mls of Cu in each weekly 60ml dose.

It is not the individual amount that is important, it is the naturally balanced, bioavailable form which makes our Animal Nutrition so effective.



- B12 levels in the group receiving AgriSea Animal Nutrition was 37% higher on average than the control in October.
- B12 is important for rumen function and feed utilisation and is effected by cobalt.
- AgriSea Animal Nutrition contains most trace elements, vitamins, minerals, amino acids, long chain sugars and phytochemicals in a naturally balanced and bioavailable form.

Other Results

- Facial eczema incidence was reduced in the group using AgriSea Animal Nutrition. Due to the 70 year drought spore counts were very low. Therefore a true assessment was not possible.
- The treatment group were also found to have a slight improvement in udder cleanliness, coat condition and milk volume.

AgriSea NZ is committed to independent research and will be releasing more research in the near future.



AgriSea How To Guide

Doseage Rates



ANIMAL NUTRITION DOSE RATES

Cows;

- Onto dry feed – 25mls per cow
- Drenching – 60mls per week
- Down/sick cow – 3 x 500mls over 24 hours, 250ml x 3 days
- Dosatron 10mls per cow per day 4 wks prior to calving until end of mating
- 5mls per cow until 4 wks prior to drying off then 10mls until drying off
- Dry 5ml per cow per day
- Facial Eczema Prevention - drench 20mls late summer

Calves;

- 20mls on arrival at the shed
- 5mls per calf per day in milk until weaning
- Weaning through to first calving 5mls per animal per day
- Ill Thrift/scours/staggers – 100mls three times over 24 hour period.

Sheep

Autumn; Lambs -10mls with oral drench to improve growth rates and well being.
Winter; Hoggets/Ewes 20mls - Post Crop/ Pre lamb
Spring; Lambs docking/tailling - drench 10mls, Ewes 20mls
Summer; Lambs weaning - drench 10mls

Ewes - drench 20mls optional

Ewe Pre-tup - drench 20mls

Rams Pre-tup - drench 30mls

SALT BLOCK DOSE RATES

Seaweed Salt Block 20kg

Sheep/Goats: 1 block per 50

Cattle/Deer/Horses: 1 block per 10 stock units

DIRECTIONS FOR USE

Cut around carton – leave the block in tray for added convenience and protection : Place the blocks near areas where stock gather.

ANIMAL + DOSE RATES

Cows	15 g per day	Yearlings	10g per day
Calves (post Weaning)	5g per day		

SEAWEED PELLET DOSE RATES

Cattle	Adult	20g per animal per day
	Yearling	10-15g per day = 27 pellets
	Calves	5g per day = 9 pellets
Sheep	Adult	3g per day = 6 pellets
	Hogget	2g per day = 4 pellets

Goats and Alpacas	3g per day = 6 pellets
Deer	Adult 5g per day = 9 pellets
Weaners	2g per day = 4 pellets

Application Rates



Soil Nutrition

5 litres per hectare

AgriSea Solid Soil+

Autumn & Spring
20kg/ ha



Pasture Nutrition

5 litres per hectare

AgriSea Solid Combo+

Autumn & Spring
30kg/ ha



Application Times

Optimum application times are early morning

Earth temp – no lower than 6°C **Air temp** – no lower than 10°C or late evening.

AgriSea Liquid Soil and Pasture Condition

May/June August/Sept Nov/Dec Feb/Mar
5L/ ha

Please Note:

These rates are intended as a guide only.

Application rates will be largely dependent on your current farming system, your specific farm needs and goals.

Application Methods



Air Based Method: Helicopter, Plane

Air Based Application: 1 part AgriSea to 2 parts water
(Optimum 1 to 3)



Ground Based Method:

Tractor, Boom, Rose, Jet, Quad, C-Dax

★ Fine filtration ensures no clogged lines or spray nozzles



Ground Based Application:

1 part AgriSea to 30 parts water
(Optimum 1 to 50)

Quad: 60 litre tank

1 part AgriSea to 6 parts water



Solid Based Method:

Incorporated into fertiliser spreader, tow behind spreaders, aerial plane or helicopter

★ Compatible for use with other products

Ground based, tractor, boom or flood jets ;
5Ltr pasture conditioner per hectare approx 150 litre water per/ha.

Quad bike – 50ltr tank (2.5 litres soil, 2.5litres pasture with 45litres of water) travel at 9kms per hour should cover over 1 ha.

Quad bike - 60 litre tank (3 litres soil, 3litres pasture with 54litres of water) travel at 9kms per hour should cover 1.5 ha.

Note: Soil temp must be above 6 degrees and air above 10 degrees, apply early morning or evening, treat as if watering garden ie, direct sunlight and water can burn grass. Dew acts as a good water carrier. Soil and Pasture conditioners translocated with 1 hour of application. No withholding period.

For your free, no obligation soil assessment, please contact your local AgriSea Field Agent or Customer Services on **0800 SEAWEED** who will arrange this for you.



Top Customer Service

Ours is a partnership – we're committed to assisting you to reduce production costs while maintaining high production, high yields and high profits.

We'll partner you with a highly trained Area Field Consultant along with specialist Advisors.

Personal Guarantee

Our family stands behind our products. We promise to deliver high quality, effective products which will reduce your environmental footprint and add value to your farm.

For more information or for your free, no obligation soil assessment please phone your Area Field Consultant or AgriSea Customer Services on **0800 SEAWEED**.



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Animal Product Typical Analysis

Minerals and Trace Elements (mg/L - ppm)

Nitrogen 50.35
Calcium 90.63
Copper 0.064
Selenium 0.01

Phosphorus 10.07
Magnesium 211.47
Manganese 0.041
Zinc 0.360

Potassium 2134.84
Sodium 1701.83
Iodine 454.50
Boron 6.06

Sulphur 271.89
Iron 0.703
Molybdenum 0.01
Cobalt 0.01

Vitamins

Vitamin A, Vitamin C, Vitamin E, Folic Acid, Vitamins B1, B2, B3, B5, B12, Fucoxanthin, Choline

Amino Acids (mg/100g)

Aspartate 971
Asparagine 1.141
Serine 381
Methionine 253

Histidine 50
Proline 398
Arginine 451

Lysine 391
Glutamine 976
Leucine 649

Phenylalanine 381
Alanine 583
Threonine 415

Tyrosine 171
Isoleucine 380
Valine 402

Cytokinins & Auxins

Trans-zeatin riboside, Trans zeatin, Indole Acetic Acid, Isopentenyladenosine, Isopentenyladenine

Phlorotannins 8-10% g dwt

Mannitol 3500 µmol g dwt

*Declared values are considered averages and are subject to seasonal variation.

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