



THE REACTION RANGE

- Reaction™ Liquid Fertilisers have been the market leaders in liquid fertilisers for over 20 years.
- Reaction™ products are not slurries or suspensions that can contain particles and or impurities.
- Completely plant available.
- Translocated quickly and efficiently.
- Any run off is readily absorbed by the plant roots.

Reaction Fertiliser Specifications & Analysis

		Rate	Reaction Vigour	Reaction Classic	Reaction Premium	Reaction HiYield	Rapid N	High N	High S
Nitrogen	N	%w/w	14	9	6	5	23	26	11
		%w/v	17.4	11.3	7.8	6.4	29	32.8	15
Phosphorus	P	%w/w	4	5	9	4	-	-	-
		%w/v	5.0	6.3	11.8	5.1	-	-	-
Potassium	K	%w/w	4	6	5	11	-	-	-
		%w/v	5.0	4.5	6.5	14	-	-	-
Sulphur	S	%w/w	-	-	-	-	-	-	26
		%w/v	-	-	-	-	-	-	34
Boron	B	mg/kg	200	200	200	200	-	-	-
Cobalt	Co	mg/kg	75	75	150	75	-	-	-
Copper	Cu	mg/kg	200	200	250	200	-	-	-
Iron	Fe	mg/kg	200	200	200	200	-	-	-
Magnesium	Mg	mg/kg	100	100	100	100	-	-	-
Manganese	Mn	mg/kg	100	100	100	100	-	-	-
Molybdenum	Mo	mg/kg	-	-	-	-	200	-	-
Selenium	Se	mg/kg	50	50	50	50	-	-	-
Zinc	Zn	mg/kg	200	200	200	200	-	-	-
Seaweed		Yes	Yes	Yes	Yes	Yes	Yes	-	-

Application rates vary between 8-20 litres per hectare.

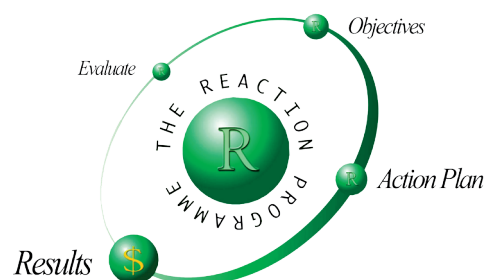
Specific application rates are best determined in consultation with your Omnia Primaxa Specialist.

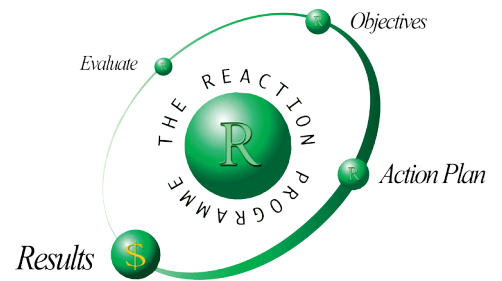
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The Brand That is Tried and Proven

THE REACTION COMPONENTS

1. Major Fertilising Elements: N (nitrogen), P (phosphorus), K (potassium). These elements are sourced from the highest grade of chemicals which eliminate the impurities normally found in fertiliser grade chemicals. This ensures complete solubility and maximum efficacy. S (sulphur) is available separately.

2. Minor (trace) elements: Mg (magnesium), Mn (manganese), Zn (zinc), Fe (iron), Mo (molybdenum), Co (cobalt), Cu (copper), B (boron), Se (selenium). To ensure easy plant uptake and complete solubility and stability, chelated minerals are used in preference to other sources.

3. Soil Food Web Activators: The vital link between the soil and the plants which you harvest or graze your stock upon, is referred to as the soil food web. Many REACTION blends now include ingredients to foster and enhance this food web.

4. Organic base: Ascophyllum nodosum seaweed from the world's largest producer forms the base and catalyst for the total mix. Clean, totally soluble, and rich in natural growth promotants, (Cytokinins, Auxins, Gibberellins and Betains). These natural growth promotants combined with those added, trigger and stimulate the plants own growth mechanisms and nurture the soil.

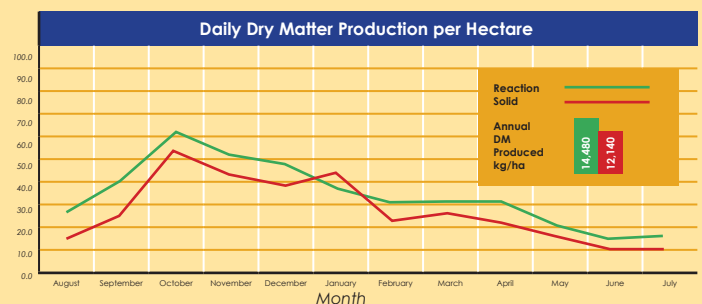
5. Pure Liquid: Unlike many products, which are in fact slurries or suspensions that contain particles or impurities, REACTION Multiblend Liquid Fertilisers are true liquids. They are completely plant available from the time they are applied and easily translocated into the plants system. Any run off is readily absorbed by plant roots.



Independent Trials continue to prove that Reaction fertilisers grow more grass

Conclusions reached in a series of national dry matter trials conducted in association with Massey University show:

- Annual pasture yields obtained using Reaction fertiliser were **similar to or better than yields using typical solid fertilisers.**
- The overall difference on dry matter yield, averaged over all sites was significant: around **20% extra yield** in favour of Reaction fertiliser.
- Yield differences occurred throughout the year and were not limited to any month or season, nor were they limited to a short period following application.**



Quotes from the farmers

- “While I noticed improvement after one year, the real benefits show after two or three years. I have a good pasture with excellent clovers, and stock health is just great.”
- “I’ve seen our clover content triple in the past two years, and the colour and vigour of the pasture is excellent. In addition, we now have a worm population.”
- “I’ve used REACTION for many years now, and honestly, I’ve never made so much money in my farming life.”
- “We’ve had good results with growing feed and our stock health is excellent- so we’ll be staying with the programme.”
- “Our pastures now have a high clover content and are very dense. When growth starts they really move, recover quickly after grazing, and we always seem to obtain more grazing from a paddock than anticipated.”
- “I’ve heard so-called experts knock liquid products, but nobody will convince me that the benefits I’m getting from REACTION aren’t real.”

“Proven on New Zealand’s unique pastoral farming systems for almost 20 years. Products bearing the Reaction brand have earned their reputation as market leaders by consistently producing outstanding results for New Zealand

Animal health

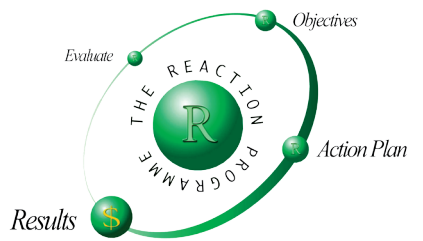
Product Name	Product Description	Application Rate	
TracemoTM LIFT	Unique formulation of essential minerals, trace elements, electrolytes, protein, carbohydrates and vitamins blended in a seaweed base	Can be administered daily in small doses or in larger doses every 21 days	
TOP TRACE DAIRY	Specifically designed for dairy cows and includes high doses of Copper, Iodine, Selenium and Cobalt in a blend of seaweed for improved efficacy. The synergistic combination of these elements assists animal health.	Lactating Cows	10ml per day
		Dry Stock	7ml per day
		Young Stock	3 - 5ml per day
VitalanTM	A probiotic for dairy cows made from naturally occurring carbohydrates producing optimum levels of beneficial bacteria required for efficient digestion. Proven to increase feed conversion and increase milk production	Dose rate 15 grms per day	

Trace Elements, EDTA chelates and mineral concentrates

Boron	B	Concentrate	150g/litre
Nitrogen	N		69g/litre
Cobalt	Co	Chelate	90g/litre
Copper	Cu	Chelate	120g/litre
Manganese	Mn	Chelate	60g/litre
Zinc	Zn	Chelate	130g/litre
Magnesium	Mg	Concentrate	60g/litre

Additional products that compliment the range

Product Name	Product Description	Application Rate
Super Seaweed	A natural growth stimulant with small amounts of major and minor elements. Natural growth promotants develop strong healthy plants	Application rates vary from 4 - 6 litres ha
Super Sulphur	0-0-0-14 w/w Liquid Sulphur	Rates vary from 1 - 4 litres/ha and should be added to other products after the water
Terraboost	Contains 13% w/w soluble solid Humate. Enhances biological activity in the soil, increases worm activity, enhances cation exchange and stimulates root growth and development	Rates vary from 1 - 20 litres per hectare
Millennium 3	Natural BioGro certified concentration of fish and seaweed. Typically contains 3-0.7-0.6 NPK but can vary due to natural qualities. Contains natural amino acids, vitamins, sugars, oils and organic compounds	Consult your Omnia Primaxa Specialist for application rates
QualigrassTM	A complex of organic substances with nitrogen, magnesium, copper, selenium and iodine. Formulated to balance the mineral status in favour of the dietary needs of cows, especially in the critical weeks before and after calving	Apply 10 litres/hectare and begin grazing the day after treatment.



Qualigrass

QUALIGRASS

QUALIGRASS is a complex of organic substances with nitrogen, magnesium, copper, selenium and iodine. Formulated to balance the pasture mineral status in favour of the dietary needs of cows, especially in the critical weeks before and after calving.

QUALIGRASS

Helps prevent ill-thrift, scouring, and poor reproduction

All these can be symptoms of copper deficiency, which is a constant pressure on New Zealand dairy cows. Their copper requirement is greatest in late pregnancy, when feed intake is about half that of lactation. Qualigrass lifts copper, selenium and iodine levels in pasture.

Reduces the risk of milk fever

Qualigrass is rich in anionic salts to improve the DCAD ratio of pasture and help induce the cow to commence mobilising bone calcium.

Helps prevent staggers

Low levels of magnesium and high levels of potassium are implicated as the main culprits causing grass staggers. Qualigrass programmes raise magnesium levels in pasture and reduce the luxury uptake of potassium by grasses.

Improves pasture utilisation

Winter pasture is typically less palatable and efficient in magnesium, copper, selenium, iodine, and other trace elements. Spring pasture is always too high in potassium. Qualigrass turns poor pasture into good pasture and avoids the need to make up the deficiencies with injections of supplements.

Grows more feed

Qualigrass contains 15% nitrogen, and boosts grass growth. In the trials the extra grass growth alone paid for the product. Qualigrass attacks the two key objectives of animal nutrition.

- 1) Give them enough to eat.
- 2) improve the nutrient quality of their feed.

THE QUALIGRASS CONCEPT

Pasture nutrients simply do not match the dietary needs of cows at certain times of the year, especially at the critical transition period: before and after calving. Magnesium, copper, selenium and iodine levels are low during winter. Potassium levels climb rapidly as temperatures warm up in early spring. Qualigrass is based on the simple idea that it is better to improve the quality and palatability of pasture, rather than tolerate poor utilisation of deficient pasture and make up the deficiencies with supplements or injections.

Transition risks

80% of disease in adult cows occurs in the four weeks either side of calving. It's during that period that cows undergo major hormonal and physiological changes as they switch from pregnancy to lactation. The immune system is strained and they are most susceptible to metabolic diseases such as milk fever, staggers and ketosis. These eight weeks are the primary focus of the Qualigrass programmes. Six to seven weeks before calving, a pasture test should be done and its mineral dietary value should be analysed. A significant amount of magnesium sulphate is normally added.

Typical application

10 litres of Qualigrass, 10 kg magnesium sulphate with 2 kg salt sprayed on the pasture the cows will graze. Grazing of treated pasture should begin the day after grazing.



Super Seaweed

A natural organic growth stimulant with small amounts of major and minor fertilising elements. Containing more than 25% w/w soluble solids, Super Seaweed is formulated from Norwegian Ascophyllum nodosum to Alga Research Foundation Standards.

Super Sulphur

0-0-0-14 w/w Liquid Sulphur

Super Sulphur is a liquid sulphur designed for use with other Omnia Primaxa products.

Application Rates: vary between 1 and 4 litres per hectare and should be added to the Omnia Primaxa product of your choice after the addition of the recommended water rate.



TERRABOOST

Humic acid 13%

Humic substances result from the breakdown of organic matter. Terraboost is a concentrate derived from Humus. Containing 13% s/s soluble solids, Terraboost will enhance biological activity in the soil, increase worm activity, enhance cation exchange and stimulate root growth and development. When combined with Reaction seaweed based multiblends you have an economical combination product.

Application Rates: Typical rates vary between 1 and 10 litres per hectare depending on the purpose for which it is used.

Millennium 3

Millennium 3 is a completely natural BIO-GRO registered concentration of fish and seaweed. Typical major element content is N 3.0% , P 0.7% and K 0.6%, but as it is a natural product there will be some variation between batches. Millennium 3 is also rich in natural amino acids, vitamins, sugars, oils and other organic compounds. Millennium 3 works rapidly if foliar applied, but is also very suitable for ground application.

Application Rates: Rates vary according to crop, purpose, frequency and base fertility. Consult your distributor or phone our help desk.



Quotes from the Scientists regarding Qualigrass and REACTION

REACTION

At a field day held on a long time REACTION user's property, a noted PhD scientist made the following statements: Animal health expenditure should be viewed alongside fertiliser expenditure, as both are linked closely together. I have had a few thousand farmers tell me of their success with using REACTION. As a result, I believe that coupled with the overseas information that is available, we have a situation that can no longer be ignored. In fact, the risk involved may not be using REACTION, but in fact in not using such a product. If your Olsen P levels are high, then why are you spending money on large applications of superphosphate? In such situations, superphosphate can be described as *the unthinking man's fertiliser*". Join the thousands of New Zealand farmers growing top quality pasture, producing healthy livestock, farming sustainably and profitably, with the REACTION range.

"The beauty of the foliar supplement technique is that the pasture magnesium concentration, which is notoriously difficult to raise in the winter/spring with magnesium fertilisers, can be rapidly and effectively accomplished for the short period of the year when there is normally a major deficiency." - GF Wilson at Massey University

Your Local Specialist: