nutrinza®

The Science of **Animal Nutrition**

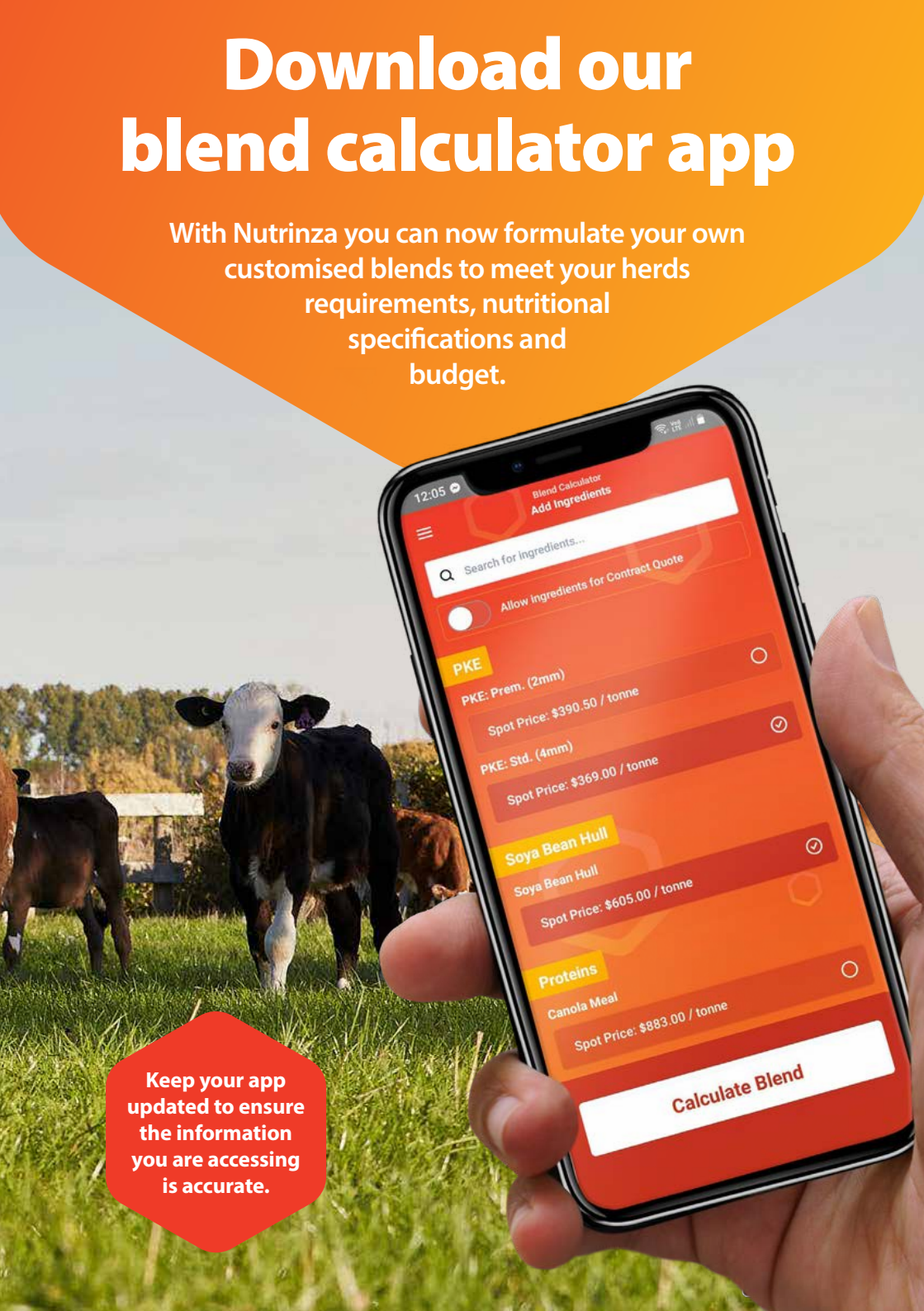
Product Guide

June 2024

nutrinza.com

Download our blend calculator app

With Nutrinza you can now formulate your own customised blends to meet your herds requirements, nutritional specifications and budget.



Keep your app updated to ensure the information you are accessing is accurate.

Contents

nutrinza®

The Science of **Animal Nutrition**

Our philosophy is

"If you are going to do the job, do it right".

We believe this is essential for protecting and maintaining your animals' health.

Nutrinza was created in 2003 to continue to provide a specialist service of customised feed solutions for New Zealand farmers nationwide. With our bulk buying power we can monitor the quality and the distribution of feed and provide economic and efficient service along with quality technical assistance.

Nutrinza recognises and appreciates the challenges of the farming industry and we are aware that the regular, reliable and efficient supply of cost effective feeds are of great importance to all our customers. Our aim is to source, supply and deliver the best product at the best price to our customer.

Blend Feeds

Nutrinza have the ability to custom blend to your requirements. We have three FeedSafe Accredited blending plants which ensure accurate and homogenous mixing of your feed and minerals. Blended feed is available from the Mount Maunganui, Marsden and Stratford blending plants.

Pellets / Compound Feed

For those clients that prefer pelleted/ compound feed we source cost-effective top quality diets to provide maximum returns.

Bulk Supply

All of our products are available as individual feed components or can be blended to your requirements in one of our North Island blending locations.

FeedSafe NZ Accredited

All of Nutrinza's stores are FeedSafe accredited.

New Zealand Feed Manufacturers Association
www.nzfmz.org.nz

Product Specification Quick Reference Chart

Product	DM %	ME	CP %	NDF %	Starch %	C FAT %
Canola Meal	88	11.7	38	26	1.5	3.5 - 5
Citrus Pulp Pellet	88	12.4	7.6	20.3	0.6	2
Dried Distillers Grain (DDGS)	88	13	30	29	6	7
Hi-Fibre Feed	88	10.2	19	73	2.6	1.9
Hi-Starch Pellet	88	12	12	25	45	3
Maize (Kibbled / Whole)	88	13.5	9	13	73	4
Megalac	95	33.3	0	0	0	84
Palm Kernel Expeller	88	11.6	14 - 16	65	2.1	7 - 9
PKE10	87	11.7	14.5	58	1.9	7.2
Soya Bean Hull	88	11.5	13.5	60	1.4	3
Soya Bean Meal	88	13.5	48	13	1.7	2
Sunflower Pellet	88	10.7	34	38	1	2
Tapioca (whole/crushed)	88	12.5	3	12	50 - 55	1
Vat Buster	88	12.5	16	30	30	4

Disclaimer

Product information provided is given on the basis of Nutrinza knowledge at the time of publication.

Nutritional information is based on accredited feed nutrition sources and sample test results. Specifications on an individual feed test will show some variation.

All animal feed products should be fed as part of a healthy balanced diet matched to the specific requirements of the herd. Nutrinza makes no representations or warranties of any kind, express or implied, as to the suitability of any of the products supplied to the specific requirements of your animals.

Please note that recommended feeding rates are given as a guideline only and will vary based on the total diet and actual feed intake of your animals. It is recommended that you consult your vet, nutritionist, feed expert or farm consultant before making any dietary changes.

Feed Options

Base Feeds

Hi-Fibre Feed

Hi-Fibre Feed is a low FEI feed produced from the chemical extraction of oil from palm fruit. It differs from mechanically extracted PKE with a lower oil, but higher protein content.

Nutritional benefits

Hi-Fibre Feed is ideally suited for periods when pastures are limited and production needs to be maintained and supported with higher levels of supplementary feed. Due to its low impact on FEI, feed rates up to 3 or 4 times that of PKE are feasible.

It is an excellent source of highly digestible fibre and provides higher levels of protein, which is normally performance-limiting during drought periods.

Hi-Fibre Feed is GM-free.

Feeding recommendations

Hi-Fibre Feed can be fed in the paddock, feed pad, or as a component of in-shed blends. Ruminants will readily switch from PKE to Hi Fibre Feed.

In an on-farm trial, Hi Fibre Feed were fed up to 8kg/cow/day without exceeding FEI levels. The cost advantage vs other feed supplements make it a vital component to manage feed supply risk during droughts. Its higher protein content allows for the partial reduction of other higher priced protein sources.

Note: Consult your milk supply company for FEI guidelines

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Hi-Fibre Feed	88%	10.2	19%	73%	2.6%

Feed Options

Base Feeds

Palm Kernel Expeller

Palm Kernel Expeller (PKE) is produced from the mechanical extraction of oil from palm fruit.

Nutritional benefits

PKE is a good source of oil and rumen fermentable fibre, which usually improves butter fat test.

Although high in Neutral Detergent Fibre, PKE does not cause significant pasture substitution, owing to the high level of rumen bypass NDF in PKE. PKE contains nearly no starch and can be safely fed with ad libitum access in the paddock. It is GM free.

Feeding recommendations

The quickest and easiest way to introduce PKE to your stock is by making the PKE accessible in the paddock in a trough or trailer where your stock can eat the product in their own time. This usually results in dairy cattle consuming 1-2kg/c/d within four days. If feeding in the bail through a silo, it is best to have the PKE mixed with other feeds.

Then increase the inclusion rate slowly, being guided by their ability to consume the feed.

Note: Consult your milk supply company for FEI guidelines

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Palm Kernel Expeller	88%	11.6	14-16%	65%	2.1%

Feed Options

Base Feeds

PKE10

PKE10 is a blend of 90% Palm Kernel and 10% Molasses.

Nutritional benefits

The addition of Molasses to Palm Kernel makes it more palatable, improving consumption and ease of introduction to animals. The increased soluble sugars will assist rumen function and feed conversion.

Supplementing cows with PKE10 will not cause significant pasture substitution which will increase total feed intake.

This product is not dusty but still flows with ease, making it ideally suited for in-shed feeding systems.

PKE10 is GM free.

Feeding recommendations

PKE10 can be fed in the paddock, feed pad, or as a component of in-shed blends. If fed in the shed, it is best to mix PKE10 with other feeds. PKE10 is a safe feed option, but if fed at high inclusion rates (more than 4kg DM per day), cows should be appropriately adapted to the feed.

Note: Consult your milk supply company for FEI guidelines.

Ask your local technical sales representative or support team for available options in your area.

Note: PKE makes up 90% of PKE10 and is a by-product of palm oil production, therefore the nutritional values can vary slightly during the season.

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
PKE10	87%	11.7	14.5%	58%	1.9%

Feed Options

Base Feeds

Soya Bean Hull

Soya beans are primarily processed for their oil, which leads to the generation of two primary by-products – Soya Bean Meal and Soya Bean Hulls. Soya Bean Hulls are the outer coating of the soya bean and this hull is removed when soya beans are processed into Soya Bean Meal. Soya Bean Hulls are quite small in size and are not very dense so are pelleted to increase ease of handling and bulk density. With respect to nutritional value, the loose and pelleted hulls are equal.

Nutritional benefits

Soya Bean Hulls are a highly digestible fibre source. They can replace both the fibre and some of the grain portion of the diet due to their energy level and digestibility. In diets where forage is being consumed Soya Bean Hulls can have a positive impact on forage intake and digestibility.

Feeding recommendations

Soya Bean Hulls can be fed from 0.5-5kg per cow per day. Soyabean hulls have a high nutritive value for ruminants and is a highly digestible fibre source. Supplementing diets with soyabean hulls increase rumen microflora flow and rumen fibre digestion.

However, soyabean hulls do not provide the same effective fibre (large particle size) as roughages.

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Soya Bean Hull	88%	11.5	13.5%	60%	1.4%

Feed Options

Protein Feeds

Soya Bean Meal

Soya Bean Meal is obtained from the process of extracting soya oil from the bean.

Nutritional benefits

Soya Bean Meal is a high protein feed that is highly palatable. Soya Bean Meal would be most aptly fed in early spring or summer when the protein content in the diet may be lower.

Feeding recommendations

Feed as required when protein is limiting production.

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Soya Bean Meal	88%	13.5	48%	13%	1.7%

Feed Options

Protein Feeds

Canola Meal

Canola Meal is a by-product of canola seed oil production.

Nutritional benefits

Canola contains 30-35% rumen undegradable (bypass) protein and the other 65-70% is degraded in the rumen. This is quite similar to the protein fraction in Soya Bean Meal. Therefore, Canola works well in diets that are low in rumen degradable protein, e.g. when over 40% of the diet is low protein feeds such as maize silage, whole crop silage, stalky grass silage or grain. GM free option available.

Feeding recommendations

The benefits of Canola Meal are best captured in a balanced feed ration and normally feeding rates for dairy cows are 0.5-2kg DM per day. In grain mixes inclusion rates range from 10-30%.

Canola Meal is best fed as part of a customised feed blend in the shed. Feed as required when protein is limiting production.

Dried Distillers Grains

Corn Distillers Grains with Solubles is the main by-product of the distillation of alcohol and industrial ethanol from maize grain. Corn DDGS is golden in colour.

Nutritional benefits

Corn DDGS is rich in protein and moderately rich in fat. One benefit of Corn DDGS over cereal grains is that, as their energy is primarily provided as readily digestible fibre and fat, they have a propensity to alleviate incidence and severity of acidosis, and fatty liver caused by rumen starch fermentation.

Feeding recommendations

As a rule, a maximum of 30% (diet DM) DDGS should be included in the ration.

DDGS is ideal for increasing the palatability of feed blends, especially when minerals are included.

Increase inclusion rate when protein is limiting production.

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Canola Meal	88%	11.7	38%	26%	1.5%
Dried Distillers Grains	88%	13	30%	29%	6%

Feed Options

Protein Feeds

Sunflower Pellet

Sunflower Pellet is the by-product of the extraction of oil from sunflower seeds. It is pelletised to increase the density and improve flow in silos.

Nutritional benefits

Sunflower Pellet is high in protein and fibre with moderate energy levels. It has a higher % of rumen degradable protein, making it an ideal supplement when pasture protein is limited. It is considered a safe feed for all ruminants and can be fed in troughs or via in-shed systems. Sunflower Pellet is a rich source of B-complex vitamins. It is GM free.

Feeding recommendations

Feed as required when protein is limiting production.

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Sunflower Pellet	88%	10.7	34%	38%	1%

Feed Options

Energy Feeds

Kibbled Maize

Maize grain is one of the best sources of energy and carbohydrate for the lactating cow and also ideal for weight gain.

Nutritional benefits

Highly digestible and slow release in the rumen, maize grain is a great choice for maximising peak in the spring. It is GM free.

Feeding recommendations

Feeding maize requires a transition for the cow because of the high starch content - so gradually increase intake over time. Feed maize as required between 2kg and 4kg per cow per day to maximise output.

Tapioca

Tapioca comes from Casava plant tuber/ root and is grown in the Tropics.

Nutritional benefits

Tapioca is a high quality energy supplement, but is low in protein. It is GM free.

Feeding recommendations

The risk of acidosis is high due to the high starch content and the finely ground nature of the feed before being pelletised. If cows are allowed ad libitum access there is a significant risk of rumen acidosis and death. Therefore feeding ad libitum in bins is risky and should only be fed as a blend with PKE/Soya Bean Hulls at no more than 25% tapioca: 75% PKE or Soya Bean Hull.

If fed in the shed where intake is controlled you can feed up to 2.5kg/c/day in the spring and 2.0kg/c/day in mid to late lactation as long as the normal protocol of gradual introduction is followed (begin with 0.5kg/day of Tapioca and increase by 0.5kg/day to desired amount).

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Kibbled Maize	88%	13.5	9%	13%	73%
Tapioca	88%	12.5	3%	12%	50-55%

Feed Options

Energy Feeds

Vat Buster

Vat Buster is a mix of ingredients designed to maximise production.
It is a 5mm pellet that is great in a blend or on its own.

Nutritional benefits

Vat Buster is a mix of grains and proteins that will help your animals maximise output. Great for driving and holding peak lactation and will help put your cows into a positive energy balance.

Feeding recommendations

Feed as required to maximise return. Managed feeding is required at 2kg to 6kg per cow per day.

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
Vat Buster	88%	12.5	16%	30%	30%

Feed Options

Energy Feeds

High Starch Pellet

Nutrinza's High Starch Pellet is a grain pellet and an excellent source of energy.

Nutritional benefits

Providing adequate amounts of starch promotes rumen bacterial growth that will enhance forage digestibility, rumen contractions and subsequent feed intakes. It is an ideal choice to increase and maintain peak production during spring. It is pelletised, reducing wastage and improve flow in silos.

Feeding recommendations

Due to the high starch content a gradual introduction is required. Once animals have adapted to a higher starch diet, the High Starch Pellet can be fed at between 2kg to 4kg per cow per day to maximise production. Due to its low protein content it must be properly complemented with a protein source from pasture/other protein feed options, as well as fibre.

Typical Nutritional Analysis

	DM	ME (MJME/kg DM)	Crude Protein	NDF	Starch
High Starch Pellet	88%	12	12%	25%	45%

Feed Options

Energy Feeds

Citrus Pulp Pellets

Citrus Pulp Pellet is a by-product obtained from the citrus juice industry. It is the ground peel, residue of inside portions and occasional cull fruits of the citrus family, which have been limed, pressed, dried and pelletised. It is a dark brown pellet with a pleasant citrus odour.

Nutritional benefits

Citrus Pulp has a highly soluble carbohydrate and highly digestible fibre content, making it a good energy source. It has excellent palatability.

Research has indicated that citrus pulp could increase the fat content in milk, likely by increasing the production of acetic acid in the rumen and the quality and quantity of NDF.

In addition to its value as a dietary supplement, it contains an essential oil called Limonene. This compound has been shown to have anti-methanogenic properties in vitro.

Feeding recommendations

Classified as an energy feed, it could replace a portion of feeds with the same characteristics as grains such as kibbled maize. However, CPP should not exceed approximately 30% of the diet. If feeding 4kg DM CPP or more, cows should be transitioned to the feed. In this instance, it is advised to feed half rates initially before moving to full rates.

Citrus Pulp has a high calcium content (up to 2%) and is low in Phosphorous. Phosphorous supplementation should be considered when higher inclusion rates are used.

It is predominantly a feed for ruminants due to the fibre content and presence of Limonene which can be toxic to monogastrics. It is also not recommended for calves younger than 2 months.

Citrus pulp pellets are hygroscopic and should be stored under dry conditions to prevent quality issues.

Typical Nutritional Analysis

The nutritional values can vary due to the type and proportion of citrus species used, the ratio of skins and seeds, the harvesting process and season.

DM	88%
MJ ME / kg DM	12.4
Crude Protein	7.6%
NDF	20.3%
Starch	0.6%
Total Sugars	23.5%
Minerals	
Calcium	1.72%
Phosphorous	0.1%
Potassium	1.1%

Feed Options

Feed Additives

Megalac™

A highly-proven, rumen protected bypass fat, Megalac is a source of energy to support body condition, fertility and production. Megalac is a calcium salt of palm fatty acids.

Nutritional benefits

High energy density

- ME = 33.3 MJ/kg DM
- 96% digestibility

Minimises body condition loss

- Helps fill the energy gap of early lactation to minimise condition lost
- Increases energy of diet without increasing acid load in the rumen
- Bypass means it avoids disruption to fibre digesting bacteria in the rumen

Supports fertility

- Targeted energy improves fertility and in-calf outcomes
- Increases follicle size to improve chances of pregnancy
- Supports progesterone production to maintain early pregnancy

Increases milk production

- 18 studies show an average increase of +2.3 litres/cow/day when fed 500g Megalac per day
- Improved feed efficiency from more energy dense feed
- Over 13% less methane produced per kg milk = more efficient production

Feeding recommendations

Feed between 0.2 to 0.5 kg/c/d.

Product available in blends. Also available direct to farm in 25 kg bags (1 tonne minimum delivery) or 800 kg bulk bags |(1.6 tonne minimum delivery).

Feed Additives

Plant-based Feed Grade Oil

Nutrinza's plant-based oil is the ideal product to include in feed blends to address dust related issues at minimal inclusion rates. Our plant-based oil consists mainly of Canola oil with other plant-based oils (no palm oil) added at low inclusion rates.

Benefits

- Oil suppresses dust at very low inclusion rates. Just 1% inclusion is all that is required to suppress dust in most instances. Less dust has the following tangible benefits:
  - » Improved animal health by reducing dust inhalation.
  - » Less wastage as it reduces the feed blown out of in-shed feed troughs.
  - » Largely eliminates eye irritation in the dairy shed for staff.
- No build-up of feed on feed auger systems. This reduces time consuming unblocking and cleaning of in-shed feed systems and silos.
- Less wear on feed system motors and augers due to the lubricating effect of oil.
- Oil is one of the highest energy feed sources available. It has a ME of 37MJ/kg DM. Added at 1% of the feed lifts ME by an average of 0.25 MJ/kg DM.

Blend inclusion recommendations

Dust suppression in blends is achieved at an inclusion rate of only 1%. Slightly higher inclusion rates can be considered for blends containing very dusty products or blends containing higher than normal mineral inclusion.

- Adding oil to blends reduce the possibility of feed separation, especially finer minerals, during transport and silo storage.
- Due to the special application method used in the Nutrinza blending process, the oil is thoroughly mixed in the feed. The feed stays dry.
- Due to the lower sugar and higher dry matter % the shelf life of blends containing oil is longer than blends containing molasses.

Typical Feed Grade Oil Nutritional Analysis

	DM	ME (MJ/kg DM)	Crude Fat	NDF
Plant-based Feed Grade Oil	100%	37	100%	0%

Trace Mineral Premixes

These trace mineral blends have been developed for on-farm addition to feed blends or liquid trace mineral supplementation.

Ultramin Sel-Gold™

(GREEN LID)

Description

Nutrinza Ultramin Sel-Gold is a soluble mixture designed to be administered to lactating dairy cows through the drinking water (troughs and in-line), via power drenching systems or mixed with feed.

If this product is applied to feed (rather than dissolved and administered as a drench or in the water via a mixed with 45g of a carrier to 5g of Ultramin Sel-Gold (ratio of 9:1) so that the combined application rate is 50g/cow/day.

The dose rate may be adjusted by a qualified nutritionist or vet depending on an assessment of the herd's current mineral status, and level of production being targeted.

This is a soluble product suitable for water dispensers, drenching or applying via the feed.

Ultramin Sel-Gold No Copper™

(RED LID)

Description

Nutrinza Ultramin Sel-Gold is a soluble mixture designed to be administered to lactating dairy cows through the drinking water (troughs and in-line), via power drenching systems or mixed with feed.

If this product is applied to feed (rather than dissolved and administered as a drench or in the water via a 'dosatron' of some form) then it should first be carefully mixed with 45g of a carrier to 5g of Ultramin Sel-Gold (ratio of 9:1) so that the combined application rate is 50g/cow/day.

The dose rate may be adjusted by a qualified nutritionist or vet depending on an assessment of herd's current mineral status, and level of production being targeted.

This is a soluble product suitable for water dispensers, drenching or applying via the feed.

This option is mainly used during the facial eczema season.

Provides the following per dose (5g dose per cow per day):

	Copper	Cobalt	Iodine	Selenium	Zinc
Ultramin Sel-Gold™	250mg	4mg	10mg	4.5mg	800mg
Ultramin Sel-Gold No Copper™	-	4mg	10mg	4.5mg	800mg

Nutrinza Mineral Options

Nutrinza offers a cost-effective range of minerals for inclusion in feed blends. This range provides adequate quantities of the 3 main macro minerals (calcium, magnesium and salt) for lactating cows. We also offer the macro minerals with Bovatec, trace minerals and Zinc (during FE season).

Nutritional benefits

Daily supplementation of macro minerals is crucial to replace minerals used in milk production – putting back what we take out. It is also critical for optimum rumen functioning and cow health. Bovatec has proven benefits in terms of increased production, bloat control, reduction in ketosis and control of Coccidiosis. Trace minerals and vitamins are required for higher production cows.

Nutrinza Mineral range

Max Mineral Standard

- At 200g/c/d this provides the cow with
  - » 60g Elemental Calcium
  - » 15g of Elemental Magnesium
  - » 9g of Elemental Sodium

Max Mineral Standard plus Bovatec or Monensin

- This option provides the standard macro minerals plus 1.5g of Bovatec or Monensin for increased production and bloat control.

Max Mineral Standard with Cowmin5

- Offers standard macro minerals plus 5 trace minerals (copper, cobalt, selenium, iodine, zinc)

Max Mineral Standard with Cowmin5 plus Bovatec

- Offers standard macro minerals plus 5 trace minerals (copper, cobalt, selenium, iodine, zinc) as well as 1.5g of Bovatec 20CC

Max Mineral Standard with Zinc

- Provides 9.6g of Elemental Zinc (12g of Zinc Oxide). For facial eczema season.

Feeding rate

200g/c/d in feed blends.

Phibro Monensin ® is a registered product under the ACVM Act 1997, A9493 Bovatec ® 20cc, a registered product under the ACVM Act 1997, A9679

x zelit

Additives for Transition

X-Zelit is a globally patented Synthetic Zeolite used to prevent Milk Fever, sub-clinical Milk Fever and associated metabolic diseases.

Nutritional Benefits

X-Zelit is a revolution in milk fever prevention as it does not rely on low or negative DCAD and restriction of pasture or high potassium feeds to prevent milk fever. This gets the cow's rumen adjusted to high pasture intake before calving. X-Zelit triggers the cow's natural response to release calcium from its bones to meet the massive extra demand for calcium at calving time.

It is a healthy way to prevent milk fever, hypocalcaemia, and related metabolic diseases. This was proven by DairyNZ trials in NZ. Other scientific trials further showed reduced cases of Mastitis, Metritis, LDA's while improving milk production and reproduction. These results have also been seen on farms in New Zealand.

The use will result in labour cost savings, and eliminate the need to monitor complicated diet formulations or urine testing. The use of unpalatable minerals to achieve low DCADs that reduce intake during the critical pre-calving period is also eliminated.

Feeding recommendations

X-Zelit can be added to in-shed feed blends, mixed with other feed in mixer wagons, or directly added to feed in troughs. No feed formulation changes are required when feeding X-Zelit.

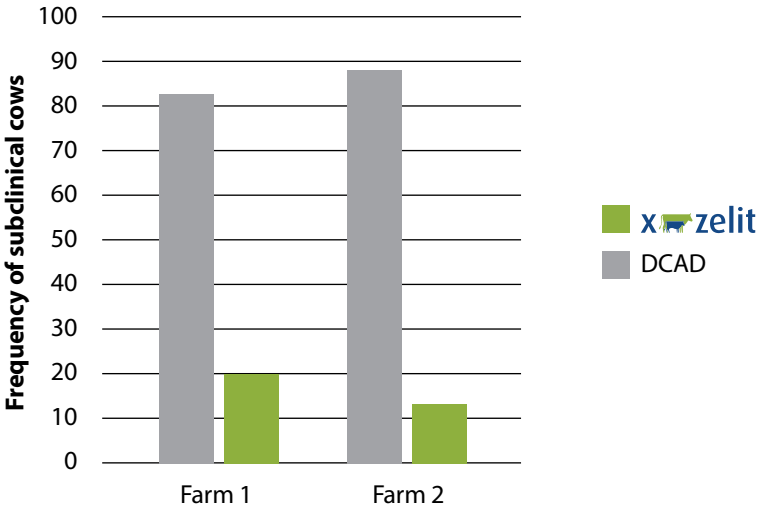
Aim to feed X-Zelit at 500g/cow/day for 14 days prior to calving. Feed with 50g of Magnesium Oxide/cow/day.

Can be used with home grown pasture, hay, and silage. Avoid fodder beet due to its low phosphorous content. It has a neutral taste and pH with no feed rejection or sorting.

Nutritional Information

X-Zelit is a Synthetic Zeolite, globally patented and has ACVM registration in NZ, number AA11835.

Plasma Ca < 2.15 mmol/L



Mineral Options

Sollus Tranzsol™ Minerals

Additives for Transition

A transition cow vitamin and mineral supplement to aid in the prevention of milk fever, maintain immune response and benefit subsequent re-breeding.

TRANZSOL™ from Sollus is formulated to be the easiest and best transition supplement for New Zealand dairy cows. It incorporates antioxidants, magnesium and, most importantly, Rovimix Hy-D®.

Nutritional benefits

Using anionic salts (TRANZSOL™) in combination with the vitamin D metabolite, Rovimix HyD® is proven to have beneficial effects in hormonal and physiological adaptation of the cow to mobilise calcium, reducing the risks of milk fever. Providing the essential minerals and vitamins during this crucial period reduces the risks of metabolic disease, has a beneficial impact on subsequent re-breeding and is important in maintaining immune function.

TRANZSOL™ is formulated for diets containing approx. 50% pasture, however it can still be fed with all pasture diets[1].

Feeding recommendations

Start when cows begin to show signs of springing (typically 14 days before calving) and continue into the colostrum herd.

Feeding options

- TRANZSOL Mineral Blend as part of your Nutrinza feed blend. 380g/cow/day for 14 days pre-calving + colostrum herd
- Feed TRANZSOL Nucleus at 100g/c/d. Must be combined 100g/c/d of MgCl and 280g/c/d of lime flour/ag lime.
- TRANZSOL Complete at 480g/c/d (MgCl & Lime added)
- Ensure TRANZSOL is mixed evenly through feed

Nutritional information

Vitamin A, Vitamin E, Vitamin D3, Iodine, Zinc, Rovimix® Biotin, Rovimix Hy-D, Calcium, Cobalt, Copper, Selenium, Magnesium, MOS, Sulphate, Chloride, Avatec ® / Bovatec ®.

Avatec® / Bovatec® is a registered product under the ACVM Act 1997, A10829

[1] Feed a maximum per day of 6kg grass or grass silage

Mineral Options

Sollus Lactisol™ Minerals

Additives for Lactating Cows

A vitamin and mineral supplement supporting the high demands of lactation, with long term benefits that supports the cow fundamentally.

Lactisol™ from Sollus provides the vitamins and minerals required to support the cow during lactation and her productive lifecycle, minimising metabolic disease and improving health and production.

Nutritional benefits

Lactisol is formulated to meet the nutritional requirements of cows when grazing pasture and consuming meals/silage. In combination with Tranzsol™ in the transition period, Lactisol provide the right elements for mineral absorption. Optimum absorption of Calcium and Phosphorus is required for strong healthy cows, putting back what we take out. Lactisol includes the following:

1. Provides the "next generation" source of Vitamin D, Rovimix Hy-D®, which ensures optimum up take of Vitamin D and utilisation within the animal.
2. Is a source of biotin which is essential for the synthesis of keratin in hooves and for energy uptake in the liver.
3. Is a source of Zinc which is a component of a wide variety of enzymes and proteins supporting metabolism, growth, production, and reproduction. Zinc is required for production of protective keratins in the hoof and teat. Contains multi stage release Zinc compounds for optimal uptake and utilisation.
4. Antioxidants to improve health and support the cow's immune system to fight infection.
5. Is a source of ruminally available Magnesium for a better, safer response.
6. Lactisol Range includes
   - » 400: Macro and Trace minerals plus Biotin
   - » 500: Macro and Trace minerals, Biotin, Vitamins, Hy-D and Monensin for cows with MS production at or close to body weight
   - » 600: Macro and Trace minerals, Biotin, additional Vitamins, Hy-D and Monensin for top production cows

Feeding options

- Lactisol 500 Mineral Blend as part of your Nutrinza feed blend. 200g/cow/day
- Feed Lactisol Nucleus at 25g/c/d. Must be combined with 135g/c/d of Lime and 40g/c/d of Salt
- Lactisol Complete at 200g/c/d

Nutritional information

Vitamin A, Vitamin D3, Vitamin E, Hy-D, Biotin, Cobalt, Iodine, Copper, Zinc, Magnesium, Selenium (8mg/200g), Calcium, Sodium Chloride, Rumenox®.

Rumenox® 400G is a registered product under the ACVM Act 1997, A11418

MineralBoost Granulated

MineralBoost

Product	Elemental profile (Each 200 gms contains)						Rumensin®
	Calcium	Magnesium	Sodium	Phosphorous	Zinc	Trace Minerals	Monensin
MineralBoost Pre-Calve	5.5% elemental	12.4% elemental	-	-	-	-	-
MineralBoost Classic*	46gms	10gms	12gms	-	-	-	-
MineralBoost Rumensin^ or Bovate 20CC	48gms	10gms	10gms	-	-	-	300mg
MineralBoost Max^	48gms	10gms	10gms	-	-	5gms (NutriPlex®5)	300mg
MineralBoost Zinc†	48gms	8gms	10gms	-	9.6gms (12gms zinc oxide)	-	-
MineralBoost Plus	41gms	12gms	11gms	5gms	-	5gms (NutriPlex®5)	-

Nutriplex®5 organic trace elements

Product	Zinc	Copper	Cobalt	Iodine	Selenium
MineralBoost Max^	300mg	135mg	12.5mg	8.5mg	2.5mg
MineralBoost Plus	300mg	135mg	12.5mg	8.5mg	2.5mg

* The base of all formulations QA assured granulated minerals

^ Rumensin® Registered Trademark of Ell Lilly and company. Rumensin® Millmix is registered pursuant to the ACVM Act 1997. No A9107.

† MineralBoost Zinc® is registered pursuant to the ACVM Act 1997. No A10914. Mineral supplement for the prevention of facial eczema in cows. The 200gm dose rate is designed for a 450kg cow.

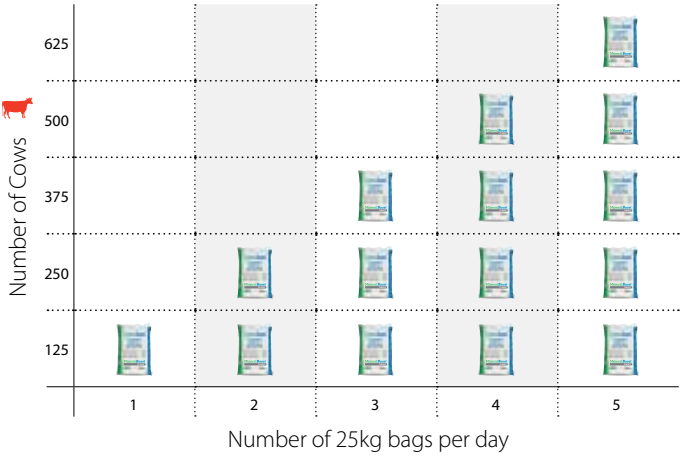
MineralBoost

MineralBoost inclusion rates
Percentage & kg / tonne (PKE, meal blends & silages)

Total ration feed rate per cow per day	MineralBoost Percentage in total feed ration	MineralBoost per Tonne in total feed ration
2kg	10%	100kg/tonne
3kg	7%	70kg/tonne
4kg	5%	50kg/tonne
5kg	4%	40kg/tonne
6kg	3.4%	50kg/tonne

Recommended Dose Rate (200gms / cow / day)

Based on 450 - 500kg live weight cow. Consult your nutrition advisor regarding altering dose rates.



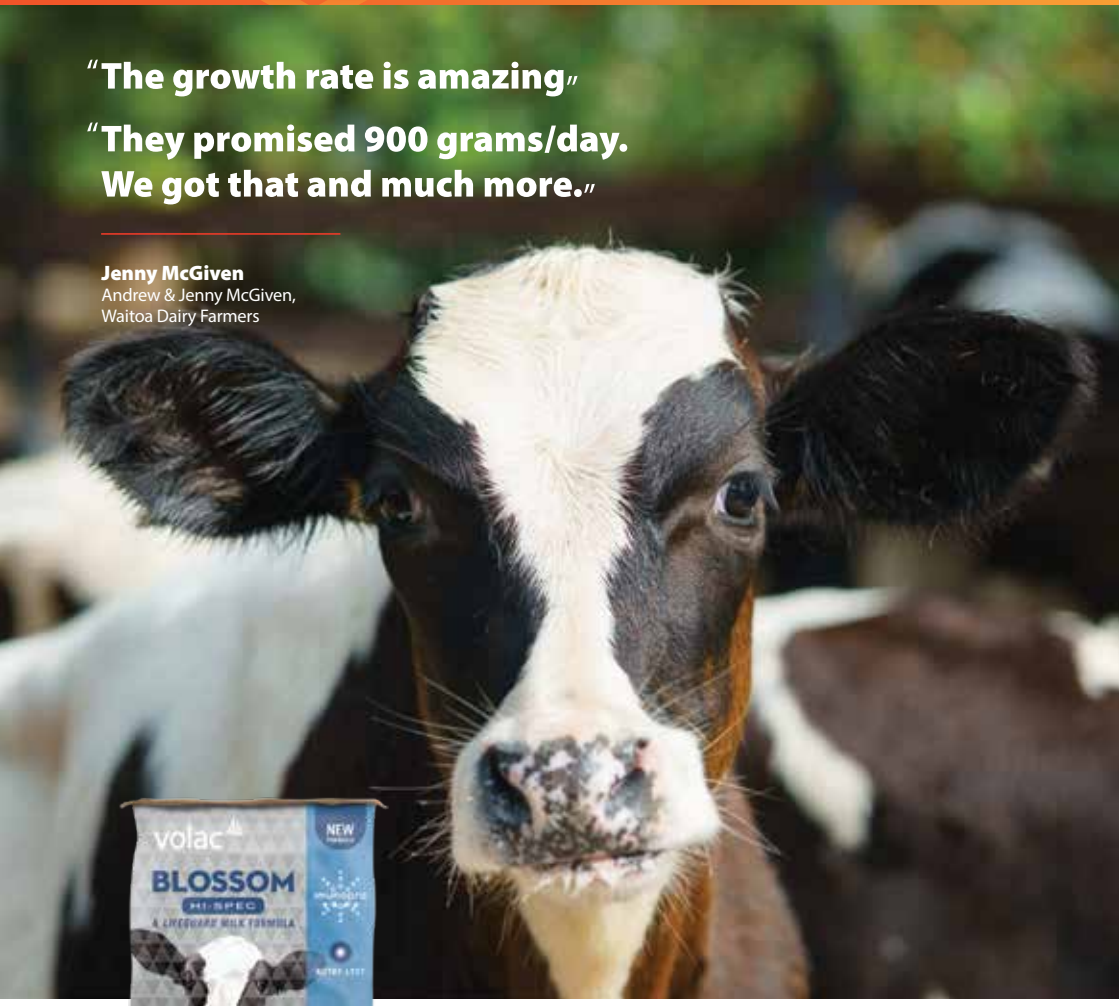
25kg bag
= 125 doses

1 Tonne bag
= 5,000 doses

"The growth rate is amazing"

"They promised 900 grams/day. We got that and much more."

Jenny McGiven
Andrew & Jenny McGiven,
Waitoa Dairy Farmers



Blossom Calf Milk Replacers

Blossom Hi-Spec and Blossom Easymix

Blossom is a whey-based calf milk replacer made from Immunopro®; a unique process that concentrates the bioactive goodness of milk for the benefit of the calf.

Nutritional benefits

- Blossom Hi-Spec is formulated to support 900g average daily gain*
- It contains high levels of limiting amino acids and nutrients to encourage skeletal growth
- Blossom Easymix is a tried and trusted product that provides excellent growth rates and value for money.
- Both products are easy to mix in warm or cold water.

*Based on feeding 900g Blossom Hi-Spec as 6 litres of milk replacer a day

Feeding recommendations

After colostrum is completed, feed Blossom Hi-Spec all the way through to weaning. Ideal for robotic calf feeders, ad lib feedings, twice-a-day and once-a-day. Mix 150g Blossom with 850 ml water for 1litre of milk replacer.

Easymix is designed to be fed at 750g per calf per day. But can be fed up to 900g to achieve growth rates of 750-900g per day.

Full feeding programme online at: **nutrinza.com**

Typical Nutritional Analysis

	ME (MJ/KG DM)	Protein	Fat	Sugar	Minerals	Vitamins and Additives	Moisture	Leucine Amino Acid at 900g feed rate
Blossom Hi-Spec	19.6	25%	17%	46.0%	7.5%	1%	3.5%	20.5g
Blossom Easymix	19.6	23%	18%	47.5%	7.5%	0.5%	3.5%	19g

Calf Products

Mega Max Calf Starter

Mega Max Calf Starter is a unique calf feed concept available from Nutrinza. We have received great feedback from our clients on the palatability, uptake and growth rates achieved from Mega Max Calf Starter.

Nutritional benefits

A mixture of whole grains and a protein pellet provide a combination that has been designed to maximise early rumen development. The whole grains provide the starch for growth and development without causing acidosis in the young calf. It has been trialled in America on 250,000 calves and used widely in the industry. We have also trialled the product in New Zealand on more than 2500 calves and seen great results. The calves love the whole grains and cud them like cows do grass, which provides the saliva to build the rumen in the infant calf. Mega Max Calf Starter contains Bovatec™ for control of coccidiosis, vitamins, trace elements and probiotic for good health.

Feeding recommendations

Mega Max Calf Starter is designed to be fed ad-lib from 4 days of age until weaning. There is no need for straw or hay to be fed as the fibre is provided by the grains in the feed. Available bagged (with molasses) or in bulk for silos (with molasses inside the pellet).

Bovatec® is a registered product under the ACVM Act 1997, A9679

Typical Nutritional Analysis

	ME (MJME/kg DM)	Crude Protein	NDF
Mega Max Calf Starter	12	18%	25%

Calf Products

Mighty Max Calf Grower

Mighty Max Calf Grower pellets are designed to grow calves. It is a cost effective pellet designed to be fed from day 4 to weaning. It has proven to be a very palatable feed and therefore increases intake quickly.

Nutritional benefits

Mighty Max Calf Grower is formulated to grow calves and we have worked with professionals around the world to build Mighty Max Grower. The energy and protein has been put together to maximise growth. Mighty Max Grower contains Bovatec™ for control of coccidiosis, vitamins, trace elements and a probiotic to promote good calf health.

Feeding recommendations

Feed from day 4 to weaning ad-lib to maximise intake and growth. Available bagged (with molasses) or in bulk for silos (molasses inside pellet).

Bovatec® is a registered product under the ACVM Act 1997, A9679

Typical Nutritional Analysis

	ME (MJME/kg DM)	Crude Protein	NDF
Mighty Max Calf Grower	12	18%	24%

AGRECOVERY

Nutrinza cares about sustainability and encourages customers to recycle their farm product bags effectively through the AgRecovery programme. Order your woven PP bag liners at **www.agrecovery.co.nz/order-your-agrecovery-liner/.**

FortiMILK™ GOLD Calf Milk Additive

A calf milk supplement to support calf health, growth performance and control protozoa disease throughout the milk feeding period.

FortiMILK™ GOLD is formulated as an easy to mix supplement for infant calves. It incorporates Bovatec®, Celmanax™, protected vitamins and chelated trace minerals, antioxidants, and most importantly a high-dose, calf-specific probiotics.

- Celmanax™ provides a resistance to Cryptosporidium spores.

Nutritional benefits

Whole milk from the modern commercial dairy cow often fails to meet the basic vitamin and trace mineral requirements of young milk-fed calves (data on file). These can be met by supplementing whole milk with FortiMILK™ GOLD - specifically designed to supplement the daily requirements of fast growing pre-ruminant calves and maximise health and growth potential.

Also contains high-dose probiotics and Celmanax to establish and maintain beneficial micro-flora balance in the gut, supports positive calf performance, gut health and immunity. Bovatec is known to prevent and control protozoa in infant calves – especially Coccidiosis infections.

FortiMILK™ GOLD is the ideal additive for rearing healthy calves in concentrated calving operations.

Feeding recommendations

For best results add FortiMILK™ GOLD to milk feed from 24 hours after birth and continue for the duration of milk feeding.

DO NOT FEED TO NEWBORN CALVES WITHIN THE FIRST 24 HOURS OF LIFE.

Excessive consumption of ionophores or use within the first 24 hours of life may result in ionophore toxicity in young calves.

Concurrent use of milk additives that contain Ionophores e.g. (lasalocid or monensin) should be avoided or carefully monitored.

Toxic to dogs, horses and other equids.

Feeding options

- Add FortiMILK™ GOLD to whole milk or non-medicated calf milk replacer
- Feed full dose in the morning milk feed – can be fed in divided dose over 2 milk feeds daily

Nutritional information

Vitamin A, Vitamin D3, Vitamin E, Vitamin C, Biotin, B-group vitamins (B1, B2, B3, B5, B6, B9, B12), Vitamin K3, Zinc (glycine chelate), Manganese (glycine chelate), Copper (glycine chelate), Cobalt (glycine chelate), Iron (glycine chelate), Selenium (glycine chelate), Iodine, Lasalocid (Bovatec®), Celmanax™, ProfeSTART™ Probiotic calf-specific blend.

Bovatec® is a registered product under the ACVM Act 1997, A9679

Don't forget to recycle your empty containers. Head to **www.agrecovery.co.nz/programmes/container-recycling/** to book a collection.

Silage Inoculants

Ecosyl™ 100

Ecosyl 100 silage inoculant is the world's most proven inoculant and is an ideal additive for clamped grass and legume silage. A proprietary L. plantarum strain MTD/1 works quickly and efficiently on a wide range of pH, temperature and dry matter to help make consistently better silage. These strains are active throughout the entire fermentation process and are not required to start fermentation which ensures excellent results faster.

Nutritional benefits

- Improves DM recovery +3.6% (28 trials)
- Improves protein preservation +3.5% (22 trials)
- Increases digestibility of silage (26 trials)

Use recommendations

- One bottle treats 100 MT of silage
- 24-month shelf life in a cool, dry place

Ecocool™

Ecocool silage inoculant controls heating and spoilage in maize, grass, and cereal silages. It contains two unique bacterial strains in one bottle, making it a preferred choice among farmers. The combination of L. plantarum MTD/1 and L. buchneri strain PJB/1 promotes efficient fermentation and aerobic stability, reducing spoilage at feedout. It is an effective solution to enhance crops and feed.

Nutritional benefits

- Improves fermentation profile with MTD/1
- Increases aerobic stability; +67 hours before heating up
- Inhibits yeast and mould growth vs untreated silage

Use recommendations

- One bottle treats 100 MT of silage
- 24-month shelf life in a cool, dry place

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HSR

HYBRID MAIZE SEED

Researched, trialled and proven in New Zealand and Australia.

For over 40 years, HSR Maize Seed has been breeding hybrid maize seed using carefully selected and trialled genetics.

We partner with breeders worldwide to source and develop the very best genetic material for local growers. Comprehensive testing for new varieties results in superior maize varieties with exceptional traits that thrive in New Zealand's unique and varied environmental and growing conditions.

Our advancements in hybrid maize seed technology are enabling farmers to cultivate superior crops, bolstering New Zealand's standing in the world as a reliable supplier of produce to feed the global population. We take great pride in being the only maize seed breeder in New Zealand to provide germination test results on each bag of seed, which gives you the assurance that HSR Maize Seed is of the highest quality and meets industry standards.

HSR Hybrid Range

Triton (78CRM) NEW

Introducing HSR Seeds 78CRM silage maize.

A short maturity hybrid that is ideal for either silage or grain. Triton has a semi-dent kernel and is a plant with large leaf area and good stay-green. It has shown very good leaf blight resilience over the last two seasons and the ability to deliver above-average yields for both silage and grain. Triton is bred to perform under dryland conditions, with genetics selected for water use efficiency. A high 'grain to stover' ratio delivers high quality silage in a short growing season.

Asterix (85CRM)

Asterix 85 CRM delivers high starch silage.

Great for very quick silage or grain to fill that void these tough seasons can create, or for planting/harvesting outside of key operating windows in North Island regions. Asterix is also showing great results in Southern regions, where this fits into the growing window. Growers seeking high yield at this CRM with excellent standability and disease tolerance should be growing Asterix.

Obelix (92CRM)

Known as "The Pillar of Strength" Obelix is proving to be a winner on-farm here in New Zealand and Australia after its success in the HSR trial programmes.

Obelix is a 92 CRM hybrid developed by the HSR team of global breeding partners to fill this maturity space within our hybrid range. With its great stature and cob placement, coupled with quick cob turn down, it is also proving to be a winner with grain growers. Obelix shows strong disease resistance and is suitable for growing in all North Island regions. A solid performer with extreme early growth.

MaxTwo (100CRM) NEW

Introducing HSR's 100CRM high starch silage maize.

A mid-maturity hybrid that delivers high starch levels to give high-quality silage values with big yields. With a very robust agronomy package and soft-starch kernels, MaxTwo has performed well as a mid-season option north of Taupo, and as full season choice in the Lower North Island. MaxTwo is a big plant with good standability. It can still go through to grain if required, giving it true versatility as a dual-purpose variety.

Maximus® (102CRM)

Highly productive Maximus® 102 CRM is ideal for various regions of New Zealand, or for growers that require high value silage maize.

Maximus® is a hybrid that produces a large bulky plant with a root system to match and has extremely high water use efficiency. It is a maize plant that is designed principally for the grower who wants a large robust plant with an excellent grain yield for top quality maize silage. It produced excellent results in the independent FAR Maize Trials across New Zealand. Farmers who want a stable hybrid performing exceptionally well across all environments should grow Maximus®.

Spartacus (102CRM) NEW

Introducing HSR Seeds 102CRM dual-purpose maize hybrid.

This is a very exciting dual-purpose hybrid that brings a new level of grain yield potential to this maturity group. Quick dry-down and excellent disease tolerance, along with a big root structure, means Spartacus ticks all the boxes for grain growers. Characterised by deep dented kernels, it will deliver an excellent return on a growers' investment. Spartacus also displays good water use efficiency, which is a result of specific trait selection during breeding.

Brutus (105CRM)

Brutus from HSR Seeds is a 105 CRM dual-purpose maize.

Brutus is a hybrid that has extremely high water use efficiency and exceptional yield for its maturity. It has an early-season growth habit that allows versatility and flexibility in sowing and harvest. It is designed for the maize grower who wants a crop that stands well, with an excellent silage yield quality, and delivers a high grain yield. It can be grown in a wide range of environments throughout New Zealand. Growers in warmer regions looking for a high-yielding, excellent disease tolerant and standability package in a mid-maturing maize hybrid should be growing Brutus.

HSR
HYBRID MAIZE SEED

Goliath (110CRM)

The perfect HSR 110CRM hybrid.

Developed in Australia as a dual-purpose hybrid with a fit for both silage and grain, it has impressed in New Zealand hybrid assessments in both yield and its overall agronomic package. Goliath is a tall plant with large cobs and bold 'dent' kernels, making it an ideal option for a full-season silage crop.

Pegasus (115CRM)

Pegasus is bred for yield, disease tolerance and adaptability. It is a 115CRM medium to tall leafy plant.

With large bright yellow kernels, this hybrid is a true 'dual purpose' that finds a fit with both silage and grain growers in Australia but will have a silage focus for the New Zealand market. Characterised by a large cob, the hybrid has a dent x flint grain. Pegasus grain is of medium density, perfect for feed grain or high quality silage.

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nutrinza.com/product/hsr-maize-seeds | 0508 768 723

SEED GROWN IN NZ
BACKED BY AUSTRALIAN SEED STOCKS

		Triton (NEW)	Asterix	Obelix	MaxTwo (NEW)	Maximus®	Spartacus (NEW)	Brutus	Goliath	Pegasus
	CRM	78	85	92	100	102	102	105	110	115
	Plant Height	Medium	Medium	Tall	Tall	Tall	Tall	Tall	Tall	Med/Tall
	Grain Type	Semi-Dent	Semi-Dent	Dent	Dent	Dent	Dent	Dent	Dent	Dent
Trait Scores	Stress Emergence	8	9	8	9	9	8	9	9	9
	Stalk Strength	9	8	9	9	9	9	9	9	9
	Stay Green	8	7	8	7	8	7	8	8	8
	Husk Cover	8	7	8	8	8	8	9	9	8
	Leaf Blight	8	7	8	8	7	8	8	8	9
	Cob Rot	8	9	8	9	7	9	8	8	8
	Rust	8	8	8	8	9	8	9	8	8

Introducing Nutrinza's sister company

headlands™
Rural Growth Partners

We're here to help you increase your productivity and profitability.

Headlands has been providing leading consulting services to farmers and agribusiness clients since 1994 to increase productivity, profitability and sustainability in farming businesses.

Our team has the collective experience and knowledge of over 40 consultants, coupled with expertise gained from international agri projects.

This positions us to offer a unique perspective in areas such as:

- **Corporate farming** - operations, management, expansions, acquisitions, divestitures.
- **Institutional investor**s - international agricultural investment opportunities, production prospects, end product markets, consumption trends, and valuations.
- **Value adders and processors** - supply strategies and end market trends.
- **Professional service firms** (including accountants, corporate recovery service providers, banks and insurance companies) - credit quality, management personnel, management plans and operational feasibility, and workouts.
- **Government and non-government organisations** – policy, independent surveys and industry research.

Find out more at www.headlands.co.nz or phone 0800 73 55 88

Join Headlands

Develop your consulting career.

Headlands is on the hunt for new consultants to join our passionate team.

Our consultants work across New Zealand, helping farmers optimise their farming system to improve profitability, business resilience and sustainability.

As part of our leading consultancy team, you'll be supported by some of the best pasture-based dairy systems consultants in New Zealand.

You'll also have the opportunity to take part in our two internal conferences annually and several forums throughout the year.

INTERESTED?

For more information visit www.headlands.co.nz or phone 0800 735 588.

How do AfiCollars work?

AfiCollar uses a proprietary 3D accelerometer to effectively monitor the motion patterns of a cow's head. It accurately distinguishes between:

Rumination

Eating

Heat detection
(Increased head movement from mounting other cows)

1. AfiCollar sends the data wirelessly to our reader.
2. The reader transfers all data to our herd management software, AfiFarm.
3. The farmer receives real time information on which cows need attention.

Actionable insights

1. Heat detection:

AfiCollar detects the increase in, and irregular movement of a cow's head when in heat.

- ✓ Accurate, giving you the time that heat signs started.
- ✓ Saves time and money invested on visual heat detection.
- ✓ Makes pre-mating heat checks easy.
- ✓ Identify silent heats/irregular cycles/ anoestrous cows.
- ✓ Decrease physical and disease risks on farm by eliminating bulls.

2. Monitor individual cow health:

A decrease in rumination and/or eating allows you to identify sick cows before they show signs of illness:

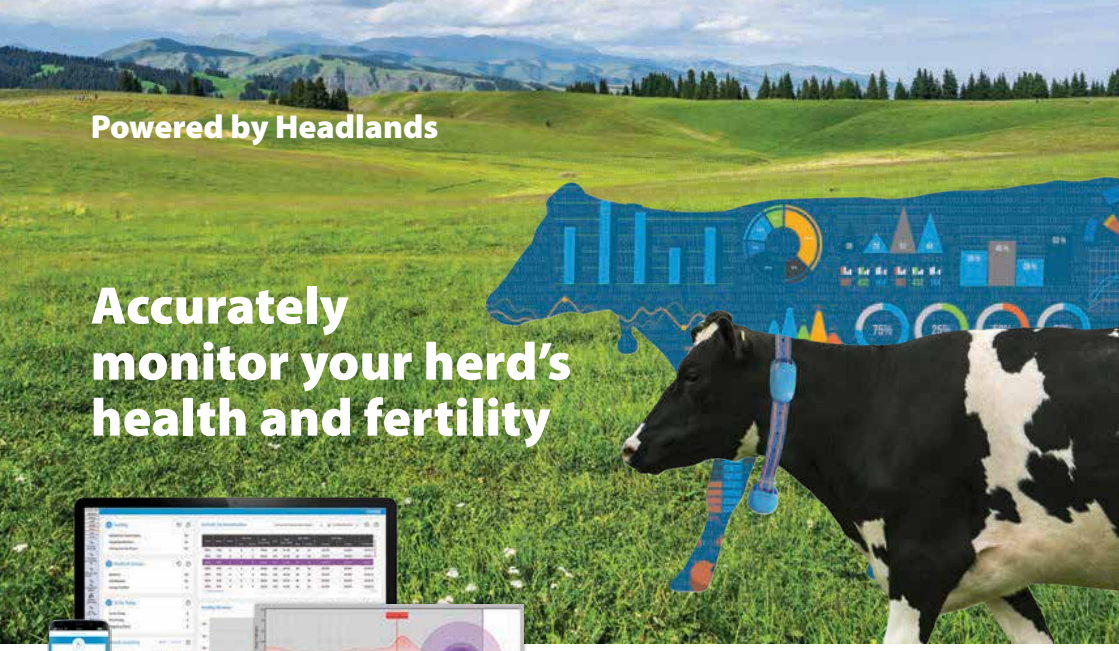
- ✓ Mastitis
- ✓ Sub-clinical rumen acidosis
- ✓ Ketosis
- ✓ Post calving disease/distress – milk fever, retained placenta, metritis, pyometra.
- ✓ Displaced abomasum

3. Monitor group nutrition:

Measuring eating and rumination on a herd/group level alerts the farmer early to any digestive issues that may cause a drop in milk production:

- ✓ Keep an eye on herd rumination when transitioning onto fodder crops.
- ✓ Eating time can give an indication of pasture quality and quantity.
- ✓ Monitor eating and rumination when introducing a new feed/ration.

Early identification ▶ **Early intervention and ability to monitor recovery** ▶ **Shorter duration of treatment and quick return to milk production potential**



AfiCollar

Gain actionable insights on **rumination, eating, heat detection, health monitoring** and more with Afimilk's cow monitoring neck collar.

With its long-life battery **the Afimilk neck collar integrates with AFiFarm** herd management software to enable informed, profitable decisions about your herd.

headlands™
Rural Growth Partners

intelact™ nutrinza™ headlands™

HSR HYBRID MAIZE SEED

FeedSafe NZ Accredited

Nutrinza, helping farmers improve efficiencies, reduce herd wastage and improve profitability through the best possible combination of science and nutrition.

nutrinza®

The Science of **Animal Nutrition**

Freephone 0508 768 723

nutrinza.com