



**HOWARD**  
  
**FARMS**

**Mineral Range**



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**Mineral Range**





### **Premium Irish Powder Minerals**

BLF Nutrition has been a long-standing supplier to Agway Milling providing a high-quality mineral to our customers for many years. This mineral range has been formulated based on detailed nutritional knowledge, the most recent scientific knowledge and utilisation of the best ingredients on the market

Offering customers Minerals, Vitamins and Trace Element Supplements in a range of different forms in a bid to cater for all types of farming

Manufactured by BLF nutrition with over 4 decades of expertise in the mineral production industry

All products manufactured here at BLF Nutrition are of the highest standard, fully accredited with the Department of Agriculture and UFAS, working continuously with both governing bodies to consistently produce high quality minerals for Irish Farms.

Included are premium: Alltech Chelates, DSM Vitamins, Spanish Cal Mag & Yara Phosphates

Our mineral range can also be formulated and manufactured based on individual farm needs

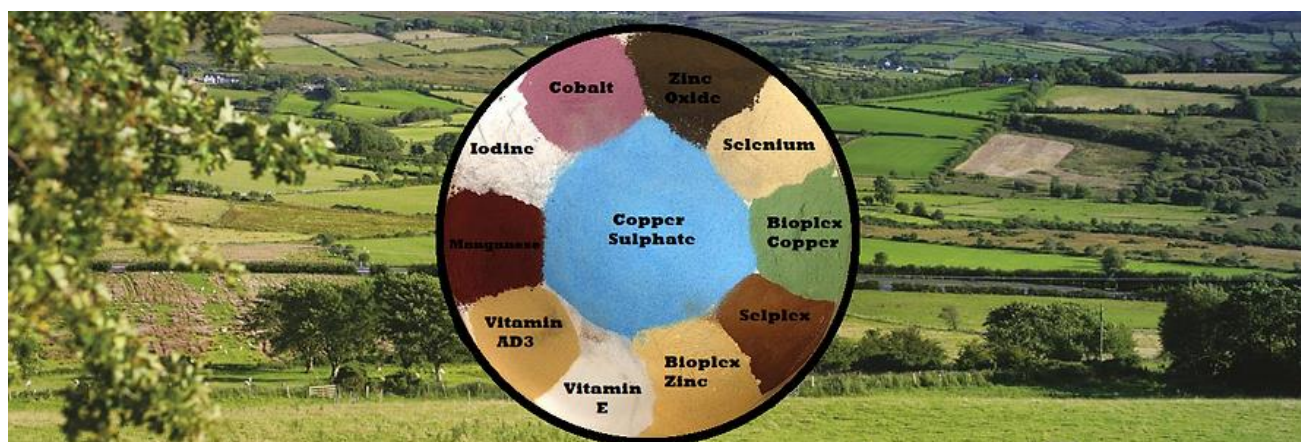


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## Dairy Pre Calver Minerals

	Pre-Calver with Seaweed	Hi Performer Pre Calver (Gold)	Quadforce Pre Calver
<b>Macro Minerals</b>			
Magnesium	20%	25%	25%
Phosphorous	3%	4%	3%
Sodium	14.2%	10%	9%
Calcium (None added)	0.74%	0.54%	0.62%
<b>Digestibility Enhancers</b>			
Yeast	/	/	Included
Seaweed	Included	/	Included
Sodium Bicarbonate	/	/	Included
Calcipowder Buffer	/	/	Included
<b>Trace Elements</b>			
Copper(Sulphate)	2500 mg/kg	2000 mg/kg	1500 mg/kg
Copper (Bioplex Chelate)	500 mg/kg	1000 mg/kg	500 mg/kg
Copper (Glycinate Chelate)	/	/	500 mg/kg
Copper (Carbonate)	/	/	500 mg/kg
Zinc (Oxide)	4500 mg/kg	4000 mg/kg	4000 mg/kg
Zinc (Bioplex)	500 mg/kg	1000 mg/kg	500 mg/kg
Zinc (Sulphate)	/	/	500 mg/kg
Zinc (Glycinate Chelate)	/	/	500 mg/kg
Selenium (Selenite)	40 mg/kg	35 mg/kg	40 mg/kg
Selenium (Selenate)	10 mg/kg	15 mg/kg	10 mg/kg
Cobalt (Carbonate)	99 mg/kg	99 mg/kg	99 mg/kg
Iodine (Calcium Iodate)	500 mg/kg	500 mg/kg	500 mg/kg
Manganese (Oxide)	2000 mg/kg	2000 mg/kg	2500 mg/kg
<b>Vitamins</b>			
Vit A	400,000 iu/kg	500,000 iu/kg	600,000 iu/kg
Vit D3	120,000 iu/kg	150,000 iu/kg	200,000 iu/kg
Vit B1	/	/	500 mcg/kg
Vit B12	1,000 mcg/kg	1,000 mcg/kg	1,000 mcg/kg
Vit E	5,000 mg/kg	6,000 mg/kg	7500 mg/kg
Biotin	/	/	100,000 mcg/kg
Pack Size	25kg	25kg	25kg

Mineral Requirement Table			
Pre-Calver			
Cow Numbers	Rate per Day(125g/day)	Weeks Dry	Kg Required (Bags Required)
1		1	0.84kg
50		12	500kg (20 Bags)
70		12	705kg (28 Bags)
100		12	1008kg (40 Bags)
50		10	420kg (17 Bags)
70		10	588kg (24 Bags)
80		10	800kg (32 Bags)
90		10	756kg (30 Bags)
100		10	840kg (34 Bags)
120		10	1008kg (40 Bags)
80		8	537kg (22 Bags)
90		8	604kg (24 Bags)
100		8	672kg (27 Bags)
120		8	906kg (32 Bags)
150		8	1008kg (40 Bags)
200		8	1344kg (54 bags)



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### **Quadforce 4 in 1 Powder Pre Calver Mineral – For pre & post calving Dairy & Suckler cows**

The formulation comprises of 4 types of Copper (Bioplex Copper, Copper Carbonate, Copper Sulphate, Intellibond Copper), 4 types of Zinc (Bioplex Zinc, Zinc Oxide, Zinc Sulphate Heptahydrate, Intellibond Copper) and 4 types of Buffers (Yeast, Seaweed, pH Neutraliser, Calcipowder Buffer).

These forms of Copper and Zinc have been added in quantities to best suit their availabilities and how an animal can absorb them, in a bid to ensure optimum utilisation of the mineral pack.

The 4 way Buffer zootechnical additive acts as aid to prevent metabolic diseases such as acidosis, lameness, poor body condition and scour, and also stabilises the rumen pH to ensure the digestive system is working to its full potential when conditions are not ideal or antagonists are high.

#### Formulated to help solve the following problems:

Silent Heats – Embryonic Loss – Poor Conception – Retained Placenta –  
Acidosis – Lameness – Poor Milk Yield – Milk Fever – Tetany – Poor Heart/Hormonal  
Functionality – SCC – Poor Calf Performance – High Molybdenum





### **Quadforce 4 in 1 - High Spec Mineral Licks 20 Kg Rectangle Buckets**

This 4 in 1 range has been formulated based on 4 decades of nutritional knowledge and manufacturing expertise, backed up with scientific research, and the utilisation of the best ingredients on the market.

#### **Quadforce High Mag Pre Calver – For Pre & Post Calving Dairy and Suckler Cows**

Formulated to help solve the following problems:

Silent Heats – Embryonic Loss – Poor Conception – Retained Placenta –  
Acidiosis – Lameness – Poor Milk Yield – Milk Fever – Tetany – Poor Heart/Hormonal  
Functionality – SCC – Poor Calf Performance – High Molybdenum

#### **Quadforce Dairy-Beef – For Cattle, Calves, Dairy Cows and Heifers**

Formulated to help solve the following problems:

Poor Weight Gain - Poor Immune Health - Pica/Phos Deficiency - Slow Growth - Brittle Bones  
Scour - Stabilizes the Rumen Flora - Coughing/Respiratory Issues - Rough/Dull Coats  
Poor Enzyme Activation and Metabolism

#### **Quadforce Sheep – For Sheep, Ewes and Lambs**

Formulated to help solve the following problems:

Lameness - Poor Milk Production for Lambs at Birth - Poor Weight Gain - Anaemia  
Poor Lamb Crop - Coxadosis - Pool Wool Coat - Weak Lambs - Swayback



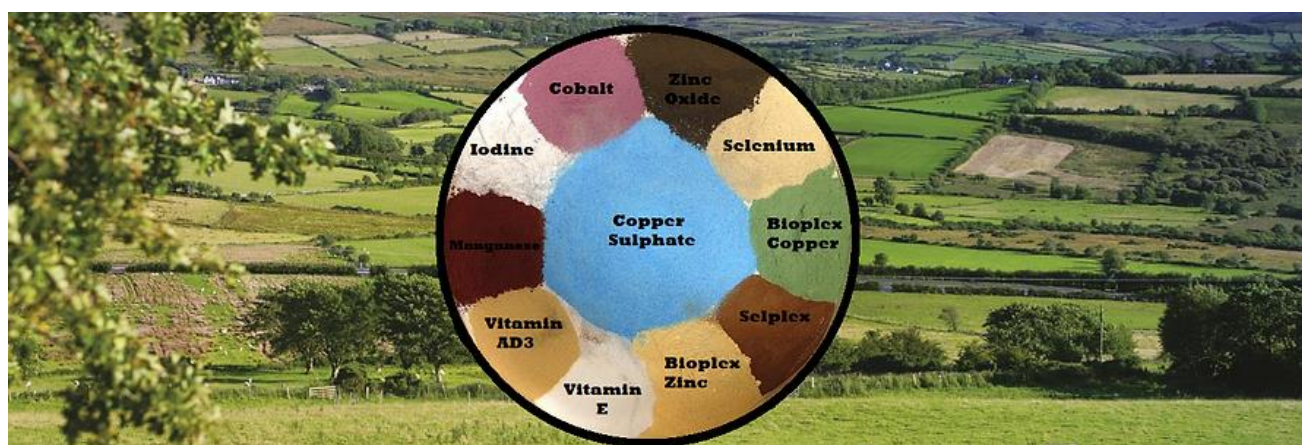
### Dairy/Beef Minerals

	Fertility Mineral with Seaweed	Hi Phos Fertility with Seaweed	Beet/Maize with Yeast	Cattle with Yeast
<b>Macro Minerals</b>				
Magnesium	5%	5%	/	/
Phosphorous	4%	6%	8%	2%
Sodium	10%	10%	10%	10%
Calcium	19%	18.5%	19.7%	21%
<b>Digestibility Enhancers</b>				
Yeast	/	/	Included	Included
Seaweed	Included	Included	/	/
<b>Trace Elements</b>				
Copper(Sulphate)	2500 mg/kg	2500 mg/kg	2880 mg/kg	2880mg/kg
Copper (Chelate)	500 mg/kg	500mg/kg	120mg/kg	120mg/kg
Zinc (Oxide)	4500 mg/kg	4500mg/kg	4850mg/kg	4850mg/kg
Zinc (Chelate)	500 mg/kg	500 mg/kg	150 mg/kg	150 mg/kg
Selenium (Selenite)	40 mg/kg	40 mg/kg	27 mg/kg	27 mg/kg
Selenium (Selplex)	10 mg/kg	10 mg/kg	/	/
Cobalt (Carbonate)	99 mg/kg	99 mg/kg	75 mg/kg	75 mg/kg
Iodine (Cal Iodate)	500 mg/kg	500 mg/kg	250 mg/kg	250 mg/kg
Manganese (Oxide)	2000 mg/kg	2000 mg/kg	2000 mg/kg	2000 mg/kg
<b>Vitamins</b>				
Vit A	400,000 iu/kg	400.000 iu/kg	100,000 iu/kg	100,000 iu/kg
Vit D3	120,000 iu/kg	120,000 iu/kg	20,000 iu/kg	20,000 iu/kg
Vit B12	1,000 mcg/kg	1,000 mcg/kg	1,000 mcg/kg	1,000 mcg/kg
Vit E	5,000 mg/kg	5,000 mg/kg	1,500 mg/kg	1,500 mg/kg
Pack Size	25kg	25kg	25kg	25kg



Post Calver/Hi Fertility /Beet & Maize			
Cow Numbers	Rate 200g/day (150-250)	Weeks	Kg Required (Bags Required)
1	200g	1	1.4kg
50		4	280kg (11 bags)
70		4	390kg (16 Bags)
100		4	560kg (22 bags)
50		12	840kg (34 Bags)
70		12	1170kg (47 Bags)
100		12	1680kg (67 Bags)

Cattle Mineral			
Cattle Numbers	Rate 30g/100kg	Weeks	Kg Required (Bags Required)
250kg	75g/day		
1		1	0.525kg
20		12	126kg (5 Bags)
40		12	252kg (10 bags)
60		12	375kg (15 Bags)
500kg	150g/day		
20		12	250kg (10 Bags)
40		12	500kg (20 Bags)
60		12	750kg (30 Bags)



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### Molassed Blocks: Standard BLF Nutrition Range: 20 Kg Round Buckets



	Pre-Calver	High Mag	Calf-Beef	Calf Feed	Sheep	Dual Mag	Sheep
<b>Macro</b>							
Magnesium	15 %	15 %	/	/	5 %	16 %	/
Phosphorous	2 %	/	3 %	1.5 %	2 %	1 %	1.5 %
Sodium	9 %	8.6 %	12 %	3 %	12 %	8.6 %	6 %
Calcium	3 %	3 %	6.3 %	6 %	6.8 %	3 %	6 %
Protein (Soya Bean Meal)	/	/	/	15 %	/	/	15 %
<b>Digestibility Enhancers</b>							
Yeast	3 g/kg	2.5 g/kg	3 g/kg	2 g/kg	2 g/kg	1 g/kg	2.5 g/kg
Seaweed	5 %	5 %	5 %	2.5 %	5 %	1.5 %	5 %
<b>Trace Elements</b>							
Copper (Sulphate)	2500 mg/kg	2000 mg/kg	2000 mg/kg	1500 mg/kg	/	/	/
Copper (Bioplex)	200 mg/kg	120 mg/kg	120 mg/kg	120 mg/kg	-- mg/kg	/	/
Zinc (Oxide)	2800 mg/kg	2800 mg/kg	2880 mg/kg	2000 mg/kg	2920 mg/kg	2300 mg/kg	2736 mg/kg
Zinc (Bioplex)	150 mg/kg	150 mg/kg	150 mg/kg	75 mg/kg	150 mg/kg	150 mg/kg	150 mg/kg
Zinc (Sulp Hept)	1000 mg/kg	1000 mg/kg	/	/	1300 mg/kg	/	223 mg/kg
Selenium (Selenite)	45 mg/kg	37 mg/kg	45 mg/kg	22 mg/kg	36 mg/kg	22.5 mg/kg	21.6mg/kg
Cobalt (Carbonate)	60 mg/kg	60 mg/kg	60 mg/kg	60 mg/kg	99 mg/kg	60 mg/kg	99 mg/kg
Iodine (Cal Iodate)	400 mg/kg	302 mg/kg	167 mg/kg	95 mg/kg	225 mg/kg	200 mg/kg	100 mg/kg
Manganese (Oxide)	1000 mg/kg	1000 mg/kg	1000 mg/kg	1000 mg/kg	1000 mg/kg	1000 mg/kg	1000 mg/kg
<b>Vitamins</b>							
Vit A	100,000 iu/kg	100,000 iu/kg	100,000 iu/kg	60,000 iu/kg	50,000 iu/kg	/	30,000 iu/kg
Vit D3	20,000 iu/kg	20,000 iu/kg	20,000 iu/kg	12,000 iu/kg	10,000 iu/kg	/	6,000 iu/kg
Vit B1	/	/	/	/	230 mg/kg	/	23 mg/kg
Vit B12	/	/	/	/	200 mg/kg	/	15 mg/kg
Biotin	/	/	/	/	13.3 mg/kg	/	13.3 mg/kg
Vit E Alpha Toc.	1500 iu/kg	500 iu/kg	500 iu/kg	250 iu/kg	1000 iu/kg	300 iu/kg	1000 iu/kg

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## Ruminant pH Neutraliser

pH Neutraliser is an acid relief/buffer product, which regulates metabolism and assists in nutrient absorption and feed utilisation. Our new 2020 formulation has been derived based on 2 decades of research, development and innovative trial work conducted by BLF Nutrition and our partners. Ingredients include Crina Biotin, Calcified Seaweed, Alltech Yeasacc, Sodium Bicarbonate, Actigen and Ammonium Bicarbonate, among other rumen/gut stabilisers and digestibility enhancers.

The main benefits of pH Neutraliser with Crina Biotin are:

- It slows down the digestive process and regulates metabolism.
- Aids in the prevention of metabolic diseases such as acidosis, lameness, poor body condition and scour.
- More efficient use of nitrogen in grass for milk production.
- Increases glucose yields for milk production.
- Increases weight gain in beef cattle.
- Counteracts problems associated with increased Potassium levels on the land due to excess slurry, being antagonised by increasing heard numbers and causing an imbalance between P and K levels.
- Allows for less energy requirement to absorb healthy bacteria.
- Increases blood flow to hooves through lower acidic levels.
- Slows down starch fermentation.
- Stabilises the pH to ensure the rumen and digestive system is working to their full potential when conditions are not ideal or antagonists are high.

Acidosis is said to occur when the pH of the rumen falls to less than 5.5 (normal is 6.5-7.0). In many cases the pH can fall even lower. The fall in pH has two effects. Firstly, the rumen stops moving, becoming atonic. This depresses appetite and production. Secondly, the change in acidity adjustment the levels of rumen flora, with acid-producing bacteria taking over. They produce more acid, making the acidosis worse. The increased acid is then absorbed through the rumen wall, causing metabolic acidosis, which in severe cases can lead to shock and death.

New pH Neutraliser Acid Relief with Crina Biotin is a cost effect solution to many heard problems.

Feeding Rate:

5 Kg per tonne of finished feed / 30gper head per day





## Equine Range

	Equine Mineral Lick 14kg	Equine Mineral Powder 25 Kg
<b>Macro</b>		
Magnesium	0.5 %	0.5 %
Phosphorous	2 %	2 %
Sodium	12 %	12 %
Calcium	10 %	10 %
Yeasacc	5 g/kg	5 g/kg
pH Neutraliser Acid Buff	2.5 %	5 %
Organic Seaweed	5 %	10 %
<b>Trace Elements</b>		
Copper (From Cu Sulphate)	2760 mg/kg	2760 mg/kg
Copper (From Cu Chelate)	240 mg/kg	240 mg/kg
Zinc (From Zn Oxide)	2520 mg/kg	2520 mg/kg
Zinc (From Zn Chelate)	150 mg/kg	150 mg/kg
Selenium	16 mg/kg	16 mg/kg
Cobalt	7.5 mg/kg	7.5 mg/kg
Iodine	100 mg/kg	100 mg/kg
Manganese	1000 mg/kg	1000 mg/kg
<b>Vitamins</b>		
Vit A	250,000 iu/kg	250,000 iu/kg
Vit D3	50,000 iu/kg	50,000 iu/kg
Vit B1	125 mg/kg	125 mg/kg
Pantothenic Acid	150 mg/kg	150 mg/kg
Nicotinic Acid	200 mg/kg	200 mg/kg
Vit B6	100 mg/kg	100 mg/kg
Vit B12	1 mg/kg	1 mg/kg
Folic Acid	10 mg/kg	10 mg/kg
Biotin	60 mg/kg	60 mg/kg
Vit E Alpha Toc.	1,000 mg/kg	1,000 mg/kg

### Equine Mineral Supplement 7.5 Kg

Manufactured by BLF Nutrition, this potent Equine Supplement has been formulated based on 35 years' experience in the production of Mineral, Vitamin and Trace Element Supplements. This mineral acts to aid equine digestibility, health, energy levels and overall appearance. Contains, Organic Seaweed, Bioplex Copper, Zinc, Manganese & Selplex, and a full range of Vitamins A, D3, E, B1, B2, B6, B12, Folic Acid, Nicotinic Acid, Pantothenic Acid, K, and Biotin. Sold in a 3 Kg Tub and to be fed at a 100 gram feeding rate, this potent formula provides one horse with all the essential minerals needed for one month.

#### Product: Liquid Minerals



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25 Litre Fertility / Post Calver	
<b>Trace Elements</b>	
Copper (From Copper Sulphate Pent)	1200 mg/l
Zinc (From Zinc Sulphate)	1200 mg/l
Selenium (From Sodium Selenite)	100 mg/l
Cobalt (From Cobalt Sulphate)	30 mg/l
Iodine (From Potassium Iodate)	500 mg/l
Manganese (From Manganese Sulphate)	1000 mg/l
<b>Feeding Rate:</b>	16 ML /H/D

Stockmag Liquid Mag 1000 Liters	
Magnesium	5%
<b>Feeding Rate:</b>	0.3 L /H/D

1000 L Stockmag with Full Trace	
Magnesium	5%
<b>Trace Elements</b>	
Copper (From Copper Sulphate Pent)	1200 mg/l
Zinc (From Zinc Sulphate)	1200 mg/l
Selenium (From Sodium Selenite)	100 mg/l
Cobalt (From Cobalt Sulphate)	30 mg/l
Iodine (From Potassium Iodate)	500 mg/l
Manganese (From Manganese Sulphate)	1000 mg/l
<b>Feeding Rate:</b>	0.32 L /H/D



### **Premium Irish Powder Minerals**

Minerals are an essential dietary component for farm animals and have a huge effect of livestock output. Between 5-7% of the body weight of farm animals are made up of minerals and when imbalances occur, there is a huge impact on the animal.

#### **Mineral deficiencies occur on soils in Ireland due to:**

Inappropriate fertiliser and lime usage

Adverse weather conditions, wet, cold, drought, etc.

Increased crop yields

Soil compacting and water logging

These deficiencies then have unfavourable effects on animals, with issues ranging from minor health problems to deaths, depending on the severity of the deficiency. Research has proven that mineral deficiencies can cause the following related problems in dry and lactating cows:

#### **Dry Cows**

Dead or weak calves

Retained placenta

Milk fever

Slow or difficult calving

#### **Lactating Cows**

Silent Heats

Lameness

Embryonic loss

Poor conception

Grass tetany

To solve the problem our mineral range are made to balance the deficiencies and excesses on Irish farms, as well as individual farm requirements. These minerals accompanied with good farming practices will help balance the nutritional deficiencies on farms.

### **Essential Minerals, Vitamins and Trace Elements**

There are over 20 essential minerals, vitamins or trace elements required by ruminant animals to ensure none of the above problems come to fruition.



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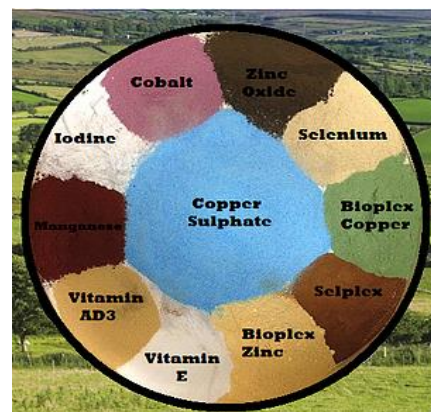
## Minerals

The most common mineral deficiencies in Ireland are Calcium, Phosphorous, Magnesium and Sodium. In cattle the most common mineral imbalance is a lack of phosphorous, which is due to our damp climate. Phosphorous is essential for proper functioning of the rumen, allowing full utilization of feed, buffering of blood, protein metabolism and a more efficient reproductive system.

Calcium is important for bone structure and also assists in blood clotting and enzyme activation. Calcium deficiencies can cause slow growth in calves, and low milk production in lactating animals.

Magnesium acts as an aid to prevent grass tetany. Hypomagnesemic tetany is caused when levels of magnesium within the animal drop, which can lead to cattle having muscle problems, respiratory problems, collapse and in bad cases death. The issue is common where an animal has been grazing on lush grass with high nitrate levels, which are common conditions in our climate.

A correct sodium chloride level is essential for adequate water retention and use. It also lays a major role in feed and nutrient absorption. Livestock crave salt, with sodium being a nutrient in salt. A prolonged deficiency in salt can cause animals to be less content, leading to less milk production, loss of weight and poor appearance. Due to the growing demand on livestock in terms of farming outputs, sodium deficiencies are now more likely to occur. This is due to salt being secreted through milk during lactation. Another reason for lower sodium content is that animals are now being fattened at a quicker rate, which also reduces sodium levels. Over fertilized ground with high K content also leads to a grassland with depressed sodium levels.



	Main Function	Disease/Issue Associated
<b>Magnesium</b>	Bone and muscle function and maintenance, muscle contraction, calcium absorption and enzyme activation	Tetany and poor calcium absorption
<b>Phosphorous</b>	Development of physical body structure, energy metabolism, milk production, fertility and appetite control	Poor growth, silent heaths, late conception, poor appetite, bone/teeth irregularities, poor milk yields
<b>Calcium</b>	Smooth muscle function, bone development, milk production	Retained afterbirth, bone/joint issues, reduced milk yield, milk fever
<b>Potassium</b>	Regulate pH balance and nerve transmission	Poor intake of other macro minerals leading to other health issues
<b>Sodium</b>	Sodium and Chlorine are essential for proper water metabolism, nutrient uptake and transmission of nerve impulses	Anxiety, weakness, licking walls, loss of appetite, decreased growth, general poor health, weight loss



## Vitamins

The most important vitamins in animal nutrition are Vitamin's A, D, and B. Vitamin A is available in most green plants, and should animals be fed poor quality roughage deficiencies occur. Problems associated with lack of vitamin A are decreased appetite, impaired vision and an increased likelihood of still births in pregnant animals. Vitamin D is mostly obtained from the sun, and due to the climate in this country this is generally found to be lacking in our

animals. It is important in the sense that it is necessary for the absorption of calcium and phosphorous, two essential minerals. The range of B Vitamin's are important for immune functionality, and when an imbalance occurs here it makes animals susceptible to disease, ringworm, diarrhoea etc. Some Extreme Vitamin B deficiencies are considered metabolic diseases.

	Main Function	Disease/Issue Associated
<b>Vitamin A</b>	Essential for growth, immune health, reproduction and vision	Increased risk of infection, blindness, poor absorption of other nutrients
<b>Vitamin D3</b>	Absorption of calcium and phosphorous, regulation of immune cells and regulation of calcification of bones	Rickets, bone deformities, muscular weakness, lameness, occasionally tetany
<b>Vitamin E</b>	An essential fat soluble antioxidant, regulates the immune system, fertility system and essential to normal healing	Fertility disorders, muscular dystrophy, retained placenta, reduced immune response
<b>Vitamin B's</b>	Produces ATP, DNA and RNA as well as assisting in energy production, synthesis of steroids, red blood cells and glycogen, biosynthesis of long chain fatty acids	Poor coordination, heart failure, mucosal inflammation, poor absorption of zinc, iron and calcium. Ulcerative lesions in the large intestine

## Trace Elements

In Irish soils over the past number of decades has shown consistent low levels of Copper, Iodine, Selenium and Zinc on Irish Farms, which is problematic due to the benefits of these specific minerals.

### Clinical signs of copper deficiency can include:

Scour	Rough and dull hair
Loss of body weight	Slow growth
Brittle bones	

Iodine deficiencies can be associated with calves and calving problems. A sign of iodine deficiency is and enlarged thyroid, with the main problem associated with this deficiency being calves being stillborn with enlarged thyroid and oedema-swelling.

Problems associated with selenium deficiency can be retained placenta or afterbirth, which decrease fertility. Calves born to cows on a selenium deficient diet can be born with muscular dystrophy which can damage the musculoskeletal system and cardiac muscles and can be more susceptibility to disease. Selenium also plays a major role in the regulation of an animals metabolism. Zinc deficiency causes chronic cracked skin, and can stop wounds from healing properly. An additional issue with a lack of zinc is that it causes hooves to become soft.

	Main Function	Disease/Issue Associated
<b>Copper</b>	Helps to maintain the nervous system, bone metabolism, the hormonal system and heart functions. It also plays a role in the immune system, milk yields and coat quality	Slow growth, brittle bones, scour, poor immune system functionality, reduced conception
<b>Iodine</b>	Maintains synthesis of thyroxine and helps fight irregular reproductive activity	Endemic goiters, dead calves, retained placenta, early embryonic loss
<b>Selenium</b>	An essential role in metabolism antibody production, immune function, fertility and growth	Nutritional muscular dystrophy or white muscle disease, retained afterbirth in mature dairy cows, mastitis
<b>Zinc</b>	A pivotal role in maintaining skin, hair and hoof health. It also effects general growth, immune activity, enzyme activation and lactation	Lameness, scaly skin, poor sperm production, poor conception rates, high somatic cell count
<b>Manganese</b>	Contribution to metabolism, skeletal and muscular development, maintaining normal growth, reproduction and lactation	Poor growth and development, bone and joint problems
<b>Cobalt</b>	To manufacture and utilize vitamin B12 for energy	Loss of appetite, poor growth and poor thrive



## **Organic Trace Elements**

In conjunction with using all essential trace elements needed in our minerals, we also used protected trace elements in the form of Bioplex Copper, Bioplex Zinc, Bioplex Manganese and Selplex, all manufactured by Alltech. This range of chelated organic trace minerals provides mineral nutrition in a form as close to nature as possible and are better able to support the modern needs of rapidly growing livestock or high milk production lactating animals. These organic minerals are easier absorbed and utilized by animals, ensuring maximum success of our products, contrasting well with out other premium minerals, vitamins and trace elements incorporated.

## **Ruminant Stability**

Ensuring that the rumen is stable in farm animals has become an essential practice among farmers when looking to maximize efficiency and profitability. An unbalanced or unstable rumen leads to poor regurgitation, poor use of feed, and poor mineral absorption, which can in turn lead to poor health and performance. Our pH neutraliser aids in overcoming this problem in a cost effective manner. The ruminant pH neutraliser is an essential dietary supplement for animals containing yea-sacc, ruminant stabilisers, and a range of other premium ingredients to enhance digestibility and improve overall animal health including regulating metabolism and assisting in nutrients absorption.

## **Seaweed**

Seaweed has been shown to reduce methane levels emitted from ruminants when incorporated into their diet. As methane levels rise in the rumen, the rumen becomes more unstable and less efficient, thus stopping animals from getting the best use of feed. An additional benefit of organic seaweed is the organic forms of minerals found within the product. Organic forms of iodine and copper are easier to break down by the animal, thus increasing animal performance and health leading to a positive effect on livestock products such as meat and milk.








# HOWARD FARMS

*Specialising in Quality Feed, Seed, Fertilizers & Agro Chemicals*

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