



AGRICULTURE

Traded Product Guide

Edition 4

WELCOME TO NWF AGRICULTURE

Established in 1871, NWF Agriculture has 150 years' experience in supplying Britain's farmers with high quality animal feed, supplements and advice.

NWF Agriculture supplies over 4,750 customers ranging from Scotland to Cornwall, with over 600,000 tonnes of feeds each year. With the majority of our business supplying ruminants, and leading the industry with dairy feed, NWF and its 200 employees are proud to feed 1 in 6 dairy cows across Great Britain.

NWF Agriculture's UK expansion plan began in 2004 with the purchase of JGT Thomas & Son in Devon which expanded coverage from Cheshire to the South West.

With an opportunity to expand in the central and northern region, NWF purchased SC Feeds in Staffordshire in 2013 and then Jim Peet Agriculture in Carlisle in 2016 which enabled the business to be truly national. A further £2 million investment into a state of the art automated blends plant in 2017 at the Nantwich site leaves NWF Agriculture in a favourable position to continue to assert its ambitious position in the British Agricultural Feed Industry.

During this expansion, a feed treatment plant was developed at the Nantwich site which enabled NWF to manufacture its own unique range of protected proteins and energy sources. These feeds now make up a significant component of the standard feed range, offering an industry leading bypass protein range.

PRODUCTION SITES



Wardle

NWF Agriculture Ltd, Wardle, Nantwich, Cheshire, CW5 6AQ
Tel: 01829 261155

Wixland

NWF Agriculture Ltd, Wixland Mill, Wixland, Atherington, Devon, EX37 9HZ
Tel: 01769 560273

Longtown

Jim Peet Agriculture, Sandysike Mill, Sandysike Industrial Estate, Sandysike,
Longtown, Carlisle, Cumbria, CA6 5SS. Tel: 01228 79190

Brayton

Jim Peet Agriculture, Brayton Park Mill, Brayton Park,
Brayton, Wigton, Cumbria, CA7 3SX. Tel: 01768 881881

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All analyses are supplied on a Dry Matter basis through this product guide.



STRAIGHTS

STRAIGHTS



STRAIGHTS

Modern TMR and mixer wagon-based feeding systems allow a wide range of feed ingredients to be cost-effectively included in ruminant diets. The use of straights and moist feeds can complement home produced forages. To achieve the best balance of ingredients and secure a continuous supply of straights and moist feeds at competitive prices our trading teams monitor market movements daily.

The NWF Agriculture Market Data page is refreshed from the latest market information every 15 minutes, providing you up-to-date live prices.

The Market Data page illustrates movements on a daily basis. For more information on our live market data page, visit the NWF Agriculture website, or alternatively speak to our commodities team on 0800 756 2787 to help make your raw materials as cost-effective as possible.



HIPRO SOYA EXT 49

An extremely high protein feed providing energy with a balanced amino acid profile. Soya beans when crushed produce three main products; oil, meal and hulls. The remainder is then heated and flaked.

Nutritional Benefit

Soya bean meal is probably the best quality vegetable protein source widely used around the world. High in protein and energy with a good amino acid profile, being high in lysine, although methionine is low. High in phosphorus of which 50% is available. HiPro Soya does not have the hulls re-blended in and therefore, lower in fibre, but higher in protein. A source of B and D vitamins.

Features

- An excellent source of high-quality protein.
- Wide range of uses for many classes of livestock.

Typical Analysis

• <i>Dry Matter – 90.0%</i>	• <i>Sugars – 90.0%</i>
• <i>Crude Protein – 55.0%</i>	• <i>NDF – 55.0%</i>
• <i>MER 13.6 MJ/Kg</i>	• <i>Oil AH – 2.6%</i>
• <i>Starch – 5.0%</i>	

Daily feed rates (per head basis)

<i>Milking Cows</i>	<i>Up to 4 (typically 2)kg</i>
<i>Dry Cows</i>	<i>Up to 2kg</i>
<i>Replacement Heifers</i>	<i>Up to 2kg and up to 30% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 0.75kg and up to 20% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 1.5kg and up to 30% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 2kg and up to 35% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 2 (typically 1)kg</i>
<i>Ewes and Rams</i>	<i>Up to 0.75 (typically 0.25)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 0.75kg and up to 30% of the DMI</i>

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MAIZE DISTILLERS

A by-product of either grain whisky production (often for gin or vodka manufacturing) or ethanol production. Maize is soaked to release the starch reserves for fermentation. The grain which remains after the liquor is removed is often called wet draff.

Nutritional Benefit

High in fibre, but well digested by ruminants. A high-energy, mid-protein feed which is reasonably undegradable in the rumen. It is low in starch because of its extraction but, has the highest energy value of all distillers' grains, being higher in oil content than other distillers grains.

Features

- Very palatable feed.
- High-quality protein and a source of bypass protein.
- High proportion of the energy as digestible fibre and oil.

Typical Analysis

• Dry Matter – 90.0%	• Sugars – 5.5%
• Crude protein – 28.0%	• NDF – 44.5%
• MER 14.8 MJ/Kg	• Oil AH – 12.0%
• Starch – 4.5%	

Daily feed rates (per head basis)

Milking Cows	Up to 4 (typically 3)kg
Dry Cows	Up to 2kg
Replacement Heifers	Up to 3kg and up to 35% of the DMI
Calves (to 12 weeks)	Up to 1.5kg and up to 25% of the DMI
Growing Cattle	Up to 2.5kg and up to 40% of the DMI
Finishing Cattle	Up to 5kg and up to 40% of the DMI
Suckler Cows	Up to 3 (typically 2)kg
Ewes and Rams	Up to 1 (typically 0.5)kg
Hoggets and Lambs	Up to 0.75kg and up to 50% of the DMI

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MAIZE GERM

A high energy, very digestible and palatable feed providing a good source of 'slowly fermentable' starch. These are the dried germs from maize after the oil has been extracted. Maize germ is a by-product from either the wet milling of maize, produced after the initial grinding and separation, or from the production of corn.

The oil is either expelled or extracted leaving variable levels depending on the source as such, always check the source and oil content.

Nutritional Benefit

High in starch, energy and protein with good amino acid balance. The oil is free, unsaturated and could be detrimental to rumen function if not formulated correctly. The low calcium content makes it suitable for dry cows.

Features

- High starch & energy content.
- High levels of digestible 'slow release' starch.

Typical Analysis

• Dry Matter – 88.0%	• Sugars – 7%
• Crude protein – 26.0%	• NDF – 4.5%
• MER 14.3 MJ/Kg	• Oil AH – 36.5%
• Starch – 23.0%	

Daily feed rates (per head basis)

Milking Cows	Up to 5 (typically 3)kg with other feeds
Dry Cows	Up to 2kg (typically 1)kg
Replacement Heifers	Up to 2kg and up to 30% of the DMI
Calves (to 12 weeks)	Up to 1.5kg and up to 25% of the DMI
Growing Cattle	Up to 3kg and up to 40% of the DMI
Finishing Cattle	Up to 5kg and up to 50% of the DMI
Suckler Cows	Up to 3 (typically 1)kg
Ewes and Rams	Up to 1 (typically 0.5)kg
Hoggets and Lambs	Up to 1.5kg and up to 50% of the DMI

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MAIZE GLUTEN

A feed with a balanced composition of protein, starch and digestible fibre. This makes it an ideal complement in ruminant rations. Derived from the wet milling of maize to extract starch or for alcohol/ethanol production, this feed consists of maize fibre and corn steep liquor, dried and pelleted. The product is manufactured in the USA and is an excellent alternative to domestically produced wheat gluten.

Nutritional Benefit

As a protein feed with reasonable energy, maize gluten suits many rations and is of good digestibility. The protein quality means it is of less use for pigs and poultry. Although it has reasonable fibre levels, due to milling, it is quite short in length and quickly fermented.

Features

- Balanced nutrient composition.
- Ready to use pellet / meal.
- Reasonable pellet durability.

Typical Analysis

• Dry Matter – 88.0%	• Sugars – 3.5%
• Crude protein – 21.5%	• NDF – 42.5%
• MER 12.9 MJ/Kg	• Oil AH – 4%
• Starch – 223.0%	

Daily feed rates (per head basis)

Milking Cows	Up to 6 (typically 3)kg
Dry Cows	Up to 2kg
Replacement Heifers	Up to 4kg and up to 35% of the DMI
Calves (to 12 weeks)	Up to 1.5kg and up to 25% of the DMI
Growing Cattle	Up to 2.5kg and up to 40% of the DMI
Finishing Cattle	Up to 5kg and up to 40% of the DMI
Suckler Cows	Up to 4 (typically 2)kg
Ewes and Rams	Up to 1 (typically 0.5)kg
Hoggets and Lambs	Up to 0.75kg and up to 50% of the DMI

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MALT RESIDUAL PELLETS

A well-balanced medium energy and protein feed, providing a lot of digestible fibre and good pellet quality. Malt residual pellets are a co-product from the malting industry. After screening, larger grains of malting barley are encouraged to sprout in order to convert the starch in the grain into sugars. The process is stopped and the sprouts or rootlets (malt culms) removed and dried. Malt residual pellets are formed from a pelleted combination of the malt culms and barley screenings.

Nutritional Benefit

Average energy can be used as a lower cost filler which has a reasonable source of protein.

Features

- A good source of digestible fibre.
- High digestible fibre and lower starch content.
- Balanced nutrient composition.
- Consistent and durable pellet.

Typical Analysis

• Dry Matter – 90.0%	• Sugars – 0.4%
• Crude protein – 24.5%	• NDF – 51.2%
• MER 11.2 MJ/Kg	• Oil AH – 2.5%
• Starch – 16.1%	

Daily feed rates (per head basis)

Milking Cows	Up to 3 (typically 2)kg
Dry Cows	Up to 2kg
Replacement Heifers	Up to 2kg and up to 30% of the DMI
Calves (to 12 weeks)	Up to 0.75kg and up to 20% of the DMI
Growing Cattle	Up to 3kg and up to 30% of the DMI
Finishing Cattle	Up to 4kg and up to 35% of the DMI
Suckler Cows	Up to 3 (typically 2)kg
Ewes and Rams	Up to 0.75 (typically 0.5)kg
Hoggets and Lambs	Up to 0.75kg and up to 30% of the DMI

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OATFEED

Oats are widely used in porridge and other breakfast cereals. Oatfeed is produced as a by-product of processing porridge and consists of a mixture of hulls and meal remaining from the screening and dehulling process.

Nutritional Benefit

A feed of low nutritive value but well suited to ruminant feed. It has a high level of neutral detergent fibre (NDF) and a variable composition which is dependent on the levels of included hulls, flour and screen dust.

Oatfeed needs careful mineral supplementation.

Features

- A source of digestible fibre.
- Low starch and high digestible fibre.

Typical Analysis

• Dry Matter – 89.0%	• Sugars – 2.0%
• Crude protein – 5.0%	• NDF – 2.0%
• MER 6.0 MJ/Kg	• Oil AH – 79.0%
• Starch – 7.5%	

Daily feed rates (per head basis)

Milking Cows	Up to 4 (typically 1)kg
Dry Cows	Up to 3kg
Replacement Heifers	Up to 3kg and up to 35% of the DMI
Calves (to 12 weeks)	Up to 1kg and up to 25% of the DMI
Growing Cattle	Up to 3kg and up to 35% of the DMI
Finishing Cattle	Up to 4kg and up to 40% of the DMI
Suckler Cows	Up to 4 (typically 1)kg
Ewes and Rams	Up to 1 (typically 0.25)kg
Hoggets and Lambs	Up to 1kg and up to 35% of the DMI

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PALM KERNEL EXPELLER

A good source of energy as digestible fibre and palm oil. A by-product of the palm oil manufacturing process. Obtained by the expelling of palm kernels from which the hard shell has been removed.

Nutritional Benefit

A source of protein and energy with a high fibre level; It will contain some palm oil which is a hard oil, producing a carcass fat. It is not suitable for use on its own but it is often mixed with molasses to encourage intake. High inclusion levels can help to boost butterfat levels.

Features

- Very high oil, rich in palmitic acid.
- A rich source of digestible fibre.
- Good supply of non-starch digestible fibre energy.

Typical Analysis

• Dry Matter – 89.0%	• Sugars – 0.4%
• Crude protein – 18.0%	• NDF – 51.2%
• MER 12.8 MJ/Kg	• Oil AH – 2.5%
• Starch – 1.75 %	

Daily feed rates (per head basis)

Milking Cows	Up to 2 (typically 1)kg
Dry Cows	Up to 1kg
Replacement Heifers	Up to 2kg and up to 20% of the DMI
Calves (to 12 weeks)	Up to 0.5kg and up to 7.5% of the DMI
Growing Cattle	Up to 2kg and up to 25% of the DMI
Finishing Cattle	Up to 3kg and up to 35% of the DMI
Suckler Cows	Up to 2 (typically 1)kg
Ewes and Rams	Up to 0.5 (typically 0.25)kg
Hoggets and Lambs	Up to 0.5kg and up to 25% of the DMI

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RAPESEED MEAL (Expelled)

Rapeseed meal is a high energy, hot pressed rapeseed expeller supplying significantly higher energy and post rumen protein digestibility than rape seed meal, extract due to higher retained rumen friendly oil and avoidance of the heat used in the recovery of hexane used in extracted meals.

Nutritional Benefits

Allows for performance to be maintained whilst reducing the overall protein needs; saving feed costs. Ruminants will increase their intake to provide energy to match the additional supply of amino acids in rapeseed expeller.

Features

- Higher energy & amino acid digestibility than rapeseed meal extract.
- Dry and free-flowing meal, suitable for wide range of uses for many livestock, providing a source of high quality protein, superior to soya and matched amino acid profile.

Typical Analysis

• Dry Matter – 89.0%	• Sugars – 7.9%
• Crude protein – 35.4%	• NDF – 35.0%
• MER 13.2 MJ/Kg	• Oil AH – 10.4%
• Starch – 6.9 %	

Daily feed rates (per head basis)

Milking Cows	Up to 4 (typically 2)kg
Dry Cows	Up to 2kg
Replacement Heifers	Up to 2kg and up to 25% of the DMI
Calves (to 12 weeks)	Up to 0.75kg and up to 20% of the DMI
Growing Cattle	Up to 2kg and up to 25% of the DMI
Finishing Cattle	Up to 3kg and up to 30% of the DMI
Suckler Cows	Up to 2 (typically 0.25)kg
Ewes and Rams	Up to 0.5 (typically 0.25)kg
Hoggets and Lambs	Up to 0.25kg and up to 50% of the DMI

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RAPESEED MEAL (Extracted)

A good source of rumen degradable protein as well as rumen bypass protein with an amino acid profile beneficially similar to microbial and milk protein.

Nutritional Benefit

A high protein, good energy feed used to partially replace soya bean meal, although the protein is less digestible. The meal from industrial crops is usually high in glucosinolate/erucic acid.

Features

- Approximately 2/3 of Rapeseed Meal protein is rumen degradable.
- A good source of high-quality protein.
- Wide range of uses for many classes of livestock.
- We use this product to produce Ultra Pro-R due to its consistent physical quality, the proximity of the production sites and its amino acid profile.

Typical Analysis

• <i>Dry Matter</i> – 88.0%	• <i>Sugars</i> – 5.0%
• <i>Crude protein</i> – 38.5%	• <i>NDF</i> – 9.5%
• <i>MER 12.1 MJ/Kg</i>	• <i>Oil AH</i> – 36.5%
• <i>Starch</i> – 5.0 %	

Daily feed rates (per head basis)

<i>Milking Cows</i>	<i>Up to 4 (typically 2)kg</i>
<i>Dry Cows</i>	<i>Up to 2kg</i>
<i>Replacement Heifers</i>	<i>Up to 2kg and up to 30% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 0.75kg and up to 20% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 1.5kg and up to 30% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 2kg and up to 35% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 2 (typically 1)kg</i>
<i>Ewes and Rams</i>	<i>Up to 0.5 (typically 0.25)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 0.5kg and up to 30% of the DMI</i>

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SOYA HULLS

Extremely rich in digestible fibre, Soya Hulls are excellent for maintaining rumen conditions and an ideal substitute for sugar beet feeds, when the price ratio encourages this. Soya beans are normally dehulled prior to crushing and the resulting hulls are either sold as a meal or pelleted.

Nutritional Benefit

A good source of digestible fibre, with average protein and reasonable energy levels.

Features

- A rich source of digestible fibre.
- Good levels of non-starch digestible fibre energy.
- Extremely high content of digestible fibre.

Typical Analysis

• Dry Matter – 90.0%	• Sugars – 5.0%
• Crude protein – 11.6%	• NDF – 9.0%
• MER 11.9 MJ/Kg	• NDF – 67.5%
• Starch – 5.0 %	• Oil AH – 2.4%

Daily feed rates (per head basis)

Dry Cows	Up to 2kg
Replacement Heifers	Up to 2kg and up to 40% of the DMI
Calves (to 12 weeks)	Up to 1kg and up to 40% of the DMI
Growing Cattle	Up to 2.5kg and up to 40% of the DMI
Finishing Cattle	Up to 5kg and up to 50% of the DMI
Suckler Cows	Up to 4 (typically 2)kg
Ewes and Rams	Up to 1 (typically 0.5)kg
Hoggets and Lambs	Up to 1kg and up to 50% of the DMI

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SUNFLOWER 32/29

Though it contains less protein and much more fibre than soybean meal, Sunflower 32/29 is a valuable livestock feed, particularly for ruminants and under certain conditions, for pigs and poultry. Well suited to ruminant rations within which it can help reduce acidosis by its fibre contribution. Sunflower 32/29 is a by-product of the oil manufacturing process obtained through the expelling and extraction of seeds of the sunflower.

Nutritional Benefit

Sunflower 32/29 has good protein levels and is high in fibre. Available in specific blends.

Features

- High levels of digestible protein.
- Good fibre content.
- Good energy levels.
- Good compliment to low protein feeds.
- Beneficial amino acid profile.

Typical Analysis

• <i>Dry Matter</i> – 88.0%	• <i>Starch</i> – 1.5%
• <i>Crude protein</i> – 36.0%/32.0%	• <i>Sugars</i> – 6.0%
• <i>MER 9.5 MJ/Kg</i>	• <i>NDF</i> – 47%
• <i>Starch</i> – 27.5 %	• <i>Oil AH</i> – 2.5%

Daily feed rates (per head basis)

<i>Milking Cows</i>	<i>Up to 4 (typically 2)kg</i>
<i>Dry Cows</i>	<i>Up to 2kg</i>
<i>Growing Cattle</i>	<i>Up to 30% of the DMI</i>
<i>Ewes and Rams</i>	<i>Up to 10% of the DMI</i>
<i>Hoggets and Lambs</i>	<i>Up to 10% of the DMI</i>

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WHEAT DISTILLERS

A very palatable, high energy and protein feed, rich in digestible fibre, low in starch and providing a good source of bypass protein. Wheat Distillers are a product of the bioethanol industry. Following the fermentation of wheat and the distillation of ethanol, they are obtained from drying solid residues of fermented grains and adding evaporated syrups.

Nutritional Benefit

High in energy and protein, which is partly degradable, can be used alongside our protected proteins to replace soya when the price ratio encourages it.

Features

- Highly palatable feed.
- High quality protein and a good source of bypass protein.
- Distillery products contain high levels of yeast fragments particularly in the soluble fraction.
- High proportion of the energy as digestible fibre.
- Pellet durability can be an issue.

Typical Analysis

• Dry Matter – 90.0%	• Sugars – 5.0%
• Crude protein – 34.0%	• NDF – 40%
• MER 13.7 MJ/Kg	• Oil AH – 8.5%
• Starch – 5.0 %	

Daily feed rates (per head basis)

Milking Cows	Up to 4 (typically 3)kg
Dry Cows	Up to 2kg
Replacement Heifers	Up to 3kg and up to 35% of the DMI
Calves (to 12 weeks)	Up to 1.5kg and up to 25% of the DMI
Growing Cattle	Up to 2.5kg and up to 40% of the DMI
Finishing Cattle	Up to 4kg and up to 40% of the DMI
Suckler Cows	Up to 4 (typically 2)kg
Ewes and Rams	Up to 1 (typically 0.5)kg
Hoggets and Lambs	Up to 0.75kg and up to 50% of the DMI

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WHEATFEED

A well-balanced energy, starch and digestible fibre feed material. A by-product of flour manufacturing from screened grains of wheat or de-husked spelt. It consists principally of fragments of the outer skins and particles of grain from which less of the endosperm has been removed than in wheat bran. Available as a meal or 6, 8 and 10mm pellets.

Nutritional Benefit

Highly digestible, but quality varies between production plants. Ideal for ruminants and pig feed and also for horse feed. A good source of phosphorus, but low in calcium, sodium and vitamins.

Features

- Useful source of starch.
- Balanced supply of readily digestible fibre, protein and starch.
- Good quality and consistent pellet. Easily stored, suitable for a wide range of livestock and incorporated into most feeding systems.

Typical Analysis

• <i>Dry Matter</i> – 86.0%	• <i>Sugars</i> – 6.5%
• <i>Crude protein</i> – 17.5%	• <i>NDF</i> – 40%
• <i>MER 11.5 MJ/Kg</i>	• <i>Oil AH</i> – 4.0%
• <i>Starch</i> – 27.5 %	

Daily feed rates (per head basis)

<i>Milking Cows</i>	<i>Up to 3 (typically 2)kg</i>
<i>Dry Cows</i>	<i>Up to 3kg</i>
<i>Replacement Heifers</i>	<i>Up to 3kg and up to 35% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 1kg and up to 25% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 3kg and up to 35% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 4kg and up to 40% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 4 (typically 2)kg</i>
<i>Ewes and Rams</i>	<i>Up to 1 (typically 0.5)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 1kg and up to 35% of the DMI</i>

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SUGARBEET



SUGARBEET

MAXIBEET

A highly digestible fibre based palatable energy feed. Maxibeet is a co-product from sugar production. Once the sugar has been diffused out from the beet, the fibrous residues are dried and then pelleted to produce the final product.

Nutritional Benefit:

Can stimulate intake, assist in optimising rumen pH and increase ration energy density without increasing risk of acidosis.

Features:

- High digestible fibre content promotes stable rumen fermentation.
- Excellent buffering effect in rumen.
- Good for animal health.
- Improves milk quality.
- Can be used for all types of livestock and feeding systems.
- Unmolassed 6mm pellet.
- Preferable to imported products which are hard 8/10mm pellets.

Daily Feed Rate (Per head Basis):

<i>Milking Cows</i>	<i>Up to 6 (typically 3)kg</i>
<i>Dry Cows</i>	<i>Up to 2kg</i>
<i>Replacement Heifers</i>	<i>Up to 2kg and up to 40% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 1.5kg and up to 40% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 2.5kg and up to 40% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 5kg and up to 50% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 4 (typically 2)kg</i>
<i>Ewes & Rams</i>	<i>Up to 1 (typically 0.5)kg</i>

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MOLASSED SUGARBEET SHREDS

A highly digestible fibre and sugar energy palatable feed supplied as shreds that afford physical structure to a ration. Molassed Sugar Beet Shreds are a co-product from sugar production. Once the sugar has been diffused out from the beet, the fibrous residues are combined with molasses and dried as shreds.

Nutritional Benefit:

Can stimulate intake, assist in optimising rumen pH and increase ration energy density without increasing risk of acidosis, which assists with maintaining animal health and milk butter fat.

Features:

- Presented as dried shreds.
- A highly palatable feed.
- Good levels of non-starch digestible fibre energy.
- High content of digestible fibre.

Daily Feed Rate (Per head Basis):

<i>Milking Cows</i>	<i>Up to 6 (typically 3)kg</i>
<i>Dry Cows</i>	<i>Up to 2kg</i>
<i>Replacement Heifers</i>	<i>Up to 2kg and up to 40% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 1.5kg and up to 40% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 2.5kg and up to 40% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 5kg and up to 50% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 4 (typically 2)kg</i>
<i>Ewes and Rams</i>	<i>Up to 1 (typically 0.5)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 1kg and up to 50% of the DMI</i>

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SUPAFLOW

A highly digestible fibre energy and palatable pelleted feed, designed to be used in a range of mechanical handling and feed systems. Supaflow is a co-product from sugar production. Once the sugar has been diffused out from the beet, the fibrous residues are dried and combined with molasses.

Available in 25KG bags as SupaBeet.

Nutritional Benefit:

Can stimulate intake, assist in optimising rumen pH and increase ration energy density without increasing risk of acidosis, which assists with maintaining animal health and milk butter fat.

Features:

- A highly palatable feed.
- Good levels of non-starch digestible fibre energy.
- High content of digestible fibre.
- Suitable for a wide range of livestock.
- Molassed, fat coated 6mm pellet.
- Blowable and suitable for storage in feed bins.
- Preferable to imported products which are hard 8/10mm pellets.

Daily Feed Rate (Per head Basis);

<i>Milking Cows</i>	<i>Up to 6 (typically 3)kg</i>
<i>Dry Cows</i>	<i>Up to 2kg</i>
<i>Replacement Heifers</i>	<i>Up to 2kg and up to 40% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 1.5kg and up to 40% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 2.5kg and up to 40% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 5kg and up to 50% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 4 (typically 2)kg</i>
<i>Ewes and Rams</i>	<i>Up to 1 (typically 0.5)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 1kg and up to 50% of the DMI</i>

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PROTECTED FEEDS



PROTECTED FEEDS

PROTECTED FEEDS

When nutrients are broken down in the rumen they produce gases which is a necessary, but also inefficient use of valuable nutrients.

As an animals nutrient requirement increases, rumen bacteria alone are unable to cope, therefore by-passing nutrients into the hind gut offers both additional nutrients but also less gas production

Most protein sources such as rapeseed meal, distillers and soya contain both rumen degradable and by-pass protein. The same can also be said for starch, where cereals also contain both rumen degradable and by-pass starch. The key question is for every kilogram of a raw material that's fed, how many grams of by-pass protein supplied.

Why feed NWF Protected Feeds

1. **Improved performance** – UK diets based on grass silages and home grown cereals tend to be higher in rumen degradable nutrients. By-pass energy and protein is then required to supply the nutrients above and beyond what is capable from rumen bacteria. A lack of by-pass nutrients can often be seen in cows not achieving their peak yields.
2. **Rumen available nutrients** – Oversupplying nutrients to the rumen can create a challenging environment for bacteria, therefore supplying by-pass nutrients is not only more efficient, but essential for rumen health.
3. **Environmental responsibilities** – feeding excessive protein can be detrimental to both the cows health and the environment due to higher urea nitrogen levels. Feeding by-pass protein can enable farmers to reach metabolizable protein requirements whilst feeding less overall crude protein.

NWF ULTRA PRO-R

A high-quality vegetable protein which, as a result of precise treatment of rapeseed meal, contains a high level of Digestible Un-degradable Protein.

Nutritional Benefit

- Cost-effective source of by-pass protein.
- 75%+ by-pass protein.

Application

NWF Ultra Pro-R can be used to balance the rumen degradable protein and by-pass protein (MPB) content of the ration. It has a valuable role to play in dairy, calf, beef and sheep and goat rations where by-pass protein can be the limiting factor.

Typical Analysis

• <i>Dry Matter</i> – 87.0%	• <i>MBP</i> – 297g/kg
• <i>Crude Protein</i> – 38.8%	• <i>MPE</i> – 310g/kg
• <i>MER</i> – 12 MJ/Kg	• <i>MPN</i> – 326g/kg
• <i>Oil AH</i> – 4.3%	• <i>NDIP</i> – 313g/kg

Daily Feed Rates

<i>Milking Cows</i>	<i>0.3-1.5kg</i>
<i>Dry Cows</i>	<i>Up to 1.5kg for 4-6 weeks prior to calving</i>
<i>Replacement Heifers</i>	<i>Up to 3 kg</i>
<i>Beef</i>	<i>Include as part of ration where extra by-pass protein is required (particularly bulls)</i>
<i>Sheep</i>	<i>Include as part of ration according to level of production required</i>

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01829 262270 | nbteam@nwfagriculture.co.uk

NWF ULTRA SOY

A high-quality vegetable protein which, as a result of precise treatment of extracted soya bean meal, contains a high level of bypass protein. (MPB).

Nutritional Benefit

- Cost-effective source of by-pass protein.
- 80%+ by-pass protein.

Application

NWF Ultra Soy can be used to balance the rumen degradable protein and by-pass protein (MPB) content of the ration. Trials have shown that it has a valuable role to play in dairy, calf, beef and sheep and goat rations where by-pass protein can be the limiting factor.

It can be used in grazing diets to balance the high levels of rumen degradable protein in grass, and in winter feeds to reduce overall crude protein levels and increase protein utilisation efficiency. Utilising by-pass protein and reducing overall protein waste can deliver environmental benefits.
Available in our blends and as a straight to be fed on farm.

Typical Analysis

• <i>Dry Matter – 87.0%</i>	• <i>MBP – 451g/kg</i>
• <i>Crude Protein – 54.0%</i>	• <i>MPE – 456g/kg</i>
• <i>MER – 13.4 MJ/Kg</i>	• <i>MPN – 473g/kg</i>
• <i>Oil AH – 2.9%</i>	• <i>NDIP – 260g/kg</i>

Daily Feed Rates

<i>Milking Cows</i>	<i>0.3-1.5kg</i>
<i>Dry Cows</i>	<i>Up to 1kg for 4-6 weeks prior to calving</i>
<i>Replacement Heifers</i>	<i>Up to 3 kg</i>
<i>Beef</i>	<i>Include as part of ration where extra DUP is required (particularly bulls)</i>
<i>Sheep</i>	<i>Include as part of ration according to level of production required</i>

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NWF ULTRA STARCH-W

Quality rolled wheat precisely treated to produce an increased level of by-pass starch.

Nutritional Benefit

- Gluco-TN value (glucogenic energy) 338g/Kg DM.
- Increased starch levels without upsetting the rumen.
- Increased supply of glucose to the udder.
- Increased milk yield potential.

Application

Maize products are commonly used to provide by-pass starch, although levels of by-pass starch is higher than in other cereals, they are far more expensive. NWF Ultra Starch-W can be used to increase the level of by-pass starch content of the ration, allowing a higher level of glucogenic energy to be fed whilst reducing the risk of acidosis.

Typical Analysis

• <i>Dry Matter – 88.0-90.0%</i>	• <i>Starch – 66%</i>
• <i>Crude Protein – 13.0%</i>	• <i>Glucogenic Energy – 338g/kg</i>
• <i>MER – 13 MJ/Kg</i>	• <i>Dynamic Energy – 8.8MJ/kg</i>
• <i>NDF – 11.7%</i>	

Daily Feed Rates

<i>Milking Cows</i>	<i>Up to 4kg</i>
<i>Dry Cows</i>	<i>Up to 1.5kg for 4-6 weeks prior to calving</i>
<i>Replacement Heifers</i>	<i>Up to 1 kg</i>
<i>Beef</i>	<i>Include as part of ration where high starch levels are required (particularly finishing bulls)</i>
<i>Sheep</i>	<i>Include as part of ration according to level of production required</i>

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PROTECTED FATS



PROTECTED FATS

PROTECTED FATS

Protected Fats are one of the richest sources of energy for the lactating dairy cow. Fat has over twice the level of energy density than the carbohydrates provided by cereals. They represent the best opportunity for fulfilling the huge energy demands of today's high-yielding dairy cows, or balancing high forage diets where silage quality may be limiting.

These products have a high melting point, which renders them inert in the rumen, thus avoiding interference with the animal's digestion.

Feeding high dietary fat through conventional sources can impair rumen microbial activity, using protected fats reduces this impact and allows higher digestible energy to be fed without impacting on rumen microbes.

Today's lactating cow requires energy for milk production, reproduction & growth. If insufficient energy is provided, the cow will lose unacceptable amounts of weight; compromising milk yield and fertility, as well as the risk of metabolic disorders.

The problem of energy deficiency is most acute in the first 100 days of lactation. At this stage, the highest energy requirement is seen when milk yield moves towards its peak, however, at this time the cows appetite remains low, which results in the classic 'energy gap'. It is the failure to fill this gap and consequent weight loss which has been shown to result in lower lactating yields, poorer fertility and risk of metabolic disorders.

NWF EVOLUTION PROTECTED FAT

A cost-effective, high-quality rumen-protected fat for ruminants. High in energy and availability, this saturated fat is protected from rumen breakdown and will help improve the performance of high performing ruminant animals by meeting the energy demands which cannot be met using standard feeds.

Nutritional Benefit

As high energy protected fat, it provides energy to high performing ruminants at the site they require it. Uniquely protected, the fat does not affect rumen function, bypassing it for digestion in the lower gut. Nutrients are therefore provided to the point of demand, essential for high yielding dairy cows, beef animals and lactating ewes.

Features

- Improved peak and lactation yields.
- Improved cow condition.
- Improved fertility.
- Reduced risk of acidosis and ketosis.
- Reduced culling rates.

Application

This product should be incorporated in TMR and home mix diets and fed to response.

Typical Analysis

• Dry Matter – 98.0%	• C16 FAT – 48.0%
• MER – 34.0 MJ/Kg	• C18 – 49.0%

Daily Feed Rates

Dairy Cows	Up to 500g depending on performance, cow condition and stage of lactation
Beef	Up to 300g
Sheep	Up to 200g

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NWF BUTTERFAT EXTRA

Farmers that are introduced to Butterfat Extra for the first time and are not currently feeding any other protected fats have often reported improvements of up to 0.5%.

Nutritional Benefit

NWF Butterfat Extra is a rumen protected fat that is extremely rich in energy and C16 fatty acids to boost milk production and milk fat content.

Features

- Pure 99% vegetable fat derived from non GM palm oil in prill form.
- High level of rumen bypass but also high absorption in the small intestine.
- Improves cow health by minimising incidence of ketosis plus weight and body condition loss in early lactation.
- High palatability, no soapy taste or smell.
- Very high energy content, 36MJ/kg DM, ideal for high yielding cows in early lactation.
- Stimulates milk yield and milk fat content.

Application

Butterfat Extra contains C16 fats and can be fed as part of a TMR, top dressed or as part of a blend.

Typical Analysis

• Dry Matter – 99.0%	• C16 FAT – 85%
• MER – 36 MJ/Kg	• C18 – 8%

Daily Feed Rates

Dairy Cows	Typically 200-500g
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GOLDEN FLAKE

An extremely high energy, palatable, rumen protected fat to drive milk yield, increase milk fat and reduce body weight loss manufactured from palm fatty acids.

Nutritional Benefit

The highest responses are seen when demand is at its highest, which is within the first 120 days of lactation for high yielding cows or in the diets of prolific milking and breeding ewes and goats. For best results consider feeding a rumen-protected protein source in addition, e.g. NWF Ultra Soy.

Up to 5% is recommended in manufactured complementary feeds. It is best introduced to the ration over a period of a few days and it should be mixed with other feed materials before feeding.

Features

- High energy increases milk yield in early lactation.
- Minimises body weight loss and improves fertility.
- Reduces risk of ketosis.
- Rumen protection avoids negative effects on fibre digestion.

Application

Golden Flake can be applied as a top dressing or as an ingredient in the feed mixture.

Typical Analysis

• <i>Dry Matter – 99.0%</i>	• <i>C16 FAT – 49.0%</i>
• <i>MER – 36.0 MJ/Kg</i>	• <i>C18 – 42.0%</i>

Daily Feed Rates

<i>Dairy Cows</i>	<i>200g to 500g depending on performance, cow condition and stage of lactation</i>
<i>Beef</i>	<i>Up to 300g</i>
<i>Sheep</i>	<i>Up to 100g for multiple bearing and lactating ewes</i>

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MAIZE, CEREAL AND FORAGE SEED

MAIZE, CEREAL AND FORAGE SEED



MAIZE, CEREAL AND FORAGE SEEDS

NWF Agriculture supply a wide range of carefully selected maize, cereal & forage seeds, which have been bred by world-leading scientists and extensively field tested. Selected with an emphasis on high productivity, yield and strong environmental credentials, our wide range of maize, cereal & forage seeds present the opportunity to improve livestock performance, efficiency and animal health.

Maize

Whatever your needs are for maize in the coming year, we can offer you a wide range of maize seeds to suit all. From improving previous yields to more cost-effective feeding sources, get in touch with your local NWF sales specialist for more information on our current range of seeds.

Cereal & Forage

Cereals & Forage seeds typically have a higher growth rate than most pasture alternatives, rates may differ based on species, however they offer fantastic flexibility. Forage cereals can be harvested as cut and wilted crop, or as a direct cut and ensiled.

Due to slight changes in crops and seeds each year, please get in touch with your local NWF sales specialist or call our traded products desk for our latest range of maize, cereal & forage seeds.

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GRAINS

GRAINS



BARLEY

Feed barley produced in the UK has been grown for this purpose. Produced as a major cereal component in beef and dairy diets, barley is well recognised as an excellent energy source for ruminants providing high levels of starch to stimulate production. Available as a whole grain or rolled.

Nutritional Benefit

Ideal as a ruminant and non-ruminant feed. Ruminants benefit from it being high in energy, in the form of starch, making it highly fermentable, encouraging milk protein and fast growth. It is also useful in pig and poultry diets.

Features

- 63Kg/Hl bushel weight.
- High starch level and high energy, low in fibre and protein.
- Risk of acidosis when high levels of barley introduced quickly.
- Preferred to wheat in intensive beef feed systems.
- High rate of live weight gain.
- Increased milk yields and milk protein output.
- New crop barley can require gradual introduction in certain diets.

Typical Analysis

• <i>Dry Matter</i> – 86.0%	• <i>Sugars</i> – 2.5%
• <i>Crude Protein</i> – 12.3%	• <i>NDF</i> – 23.1%
• <i>MER 13.2 MJ/Kg</i>	• <i>Oil AH</i> – 3.0%
• <i>Starch</i> – 57.0%	

Daily Feed Rates

<i>Dairy Cows</i>	<i>Up to 5kg/head/day</i>
<i>Beef</i>	<i>Up to 85% of the DMI</i>
<i>Ewes</i>	<i>Up to 0.7kg/head/day</i>

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MAIZE

A highly palatable feed providing a rich source of energy, from digestible fibre plus oil, and protein. Available as a whole grain or rolled.

Nutritional Benefit

The highest energy of most cereals, containing twice the oil of wheat and barley.

Features

- Flaked, cracked, rolled, microside, sploded or ground before feeding, these processes improve the digestibility maximum of 85%.
- A ready source of fermentable energy and protein.
- Minimises risk of acidosis.
- Suitable for all classes of ruminants.
- Improves fertility by reducing loss of body condition in early lactation.

Typical Analysis

• <i>Dry Matter</i> – 86.0%	• <i>Sugars</i> – 2.0%
• <i>Crude Protein</i> – 9.6%	• <i>NDF</i> – 14.5%
• <i>MER 14.5 MJ/Kg</i>	• <i>Oil AH</i> – 4.4%
• <i>Starch</i> – 68.0%	

Daily Feed Rates

<i>Milking Cows</i>	<i>Up to 8 (typically 5)kg</i>
<i>Dry Cows</i>	<i>Up to 4kg</i>
<i>Replacement Heifers</i>	<i>Up to 5 kg and up to 15% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 5 kg and up to 30% of the DMI</i>
<i>Growing Cattle</i>	<i>Can be fed ad lib and up to 25% of the DMI</i>
<i>Finishing Cattle</i>	<i>Can be fed ad lib and up to 25% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 6 (typically 4)kg</i>
<i>Ewes and Rams</i>	<i>Up to 2.5 (typically 1.5)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 15% of the DMI</i>

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WHEAT

Wheat is an excellent energy source for ruminants providing high levels of starch to stimulate milk production. Feed wheat produced in the UK has been grown for this purpose, although varieties for bread or biscuit making that failed to make the grade are also suitable. Available as a whole grain or rolled.

Nutritional Benefit

It is useful for increasing milk protein yields and for the promotion of growth.

Features

- 72Kg/HI bushel weight.
- Very high starch level, but very low in fibre.
- Feed coarsely rolled and not ground finely to avoid acidosis in ruminants or consider a treated product.
- Increases milk yield and milk protein output.
- We source homegrown wheat to produce our unique product, Ultra Starch-W, which provides a consistent source of high-quality bypass starch with a higher gluco-TN value.

Typical Analysis

• <i>Dry Matter</i> – 86.0%	• <i>Sugars</i> – 4.0%
• <i>Crude Protein</i> – 13.0%	• <i>NDF</i> – 12.0%
• <i>MER</i> 13.8 MJ/Kg	• <i>Oil AH</i> – 2.0%
• <i>Starch</i> – 67.0%	

Daily Feed Rates

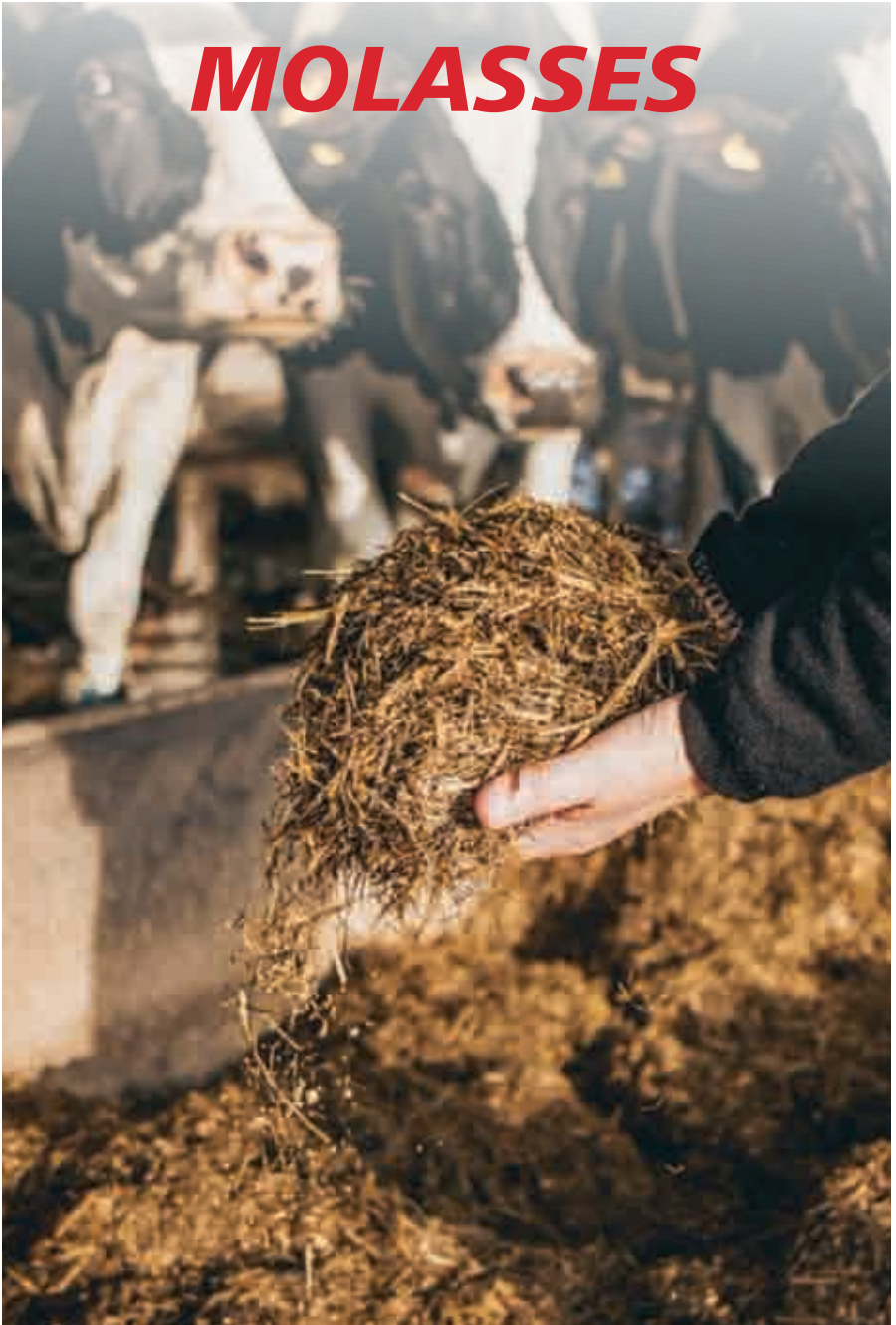
<i>Dairy Cows</i>	<i>Up to 5kg/head/day</i>
<i>Beef</i>	<i>Up to 40% of the DMI</i>
<i>Ewes</i>	<i>Up to 0.5kg/head/day</i>

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MOLASSES

MOLASSES



MOLASSES

Feeding a molasses blend is the easiest way to supply a good source of sugars and fermentable energy, essential in any well-balanced diet to help maximize herd health, performance and fertility; alongside fueling the rumen microbes to stimulate dry matter intake.

Extracted during sugar production, molasses is one of the most economical and palatable sources of sugar and fermentable energy available, hence it's value in dairy, beef and sheep rations.

Surprisingly for a liquid feed, it is also high in dry matter and in the case of standard cane molasses, 74%; meaning it offers excellent nutrient density. Using modern blending technology in partnership with ED&F Man, we can offer a wide-range of products which combine standard cane molasses with other liquid co-products, the result; a choice of products offering the ideal energy, protein, viscosity and price to suit.

The formulation of a balanced TMR can all be in vain if cows then sort through the ration, selecting the tastier concentrate portion and leaving the more fibrous components such as silage and straw.

With insufficient intakes of effective long fibre these cows can then suffer sub-acute ruminal acidosis (SARA). The consequences include, inefficient feed utilisation, depressed production, production related diseases such as lameness and ketosis, low butterfat levels and loose dung.

The addition of a molasses blend to a TMR has been shown to reduce sorting; making the meal/concentrate ingredients stick to the forage, in turn making it harder for the ration to be sorted out by cows.

A Penn State sieve test trial has shown that reducing sorting by feeding molasses blends results in a more consistent rumen pH, increases in herd milk yield and butterfat level. In addition, cows will have more consistent dung, reduction in mastitis, acidosis, bullying & a more consistent body condition across the herd and improved fertility.

CANE MOLASSES

A highly palatable liquid derived from the extraction of sugar from cane. Cane Molasses offers an excellent source of rapidly fermented sugar based energy.

Very high sucrose content making it ideal for use in most dairy, beef and sheep rations.

Features:

- Provides high levels of sucrose sugar.
- Helps improve diet palatability.
- Helps promote high dry matter intake.
- Helps contribute to rumen fermentation.
- Stores up to six months.

Application:

Cane Molasses is suitable for inclusion in the diets of all ruminant livestock and can offer a very cost-effective way to increase the palatability of feeds whilst contributing good levels of energy from sugar.

Typical Analysis: Dry Matter Basis:

• Dry Matter – 74.0%	• Sugars – 64.0%
• MER – 12.7 MJ/Kg	• Litres/Tonne - 714
• Crude Protein – 6.5%	

Daily Feed Rates:

Milking Cows	Normal feed rates between 1- 2KG.
Beef	Normal feed rates between 1-2KG
Sheep	Fed at levels up to 0.3kg per ewe per day, either top dressed, free access via a wheel or lick feed, or fed as part of TMR

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ECONOMOL

A dark brown, viscous liquid produced as a co-product of the production of sugar from the sugarcane plant mixed with water in flowable conditions, offering an excellent source of rapidly fermented sugar-based energy in a flowable form.

Features:

- High energy in a rapidly available form.
- Provides high levels of sucrose sugars.
- Highly palatable sweet liquid.
- Helps to promote high dry matter intake.
- Stores up to six months.

Application:

Economol is suitable for inclusion in the diets of all ruminant livestock and can offer a very effective way to increase the palatability of feeds whilst contributing high levels of energy from sugars.

Typical Analysis: Dry Matter Basis:

• Dry Matter – 71.0%	• Sugars – 64.0%
• MER – 12.7 MJ/Kg	• Litres/Tonne - 724
• Crude Protein – 6.5%	

Daily Feed Rates:

<i>Milking Cows</i>	<i>Normal feed rates between 1- 2KG.</i>
<i>Beef</i>	<i>Normal feed rates between 1-2KG</i>
<i>Sheep</i>	<i>Fed at levels up to 0.3kg per ewe per day, either top dressed, free access via a wheel or lick feed, or fed as part of TMR</i>

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A MOLASSES BLEND IS THE EASIEST WAY TO SUPPLY A GOOD SOURCE OF FERMENTABLE ENERGY, ESSENTIAL IN WELL-BALANCED DIETS

MILLSPEC 20

Blended from cane molasses and liquid co-products to give a rich source of sugars protein and organic matter. Low viscosity ensures easy handling in cold conditions and thorough absorption to promote dry matter intakes of all forages and mixed rations.

Features:

- Highly palatable sweet liquid which stimulates total feed intake.
- A source of rapidly fermentable sugar energy which balances rapidly digestible energy sources such as cereals and low protein forages.
- A binding sticky liquid which helps livestock consume a more balanced ration, reducing the risk of acidosis and improving feed efficiency.

Application:

Millspec 20 is suitable for inclusion in the diets of all ruminant livestock.

Typical Analysis: Dry Matter Basis:

• <i>Dry Matter</i> – 68.0%	• <i>Sugars</i> – 55.0%
• <i>MER</i> – 12.1 MJ/Kg	• <i>Litres/Tonne</i> - 729
• <i>Crude Protein</i> – 12.0%	

Daily Feed Rates:

<i>Dairy Cows</i>	<i>Normal feed rates between 1- 2KG.</i>
<i>Beef</i>	<i>Normal feed rates between 1-2KG</i>
<i>Sheep</i>	<i>Fed at levels up to 0.3kg per ewe per day, either top dressed, free access via a wheel or lick feed, or fed as part of TMR</i>

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MOLALE

Molale provides the high palatability and energy of molasses, balanced with protein from a variety of sources. Easy to handle at low temperatures and shown to help ease respiratory problems through reduction of dust. Suitable for all feeding systems.

Features:

- Well balanced, palatable product.
- Highly rumen fermentable, stimulating rumen function and greater feed efficiency.
- Excellent source of fermentable energy to enhance microbial protein production.
- Boosts intakes of forage.

Application:

Molale is suitable for all classes of cattle from young calves through to adult stock.

Typical Analysis: Dry Matter Basis:

• Dry Matter – 60.0%	• Sugars – 42.0%
• MER – 13.2 MJ/Kg	• Litres/Tonne - 790
• Crude Protein – 16.0%	

Daily Feed Rates:

Dairy Cows	Normal feed rates between 1- 2KG.
Beef	Normal feed rates between 1-2KG

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REGUMAIZE 24

A liquid feed comprising of Cane Molasses and urea. This unique process developed by ED&F Man Liquid Products is designed to give rumen bacteria exactly what they need to thrive on. Regumaize 24 is designed for rations which require a boost in both protein and energy. A very high protein from regulated release urea, providing a good source of palatable sugar based energy and rumen degradable protein.

Features:

- High protein and high sugars.
- High technology regulated release urea.
- Urea released at a safe rate in the rumen.
- Versatile, can be used in dairy, beef or sheep diets.
- A one for one replacement for rape / soya mix.

Application:

Suitable for all adult classes of ruminant livestock from approximately six months of age.

Typical Analysis: Dry Matter Basis:

• <i>Dry Matter – 66.0%</i>	• <i>Sugars – 50.0%</i>
• <i>MER – 12.6 MJ/Kg</i>	• <i>Litres/Tonne - 770</i>
• <i>Crude Protein – 24.0%</i>	

Daily Feed Rates:

<i>Dairy Cows</i>	<i>Normal feed rates between 1- 2KG.</i>
<i>Beef</i>	<i>Normal feed rates between 1-2KG</i>
<i>Sheep</i>	<i>Fed at levels up to 0.3kg per ewe per day, either top dressed, free access via a wheel or lick feed, or fed as part of TMR</i>

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REGUMAIZE 46

A liquid feed comprising of Cane Molasses and Urea. This unique process developed by ED&F Man Liquid Products is designed to give rumen bacteria exactly what they need to thrive on. Regumaize 46 provides a good source of palatable sugar based energy and rumen degradable protein.

Features:

- High protein and high sugars.
- High technology regulated release urea.
- Urea released at a safe rate in the rumen.
- Versatile, can be used in dairy, beef.
- A one for one replacement for rape / soya mix.

Application:

Regumaize 46 can be fed as part of a TMR, within a blend or as a straight liquid by pouring onto other feeds or via ball feeders.

Typical Analysis: Dry Matter Basis:

• Dry Matter – 68.0%	• Sugars – 55.0%
• MER – 11.7 MJ/Kg	• Litres/Tonne - 745
• Crude Protein – 46.0%	

Daily Feed Rates:

Dairy Cows	Normal feed rates between 1- 2KG.
Beef	Normal feed rates between 1-2KG

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REGUMAIZE 65

A liquid feed comprising of Cane Molasses and Urea. This unique process developed by ED&F Man Liquid Products is designed to give rumen bacteria exactly what they need to thrive on. Regumaize 65 is designed for diets in which protein levels need an extra boost.

Features:

- High protein and high sugars.
- High technology regulated release urea.
- Urea released at a safe rate in the rumen.
- Versatile, can be used in dairy or beef.

Application:

Suitable for all adult classes of ruminant live-stock from approximately six months of age.

Typical Analysis: Dry Matter Basis:

• <i>Dry Matter – 67.0%</i>	• <i>Sugars – 50.0%</i>
• <i>MER – 11.4 MJ/Kg</i>	• <i>Litres/Tonne - 747</i>
• <i>Crude Protein – 65.0%</i>	

Daily Feed Rates:

<i>Dairy Cows</i>	<i>Normal feed rates between 1- 1.5KG.</i>
<i>Beef</i>	<i>Normal feed rates between 1-1.5KG</i>

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REGUMIX 27

Regumix 27 is a highly palatable, molasses based liquid, rich in protein and energy, designed to get the most from forage. It is blended from Cane Molasses, Urea and liquids from the human food and drinks industries. The inclusion of urea results in the high crude protein level. Regulated release urea ensures slow availability of Nitrogen in synchrony with the energy released in the rumen.

Features:

- High protein and high sugars.
- High technology regulated release urea.
- Urea released at a safe rate in the rumen.
- Versatile, can be used in dairy, beef or sheep diets.

Application:

Suitable for all adult classes of ruminant livestock from approximately six months of age.

Typical Analysis: Dry Matter Basis:

• <i>Dry Matter</i> – 67.0%	• <i>Sugars</i> – 53.0%
• <i>MER</i> – 13.1 MJ/Kg	• <i>Litres/Tonne</i> - 741
• <i>Crude Protein</i> – 27.0%	

Daily Feed Rates:

<i>Dairy Cows</i>	<i>Normal feed rates between 1- 2KG.</i>
<i>Beef</i>	<i>Normal feed rates between 1-2KG</i>
<i>Sheep</i>	<i>Can be offered to sheep up to 7% of concentrate or 0.2kg</i>

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REGUPRO 38

Regupro 38 is a highly palatable molasses blend with added Regulated Release protein, supplying a high protein option when sugar levels are less critical, for example when high levels of sugar beet pulp or fodder beet are being fed. The Regupro blends are designed to complement rations containing a high level of grass silage helping to correct any energy and degradable protein imbalances.

Features:

- Palatable liquid.
- Regulated release urea technology.
- An excellent source of fermentable energy and protein.
- A free flowing binding liquid.

Application:

Regupro 38 can be fed as part of a TMR, within a blend or as a straight liquid by pouring onto other feeds or via ball feeders.

Typical Analysis: Dry Matter Basis:

• Dry Matter – 60.0%	• Sugars – 30.0%
• MER – 12.5 MJ/Kg	• Litres/Tonne - 784
• Crude Protein – 38.0%	

Daily Feed Rates:

Dairy Cows	Normal feed rates between 1- 2KG.
Beef	Normal feed rates between 1-2KG

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REGUPRO 50

Regupro 50 is a highly palatable molasses blend with added Regulated Release protein, supplying a high protein option when sugar levels are less critical, for example when high levels of sugar beet pulp or fodder beet are being fed. The Regupro blends are designed to complement rations containing a high level of grass silage helping to correct any energy and degradable protein imbalances.

Features:

- Highly palatable liquid.
- Regulated release urea technology.
- Cost effective way of feeding ERSDP.
- An excellent source of fermentable energy and protein.
- A free flowing binding liquid.

Application:

Regupro 50 is ideally suited to feeding in a complete diet mix using a feeder wagon, poured over forage or fed free-access through wheel lick feeders.

Typical Analysis: Dry Matter Basis:

• Dry Matter – 60.0%	• Sugars – 42.0%
• MER – 12.6 MJ/Kg	• Litres/Tonne - 774
• Crude Protein – 50.0%	

Daily Feed Rates:

Dairy Cows	<i>Normal feed rates between 1- 2KG.</i>
Beef	<i>Normal feed rates between 1- 2KG or up to 10% of the concentrate part of the diet, where physical handling is the limit rather than the feed level</i>

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SHEEPMOL

A high dry matter, high sugar blend of cane molasses, glycerine and liquid co-products formulated specifically to feed sheep. The unique mix of energy sources is ideal to promote healthy lamb growth and maintain ewe health.

Features:

- Extra energy boost from feeding sugars and glycerine.
- Ad-lib feeding reduces stress for sheep and saves time for the shepherd.
- Highly palatable and improves intake and forage digestibility.
- Balances variations in grazing/forage quantity and quality.
- Easy and convenient to store, handle and feed.

Application:

Sheepmol can be fed to sheep either top dressed, free access via a wheel or ball feeder, or fed as part of a mix.

Typical Analysis: Dry Matter Basis:

• <i>Dry Matter – 69.0%</i>	• <i>Sugars – 48.0%</i>
• <i>MER – 13.5 MJ/Kg</i>	• <i>Litres/Tonne - 747</i>
• <i>Crude Protein – 7.0%</i>	

Daily Feed Rates:

<i>Feeding Guidelines</i>	<i>Typical daily intake: 0.25kg / head / day</i>
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SHEEPMOL PLUS

A high dry matter, high sugar blends of cane molasses, glycerine and liquid co-products formulated specifically to feed sheep. The unique mix of energy sources is ideal to promote healthy lamb growth and maintain ewe health. Sheepmol Plus has the added benefit of the vitamin and mineral package.

Features:

- Extra energy boost from feeding sugars and glycerine.
- Ad-lib feeding reduces stress for sheep and saves time for the shepherd.
- Highly palatable and improves intake and forage digestibility.
- Balances variations in grazing/forage quantity and quality.
- Easy and convenient to store, handle and feed.
- 3 month shelf life.

Application:

Sheepmol Plus can be fed to sheep either top dressed, free access via a wheel or ball feeder, or fed as part of a mix.

Typical Analysis: Dry Matter Basis:

• Dry Matter – 69.0%	• Sugars – 48.0%
• MER – 13.5 MJ/Kg	• Litres/Tonne - 743
• Crude Protein – 7.0%	

Daily Feed Rates:

Feeding Guidelines	Typical daily intake: 0.25kg / head / day
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NOTES

MOLASSES

MOIST FEEDS



MOIST FEEDS

BREWERS GRAINS

A highly palatable and succulent moist feed providing a rich source of digestible fibre and protein. A moist by-product from the brewing industry made up of spent grains, widely fed to ruminant animals. They are commonly used in the dairy industry as a buffer feed or as a forage or concentrate replacer.

Nutritional Benefit

High in fibre and good quality protein which is quite undegradable due to the heat process in manufacture. Ideal for mixing with other forage rations to stimulate dry matter intake and an excellent feed for dairy cows, cattle and sheep.

Features

- Highly palatable moist feed.
- Brewery products contain high levels of yeast fragments.
- High digestible fibre and low starch content.

Feed Rates

<i>Milking Cows</i>	<i>Up to 20 (typically 8)kg</i>
<i>Dry Cows</i>	<i>Up to 4kg</i>
<i>Replacement Heifers</i>	<i>Up to 10 kg and up to 30% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 5 kg and up to 50% of the DMI</i>
<i>Growing Cattle</i>	<i>Can be fed ad lib and up to 50% of the DMI</i>
<i>Finishing Cattle</i>	<i>Can be fed ad lib and up to 50% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 15 (typically 6)kg</i>
<i>Ewes and Rams</i>	<i>Up to 3 (typically 2)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 50% of the DMI</i>

Typical Analysis

• <i>Dry Matter – 23.0%</i>	• <i>Sugars – 1.5%</i>
• <i>Crude Protein – 25.0%</i>	• <i>NDF – 56.5%</i>
• <i>MER 11.7 MJ/Kg</i>	• <i>Oil AH – 7.5%</i>
• <i>Starch – 5.5%</i>	

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CRIMPED MAIZE

New early maturing varieties now allow maize to be used as a concentrate feed source rather than as a forage crop as in the past. Crimped maize grain complements all forms of silage, whole crop cereals and conventional cereals by providing a high energy source of by-pass starch. The type of starch present in maize differs in structure to that of wheat and barley, and crimping the maize grain results in a slower rate of starch digestion in the rumen. A greater amount of undigested starch passes into the lower gut, where the increased digestion improves the glucose supply to the tissue and improves the overall efficiency of dietary energy to milk and meat.

Nutritional Benefit

Can be used to replace maize silage, increase energy density of ration, particularly early lactation and supports milk proteins.

Features

- Suitable for all classes of ruminants.
- Crimped maize has highest bypass starch.
- Increases milk yield.
- Increases milk protein output.
- Improves fertility.

Typical Analysis

• <i>Dry Matter</i> – 70.0%	• <i>Sugars</i> – 1.8%
• <i>Crude Protein</i> – 10.0%	• <i>NDF</i> – 8.96%
• <i>MER</i> 14.5 MJ/Kg	• <i>Oil AH</i> – 4.5%
• <i>Starch</i> – 70.0%	

Daily Feed Rates

<i>Milking Cows</i>	<i>Up to 6kg/head/day</i>
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MASH FILTER GRAINS/DRAFF

Fine, textured brewers grains.

Nutritional Benefit

- Cost-effective alternative protein source.
- Useful feed to use as forage enhancer or extender.
- Easy to feed in either TMR, or as a straight.

Features

- Very palatable feed that stimulates dry matter intake.
- High in digestible fibre with good slow release protein content.
- Generally good all year round availability.

Typical Analysis

• Dry Matter – 26.0%	• Sugars – 1.0%
• Crude Protein – 22.50%	• NDF – 51.5%
• MER 11.8 MJ/Kg	• Oil AH – 11.0%
• Starch – 3.0%	

Daily Feed Rates

Dairy Cows	Up to 15kg/head/day
Beef	Up to 20kg/head/day
Ewes	Up to 2kg/head/day

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PRESSED SUGARBEET PULP

A high digestible fibre, extremely palatable to be used as a forage extender or concentrate feed. It is widely recognised for its ability to enhance the physical nature and 'open up' total mixed rations. Pressed Sugarbeet is produced during the processing of Sugarbeet. Once the sugar has been washed out from the beet, excess water is removed from the fibrous residue by passing the material through heavy presses.

Nutritional Benefit

Can stimulate intake while providing building blocks for milk fat synthesis.

Features

- A highly palatable and succulent feed.
- High levels of non-starch digestible fibre energy.
- Provides slowly fermentable energy similar to forage.
- Can be used in complete diets or ensiled with other feeds e.g. distillers.
- Available in articulated vehicles whilst factories are producing normally between October and February.

Typical Analysis

• <i>Dry Matter</i> – 27.0%	• <i>Sugars</i> – 6.0%
• <i>Crude Protein</i> – 9.0%	• <i>NDF</i> – 37.0%
• <i>MER</i> 13.0 MJ/Kg	• <i>Oil AH</i> – 1.0%
• <i>Starch</i> – 0.0%	

Daily Feed Rates

<i>Milking Cows</i>	<i>Up to 20 (typically 8)kg</i>
<i>Dry Cows</i>	<i>Up to 4kg</i>
<i>Replacement Heifers</i>	<i>Up to 10 kg and up to 50% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 5 kg and up to 50% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 10 kg and up to 50% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 20 kg and up to 50% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 10 (typically 5)kg</i>
<i>Ewes and Rams</i>	<i>Up to 5 (typically 2-3)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 5 kg and up to 50% of the DMI</i>

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BISCUIT BLENDS

BISCUIT BLENDS



BREAKFAST CEREAL (SugaRich)[®]

High energy from starch and sugar, Breakfast Cereal is a very digestible and palatable feed derived predominantly from maize. This product is produced from high quality, high performance feed ingredients from the food industry, ground and sieved to make a free-flowing meal.

Nutritional Benefit

Cost effective source of starch and sugars, used in NWF blends and available as a straight feed to be fed on-farm.

Features

- High starch, sugar and energy content.
- Ready to use coarse mix.

Typical Analysis

• <i>Dry Matter</i> – 92.5%	• <i>Sugars</i> – 10.0%
• <i>Crude protein</i> – 11.0%	• <i>NDF</i> – 7.5%
• <i>MER</i> – 14.0 Mj/kg	• <i>Oil AH</i> – 1.8%
• <i>Starch</i> – 58.0%	

Feeding Recommendations

Breakfast Cereal is derived from UK manufactured cooked breakfast cereals. The cooking of cereal gelatinises the starch increasing digestibility, especially useful in diets for young animals. There has been a small amount of salt and sugar added to the cereal, making the cereal very palatable to all livestock.

<i>Dairy Cows</i>	<i>Up to 3kg/head/day mixed with other feeds</i>
<i>Growing Cattle</i>	<i>Up to 3KG/head/day and up to 40% of DMI</i>

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NWF CHOC MIX

NWF Choc Mix is produced from high quality, high performance feed ingredients from the food industry blended with carriers, ground and sieved to make a free flowing meal. Our Choc Mix is brown coarse with pieces of coloured confectionary present.

LIMITS TO USE: Not for feed bins, use within 8 weeks of delivery.

Nutritional Benefit

Cost effective source of starch and sugars.

Typical Analysis

• <i>Dry Matter</i> – 87.0%	• <i>Sugars</i> – 15.0%
• <i>Crude protein</i> – 10.0%	• <i>NDF</i> – 17.0%
• <i>MER</i> – 15.0 Mj/kg	• <i>Oil AH</i> – 8.0%
• <i>Starch</i> – 35.0%	

Daily Feed Rates

Ensure adequate long fibre such as silage or straw.
Introduce gradually. Do not feed ad lib.

<i>Milking Cows</i>	<i>Up to 8 (typically 3)kg mixed with other feeds</i>
<i>Dry Cows</i>	<i>Up to 2 (typically 1) kg.</i>
<i>Replacement Heifers</i>	<i>Up to 2 kg and up to 30% of the DMI</i>
<i>Calves (to 12 weeks)</i>	<i>Up to 1.5 kg and up to 25% of the DMI</i>
<i>Growing Cattle</i>	<i>Up to 3 kg and up to 40% of the DMI</i>
<i>Finishing Cattle</i>	<i>Up to 5 kg and up to 50% of the DMI</i>
<i>Suckler Cows</i>	<i>Up to 3 (typically 1)kg</i>
<i>Ewes and Rams</i>	<i>Up to 1 (typically 0.5)kg</i>
<i>Hoggets and Lambs</i>	<i>Up to 0.75kg or up to 40% of DMI</i>

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NWF HIGH STARCH

NWF High Starch is produced from high quality, high performance feed ingredients from the food industry blended with carriers, ground and sieved to make a free flowing meal. NWF High Starch is light coloured, slightly coarse, pieces of coloured confectionary present.

LIMITS TO USE: Not for feed bins, use within 8 weeks of delivery.

Nutritional Benefit

Cost effective source of starch and sugars.

Typical Analysis

• <i>Dry Matter</i> – 90.0%	• <i>Sugars</i> – 12.5%
• <i>Crude protein</i> – 11.0%	• <i>NDF</i> – 13.0%
• <i>MER</i> – 15.0 Mj/kg	• <i>Oil AH</i> – 7.5%
• <i>Starch</i> – 42.5%	

Daily Feed Rates

Ensure an adequate source of long fibre such as silage or straw for cattle.

<i>Dairy Cows</i>	<i>Up to 3kg/ head/ day mixed with other feeds</i>
<i>Growing Cattle</i>	<i>Up to 3kg/ head/ day and up to 40% of the DMI</i>

Where appropriate, bespoke blends can be created to meet specific requirements of our customers.

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**AFTER A
SPECIFIC BLEND?
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EXPERIENCED
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FOR A BESPOKE
FORMULATION &
BLEND**

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SUPPLEMENTS

SUPPLEMENTS



SUPPLEMENTS

Our range of supplements allow for a quick, convenient way of improving many aspects of your livestock's wellbeing. Supplementing deficiencies cannot only improve your livestock but can also reduce the risk of diseases and other health issues, such as foot rot or grass staggers.

Our range of supplements are carefully selected for their high-quality raw materials to suit the ranges of feed and forage fed in UK diets. Our supplement range provides the required levels for your livestock to perform, whether it's for rumen health, foot health, disease prevention, improving feed efficiency, hydration, reducing heat stress, turn-out, lameness or other, your local NWF sales specialist will be able to advise you on the correct supplementation for your livestock.

Symptoms/Problems	Production Problem	Effective Product
Reduced Feed Intake Low Butterfat's Cud-Balling Scouring Lethargy	SARA (Sub-Acute Rumen Acidosis) OR Clinical Acidosis	NWF Stable Rumen NWF Healthy Rumen NWF Ultra Buff Rumen Yeast Caps
Swollen Hocks Reduced Fertility/Abortions Nasal Discharge	Mycotoxin Contamination	NWF Healthy Rumen NWF Myco-Challenge
Late Cut Silage Highly Lignified	High Diet content of indigestible fibre	NWF Fibregest Vista Pre T
Poor Condition Low Milk Production Reduced Fertility	Energy Deficit OR Ketosis	Evolution Protected Fat
Low Milk Butterfat's	(Contract Penalisation)	Butterfat Extra
Wood Chewing Licking Urine	Salt Deficiency	Lump Rock Salt Ground Rock Salt PDV Salt
Turn out to spring pastures	Grass Staggers (Hypo-Magnesaemia)	Magnesium Chloride Calcined Magnesite
High Somatic Cell Count High Mastitis Rates	Depressed Immunity	NWF Cell Shield
Increased Lameness Soft Hoof Tissue	Biotin Deficiency	Biotin Additive

ACID BUF

A pure rumen conditioner with bioavailable minerals. It is derived from marine algae and contains high levels of calcium, magnesium and other minerals. It is highly effective as a rumen buffer and stabilises rumen pH over longer periods of time. Acid Buf works in harmony with the animal's natural endogenous system for buffering excess acid leading to a stable and productive rumen environment. A healthier rumen can lead to improved production parameters.

Lactating Cows

Including Acid Buf in the diet can provide:

- Better neutralisation of rumen acid.
- Slow-release and longer-term rumen buffering.
- Excellent source of bio-available minerals.
- Improved fibre digestion.
- Boosts milk yield and quality.
- Reduces methane output and environmental pollution.

Dry Cows

Including Acid Buf in the diet can provide:

- DCAD (Dietary Cation, Anion Difference) neutral – allowing inclusion in dry cow diets.
- Allows increased concentrate feeding close to calving.
- Releases highly available magnesium to the cow.
- Reduces the risk of metabolic disorders.
- Conditions the rumen for lactation.

Daily Feed Rates

<i>During lactation</i>	<i>50-80g/cow/head/day</i>
<i>Dry cow transition</i>	<i>40-50g/cow/head/day</i>
<i>Beef</i>	<i>30-50g/cow/head/day</i>

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CALCINED MAGNESITE

Calcined magnesite is produced from the raw material Magnesium Oxide which is quarried around the world. Calcined magnesite offers the most commonly used and economic source of supplementary magnesium for ruminant livestock.

Application

Calcined magnesite provides a good source of dietary magnesium. The magnesium in Calcined magnesite is highly available during digestion. Due to its poor palatability, it is normally included in TMR, minerals, mineral buckets, compounds, blends or premixes.

Dairy cows

Small amounts are used in winter diets. The major use, is with dairy cows at turnout. Feed 50 – 60 grams per head per day, commencing about 10 days prior to turn out, to help prevent Grass Staggers (Hypomagnesaemia). Magnesium is not readily stored in the body so continue feeding during high-risk periods, eg: lush spring grass.

Dry Cows

Dry cows generally have a higher magnesium level than lactating cows. This magnesium can be supplied by including Calcined magnesite in the diet or feeding dry cow minerals which have a high level of magnesium. It may sometimes be used in conjunction with magnesium chloride.

Suckler Cows & Beef

As with dairy cows, Calcined magnesite is primarily used at turn out. Typical feed rates are 50 grams/head/day.

Handling & Storage

To be stored in a cool, dry place. It may go lumpy/hard if stored for extended periods.

Typical Analysis

• *Dry Matter* – 99.0%

• *Magnesium* – 50-52%

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CAUSTIC SODA PEARLS

The treatment of cereals, legumes and oilseeds with caustic soda pearls (Sodagrains treatment) is a well-proven and effective technique. Treated grains can be fed without further processing.

The Sodagrains process is also an effective way of preserving moist grain. As an additional benefit, treated grains are alkali so they provide rumen buffering and assist in the prevention of acidosis.

Caustic soda is a hazardous product and appropriate precautions should be taken before handling and usage. The treatment process neutralises the Caustic soda, leaving a sodium (salt) residue. You should consider the use of a low sodium mineral (Sodagrains Balancer) in diets containing Caustic treated grains. This will avoid excessive water intake caused by the residual sodium.

The Sodagrains process is a simple, effective means of on-farm processing of whole grain for cattle feed. Sodagrains can improve forage and total feed intake, leading to increased milk yield and quality in dairy cattle and better live weight gains.

A watertight mixer feeder wagon is used for the process, eliminating the need for rolling, and aiding storage and feed preservation.

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FEED GRADE UREA

Urea is an economic non-protein nitrogen (NPN) source for boosting protein levels in ruminant rations. It is also a highly effective preservative for cereals.

Adequate protein supply to the rumen is essential to enable microorganisms to utilise dietary energy, in particular from forage. Urea when fed, is readily converted to ammonia by urease enzyme in the rumen, thus providing an economic source of Rumen Degradable Protein.

Features

- Highly concentrated effective protein source for adult ruminants.
- Supplies rapidly available nitrogen.
- Good balancer for low protein, high energy feeds.
- Can be used to preserve moist forage or grain.
- Alkaline pH results from hydrolysis with water.
- Very toxic if offered at even moderate levels.

Feed Rates

Urea provides a good source of Effective Rumen Degradable Protein (ERDP) to adult ruminants, but care should always be taken to ensure diets are correctly balanced. As feeding levels are very low due to its high 'protein' content, it is essential that Urea is mixed thoroughly with other feeds prior to offering to animals. Maximum feed rates do apply and should be taken into account with total excess nitrogen levels.

Typical Analysis

• Dry Matter – 99.5%

• Crude Protein – 280%

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HYDRATED LIME (BIOLIME H90)

Biolime helps control bacteria and mastitis to protect cattle housing environments. Simple to handle and easy to apply, this specially blended hydrated lime is quick to take effect and produce results.

Dairy/Cattle Potential Benefits

- Prevents mastitis.
- Reduces hoof infection.
- No risk of hydrogen sulphide.
- Improves hygiene in calf pens.
- Helps keep calf pens dry.

Sheep Potential Benefits

- Reduces hoof infection.
- Improves hygiene in lambing pens.
- Can help to prevent against navel infection.
- Prevents Scald and Footrot when applied to gathering areas, gateways and at housing.

Poultry/Game Potential Benefits

- Improves biosecurity.
- Reduces fly activity.
- Improves hygiene for a healthy flock environment.

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LIMESTONE FLOUR

Limestone Flour is used as a supplementary source of calcium. Limestone flour is a fine white powder, nominally less than 300 microns. The material has been crushed, milled, dried and screened, then milled and classified again to exceptional quality.

Typical Analysis

• <i>Dry Matter</i> – >99%	• <i>CaO</i> – 55.5%
• <i>CaCO₃</i> – 99%	

Particle Size Analysis

MICRONS	TYPICAL %	LIMITS
425	100	100
300	99-100	-
75	80-86	-
45	55-65	-
24	40-50	30 min

Typical Physical Properties

425	% retained on 175 micron sieve	2
300	% finer than 10 microns	28
75	% finer than 2 microns	7
45	Top Cut (D98)	150
25	Weight Median (D50)	30

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MAGNESIUM CHLORIDE FLAKES

Magnesium chloride is a highly soluble form of flaked magnesium.

Application

Because of its high solubility, magnesium chloride is normally administered via the drinking water. It can also be added to the TMR diet. It is often used with Dry Cows to help maintain anionic/cationic balance (negative DCAB), and assist in preventing milk fever. It is also used as a source of magnesium prior to turn out and during periods when lush grass is being fed.

Dairy Cows

Supplement according to magnesium requirements. Levels exceeding 100g/h/d in water may reduce water palatability.

Dry Cows

To help maintain anionic/cationic balance (DCAB), magnesium chloride is typically fed at 60 – 100 grams/head/day during the 2 – 3 week period prior to calving. It can be added to the drinking water or as part of a TMR diet.

Beef & Sheep

Magnesium chloride is not widely used with beef or sheep although it can be a convenient way of administering magnesium (via the drinking water) to Suckler Cows prior to turn out. In most cases, other sources of magnesium are preferred, eg: Calcined Magnesite, High Magnesium Minerals, High Magnesium Buckets.

Handling & Storage

Magnesium chloride is supplied in poly bags. It should be stored in a cool, dry place. Due to its hygroscopic nature, Magnesium Chloride may go lumpy if stored for extended periods.

Typical Analysis

• *Dry Matter* – 99.0%

• *Magnesium* – 12-13%

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NWF HEALTHY RUMEN PAK

Dairy cows often underperform for no apparent reason but in many cases the problem is poor rumen health. As the rumen produces around 70% of the energy and protein used by the cow, anything that disrupts the rumen disrupts the cow. NWF Healthy Rumen Pak contains Yea-Sacc® and Mycosorb A+, formulated to help ensure the conditions in the rumen are maintained at a level to promote high intakes, efficient digestion and increased yields. It can also deliver benefits when fed to cattle and calves. In cattle it will help increase liveweight gain by over 10%, improving carcass composition and reduce risk of bloat. Calves will see an improvement in dry matter intake and liveweight gains by 8%.

Features

Yea-Sacc®

- Scavenges oxygen from the rumen, removing the 'barrier' to efficient fibre digestion.
- Promotes beneficial bacteria in the rumen, increases fibre breakdown by up to 20% and helps reduce the incidence of Sub Acute Ruminal Acidosis (SARA).
- Maintains a more stable rumen pH.
- Increases dry matter intake by up to 1.4kg.
- Increases milk yield by up to 1.4kg.

Mycosorb A+

- Broad spectrum action against a wide range of mycotoxins.
- Stops mycotoxins attacking the rumen and the cow.
- Cost effective formulation protects the immune system of your cattle.
- Improves dung consistency.

Application

50g per cow/day

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NWF STABLE RUMEN PAK

A cost effective way of optimising rumen pH. Containing Yea-Sacc® and a blend of buffering agents. Combining a specially formulated range of buffers with improved fibre digestion from Yea-Sacc® to produce the optimal rumen environment.

This product is a solution to combat SARA in your cows
SARA – Sub-Acute Rumen Acidosis signs include:

- Poor performance.
- Fluctuating milk yield.

This can be triggered by:

- Wet maize silage.
- Acidic grass silage.
- High levels of cereal.

Features

- Higher feed intakes due to a more stable rumen.
- Increase in milk yield of up to 1.4 litres per day.
- Improvements in milk quality.
- Improvements in dung quality.
- Reduced lameness.

Daily Feed Rates

Dairy Cows	75-125g / head / day
Calves	25g / head / day
Beef	75-125g / head / day
<i>Ideal for mixing in with or sprinkling onto the daily ration</i>	

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NWF MYCO CHALLENGE FARM PAK

An enhanced version of Healthy Rumen Pak that contains Yea-Sacc® and a higher rate of Mycosorb. Combined ensures that rumen conditions in the rumen are maintained at a level to promote high intakes, efficient digestion and increased yields.

Features

Yea-Sacc®

- Scavenges oxygen from the rumen, removing the 'barrier' to efficient fibre digestion.
- Promotes beneficial bacteria in the rumen, increases fibre breakdown by up to 20% and helps reduce the incidence of Sub Acute Ruminal Acidosis (SARA).
- Maintains a more stable rumen pH.
- Increases dry matter intake by up to 1.4kg.
- Increases milk yield by up to 1.4kg.

Mycosorb A+

- Broad-spectrum action against a wide range of mycotoxins.
- Stops mycotoxins attacking the rumen and the cow.
- Cost effective formulation helps protect the immune system of your cattle.
- Improves dung consistency.

Daily Feed Rates

50g per cow/day

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NWF HEALTHY GUT

Containing Lactibute, a patented novel prebiotic that works to reduce the effects of leaky gut, improve energy partitioning within dairy cows and ultimately support milk production and performance

Nutritional Benefit

Leaky gut is the inability of the gut barrier to prevent unwanted toxin and pathogens leaking into the bloodstream. This can occur due to numerous stress situations such as transition period, feed restrictions, high starch diets and inflammation in the animal (I.E Injury or Disease). As a result, an immune response occurs, diverting energy away from milk production. The addition of the NWF Healthy Gut helps maintain yields, butterfats and milk proteins during these stressors.

Features

- Aids in gut health.
- Supports your herd in times of stress.
- Improves milk production and milk constituents.
- Increases short chain fatty acid utilizing bacteria.
- Promotes butyrate production.

Daily Feed Rates

Milking Cows	50g / head / day
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NWF HEALTHY GUT EXTRA

The NWF Healthy Gut Extra has been designed to be an effective solution to optimising the rumen and improve hind gut health all out of one bag, with the inclusion of Lactibute, Acid Buf and Opti Rumen.

Nutritional Benefit

Specifically designed to maintain milk yields, improve immune system health, milk proteins and butterfats at times of stress.

Features

- Aids in gut health.
- Supports your herd in times of stress.
- Improves milk production and milk constituents.
- Increases short chain fatty acid utilizing bacteria.
- Improves feed utilization and efficiency.
- Stabilises the rumen pH and optimises rumen conditions.
- Source of highly bio-available calcium and magnesium.

Daily Feed Rates

<i>Milking Cows</i>	<i>150g / head / day</i>
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NWF OPTI RUMEN

NWF Opti Rumen is a unique blend of plant extracts, essential oils and spices, which positively alters the rumen microbes to ensure optimal fermentation for more efficient production.

Nutritional Benefit

Plant extracts and essential oils help balance microbe populations to improve utilisation of nutrients. Spices improve digestion through a buffering effect. NWF Opti Rumen works by mopping up free nitrogen in the rumen whilst increasing levels of bypass protein contributing to decreased milk urea levels. Trials have shown ammonia production in the rumen decreased by 18% in a fibre-based diet and 27% in a starch-based diet.

Features

- Improves rumen buffering.
- Removes excess Nitrogen & decreases milk ureas.
- Increases butterfats.

Daily Feed Rates

Milking Cows	1-3g / head / day
--------------	-------------------

**NWF Opti Rumen is included in the Gut health extra pack and our Grazemore compound range as standard. It is also available to add into bespoke on farm minerals and as an additive in selected compounds.*

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PDV SALT

Salt is an essential mineral in all species. PDV (Pure Dried Vacuum) salt is an alternative to Ground Rock Salt.

A free flowing salt, PDV is refined to remove any other trace elements or minor impurities. Fine granules, similar to table salt, white in colour.

Usage

- Normally included within TMR or home-mixed rations.
- Used in the manufacture of mineral / vitamin supplements.

Typical Analysis

• <i>Sodium</i> – 40%	• <i>Potassium</i> – 1.25%
• <i>Calcium</i> – 0.13%	• <i>Magnesium</i> – 0.005%

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HIMALAYAN LUMP ROCK SALT

Salt is an essential mineral in all species. It is essential to promote saliva production and ensure optimum function of the digestive system.

Himalayan Rock Salt offers a convenient and natural way of providing salt for your livestock.

Large lumps of raw salt ranging from 5 – 35kgs in weight. The colour may be grey, red, brown, or white according to the source.

Feed Rates

Normally offered 'Free Access' in the feed trough, manger, or at grass.

Very weather resistant, so can be fed outside without protection.

Can be fed to all species.

Typical Analysis

• Sodium – 40%	• Potassium – 1.25%
• Calcium – 0.13%	• Magnesium – 0.005%

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SODIUM BICARBONATE

Sodium bicarbonate is one of the most commonly used rumen buffers in dairy cow diets.

Benefits

Optimal rumen function is essential in order to maximise performance as well as allowing maximum utilisation of low-cost forages. Rumen function can be impaired by feeding high cereal rations, acidic silages, short chop forage and starchy forages which in turn can lead to impaired digestion, reduced intakes and poor performance (e.g. reduced butterfat). Feeding sodium bicarbonate assists the saliva in its buffering capacity, thus reducing the risk of large drops in rumen pH which can lead to acidosis.

This is practically demonstrated with:

- Improved forage intakes.
- Effective fibre digestion.
- Higher milk yields.
- Enhanced milk quality, increased butterfat.
- Improved feed conversion and liveweight gain.

Typical Analysis

• *Dry Matter* – 99.0%

• *Sodium* – 27%

Daily Feed Rates

Feed up to 250g/h/d. typical feed rates are 100 – 150g/h/d

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SODIUM SESQUICARBONATE

Sodium sesquicarbonate contains a blend of sodium bicarbonate and sodium carbonate and is a source of sodium for cows and sheep.

Benefits

Optimal rumen function is essential in order to maximise performance as well as allowing maximum utilisation of low-cost forages. Rumen function can be impaired by feeding high cereal rations, acidic silages, short chop forage and starchy forages which in turn can lead to impaired digestion, reduced intakes and poor performance (e.g. reduced butterfat). Feeding sodium sesquicarbonate assists the saliva in its buffering capacity, thus reducing the risk of large drops in rumen pH which can lead to acidosis.

This is practically demonstrated with:

- Improved forage intakes.
- Effective fibre digestion.
- Higher milk yields.
- Enhanced milk quality, increased butterfat.
- Improved feed conversion and liveweight gain.

Typical Analysis

• <i>Dry Matter</i> – 99.0%	• <i>Sodium</i> – 27%
-----------------------------	-----------------------

Daily Feed Rates

<i>Dairy Cows</i>	100 - 150g / head / day
<i>Beef</i>	20-25g per 100kg live weight / head / day
<i>Sheep</i>	20g / head / day

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MICROZYME – R

Make the most of your slurry. MicroZyme R is a biological product for use in the reduction of solids, odour control and nitrogen retention in stored liquid ruminant manure. Containing a unique blend of bacteria strains and enzymes specifically selected for their capability to break down fibre, starch, pectins, fats and protein residues within ruminant slurry over a wide range of temperatures.

Features

- Decreases Solids, crust and odour.
- Faster pump outs and easier to handle.
- Preserves nitrogen content, optimising fertiliser usage.
- Lowers ammonia emissions from slurry.
- Less separation after mixing and a more consistent slurry.
- Improves plant uptake, suitable for multi-cut systems.

Application

Treatment should start as soon as the lagoon begins to fill and should be continued on a regular basis. Do NOT apply MicroZyme R to lagoons that are nearly full unless long term storage is intended.

For herds less than 250 cows: Initial dose for lagoon: 2 x 400g.
Then a dose of 1 x 400g on a weekly basis.

For herds greater than 250 cows: Initial dose for lagoon 2 x 1 kg.
Then a dose of 1 x 1 kg on a weekly basis.

For all applications, mix the total amount of MicroZyme R with 10 times the volume of water and then add to passage scrapings or pump into the lagoon.

Storage

This product contains viable bacteria and microbial enzymes. For maximum shelf life store in a cool, dry place in original packaging.

Use within 12 months of manufacture.

TECHMIX BLUELITE® REPLENISH™

For Calves

Calf diarrhoea continues to be a major health problem in calves less than 2 months of age. BlueLite® Replenish™ is a palatable liquid, buffer calf electrolyte formulated for the severely dehydrated calf.

Features

- Scientifically formulated for optimal osmolarity, tonicity, acidification and energy, to provide the right hydration at the right time giving calves the best chance to reach their genetic potential.
- Corrects dehydration and electrolyte abnormalities (NA, K, Cl) facilitating the absorption of sodium.

Benefits

- Provides energy.
- Maintains a low abomasal pH supporting a healthy digestive tract.
- Nutrient dense liquid, providing ease of supplementation with no mixing required.

Daily Feed Rates

100ml into 2L of extra water (preferably warm) consumed daily or add 50ml with each milk feeding twice a day (morning and evening). Repeat until calf recovers.

Can also be fed to sheep. Consult feed rates with your NWF Sales Specialist

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NWF
YOUNGSTOCK
SPECIALISTS
AVAILABLE TO
OFFER ADVICE
ON CALF
REARING



TECHMIX CALF RENOVA®

For Calves

Calf Renova® is an easy-to-use bolus, containing a source of natural ingredients. The bolus includes a botanical extract, naturally occurring microorganisms (Direct Fed Microbials) and yeast products. Calf Renova® provides intestinal support through beneficial bacteria and plant extracts as an effect intervention for diarrhoea.

Features

- Contains specifically selected hind gut DFM's (probiotic).
- Essential oil as a natural antioxidant.
- Offers a natural antimicrobial effect.

Benefits

- Preventative of diarrhoea.
- Eases the transition from colostrum to whole milk/milk replacer.
- Improves hind gut integrity.

Daily Feed Rates

Administer 1 bolus capsule per calf at first signs of intestine upset or reduced intake from 3 days of age. Repeat if needed after 24 hours.

Can also be fed to sheep. Consult feed rates with your NWF Sales Specialist

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TECHMIX FRESH COW YMCP®

For Cows

Fresh Cow YMCP® is the total fresh cow solution that provides rehydration and nutrients essential to maintain optimum peak yield while also helping to maintain health. The products provides more than just calcium to activate the metabolism and the rumen, helping with recovery and ease the transition into lactation.

Features

- Contains live yeast to support rumen function.
- Calcium derived from four different sources.
- Magnesium to help the body absorb calcium.
- Potassium required for energy metabolism and re-hydration.
- Niacin to help energy metabolism.
- Highly palatable and non-abrasive formula.

Benefits

- Promotes an optimal rumen environment.
- Supports muscle tone of the uterus.
- Vitamin E and Zinc chelate to support animal health during stressful periods.
- Includes Niacin which is essential for energy metabolism and fat mobilisation.

Daily Feed Rates

Feed 500g (one sachet) as soon as possible after calving through bucket or drench.

Water Use – Mix one sachet of Fresh Cow YMCP with 20 litres of warm water, ensure the cow drinks the full buckets.

Drench Use – Mix one sachet of Fresh Cow YMCP with 1-2 litres of warm water then drench

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TECHMIX RUMEN YEAST CAPS®

For Cows

Rumen Yeast Caps® are a source of live yeast and vitamins in an easy-to-use bolus form to be used at any off-feed events.

Benefits

- Contains 30 Billion CFU's of live yeast cultures (3x normal rate).
- Includes the recommended 6 grams of Niacin which is essential for energy metabolism.
- Vitamin E supports animal health during stressful periods.
- Promotes an optimal rumen environment.
- Supports optimum feed efficiency and encourages dry matter intakes.

Daily Feed Rates

When to use
<i>Anytime dry matter intake drops i.e. after calving, during heat stress, bulling or after antibiotics have been administered.</i>
<i>Once a downer cow back on its feet.</i>

Directions for use
<i>Give one capsule daily using the large applicator for a maximum of 3 days following calving, or whenever feed or dry matter intake drops below normal.</i>
<i>Do not exceed 3 boluses.</i>

Pack Size

<i>25 capsules per pot</i>

Can also be fed to sheep. Consult feed rates with your NWF Sales Specialist

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TECHMIX BLUELITE® C HYDRATABS

Bluelite® C Hydratabs is a highly palatable electrolyte supplement providing oral hydration support to pre-weaned calves. With multiple energy sources and acidification that promote healthy guts. Bluelite® C Hydratabs can be administered with milk, milk replacer or water to enhance digestion, and has been proven to be an effective and easy way to ensure young calves maintain hydration.

Benefits

- To encourage water intake and maintain hydration
- For rehydration of transported calves
- To encourage hydration during periods of stress
- To promote clot formation of milk nutrients to help utilization of milk solids
- To enhance digestion and optimize nutrient utilization
- Add to water during the summer and winter months for added energy Daily Feed Rates

Daily Feed Rates

Dissolve 1 bolus in 1L of 37°C water. Provide 2-3 times daily as a drink.

Pack Size

20 boluses per tub.

RELATED PRODUCTS
also see
MILK REPLACERS
page 124

RELATED PRODUCTS
also see
MINERALS
page 102

MINERALS

MINERALS



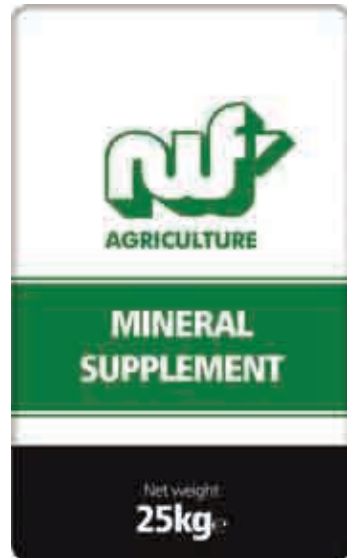
MINERALS

The NWF range of minerals are a popular and convenient way of providing bio-available minerals, trace elements and vitamins to livestock.

Minerals and vitamins are essential components of all livestock diets. Inaccurate mineral supplementation of diets can result in reduced performance, increased disease, and health problems and potentially death. It pays to get mineral nutrition right.

We supply a range of carefully formulated minerals, to complement the range of forages fed in the UK and to help overcome specific problems. They contain minerals from the highest quality sources and with outstanding bioavailability. Specific bespoke minerals can be produced based on the results of a forage mineral assay and animal health symptoms.

Minerals are available in a range of physical forms to suit every feeding system, including free access minerals and in feed products, as well as buckets and blocks. We can supply mineral straights including limestone flour, calcined magnesite, magnesium chloride flakes and di calcium phosphate.



CATTLE BREEDER

For use in cows and heifers at breeding time

Nutritional Benefit

A specifically formulated mineral and vitamin lick to support the requirements of cows and heifers in the lead up to breeding.

Features

- Promotes fertility and supports foetus development.
- Full mineral and vitamin pack including selenium, zinc, copper, and vitamin E to help balance deficiencies in grass and silages.
- High levels of selenium and vitamin E improve conception rates and embryo survival.
- High zinc levels to support immune function, udder and foot health.
- 12% magnesium to reduce the risk of staggers during known risk periods.

Daily Feed Rates

Typical intake up to 150g/head/day.

Do not feed to sheep.

RELATED PRODUCTS
also see
MILK REPLACERS
page 124

RELATED PRODUCTS
also see
POWDERED MINERALS
page 110



Available in 20kg and 80kg tubs

CATTLE GP

General purpose mineral lick to supplement cattle

Nutritional Benefit

A specifically formulated mineral and vitamin lick suitable for dairy cows, suckler cows, breeding youngstock and store cattle.

Features

- Full mineral and vitamin pack including selenium, zinc, copper, and vitamin E to help balance deficiencies in grass and silages.
- High levels of selenium and vitamin E to help support immune system.
- High zinc levels to support immune function, udder, and foot health.
- Contains copper to support fertility in breeding stock.

Daily Feed Rates

Typical intake up to 150g/head/day.

Do not feed to sheep.

RELATED PRODUCTS
also see
MILK REPLACERS
page 124

RELATED PRODUCTS
also see
POWDERED MINERALS
page 110



Available in 20kg and 80kg tubs

DRY COW

For cows in the lead up to Calving

Nutritional Benefit

A specifically formulated dry cow mineral and vitamin lick to support the requirements of dry cows and in-calf heifers to support cow and calf health and where the risk of milk fever exists.

Features

- Optimal calcium and magnesium levels to help prevent milk fever and low blood magnesium.
- Full mineral and vitamin pack including selenium, zinc and vitamin E to help, where there is a risk of key dry cow disorders.
- Contains MOS/ β -glucan - activates cows immune system & improve colostrum quality.
- Biotin helps improves hoof hardness and condition.
- Salmon Fish Oil helps improves early calf vigour.
- Protected Choline improves liver function.

Daily Feed Rates

Typical intake up to 150g/head/day.

Do not feed to sheep.

RELATED PRODUCTS

also see

MILK REPLACERS
page 124

RELATED PRODUCTS

also see

POWDERED MINERALS
page 110



Available in 20kg and 80kg tubs

HIGH MAG

Reduce the risk of staggers (Hypomagnesemia) in lactating cattle and sheep

Nutritional Benefit

A specifically formulated mineral and vitamin lick designed to reduce the risk of grass staggers (Hypomagnesemia) in your livestock, suitable for cattle and sheep.

Features

- Full mineral and vitamin pack to address Spring and Autumn grass deficiencies.
- Vitamin D3 to aid with calcium absorption to help prevent milk fever.
- Contains 3 sources of highly accessible magnesium.
- Combination of quickly available and slow release sources offer 24 hour protection against grass staggers.

Daily Feed Rates

<i>Cattle 200g/head/day.</i>
<i>Sheep 30g/head/day.</i>

RELATED PRODUCTS
also see
MILK REPLACERS
page 124

RELATED PRODUCTS
also see
POWDERED MINERALS
page 110



Available in 20kg and 80kg tubs

**Suitable for mixed grazing*

PROTEIN ENERGY

For grazing animals, including mixed livestock

Nutritional Benefit

A specifically formulated high quality protein and energy feed tub suitable for grazing cattle and sheep.

Features

- Excellent source of energy from sugars, starch, and protected fat.
- High quality rumen bypass protein.
- Protected zinc to support a healthy immune system and encourage foot health.
- Full mineral and vitamin pack to counter forage shortfalls.
- Helps boost fertility and growth rates by supplementing forage-based diets.

Daily Feed Rates

<i>Cattle 100-150g/head/day.</i>
<i>Sheep 20-50g/head/day.</i>

RELATED PRODUCTS

also see

MOLASSES
page 48

RELATED PRODUCTS

also see

ULTRA SOY
page 31



Available in 20kg and 80kg tubs

EWE BREEDER

For productive ewes from tugging to lambing

Nutritional Benefit

A specifically formulated high quality protein and energy lick developed for ewes all year round.

Features

- Enhances rumen activity, leading to better forage utilisation and increased intakes.
- Salmon Fish Oil (Omega 3) supports egg development and lamb vigour.
- Contains MOS/ β -glucan - activates ewe's immune system & improve colostrum quality.
- Full mineral and vitamin pack to support pregnant ewe and growing lambs.
- High levels of zinc to support the immune system and foot health.
- B12 to further enhance rumen function.

Daily Feed Rates

<i>Sheep 30g/head/day.</i>
<i>Do not feed to cattle.</i>

RELATED PRODUCTS
also see
MOLASSES
page 48

RELATED PRODUCTS
also see
ULTRA SOY
page 31



Available in 20kg and 80kg tubs

Powdered Minerals

Supplied in 25kg bags

NWF ULTRAMIN CATTLE GP

Nutritional Benefit

A general purpose mineral to help maintain the health and productivity of growing, rearing and suckler cattle.

Features

- All round mineral giving general areas.

Daily Feed Rates

Feed one 25kg bucket per 15 sheep.

Typical intake up to 150g/head/day.

RELATED PRODUCTS
also see
MINERAL BUCKETS
page 104

RELATED PRODUCTS
also see
MOLASSES
page 48



NWF ULTRAMIN CATTLE HI MAG

Nutritional Benefit

Balanced mineral to meet the mineral needs of the cow whilst reducing the risk of magnesium deficiency, particularly in spring and autumn grazing cattle.

Features

- A robust high magnesium mineral to help cope with lush pastures which are low in fibre reducing the time for magnesium absorption from forage.
- Free Access is available which is weatherproofed and de-dusted to enable trough feeding.

Daily Feed Rates

Typical intakes up to 150g/head/day.

RELATED PRODUCTS
also see
MINERAL BUCKETS
page 104

RELATED PRODUCTS
also see
MOLASSES
page 48

NWF ULTRAMIN DAIRY

Nutritional Benefit

High levels of all vitamins and minerals to support the needs of the modern dairy cow.

Features

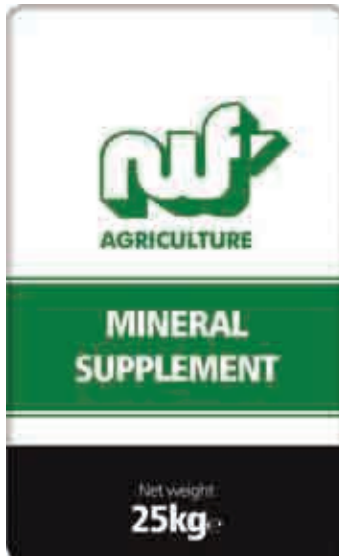
- A quality mineral formulated to support most feeding systems.
- Balanced trace minerals to help support health and vitality.
- Good vitamin E levels to help aid immunity.

Daily Feed Rates

Typical intake up to 150g/head/day.

RELATED PRODUCTS
also see
TECHMIX
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RELATED PRODUCTS
also see
MOLASSES
page 48



NWF ULTRAMIN ELITE DAIRY

Nutritional Benefit

A balanced high specification mineral targeted to meet the mineral requirements of the high yielding cow.

Features

- High vitamin E and Protected Selenium to support the immune system.
- Protected Zinc and Copper to support fertility and hoof health.
- Combined with its high iodine content, this can help aid cell count management and fertility performance.

Daily Feed Rates

Typical intake up to 150g/head/day.

RELATED PRODUCTS
also see
TECHMIX
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RELATED PRODUCTS
also see
MOLASSES
page 48



NWF ULTRAMIN DRY COW

Nutritional Benefit

An essential product when considering good dry cow management and getting the cow well established in the next lactation.

Features

- High vitamin E to help support the immune system and cell repair in the dry period.
- Iodine and Selenium content help to reduce the incidence of stillbirth, weak calves and retained cleansings.
- High magnesium to help calcium use post calving and support calving health.
- Free Access is available which is weatherproofed and de-dusted to enable trough feeding.

Daily Feed Rates

Typical intake up to 200g/head/day.

RELATED PRODUCTS

also see

TECHMIX
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RELATED PRODUCTS

also see

MINERAL BUCKETS
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NWF ULTRAMIN ELITE DRY COW

Nutritional Benefit

An essential product when considering good dry cow management and getting the cow well established in the next lactation.

Features

- High vitamin E and chelated Selenium to support the immune system and cell repair in the dry period.
- Chelated copper and zinc to help support optimal energy metabolism for fertility, production and hoof health.
- Iodine and Selenium content help to reduce the incidence of stillbirth, weak calves and retained cleansings.
- High magnesium to help calcium use post calving and support calving health.

Daily Feed Rates

Typical intake up to 200g/head/day.

RELATED PRODUCTS
also see
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also see
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NWF ULTRAMIN GRASS MAIZE SILAGE

Nutritional Benefit

Specifically formulated to balance a typical dairy cow diet using both grass and maize silage within their diets.

Features

- Balanced trace minerals to help support health and vitality
- Good vitamin E levels to help aid immunity and balance the low levels found in maize silage.

Daily Feed Rates

Typical intake up to 200g/head/day.

RELATED PRODUCTS
also see
MOLASSES
page 48

NWF ULTRAMIN INTENSIVE BEEF

Nutritional Benefit

Specifically formulated to balance intensive beef finishing diets.

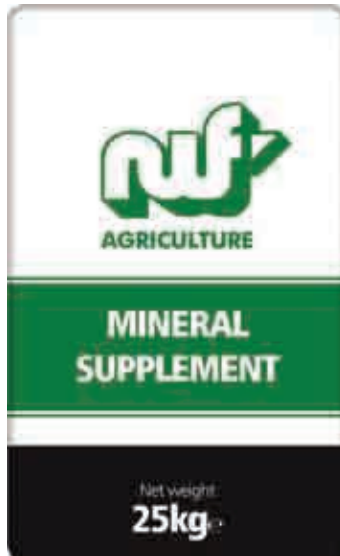
Features

- Formulated with high salt and calcium and no magnesium and phosphorous to reduce the risk of urinary calculi.
- The high vitamin E level in this product will work well with moist cereal-based diets, helping to reduce the risk of white muscle disease.

Daily Feed Rates

Typical intake 50-100g/head/day.

RELATED PRODUCTS
also see
MINERAL BUCKETS
page 104



NWF ULTRAMIN INTENSIVE LAMB

Nutritional Benefit

Specifically formulated to balance intensive lamb diets.

Features

- Formulated to reduce the risk of urinary calculi using Ammonium Chloride, high salt, calcium and no added magnesium or phosphorous.
- High levels of vitamin E to ensure this product will work well with moist cereal-based diets, helping reduce the risk of muscle weakness in intensively fed lambs.

Daily Feed Rates

Lamb Finishing – 25kg/T.

RELATED PRODUCTS
also see
MINERAL BUCKETS
page 104

RELATED PRODUCTS
also see
MOLASSES
page 48

NWF ULTRAMIN SHEEP GP

Nutritional Benefit

Specifically formulated to support the mineral requirements of the growing and adult ewe.

Features

- High levels of Vitamin B12 to reduce the risk of pine (cobalt availability).
- High levels of vitamin E are included to support immunity.
- Free Access is available which is weatherproofed and de-dusted to enable trough feeding.

Daily Feed Rates

Typical Intakes – 15 - 30g/day/head.

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also see
MINERAL BUCKETS
page 104

RELATED PRODUCTS
also see
MOLASSES
page 48

NWF ULTRAMIN SUCKLER COW

Nutritional Benefit

Specifically formulated to support the mineral requirements of the suckler cow through lactation.

Features

- High vitamin E to support the immune system and aid fertility.
- High phosphorous and magnesium – essential for energy metabolism, particularly whilst grazing.

Daily Feed Rates

Typical intake up to 100-150g/head/day.

RELATED PRODUCTS
also see
MINERAL BUCKETS
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RELATED PRODUCTS
also see
MOLASSES
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MILK REPLACERS

MILK REPLACERS



MILK REPLACERS

The NWF milk replacer range is formulated to provide outstanding nutrition using high quality, traceable ingredients to ensure digestibility and palatability.

- Carefully selected milk solids with maximum nutritional value.
- Balanced blend of oils, homogenised and emulsified for maximum digestibility and normal gut function.
- Full supplement of vitamins, minerals and trace elements.
- Selected additives to help meet growth rates and support the health status of calves.
- Our milk replacers are easy-mixing and suitable for most automated and manual feeding systems.
- All our milk replacers are fixed formulation, to supply a consistent product.

The LifeStart Programme is helping understand nature's way to unlock the early growth potential of the calf to further improve dairy farm efficiency in the future. NWF Ultra Life milk replacer is suitable for accelerated heifer-rearing programmes on either bucket systems or computer-controlled machines.

CALF REARING ADVICE

Our technical and sales teams offer calf rearing advice that reviews the behaviour of youngstock in their environment to establish where improvements can be made to help maximise their health and performance.

Successful calf rearing is based on a virtuous circle of good health, quality nutrition and strong growth. Your local NWF sales specialist can provide advice on the 5 C's of calf rearing; Colostrum, Calories, Comfort, Cleanliness & Consistency.



NWF ULTRA MILK ELITE

Ultra Life Elite is a LifeStart accredited skim-based milk replacer, with a 50% skim content and 100% dairy protein. It is highly digestible and carefully formulated with equal fat and protein levels to ensure it has an appropriate and specific nutrient profile to support the growing calf.

Ultra Life Elite contains natural vitamin E which has higher biological activity than synthetic, approximately 2:1 over synthetic Vitamin E.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional value.
- Balanced blends of vegetable fats and oils, homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Fibosel - an active β -glucan that supports a calf's innate immunity.
- Butyrate.
- Acidified.
- Contains flavouring and sweeteners to encourage intakes.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis:

• Protein 22.5%	• Vitamin A 20,000 iu/kg
• Oil 22%	• Vitamin D3 5,000 iu/kg
• Fibre 0.0%	• Vitamin E 150 iu/kg

RELATED PRODUCTS

also see

TECHMIX
page 94

NWF ULTRA LIFE SKIM

A Lifestart accredited skim-based milk replacer. At 50% skim content this milk replacer is highly digestible and carefully formulated to ensure it has an appropriate and specific nutrient profile to support the growing calf.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional solids.
- Balanced blends of vegetable fats and oils homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Easy Mix.
- Acidified.
- Beta Glucans.
- Butyrate.

Applications:

It is suitable for accelerated heifer and beef rearing programs.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 24.0%	• Vitamin A 25,000 iu/kg
• Oil 20.0%	• Vitamin D3 5,000 iu/kg
• Fibre 0.00%	• Vitamin E 500 iu/kg

RELATED PRODUCTS
also see
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NWF ULTRA MILK YELLOW

A top quality skim milked based calf milk replacer, ideally suited to the professional calf rearer or dairy units looking for high performance. At 50% skim and 100% dairy protein this milk replacer is highly digestible. It is suitable for many systems, particularly those wanting something special from their youngstock.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional solids.
- Balanced blends of vegetable fats and oils homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Easy Mix.
- Acidified.
- Beta Glucans.
- Butyrate.

Applications:

Ideal for many systems, particularly those wanting something special from their youngstock.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 22.0%	• Vitamin A 25,000 iu/kg
• Oil 18.0%	• Vitamin D3 5,000 iu/kg
• Fibre 0.00%	• Vitamin E 250 iu/kg

RELATED PRODUCTS
also see
TECHMIX
page 94



NWF ULTRA MILK GREEN

A skimmed milk-based product, ideal to promote early bloom and a healthy-looking calf, suited for many systems, particularly those selling stock at a young age. Contains 35% skim.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional solids.
- Balanced blends of vegetable fats and oils homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Easy Mix.
- Acidified.
- Beta Glucans.
- Butyrate.

Applications:

It is suitable for accelerated heifer and beef rearing programs.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 22.0%	• Vitamin A 25,000 iu/kg
• Oil 18.0%	• Vitamin D3 5,000 iu/kg
• Fibre 0.00%	• Vitamin E 250 iu/kg

RELATED PRODUCTS
also see
TECHMIX
page 94

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AGRICULTURE

NWF ENERGIZED CALF MILK

A LifeStart accredited, ECM has been developed with whole milk as the biological reference; the best of whole milk combined with the best of CMR. The LifeStart Programme helps to understand nature's way to unlock the early growth potential of the calf to further improve dairy farm efficiency in the future.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional value.
- Balanced blends of vegetable fats and oils, homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Fibosel - an active β -glucan that supports a calf's innate immunity.
- Butyrate.
- Acidified.
- Contains flavouring and sweeteners to encourage intakes.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis:

• Protein 22.5%	• Vitamin A 20,000 iu/kg
• Oil 25%	• Vitamin D3 4,000 iu/kg
• Fibre 0.0%	• Vitamin E 200 iu/kg

RELATED PRODUCTS

also see

TECHMIX
page 94

NWF ULTRA LIFE WHEY

A Lifestart accredited whey-based milk replacer. This milk replacer is carefully formulated to ensure it has an appropriate and specific nutrient profile to support the growing calf.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional solids.
- Balanced blends of vegetable fats and oils homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Easy Mix.
- Acidified.
- Beta Glucans.
- Butyrate.

Applications:

It is suitable for accelerated heifer and beef rearing programs.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 24.0%	• Vitamin A 25,000 iu/kg
• Oil 20.0%	• Vitamin D3 5,000 iu/kg
• Fibre 0.02%	• Vitamin E 500 iu/kg

RELATED PRODUCTS
also see
TECHMIX
page 94

NWF ULTRA HI PRO HEIFER

A top quality whey-based milk replacer that is suitable for accelerated heifer rearing program's that require a high protein product.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional solids.
- Balanced blends of vegetable fats and oils homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Easy Mix.
- Acidified.
- Beta Glucans.
- Butyrate.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 26.0%	• Vitamin A 25,000 iu/kg
• Oil 17.0%	• Vitamin D3 5,000 iu/kg
• Fibre 0.03%	• Vitamin E 500 iu/kg

RELATED PRODUCTS
also see
TECHMIX
page 94

NWF ULTRA MILK BLUE

This excellent whey-based product enables fast cost-effective growth and development with enhanced concentrate feed intake at this critical stage in life. A high energy calf milk replacer that reconstitutes easily.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional solids.
- Balanced blends of vegetable fats and oils homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Easy Mix.
- Acidified.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 22.0%	• Vitamin A 25,000 iu/kg
• Oil 19.0%	• Vitamin D3 5,000 iu/kg
• Fibre 0.04%	• Vitamin E 300 iu/kg

RELATED PRODUCTS
also see
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NWF ULTRA MILK PLATINUM

A superior quality skim-based calf milk replacer with elevated levels of energy and protein. At 50% skim, 100% dairy protein content, this milk replacer contains high levels of milk proteins and is highly digestible. It is suitable for many systems, particularly those wanting something special from their youngstock.

Specifically developed using:

- A specific spray dried technology.
- High levels of dairy proteins for optimal solubility and digestibility.

Key Features

- A β -glucan that supports a calf's innate immunity (a form of defence mechanism) to combat challenging conditions whilst safeguarding performance.
- Butyrate- stimulates growth and enhances performance in young calves.
- Acidified- Lowers milk replacer pH which in turn reduces the risk of harmful bacteria proliferation in the milk. Acidified milk replacer can be fed to support an ideal intestinal pH to encourage 'good' bacteria to proliferate in the Gastrointestinal Tract.
- Contains flavouring and sweeteners to encourage intakes

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Oil 25%	• Vitamin A 25,000 iu/kg
• Protein 23%	• Vitamin D3 5,000 iu/kg
• Fibre 0.0%	• Vitamin E 300 iu/kg
• Ash 6.5%	

RELATED PRODUCTS
also see
TECHMIX
page 94

NWF ULTRA MILK DIAMOND

A superior quality, 50% skim-based calf milk replacer, with elevated levels of oil and milk protein to promote accelerated growth and development at this critical stage of life.

Specifically developed using:

- A specific spray dried technology.
- High levels of dairy proteins for optimal solubility and digestibility.

Features

- A β -glucan that supports a calf's innate immunity (a form of defence mechanism) to combat challenging conditions whilst safeguarding performance.
- Butyrate- stimulates growth and enhances performance in young calves.
- Acidified- Lowers milk replacer pH which in turn reduces the risk of harmful bacteria proliferation in the milk. Acidified milk replacer can be fed to support an ideal intestinal pH to encourage 'good' bacteria to proliferate in the Gastrointestinal Tract.
- Contains flavouring and sweeteners to encourage intakes

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Oil 20%	• Vitamin A 25,000 iu/kg
• Protein 23%	• Vitamin D3 5,000 iu/kg
• Fibre 0.03%	• Vitamin E 300 iu/kg
• Ash 7.0%	

RELATED PRODUCTS

also see

TECHMIX
page 94

NWF ULTRA MILK GOLD

A superior quality, highly digestible 50% skim milk replacer which has high levels of milk proteins. This replacer contains the Greenguard package.

Specifically developed using:

- A specific spray dried technology.
- High levels of dairy proteins for optimal solubility and digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Butyrate.
- Acidified.
- MOS.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 22.0%	• Vitamin A 25,000 iu/kg
• Oil 19%	• Vitamin D3 5,000 iu/kg
• Fibre 0.05%	• Vitamin E 100 iu/kg

RELATED PRODUCTS
also see
TECHMIX
page 94



NWF ULTRA MILK EMERALD

A 35% skim-based replacer, containing the additive package ensuring that early bloom and healthy calves is promoted.

Specifically developed using:

- A specific spray dried technology.
- High levels of dairy proteins for optimal solubility and digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Butyrate.
- Acidified.
- MOS.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 21.5%	• Vitamin A 25,000 iu/kg
• Oil 18%	• Vitamin D3 5,000 iu/kg
• Fibre 0.05%	• Vitamin E 100 iu/kg

RELATED PRODUCTS
also see
TECHMIX
page 94

NWF ULTRA MILK RUBY

A superior quality whey-based calf milk replacer, with elevated levels of oil and milk protein to promote accelerated growth and development at this critical stage of life.

Specifically developed using:

- A specific spray dried technology.
- High levels of dairy proteins for optimal solubility and digestibility.
- Full supplement of vitamins, minerals, and trace elements.

Key Features:

- Butyrate.
- Acidified.
- MOS.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 24%	• Vitamin A 5,000 iu/kg
• Oil 20%	• Vitamin D3 25,000 iu/kg
• Fibre 0.05%	• Vitamin E 100 iu/kg

RELATED PRODUCTS

also see

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page 94

NWF ULTRA MILK SAPPHIRE

A high-quality whey-based milk replacer, a good all-rounder replacer which has the addition of the Greenguard to support digestive health and performance.

Specifically developed using:

- A specific spray dried technology
- High levels of dairy proteins for optimal solubility and digestibility
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Butyrate.
- Acidified.
- MOS.

Applications:

Suitable for all beef & dairy breeds, home bred or market purchased.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis

• Protein 22.5%	• Vitamin A 25,000 iu/kg
• Oil 18%	• Vitamin D3 5,000 iu/kg
• Fibre 0.1%	• Vitamin E 100 iu/kg

RELATED PRODUCTS
also see
TECHMIX
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NWF ENERGIZED LAMB MILK REPLACER

Energized Lamb Milk is a precisely formulated lamb milk replacer containing specially selected milk products, highly digestible oils and proteins plus vitamins and minerals to satisfy the requirements of fast-growing lambs. It is available in skimmed milk (50%) or whey-based options.

Specifically developed using:

- Carefully selected milk solids with maximum nutritional solids.
- Balanced blends of vegetable fats and oils homogenised and emulsified for maximum digestibility.
- Full supplement of vitamins, minerals and trace elements.

Key Features:

- Improved Energy Density.
- Optimal Protein Digestibility.
- Controlled Osmolality.

Applications:

This easy-mixing milk replacer is ideally suited to all bottle and most ad lib lamb feeding systems. Milkivit Energized Lamb Milk should be introduced directly following on from colostrum feeding.

Shelf Life:

Vitamins guaranteed for 12 months from date of manufacture.

Typical Analysis:

• Oil 25%	• Vitamin A 20,000 iu/kg
• Protein 22.5%	• Vitamin D3 4,000 iu/kg
• Fibre 0.0%	• Vitamin E 200 iu/kg
• Ash 7.0%	• Selenium mg/kg 0.3

RELATED PRODUCTS
also see
TECHMIX
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GRASS SEED



GRASS SEED

GRASS SEED

We have a comprehensive range of grass seed mixtures that are bred, grown, blended and packed by Barenbrug UK, one of the largest grass seed breeders and producers in the UK and Europe. Barenbrug are internationally respected grass breeders dedicated to ensuring farmers achieve the maximum return from grass growth. Their expertise and skills have led to the development of a superb range of quality grass seed mixtures. Do not jeopardise the productivity of your grassland with poor quality grass seed. Invest and renew your pasture for better stock performance.

Grass Mixture	Short Term Leys 1 to 2 years	Short Term Leys 2 to 3 years	Medium Term Leys 4 to 5 years	Long Term Leys 5 years plus	Grazing	Cutting	High Protein	Clover
Ultra Renovate	✓✓✓				✓✓	✓		
Ultra Turbo Mix	✓✓✓				✓✓	✓✓✓		
After Maize	✓✓✓	✓			✓✓	✓✓✓		
Ultra Early Abundance		✓✓✓			✓✓	✓✓✓		
Ultra High-Pro Red		✓✓✓			✓	✓✓✓	✓✓✓	✓✓✓
Ultra Cut 'n' Graze			✓✓✓		✓✓✓	✓✓✓		
Ultra Intensive Dairy				✓✓✓	✓✓✓	✓	✓	✓
Ultra Longlife				✓✓✓	✓✓✓	✓✓	✓	✓✓
Champion with Clover			✓✓	✓✓✓	✓✓✓	✓✓✓	✓	✓✓
Champion without Clover			✓✓	✓✓✓	✓✓✓	✓✓✓		

✓ Average
 ✓✓ Good
 ✓✓✓ Excellent



THREE REASONS TO RESEED

1 - Increased Yields

- Yield from a ley established this summer.
- Potential yield 11.63 TDM/ha from two cuts.
- Based on data from 2018 RGCL list.
- Compared to an old sward 50% weed grasses with potential as low as 9 TDM/ha.
- At DM value £140/t its worth £360/ha in the first year of sowing.
- Doesn't take into account further cuts in the summer.
- Doesn't take into account grazing yield consumed by stock.

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THREE REASONS TO RESEED

2 - Increased Energy

- Yield from the two cuts could have an energy value of 133,320MJ.
- This is capable of producing – over 25,150 litres of milk, over 2050kg of lamb or over 2400kg of beef.
- When cut at the optimum growth stage, would achieve a 1st cut of 71D (11.3ME) and a 2nd cut of nearly 74D (11.7ME).
- Old swards not only yield less, but also have poorer feed value.
- A typical old sward could have a D value of 60-65D, which would have an ME of between 9.6 and 10.4.
- By introducing modern, high quality varieties, this could be increased significantly.
- By cutting at the optimum growth stage, a 72D silage is achievable and should have an ME of 11.5.

3 - Increased N Efficiency

- 1st step in reseeding - make sure your soils are in optimum health & condition.
- Even the best ryegrasses will not realise their potential when expected to grow in soil which has poor structure, is deficient in P & K and / or has a below optimum pH.
- Aim to maintain a soil pH of AT LEAST 6; pH6.5 where clover is being sown.
- P (Phosphate) and K (Potash) indices of 2.
- In ideal conditions, the major benefit of young Ryegrass swards in terms of efficiency is with nitrogen.
- Ryegrass species are all 100% Nitrogen efficient.
- Weed grasses like annual meadow grass are only 17% efficient.
- Meaning £83 of N is wasted for every £100 worth of N applied.

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ULTRA RENOVATE™

Ideal to improve the productivity of a low performing tired ley for 3-5 years.

Medium Term Leys - 3 to 5 Years

- Renovate is a 100% ryegrass blend for areas of good fertility.
- Uses varieties which are aggressive enough to establish in an existing sward yet easy to manage.
- Specifically designed to work best with specialist overseeding techniques.

Designed for:

- Restoring productivity into underperforming leys.
- Re-introducing vigorous highly productive grasses into a sward.
- Improving the quality of a sward for better animal performance.
- Repairing damage caused by poaching.
- Use with specialist overseeding techniques.

Benefits:

- Includes varieties which are vigorous enough to establish in an existing sward.
- Easy to manage.
- Can be used in spring or autumn to repair and renovate swards.
- Increases the proportion of productive grasses in a sward.

Sward management:

Existing sward should be topped or grazed short and harrowed to remove any dead material and to create some tilth for the new grass seed. Soil fertility (Ph, P,K Mg status) and structure should also be assessed to identify any underlying field issues.

Sowing Rates:

10kg per acre packed in 20kg bags, 707.00 seeds/m² @10kg/acre

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ULTRA TURBO MIX™

A highly productive short term Italian ryegrass blend

Short Term Leys – 1 to 2 years

- A highly productive Italian ley.
- Grows down to 3°C soil temperature, extending the growing season for store lambs or wintering hogs.
- Contains high ranking BARMULTRA II which has excellent spring grazing and silage yields.
- High response to nitrogen inputs and high fertility situations. Ultra Turbo Mix will produce 20% more yield than perennial ryegrass leys.
- Capable of producing four cuts of high quality, high yielding silage.

Designed for:

- Producing maximum amounts of quality forage under a high input/high fertility system.
- A first cut at the end of May, producing 70+D value silage with a second cut five weeks later.
- Giving a very long growing season it is ideal for early turnout or lamb finishing.

Benefits:

- Fits well into cereal crop rotation.
- Ideal for following maize and giving a two year break.
- Gives high quality aftermath grazing.

Sward management:

Grows at temperatures as low as 3°C, so the farm must be able to use this early growth. A first cut at the end of May, following a spring grazing will produce 70+ D value silage, with a second cut five weeks later. Will yield up to 17tDM/ha in its first year under high input management and will achieve up to six cuts a year.

Sowing Rates:

12kg per acre, 1,216 seeds/m²

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AFTER MAIZE - FAST GRASS™

Delivering a high quality grass crop after maize has been harvested.

Short Term Leys – 1 to 2 years

- Very quick establishment.
- Rapid growth at cool temperatures.
- Flexibility of duration with 12, 18 or 24 month production.
- Can be established after a spring cereal harvest.

Designed for:

- Ability to germinate at lower temperatures than conventional leys.
- Safe sowing throughout October.
- Ability to establish faster and better than other leys even in adverse conditions of cold wet seed beds.

Benefits:

- Using the concept of “germination energy” a faster establishment rate of 20% above the average ryegrass is achieved.
- Over winter grazing.
- Stability of soils over winter reducing soil erosion and run off.
- Gives an early silage cut in spring enabling entry back into maize / cereals.

Sward management:

Over winter grazing will produce a dense sward with full potential for an early silage cut in spring.

Sowing Rates:

12.5kg per acre packed in 25kg bags.

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ULTRA EARLY ABUNDANCE™

The ultimate high yielding high quality short term cutting.

Short Term Leys – 2 to 3 years

- Very high yielding two-three year predominantly cutting mixture.
- Responds to high inputs by producing 20% more than long term leys.
- A ley that will produce forage very early and late in the season.
- Good digestibility is combined with excellent palatability and high sugars.

Designed for:

- Intensive production over an 18-36 month period.
- Up to four silage cuts with over winter grazing.
- Long grazing season from early spring to late autumn.
- Ideal as a catch crop, will give excellent production from an early spring or late summer sowing.

Benefits:

- A highly productive ley, which will give exceptional crops for silage, grazing or hay, from a high input system.
- A mixture for the farmer who wants to maximise their own production from a short term grass crop in a rotation.

Sward management:

A first cut in the middle of May will produce 70+ D value silage, with a second cut six to eight weeks later. Hybrid and Italian ryegrass responds positively to high levels of fertility, by producing 20% more yield than Perennial Ryegrass.

Sowing Rates:

13kg per acre, 991 seeds/m².

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ULTRA HIGH-PRO RED™

An outstanding high yielding high protein cutting ley.

Short Term Leys – 2 to 3 years

- Highly productive two-three year high protein ley.
- The red clover both fixes nitrogen and gives a high protein feed.
- Suitable for both hay and silage production.
- High sugar production from grass.
- The most profitable legume/grass mixture for silage production.

Designed for:

- High protein forage production.
- Two or three cuts can be followed by high quality, productive autumn grazing.
- Long production season, grows early spring to late autumn.

Benefits:

- A highly productive, high protein cutting ley, giving the maximum quantity and quality.
- Ideal for those looking to produce home grown protein crops, red clover has a protein content of between 16 and 20%.
- Red clover/grass silage is highly palatable, giving increased intakes.
- Prota Red is a new unique mixture of red clovers. The blend of varieties balances production through the growing season, while maintaining excellent persistency and disease resistance.

Sward management:

Needs to be sown in spring or by early September to allow the clover to establish well enough to survive the winter. A first cut in the middle of May will produce 70D + silage, with a second cut seven to eight weeks later. The first cut will tend to be more grass with red clover being the larger part of the later cuts.

Sowing Rates:

13kg per acre, 1,060 seeds/m²

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ULTRA HYBRID™

A high yielding cutting ley containing 3 of the best Hybrid ryegrass varieties available. Designed as an intensive cutting ley producing high quality silage for 3-5 years. It fits well into medium term rotations, is suitable for multi cut systems and AD plants.

Medium Term Leys – 3 to 5 years

- Designed for a mid-May first cut.
- Available with clover if required.
- Barclamp has very high yields in its first season, excellent early spring growth and high crown rust resistance.
- New variety Bannfoot produces improved yields with high D value along with excellent persistency. It also has a good all round disease profile.

Designed for:

- Hybrid ryegrasses grow at soil temperatures as low as 5-6°C. This lower temperature growth means the grasses get away earlier in the spring and grow later in the autumn extending the growing season and therefore production of the ley. This also allows the sowing window for Ultra Hybrid to be lengthened.

Benefits:

- Will produce 10-15% more yield than Perennial ryegrass leys due to the ability to use Nutrients efficiently via its long season growth.
- Ultra Hybrid delivers a superb silage mixture for farmers. It has a tight heading date range and excellent disease resistance offering strong silage production throughout the season.
- Offers multiple entries for slurry / digestate application, making the most of home produced nutrients.

Sowing Rates:

14kg per acre

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ULTRA CUT 'N' GRAZE™

An excellent cutting and grazing ley for up to 5 years duration. Will produce top quality high yielding silage cuts. Gives the option to graze after cutting.

Medium Term Leys – 4 to 5 years

- Outstanding early spring growth.
- Produces very high-quality silage from an early cut.
- Will produce three good cuts per year.
- Grazing can be combined with cutting for a fully flexible ley.
- Combines the massive yields of hybrid ryegrass with the persistence of perennial ryegrass.

Designed for:

- Excellent early season growth, ideal for early lambing or extended grazing of dairy cows.
- Intensive cutting, up to three cuts per year, combined with high quality grazing.
- Combines the yield of hybrids with the quality and persistence of perennial ryegrass.

Benefits:

- A flexible, productive ley, ideal for those looking for early grass for lamb or cattle grazing, followed by two or three cuts of quality silage.
- When cut only it will produce up to three prolific cuts of leafy, productive forage.
- The varieties in the ley have been selected for their digestibility and palatability, which ensures maximum animal output.
- Contains FINTONA, the highest yielding perennial ryegrass ever listed in the UK.

Sward management:

Hybrids lower temperature growth will give excellent early spring grazing. An early spring grazing can be followed by two cuts of quality silage or a cut of hay plus aftermath grazing. The ley will also produce extremely long-season productive grazing, capitalising on the early spring and late autumn growth of the hybrid ryegrasses.

Sowing Rates:

14kg per acre, 1,361 seeds/m²

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ULTRA INTENSIVE DAIRY™

A highly productive grazing ryegrass mixture that will give season long quality forage.

Long Term Leys – 5 years plus

- Very late heading dense leafy mixture.
- Large “window” to cut 70+D silage.
- Exceptionally versatile, suitable for both cutting and grazing.
- Produces a dense, productive ley, for high quality grazing.
- New variety GRACEHILL is an excellent all-round performer right across the growing season, producing superb annual yields of high digestibility grass under both grazing and silage management along with extremely high metabolizable energy (ME) yields per hectare.

Designed for:

- Intensive production from grazing a highly palatable, very digestible ley.
- Creating a tight persistent sward that is highly resistant to poaching.
- Season long grazing from early spring to late autumn.

Benefits:

- Ultra Intensive Dairy produces a dense leafy sward that is easily managed.
- The use of late heading varieties means that production always of the highest quality.
- The varieties used have been selected for their persistence as well as their palatability and mid-season digestibility to produce a long lasting, productive sward.

Sward management:

This ley was initially designed as a dairy paddock grazing mixture but has been cut and grazed very successfully on all types of farms. Tight heading date grouping make it easily manageable and reduces the need for topping. Grass growth from this mix stays in front of the cows not ahead. This means cows are always grazing optimum quality grass. Cut at first ear emergence, in the 3rd week of May, this ley will produce grass of 70+D.

Sowing Rates:

14kg per acre, packed in 14kg bags, 1,705 seeds/m²

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ULTRA LONGLIFE™

A permanent pasture mixture, with the option to take later cuts of quality silage.

Long Term Leys – 5 years plus

- The permanent pasture mixture.
- Exceptionally versatile, suitable for both cutting and grazing.
- Produces a dense, productive ley, for high quality grazing.
- Including quality white clovers contributes both protein and minerals, to ensure maximum performance from the grazing animal.
- The very high yielding Timothy, COMER, gives mid-season production and variety to the sward.
- COMER Timothy increases spring growth by 34% and persistence under extreme conditions.

Designed for:

- Intensive production from grazing a highly palatable, very digestible ley.
- Creating a tight persistent sward that is highly resistant to poaching.
- Season long grazing from early spring to late autumn.

Benefits:

- Ultra Longlife produces a dense leafy sward that is easily managed.
- The use of early, intermediate and late heading varieties means that production is season long.
- The varieties used have been selected for their persistence as well as their palatability and mid-season digestibility to produce a long lasting, productive sward.

Sward management:

Ultra Longlife is designed to give fantastic spring growth as well as season long production utilising a combination of early intermediate and late heading perennial ryegrass varieties and Timothy. Therefore it is ideal for farms where early spring grazing is important. Giving later fields a chance to get going. It can then be shut up for 1 or 2 cuts of silage (or hay) followed by grazing for the rest of the season.

Sowing Rates:

13kg per acre, 2,369 seeds/m²

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CHAMPION WITH OR WITHOUT CLOVER™

The number one selling mixture.

Our number one selling mixture. A proven long-term top class dual purpose mixture which produces excellent quality forage production whether cut or grazed.

Long Term Leys – 5 years plus

- Ultimate proven ley for milk and meat production.
- Very productive and flexible 5+ year ley.
- 15kg seeding rate for rapid sward density.
- This ley includes the very best season-long production varieties available.
- Suitable for both intensive cutting and grazing, with good persistence.
- PROTA WHITE contributes both protein and minerals, to ensure maximum performance from the grazing animal.
- The correct proportion of Tetraploids in the ley give very good animal intakes
- Includes FINTONA highly digestible varieties with extremely high yields
- FINTONA is the highest yielding perennial ryegrass ever listed in the UK
- GALGORM holds top position for total yield in both grazing and silage management. No other intermediate diploid variety on the list produces more ME yield per hectare under grazing management (106% of the mean of all intermediate diploid varieties on the list) and is very persistent in grazing swards.
- CALLAN combines an excellent mean cutting yield with a high grazing yield and exceptional spring growth. CALLAN excels on all three recommended lists.

Designed for:

- Top quality forage production whether cut or grazed.
- Long-term production from a highly persistent ley.
- Maximum production by using the top yielding varieties.

Benefits:

- The use of later heading varieties means that any topping can be kept to a minimum.
- The varieties used have been selected for their persistence as well as their palatability and mid-season digestibility to produce a long lasting, productive sward.
- Champion combines the benefits of high yields of quality mid-May silage production, with excellent sward density and outstanding mid-season digestibility for highly palatable grazing, thus creating a highly flexible ley.
- Available without clover as Champion No Clover.

Sward management:

Cut when the first ears emerge, around the 20th May and this ley will produce grass of 70D plus and if cutting is delayed 10 days, it will still produce grass of 67D. This ley is capable of being spring grazed, giving two highly productive silage crops and an autumn grazing, or alternatively being grazed for a full season.

Sowing Rates:

15kg per acre, 2,089 seeds/2m²

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FERTILISER

FERTILISER



FERTILISER

Precise crop nutrition is essential if yields are to be maximised whilst meeting environment requirements and preserving soil fertility. Increasingly the skill in crop nutrition is about balancing organic and inorganic fertilisers to match crop demands while ensuring soil fertility is maintained.

We offer a comprehensive range of fertilisers for grassland, arable or mixed farms looking for optimum yields and the best return on investment. For livestock farmers, the need to increase yields from home grown forage is increasing and our fertilisers have been designed with this in mind.

Our sales specialists provide technical and analytic services to ensure the right nutrients are applied to crops in the most cost-effective way.

We supply quality ammonium nitrate and ammonium sulphate fertilisers and blends. In addition to these, we supply a range of straights for grassland, forage and arable crops.



FERTILISER STRAIGHTS

NWF Agriculture have a comprehensive range of straight-based fertilisers.

In addition to Ammonium Nitrate, Ammonium Sulphate and Top Yield blends, we supply a range of straights for grassland, forage and arable crops.

The range includes:-

- Muriate of Potash (MOP).
- Triple Super Phosphate (TSP).
- Diammonium phosphate (DAP).
- Ammonium Sulphate.
- Urea.
- Lime.
- CAN, AN and Granular AN.
- Potash Plus.

Get in touch with your local NWF sales specialist or call on 0800 756 2787 for a Soil Analysis Kit.

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FERTILISER BLENDS

NWF Agriculture have a comprehensive range of standard formulation and bespoke blended fertilisers. Whether you need a regular blend, or a product tailored to your particular circumstances, you can be assured of exceptional quality.

- Contains only top-quality components for consistent analysis
- Size matched particles ensure even mixing and prevent segregation after mixing
- Oil coated particles guarantee minimal dust and even flow when spreading. Also helps protect the fertiliser from lumping due to moisture
- Blended in a modern facility in the UK
- Blended fertilisers are suitable for all grassland applications as well as other forages and arable crops.

For balanced crop nutrition in grazing applications, choose from:

- 25-5-5
 - 27-6-6
 - 20-10-10
- also available with sulphur

For optimum yields in cutting fields, options include:

- 24-0-15
- 24-0-14 with sulphur
- 22.04.14+7.5%So₃

All blends are supplied in 600kg bags

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SILAGE ADDITIVES

SILAGE ADDITIVES



SILAGE ADDITIVES

The NWF Sila-Guard range of silage additives helps you create intelligent silage, a new way of producing silage that best suits your livestock. New grass and maize varieties create more sugar and starch and have lower fibre contents. In addition, developments in the way the cut material is managed and changes in growing crop management are presenting challenges to the silage maker.

The range includes additives for grass, whole crop and maize silage production, formulated to produce high quality silage with a balanced acid profile for your livestock.

Top tips for quality silage

- Focus on clamp management monitoring for overheating and mould.
- Manage your forage crop paying attention to soil and crop condition to create rumen friendly silage.



SILA-GUARD 50

NWF Sila-Guard 50 contains quick-acting bacteria and enzymes that convert valuable crop carbohydrates into energy for milk production. The additive has been formulated to produce high-quality silage with a balanced acid profile for your livestock.

Features

- Designed for UK weather and UK grasses.
- Rapid pH drop to inhibit growth of spoilage bacteria.
- LACTOBACILLUS BREVIS for improved palatability.
- Exclusive Lactic acid mix.
- Microbial stimulants.

Benefits

- Improved palatability.
- Improved yields (Edinburgh University Trials).
- Stable silage with minimum nutrient losses.
- More active bacteria once re-hydrated.

Directions

Each 150g jar is sufficient to treat 50 tonnes of fresh forage. Add contents of each jar to 50L of fresh, clean water and mix thoroughly. Apply to forage at 1 litre per tonne of fresh forage. Can also be applied through all low volume application systems.

RELATED PRODUCTS
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NWF
OFFER A
FREE FORAGE
ANALYSIS
SERVICE,
ASK FOR
DETAILS.

SILA-GUARD 45

Sila-Guard 45 silage inoculant offers exceptional quality and value in conservation technology. The additive has been formulated to produce high-quality silage with a balanced acid profile for your livestock.

Features

- Designed for UK weather and UK grasses.
- Rapid pH drop to inhibit growth of spoilage bacteria.
- LACTOBACILLUS BREVIS for improved palatability.
- Exclusive Lactic acid mix.
- Microbial stimulants.

Benefits

- Improved palatability.
- Improved yields (Edinburgh University Trials).
- Stable silage with minimum nutrient losses.
- Active Bacteria that stimulates the inoculant, ensuring maximum activity.

Directions

Each 150g jar is sufficient to treat 50 tonnes of fresh forage. Add contents of each jar to 50L of fresh, clean water and mix thoroughly. Apply to forage at 1 litre per tonne of fresh forage. Can also be applied through all low volume application systems.

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NWF SILA-GUARD MAIZE

NWF Sila-Guard Maize is a premixture of technological additives containing:

- Fermentation Starter: *Pediococcus Pentosaceus*.
- Fermentation Finisher: *Lactobacillus Plantarum*.
- Enzymes, designed for UK weather and forage types to ensure maximum digestibility.
- Aerobic Stability Enhancer: *Lactobacillus Brevis*.

Features

- *Pediococcus Pentosaceus* has an optimum pH range of 7-5 to dominate spoilage organisms.
- *Lactobacillus Plantarum* has an optimum pH range of 5.5-4, ensuring a full fermentation and produces a stable silage.

Benefits

- Improved digestibility.
- Improved yields (Edinburgh University Trials).
- Stable silage with minimum nutrient losses.
- Active bacteria to help ferment.

Directions

Each 150g jar is sufficient to treat 50 tonnes of fresh forage. Add contents of each jar to 50L of fresh, clean water and mix thoroughly. Apply to forage at 1 litre per tonne of fresh forage. Can also be applied through all low volume application systems.

RELATED PRODUCTS

also see

MAIZE SEED

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RELATED PRODUCTS

also see

HEALTHY RUMEN PAK

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Ollie Rose, Somerset

'I was very impressed with how stable and cool the crop stayed. I started feeding within 3 weeks of sheet up and I am extremely pleased at the crop quality throughout, it has enabled us to achieve over 5% butterfat.'

NWF SILA-GUARD WHOLE CROP

NWF Sila-Guard Whole Crop contains quick acting bacteria and enzymes that convert valuable crop carbohydrates into energy for milk production.

- Fermentation Starter: *Pediococcus Pentosaceus*.
- Fermentation Finisher: *Lactobacillus Plantarum*.
- Aerobic Stability Enhancer: *Lactobacillus Brevis*.
- Enzymes, designed for UK weather and forage types to ensure maximum digestibility.

Features

- *Pediococcus Pentosaceus* has an optimum pH range of 7-5 to dominate spoilage organisms.
- *Lactobacillus Plantarum* has an optimum pH range of 5.5-4, ensuring a full fermentation and produces a stable silage.
- *Lactobacillus Brevis* controls the production of acetic acid, further improving the palatability and stability.

Benefits

- Improved digestibility.
- Improved yields (Edinburgh University Trials).
- Stable silage with minimum nutrient losses.
- Active bacteria to help ferment.

Directions

Each 150g jar is sufficient to treat 50 tonnes of fresh forage. Add contents of each jar to 50L of fresh, clean water and mix thoroughly. Apply to forage at 1 litre per tonne of fresh forage. Can also be applied through all low volume application systems.

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CLAMP MANAGEMENT

CLAMP MANAGEMENT



FLOOR AREA SQ. METRES	HEIGHT OF CLAMP IN METRES					
	1.52	1.83	2.13	2.44	2.74	3.05
1524	500	600	700	800	900	1000
1220	400	480	700	800	900	1000
915	300	360	420	480	540	600
610	200	240	286	320	360	400
305	100	120	143	160	180	200
274	90	108	126	144	162	180
244	80	96	112	128	144	160
213	70	84	98	112	126	140
183	60	72	84	96	108	120
152	50	60	70	80	90	100
122	40	48	56	64	72	80
91	30	36	42	48	54	60
61	20	24	28	32	36	40
30	10	12	14	16	18	20

Example: A clamp 2.13m high with a floor area of 610m sq will contain 286 tonnes of silage.

NB: The above table shows silages of 22% dry matter.
For silages of:

- 18% DM add 5%
- 25% DM deduct 5%
- 27% DM deduct 6%
- 30% DM deduct 8%

<i>PROBLEM</i>	<i>PROBABLE CAUSE</i>	<i>SOLUTIONS</i>
Top of the clamp heating, with a fairly warm layer beneath.	<ul style="list-style-type: none"> -Inadequate sealing. -Insufficient final roll. -Last field too dry. -Working under eaves. -Poor top weight after sealing. 	<ul style="list-style-type: none"> -Improve compaction. -Ensure plastic sheets are properly weighted – Immediate after sealing. -Consider using ‘cling film’ type sheet to replace the inner layer of top sheeting. -At the very least, treat the top with a Double Action-type product.
Side and top of the clamp heating.	<ul style="list-style-type: none"> -Porous clamp walls. -Poor seal between plastic and wall. -Inadequate compaction along edges. 	<ul style="list-style-type: none"> -Line walls fully with a plastic sheet with good overlap under top sheet. -Fill clamp with concave top to help consolidate edges. -Check rolling tractor can apply weight close to walls (buckrake width). -Add another tractor for rolling.
Shoulder of the clamp heating.	<ul style="list-style-type: none"> -Lack of consolidation or ineffective sealing at shoulders. 	<ul style="list-style-type: none"> -Improve compaction & sealing. -Line walls fully with a plastic sheet with a good overlap under the top sheet. -Keep plenty of weight on edges.

PROBLEM	PROBABLE CAUSE	SOLUTIONS
Top of the clamp heating as well as pockets through the clamp.	<ul style="list-style-type: none"> -Inadequate consolidation of over-wilted or mature material resulting in trapped air. -Possible contamination with bad bacteria from tyre luggs. 	<ul style="list-style-type: none"> -Improve consolidation, seal immediately and weight well. -Use 'Cling Film' for the inner layer of top sheeting. -Avoid over wilting and top clamp with a moist or shorter chopped material. -Improve compaction by spreading loads of evenly over the whole area – no deeper than 6 inches. -Use a Double Action-Type product on the whole clamp.
Whole of clamp face heating. Mould.	<ul style="list-style-type: none"> -Crop too mature/dry. -Poor Consolidation. -Crop dying in field. -Eating too slow. -Covering clamp face with sheet. 	<ul style="list-style-type: none"> -As above, plus shorting wilt, fill clamp slower or use more tractors to consolidate better. -Spread loads evenly over the whole area, no deeper than 6 inches and roll continuously. -Improve spray program. -Examine feedout technique. -Keep sheet of face – use pea net.
Top of the clamp heating, with heat bands throughout the clamp.	<ul style="list-style-type: none"> -More than one cut. -Different crops/maturities/DM. -Different styles of clamp fill. 	<ul style="list-style-type: none"> -Always try to put driest/most mature product on the bottom. -Improve compaction of drier material. -Use best people of system throughout clamp filling.

TECHNICAL SERVICES

TECHNICAL SERVICES



TECHNICAL SERVICES

NWF Agriculture offers a wide range of Technical Services to help livestock farmers.

We provide a fully researched and accredited rationing programme, and unique laboratory service, to help develop and sustain the correct diet for your livestock.

Our sales specialists work alongside livestock farmers and our in-house nutritionists to develop tailored diets using our quality feed range of compounds and bespoke blends.

Our aim is to maximise flock and herd health, efficiency and performance, providing a range of technical services:

- Dairy Costings
- Beef Costings
- Ration Planning
- Diet Sieving
- Dung Sieving
- Mineral Analysis
- Interherd Report using NMR and CIS Data
- Heifer Rearing Calculator
- Youngstock Growth Monitor
- Soil Analysis
- Water Testing
- Forage Analysis
- Clamp Capacities
- Body Condition Score Monitor
- Mobility Score Monitor
- Youngstock Specialist Team

The team includes Certified Master Cow Signals® Trainers, providing advice on the six signs of freedom.

BODY CONDITION SCORING

Body Condition Scoring (BCS) is a numeric score system to estimate the animals' body energy reserve.

It is a useful management tool to help aid decision making, helping to indicate the nutritional status of animals, as ideal live weight can vary from individual to individual. With variations in conditions directly impacting health, fertility & yield, understanding BCS can be a quick tool to assess your livestock.

Implementing BCS can benefit animal health and welfare; ensuring that good condition is throughout the herd/flock, and animal husbandry & management; identifying animals to manage accordingly.

For example; witnessing excessive weight loss between calving and peak yield. This management can have positive impacts on animal performance and on margin as you can feed according to condition.

We recommend evaluating and recording your herd three times a year.



COW SIGNALS®

The concept is simple – it's about reading cow behaviour with the aim to improve their surroundings or routine, enabling farmers to increase production and longevity whilst lowering costs.

The Cow Signals diamond focuses on the six freedoms of a cow; feed, water, light, air, rest and space.

Feed

Cows are natural grazers and so prefer to eat "little and often" (up to 12 times a day), constant access to feed is one of the pillars of health and production on dairy farms. Sufficient space at the trough, alongside numerous push-ups of feed, will be required to ensure fresh feed is available to the whole herd, rumen fill can be scored to assess feed intake.

Water

Cows should have easy access to clean water at all times.
Over 85% of milk is water and a 30L cow will drink up to 120L of water a day.

Light

For optimum feed intakes and heat signals, it is recommended that lactating cows should lactating cows should have 16-18 hours at 200 Lux plus. (as a guide you should be able to read the paper in 200 Lux) and 6-8 hours at less than 50 Lux.

Air

Fast breathing is one of the first symptoms of heat stress or lack of ventilation. Wet floors, condensation and cobwebs are all extra signs of a lack of ventilation in the shed. The air should be just as fresh as outside.

Rest

When cows are lying down more blood is circulated through the udder and hooves are rested, cows resting for 14 hours have been shown to give more milk than those only resting for 9 hours. To achieve 14 hours, beds need to be comfy and the correct dimensions, the drop knee test can be used to determine how comfy beds are.

COW SIGNALS®

Space

Nothing should prevent cows from having access to feed, water or a bed. She should be free to socialise and exhibit signs of heat without hindrance (walk securely on a non-slippery floor).

We have Cow Signal Master Trainers within our team, who can help you understand the environment and what your cows are telling you as they go about their daily routines.

NWF Agriculture offers two types of Cow Signals Workshops

Full Day Workshop from 10 am to 3 pm

The morning is a classroom session working through the Cow Signals concepts and the theory for each of the 6 signs. The afternoon session is on farm putting the theory into practice.

Evening Presentation 2hrs

A member of the NWF team would visit your evening meeting and present an overview of Cow Signals with take-home tips where simple changes on the farm or the way you watch the herd can make a difference.

DUNG SIEVING

For those looking to produce more milk, you must understand what your cows are getting from their diet.

There are several methods you can use to determine rumen health, but one of the easier and faster options is dung sieving.

We recommend a three-tiered dung sieve, giving you the most accurate result.

Typically, we recommend getting approximately 10% of the herd number in dung samples, allowing for all bases to be covered, for larger herds, a total of 50 samples will suffice.

Our technical team recommends the Nasco Digester, along with a set of accurate digital weigh scales, notebook, smartphone for photos, gloves, scoop and access to a hose pipe. If you require this service, please get in touch with your rep and they will arrange to visit and carry out the assessment.

To begin, weigh out each component of your sieve, along with the scoop. Collect your fresh faeces samples in a large bucket and mix, fill the white scoop provided then slowly empty into the sieve whilst using the hose pipe to help it flow through (don't blast or force it through), continuing until all the dung has been added to the sieves. Take care not to add too much at any one time to prevent blocking the sieve, once the sample is completely washed through, weigh the total, each section of the sieve and take photographs.

1. Weigh total digester/sieves + retained samples = amount of manure retained.
2. Dismantle sieve and weigh individual parts + retained samples.
3. This will give values for top sieve + sample, middle sieve + sample and bottom sieve + sample.

After completing your test, we can provide calculations to work out percentages of dung retained in each sieve. We would hope that within the top sieve, you'll have less than 10% of the total, less than 20% in the middle and more than 50% in the bottom sieve.

DIET SIEVING

A diet sieving guide for traded products

Sieving a diet can be done to gain a further understanding of the physical components and the consistency of a ration. It can help assess the efficiency of the mixer on farm and can also highlight if the cattle are sorting their ration.



Procedure:

Take samples immediately after feed out at the top, middle and bottom of the feed barrier. Then take a second set of samples at approx. 4 hours post feed out, once the cows have had time to eat their TMR.

1. Weigh 400-600g of sample from set 1 and put in the top sieve (there should be 3 sieves stacked on a bottom tray (4 layers in total).
2. Shake the sieves 5 times- push away and pull back sharply. Turn the sieves clockwise and repeat this motion until you have done a full circle.
3. Repeat this in an anti-clockwise direction. The sieve should be shaken in a total of 10 direction.
4. Weigh each compartment with the sieved ration, and place the samples on the floor in order. Note the sample weight this data will be inputted into NWF's Diet Sieve Calculator.

Repeat steps 1 – 4 for each set of samples. Place each sample next to each other for visual comparison and take a photograph of the samples.

NWF's Diet Sieve Calculator will be used to generate the results, your adviser will then be able to interpret these and make recommendations.

Speak to your local NWF sales specialist about arranging a diet sieving test.

FORAGE ANALYSIS

The foundation of effective ration planning is an understanding of the feed value of forages. We offer a full Forage Analysis Service from our on-site laboratory at Wardle, which is maintained and quality assured through the Forage Analyses Assurance network.

Our sales representatives work alongside farmers and our in-house nutritionists to develop tailored diets using our quality feed range with the aim to maximise herd health and output.

We provide a forage analysis service for Fresh Grass, Grass Silage, Maize, Whole-crop, Hay and Haylage, and aim to have fully comprehensive results in the hands of our customers within 24 hours of the sample being taken.

Mineral Analysis

As livestock dietary requirements become more complex and the aim to maximize herd health. We offer a Mineral Analysis service for both soil and forage to identify any areas for improvement, results from which our nutritionists are able to advise and develop for individual herd requirements.

Ration Planning

Our comprehensive NutriOpt Feed Rationing System is regularly updated to take accounts of all the developments that improve our understanding of how to ration cows effectively. Following discussions with our feed specialists, the program will formulate a cost-effective, balanced ration with sufficient levels of all essential nutrients to suit growth and animal welfare requirements.

ASK YOUR
NWF SALES
SPECIALIST FOR
A FREE FORAGE
ANALYSIS
KIT



DAIRY COSTINGS

We can provide a dairy costings service to stimulate discussion, help customers with their business efficiency and highlight areas that might need improving.

Your local sales representative can meet customers on the farm to discuss their results using graphing tools.

These tools enable us to assess your area of interest e.g. yield output, milk from forage & margin over concentrates. We can then analyse the report relating to your specific requirements and provide a detailed overview suggesting improvements.

Our league tables are generated every 4 months which help benchmark businesses against others of similar size.

SOIL ANALYSIS

The Soil Analysis Service enables accurate assessment of the correct levels of the most important nutrients that should be applied to grassland, arable and forage crops.

Soil Analysis Results

Soil analysis is necessary to enable prediction of nutrient levels available for crops, ensuring the correct applications can be made for optimum plant growth and crop protection. Standard soil analysis includes pH, P, K and Mg. Trace elements can be included on request at an additional cost.

The available levels of the following can be accurately measured:

- Phosphorus
- Potassium
- Magnesium
- pH
- Calcium
- Sulphur
- Sodium
- Iron
- Manganese
- Copper
- Zinc
- Boron
- Molybdenum (Cobalt, Iodine of grassland)

Following three simple stages ensure the results are accurate:

- Stage 1. Take a representative sample, from a uniformly managed area
- Stage 2. Supplying all relevant field and background information
- Stage 3. Correct packaging of the sample to avoid contamination, and immediate dispatch to the laboratory.

Soil samples should be taken on all fields at least once every 2-4 years. The soil where vegetables or other crops are grown may need to be tested annually to ensure up to date information is available.

For arable and grassland, soil samples can be taken at any time of the year, provided fertiliser has not been applied in the past 6 months. Where lime has been applied, 2 years should be allowed before a sample is taken.

Fields of up to 10Ha (25 acres) can be sampled as a single unit, providing the field is uniform (i.e. soil type, past cropping, lime and fertiliser usage etc.). Large fields and fields which are not uniform should be subdivided and each area sampled and labelled as separate.

SOIL SAMPLING PATHS

When taking soil samples, individual samples should follow a carefully thought-out route. The 'w-pattern' can be easily adapted to most shapes of field. Avoid areas which are not representative of the field, such as gateways, headlands, hedges, ditches, footpaths, fences, telegraph poles, or dumps of fertiliser, lime or manure.

We recommend 20 samples, taken at regular intervals.

Step 1 For each of the 20 samples, remove the top 5cm (2") of soil and discard away from the sample hole.

Step 2 Take a sample to a depth of 15cm (6") for arable or 7.5cm (3") for grass and place this into the plastic bucket.

Step 3 The 20 sub-samples should be mixed in the bucket, before filling a polythene bag with mixed soil (around 0.5kg (3/4lb) of soil).

Step 4 Seal bag securely and label it.

If there are problem patches within the field which need analysis, i.e. acid patches, do not mix with any other sub-samples, instead, sample separately.

SOIL
ANALYSIS FROM
£15 EACH, ASK
YOUR NWF SALES
SPECIALIST
FOR KIT.

YOUNGSTOCK TEAM & SERVICES

NWF Agriculture has developed a Youngstock Team consisting of specialists. The team has been developed to help improve the health and performance of calf rearing units and businesses, providing advice and services ranging from testing colostrum and monitoring growth to devising protocols and staff training.

The NWF Youngstock Team has both a wealth of industry and youngstock knowledge, experience and technical understanding, designed to help with a wide range of youngstock related areas.

Youngstock Nutrition

It's what we do best. At NWF we have extensive experience of dairy and youngstock nutrition. With this, our Youngstock Team is perfectly positioned to provide knowledge and support on all aspects for calf rearing. Further supporting our youngstock team, is our blends desk who offer a portfolio of standard and bespoke youngstock blends.

Feeding Advice

All of our Youngstock Team have been nutritionally trained to offer feeding support and advice. They are FAR registered, an industry accreditation that sets the standards for feeding advice.

Weighing & Growth

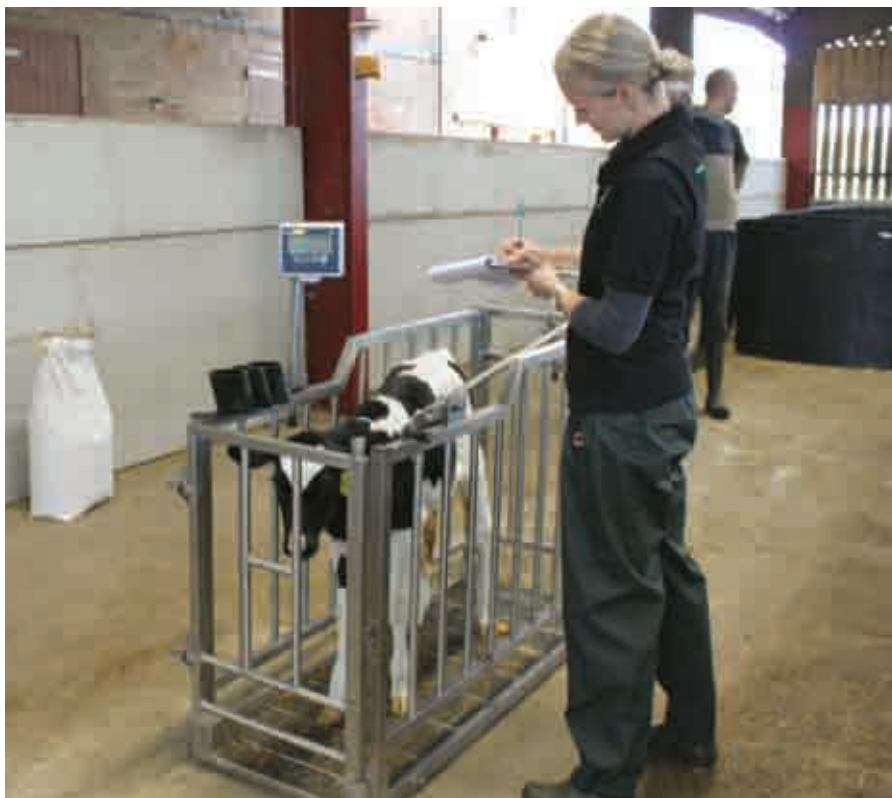
The Youngstock Team will visit your farm, bringing all the necessary equipment, to weight, measure, monitor calves, as well as offering practical advice to help maximise your productivity when raising youngstock. Regularly monitoring body weight and growth can indicate potential issues in your system, and through their technical and youngstock training, the team can offer appropriate advice.

Procedures & Gathering Data

The best way to understand how your livestock is performing, and therefore, the performance of the business is by collecting data. In calf rearing, daily liveweight gain is one of the most important indicators of efficiency and for long term performance and profitability of the enterprise.

Housing

The environment where calves are housed is key to rearing healthy and productive calves. The type of housing will differ depending on the individual farm infrastructure. Location, wind speed, ventilation and moisture are all key components for calf housing, where calves must have sufficient space to express normal behaviour; to stretch and groom, stand up, eat, sleep and play. Calf housing should fundamentally be comfortable and clean, enabling the calf to focus on growing. The NWF Youngstock Team can offer advice on a range of housing-related situations including airflow and lying space. Conducting simple tests such as Nesting Scores are a great way to assist your calf housing.



TAKING A SILAGE SAMPLE

NWF Agriculture offers a free silage and forage sample analysis. For more information on arranging a free analysis, or understanding more about the benefits of creating great silage, speak to your local NWF Sales Specialist.



STEP-BY-STEP GUIDE TO TAKING FORAGE SAMPLES

Clamp Silage (Maize and Wholecrop)

1	Sample approx. 15cm into the clamp face (carry a screwdriver with you).
2	Take 5-10 samples across the face in a "W" shape.
3	Mix the samples together on a clean surface.
4	Put 500g into a sample bag, pushing as much air out of the bag as possible (like a vacuum pack).
5	Fill in the yellow card for each sample. Please ensure this is readable and that all appropriate fields are filled in (name, account number and sample type and ID).
6	Send the sample (and card) to NWF Agriculture in the pre-paid bag. If the sample cannot be posted straight away, refrigerate the sample. *Do not freeze and do not send the sample of a Friday.
Core	To give an early assessment of the clamp prior to feeding, core samples can be taken. Take 3 full depth core samples from the top, along the diagonal of the clamp.

*Do not underestimate the variability within the clamp. Most clamps have multiple cuts from multiple fields. Take regular samples as you go through the clamp to ensure a ration is balanced appropriately.

Fresh Grass

1	Take 10 handful samples in an "X" pattern across the area (two samples at each point on the "X"). Cut these with scissors, at mower height.
2	Put into a sample bag, sealing as much air out of the bag as possible (like a vacuum pack). A minimum of 500g is required.
3	Fill in the yellow card for each sample. Please ensure this is readable and that all appropriate fields are filled in (name, account number and sample type; pre-cut, MYFG, grazed grass, and sample ID).
4	Post as soon as possible to NWF Agriculture in the pre-paid bag (with the yellow card).

*With all samples, please ensure that they have ID- On the bag and the ID card!

Key Points to consider when analyzing your silage

1. Energy
2. Protein
3. Dry Matter



AGRICULTURE

NWF Agriculture Ltd
Wardle, Nantwich, Cheshire, CW5 6AQ
www.nwfagriculture.co.uk
0800 756 2787 nbteam@nwfagriculture.co.uk
01829 797 100

