Malt Residuals

A well balanced medium energy and protein feed, providing a lot of digestible fibre and good pellet quality.

Typical Analysis (on a dry matter basis)

Dry matter (%)	Energy (MJ ME/kg DM)	Crude protein (%)	Oil (%)	NDF (%)	Starch (%)	Sugar (%)	DUP (%)
90.0	10.4	21.0	2.5	48.0	14.0	1.0	4.7

What are you trying to achieve?

Need	Feature	Benefit
Maintain milk fat %	A good source of digestible fibre.	Provides the building blocks for milk fat synthesis, increasing value per litre. Helps to offset any negative effect of high oil feeds.
Minimise risk of acidosis	High digestible fibre and lower starch content.	Allows high levels to be fed safely, especially when used as a cereal replacer.
Reduce feed costs	Balanced nutrient composition.	Provides a cost-effective partial alternative to compounds in moderate production cattle and sheep systems.
Feeding flexibility	Consistent durable Pellet.	Suitable for use in automated and floor feeding systems. Can be blown and transferred to feeders via auger systems.

The predicted responses (benefits) assume that the specified nutrient, physical or structural dietary components are limiting livestock performance in the current ration.

Complementary Concentrate Feeds

- **High starch feeds** e.g. cereals, maize meals, confectionary and bakery products.

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Recommended daily feed rates (per head basis)

Malt Residuals can be fed as part of a TMR or as a concentrate feed.

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(typically2)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

DMI = dry matter index

Availability, handling and storage

Malt Residuals are available all year round, UK wide as bulk tipped or blown loads. Like all dry feeds, they should be stored in a secure shed, bunker, bin or hopper and kept cool, dry and free

Additional information

Method of production

Malt Residuals 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 Residuals are formed from a pelleted combination of the malt culms and barley screenings.

Quality Assurance

Malt Residuals are a FEMAS assured (or a recognised equivalent), fully traceable, product. Malt Residuals (malt rootlets) are listed under number 1.1.19 in the EU Catalogue of Feed Materials.

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Detailed Typical Analysis (fresh basis other than where stated)

Dry matter	%	90.0	Calcium	g/kg	1.89
Oil A	%	1.50	Magnesium	g/kg	1.40
Oil B	%	2.25	Phosphorus	g/kg	5.30
Crude protein	%	19.0	Potassium	g/kg	13.0
Crude protein: DM	%	21.0	Salt	g/kg	0.70
Fibre	%	11.0	Sodium	g/kg	0.27
Ash	%	4.80	Copper	mg/kg	9.81
ME* – *in vivo*	MJ/kg DM	10.4	Manganese	mg/kg	59.6
NDF	%	43.0	Selenium	mg/kg	0.19
Starch	%	12.6	Zinc	mg/kg	81.5
Sugar	%	1.00	Saturates	% of oil	22.0
ERDP-FiM*	% @ 6%	13.0	Monounsaturates	% of oil	13.0
DUP-FiM*	% @ 6%	4.2	PUFAs	% of oil	65.0
DUP digestibility	%	70.0	Long chain PUFAs	% of oil	0.00
sDM		0.20	Lysine	% of CP	6.00
aDM		0.65	Methionine	% of CP	1.81
bDM		0.30	Cysteine	% of CP	1.78
cDM		0.10	Histidine	% of CP	2.57
sN		0.10	Threonine	% of CP	4.29
aN		0.22			
bN		0.73			
cN		0.15			

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