

BULK/CO-PRODUCT FEEDS – Typical analysis (Dry Matter Basis)

Practical feeding information



FEED	DM (%)	ME (MJ/kg DM)	CP	Starch	Sugar (% DM)	NDF	Oil	BENEFITS	LIMITATIONS	Est. Relative Feed Value (£/t DM) *	Max Feed Rate (kg)
Amyplus By-product of wheat processing	55	12.3	21	21	2.5	34	5.8	A good source of both dietary carbohydrates and crude protein. <i>Use 1.7 kg to replace 1kg Maize Gluten Feed.</i>	Ideally ensile in long narrow clamp with weighted sheets to minimise clamp face area.	117	8
Apple Pomace	20	11.0	5	5	10	42	2.4	An excellent and palatable forage extender. Useful when silage quality is poor.	Does not improve ration structure. Check long fibre levels. Some variation between sources and between cider apples and culinary apples. Seal well and use quickly to avoid waste.	76	20
Bread Waste	65 or 90	14.0	14	73	4	10	3.0	High energy levels – particularly starch. Useful for high density diets where more space is needed for roughage. <i>Use 1.4 or 0.85 kg (depending on DM) to replace 1kg wheat.</i>	Care needs to be taken to avoid rumen acidosis as starch is rapidly fermented, particularly with other starchy diet components. 65% DM material needs to be carefully stored and fed quickly to avoid moulds and spoilage.	112	5 @65% DM or 3.5 @ 90% DM
Breakfast Cereal	90	13.8	9 to 13	70	5 to 10	10	1 to 2.5	Excellent energy source. Highly digestible. <i>Use 0.9 kg to replace 1 kg wheat.</i>	Origins vary slightly, so check exact specification. Watch out for adulteration or blending with lower quality ingredients.	105	5
Brewers Grains By-product from brewing and distillery industry	23	12.0	24	4	<1	59	9.5	The best sources are good concentrate replacers, lower quality sources can only be used as forage replacers. Good protein quality, aids rumen function, stimulates dry matter intake.	High in unsaturated oil, which can reduce milk butterfat content at high feed rates. Feed quality & DM can vary according to origin. Check with supplier.	119	10
Citrus Pulp (Wet)	22	12.8	8	0	25	55	2.8	Orange Citrus Pulp is very palatable & a good source of sugars (25% in Dry Matter). Stimulates intake of diet and overall rumen performance. <i>Use 4.3 kg to replace 1 kg wheat.</i>	Adding or removing quickly from a ration can lead to refusal. Grapefruit, lemon and mixed citrus are less palatable and less useful in the diet. Quickly deteriorates in storage. Poor calcium levels.	93	10
Confectionary & Biscuit Waste	80 to 90	12.3 to 14.8	10 - 14	15 to 50	5 to 40	8 to 12	6 to 14.5	Excellent source of energy providing high levels of oil, starch and sugar depending on source. Very palatable & takes up little space in diet. <i>Use 0.8 to 1.1 kg to replace 1 kg wheat according to origins.</i>	Great care needs to be taken to know the exact origin and quality for effective feeding. Often difficult to handle in a bin. Watch out for blending with lower quality ingredients.	102	4 to 5 according to origin

* Relative feed values compared to Barley and Soya

Max feed rate is for milking cows

NB. Replacement feed rates in Italics are a guide for value determination purposes. The diet needs to be properly formulated for effective utilisation.

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Fodder Beet	18	12.5	6.0	2.0	66	13.6	0.4	A sugar rich (66% of Dry Matter) energy feed. Excellent for improving feed intakes and rumen performance. <i>6kg replaces 1kg wheat.</i>	Variable composition. Should be well cleaned to avoid refusal.	87	15
Grainbeet Dried molassed sugar beet feed and brewers grains	32	12.2	19.5	3.8	8	53	7.4	A balanced source of energy and protein. Improves intake & rumen performance. <i>3kg replaces 1 kg Maize Gluten Feed</i>	Store carefully in well sealed clamp to avoid wastage. Relatively low energy so better suited as a forage substitute than concentrate substitute.	113	10
Potatoes	20	13.4	9.3	57	8	7.6	0.2	High in starch energy. Very palatable feed. <i>Use 4.5 kg to replace 1kg wheat.</i>	Low fibre content. High feed rates can cause acidosis. Poor mineral levels. Avoid rotten and green tubers. Feed at floor level to reduce choking risk.	99	20
Wet Pressed Sugar Beet Pulp By-product of sugar industry	26	12.5	9.4	0	4.5	52.4	0.5	Good energy source. Particularly good source of digestible fibre. Aids rumen stability and total Dry Matter Intake. Increases overall diet palatability. <i>Use 3.6 kg to replace 1 kg of Wheat.</i>	Sugar level is low 4.5% DM. Not a direct comparison with Dried Molassed Sugar Beet Feed. Low in Phosphorus. Needs to be ensiled if not used within a week. Store carefully to avoid waste.	94	15
Supergrains By-product of whisky distillation (non-starchy wheat grains)	26	13.0	32	2.0	<1	56	10.5	A high energy, high protein higher dry matter. Provides good quality protein alongside digestible fibre. <i>Use 5.7kg to replace 1 kg Soya or 2.25 kg to replace 1kg Maize Gluten Feed.</i>	As with all brewers products low in sugar and high in unsaturated oil. Ensile quickly once delivered as prone to aerobic decay. Low Magnesium levels.	143	8
Trafford Gold Moist maize gluten produced in the UK	44	12.9	20	20	2.5	32	4.5	Provides a good source of both energy and protein. More digestible than dry Maize Gluten Feed. <i>Use 5.5kg to replace 1kg Soya or 1.9 kg to replace 1 kg Maize Gluten.</i>	Store carefully to avoid waste. Low in Sugar. Compare pricing closely with good quality brewers grains available in your area.	118	10
Veg. Waste eg Pea	20	9.0	14.5	5	10	41.2	1.9	Very variable in Sugar content. Tend to stimulate intake and aid ration structure. A reliable supply allows reduction in concentrate use – particularly energy materials.	Vegetable Wastes need to be used fresh as they are difficult to store without considerable waste. Need a plan as availability varies through the season as packhouses and processors utilise different crops.	123	about 2 to 3 kg DM
eg Cabbage	11	13.7	20	0	6	48	1.8				
eg Carrot Peel	11.5	13.0	6	0	48	19.4	2.9				
Vitagold Moist wheat distillers dark grains	35	13.8	34	2	<1	50	8.3	High in both protein and energy. Protein quality is good. <i>Use 3.5kg to replace 1kg Soya or 1.5kg to replace 1 kg Maize Gluten Feed.</i>	Needs to be effectively clamped to avoid waste. Low in Sugars.	152	9



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