ProNutri

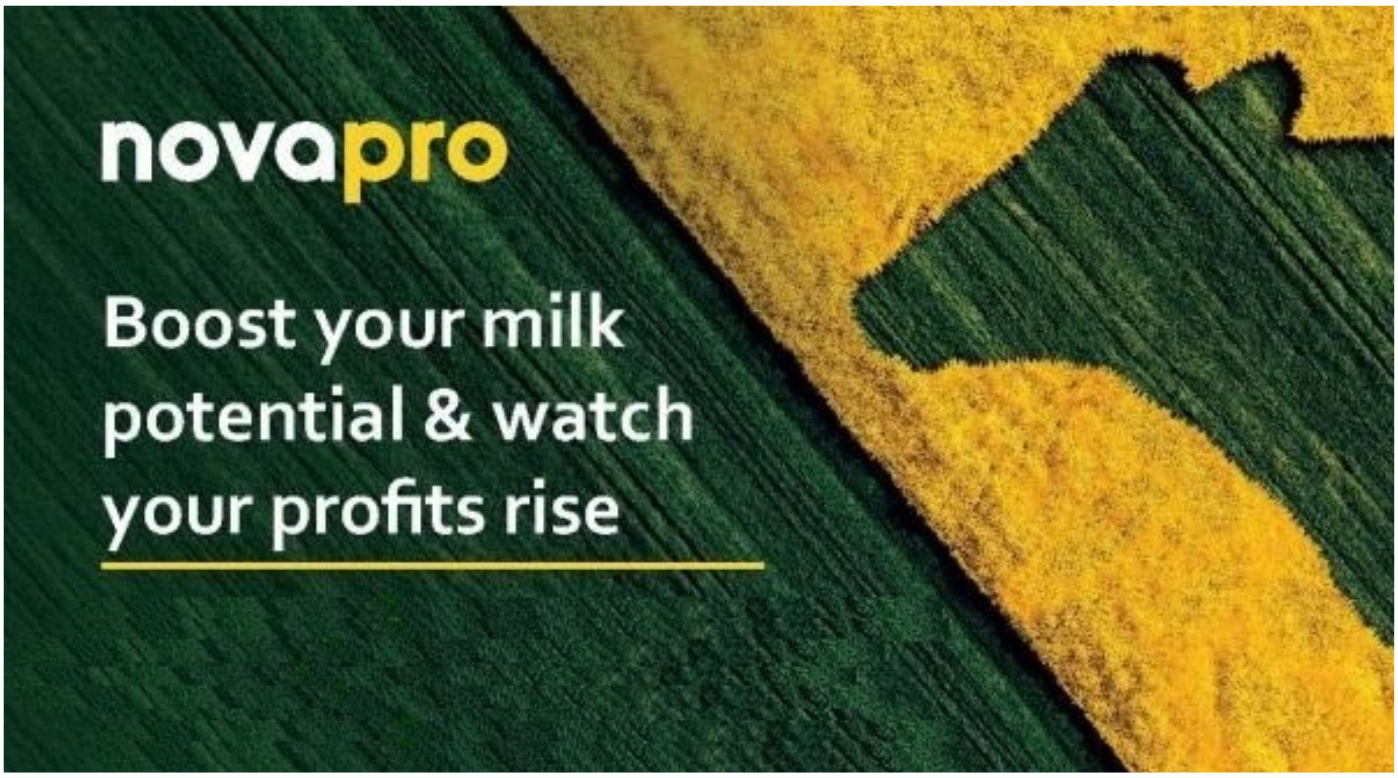
Animal Feed Ingredients

NovaPro

A high energy, sustainable rumen-protected rapeseed expeller with proven performance benefits .

NovaPro is a high energy, hot pressed rumen protected rapeseed expeller supplying similar quantity of rumen bypass protein as hi-pro soya with a significantly higher energy content (~10%) than rape seed meal due to higher retained rumen friendly oil.

The by-pass protein is of higher digestibility than that within other rumen protected rape seed meal based products as it is not subjected to hexane solvent extraction that reduces digestibility.



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Typical Analysis (on a dry matter basis)

Dry matter (%)	Energy (MJ ME/kg DM)	Crude protein (%)	Oil (%)	NDF (%)	Starch (%)	Sugar (%)	DUP (%)
89.0	12.9	34.8	10.5	35.0#	6.9	7.9	19.0

The production process creates a false analytical value 26% should be used for rationing purposes

What are you trying to achieve?

Need	Feature	Benefit
Drive intakes	An excellent source of high quality rumen bypass protein, of superior and matched amino acid profile to milk protein, soya, in a palatable form	Ruminants will increase intake to provide energy to match the superior supply of amino acids in NovaPro (the building blocks of protein) compared to soya.
Reduce feed costs		Allows performance to be maintained while reducing the overall protein content saving feed costs
Increase milk yield		Allows the cow to maximise milk production by meeting its demand for DUP and improve protein efficiency
Reduce reliance on soya bean meal	Very similar DUP content as hi-pro soya meal	Allows a dairy and growing rations to reduce or remove hi-pro soya saving feed costs
Flexibility in feeding	Dry and free-flowing meal	Simplifies feeding and storage

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

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Complementary Concentrate Feeds

- **High starch feeds** e.g. cereals, maize meals, confectionary and bakery products.
- **Low protein feeds** e.g. cereals, citrus pulp, soya hulls and sugar beet products.
- **Rumen degradable protein sources** e.g. Distillery syrups, high protein molasses products and DDGS
- **Rumen bypass protein boosters** e.g. SoyPass
- **Rumen bypass fats** e.g. Golden Flake, Butterfat Extra

Recommended daily feed rates (per head basis)

NovaPro can be fed, top dressed, used individually or as part of a blend or TMR.

Milking Cows	Up to 4 (typically 2)kg
Dry Cows	Up to 2.0 kg
Replacement Heifers	Up to 2 kg and up to 25% of the DMI
Calves (to 12 weeks)	Up to 0.75 kg and up to 20% of the DMI
Growing Cattle	Up to 2 kg and up to 25% of the DMI
Finishing Cattle	Up to 3 kg and up to 30% of the DMI
Suckler Cows	Up to 2 (typically 1)kg
Ewes and Rams	Up to 0.5 (typically 0.25)kg
Hogget's and Lambs	Up to 0.5kg and up to 25% of the DMI

DMI = dry matter intake

Availability, handling and storage

NovaPro is available all year round, UK wide and is delivered direct to farm in bulk.

NovaPro should be stored out of direct sunlight, in a cool, dry and well-ventilated environment and should be used within three months of delivery.

Method of production

NovaPro is produced at a new state of the art rapeseed expelling facility, where whole rape seeds are heated and pressed to expel the oil, after which the residual cake is treated using a unique and safe patented process which increases the level of rumen bypass protein. The process takes advantage of naturally occurring wood sugars which, when mixed with the rapeseed cake under gentle steam treatment, binds to part of the protein, protecting it from degradation in the rumen.

During production of NovaPro, careful process control procedures ensure that the proteins become highly rumen undegradable but retain, post rumen, high intestinal digestibility, similar to untreated soya bean meal. Hexane solvent, which has been shown to reduce protein digestibility, is not used in the manufacturing of NovaPro. Unlike conventional rapeseed extract where hexane is applied during the recovery phase of the process.

Quality Assurance

NovaPro is a FEMAS assured (or a recognised equivalent) fully traceable, product, marketed by Trident Feeds – a UFAS accredited merchant. NovaPro is listed under Rapeseed expeller feed number 2.14.6 in the EU Catalogue of Feed Materials.

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Suggested feeding rates are produced as a guide only and many other factors may have an overriding effect on animal response; no performance guarantee can be given. Rations should be carefully balanced for energy and protein, contain sufficient forage to maintain rumen function and be fortified with an appropriate vitamin and mineral supplement. Animals must have constant access to clean water.

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Detailed Typical Analysis (fresh basis other than where stated)

Dry matter	%	89.0	Calcium	g/kg	7.2
Oil A	%	8.3	Magnesium	g/kg	4.8
Oil B	%	9.4	Phosphorus	g/kg	9.5
Crude protein	%	31.0	Potassium	g/kg	11.0
Crude protein: DM	%	34.8	Salt	g/kg	1.5
Fibre	%	12.0	Sodium	g/kg	0.2
Ash	%	6.5	Copper	mg/kg	5.0
ME* – *in vivo*	MJ/kg DM	12.9	Manganese	mg/kg	55.0
NDF	%	31.2 (23.0)	Selenium	mg/kg	0.08
Starch	%	5.0	Zinc	mg/kg	50.0
Sugar	%	7.0	Saturates	% of oil	6.0
ERDP-FiM*	% @ 6%	10.3	Monounsaturates	% of oil	68.0
DUP-FiM*	% @ 6%	17.0	PUFAs	% of oil	26.0
DUP digestibility	%	80.0	Long chain PUFAs	% of oil	0.0
sDM		0.201	Lysine	% of CP	5.40
aDM		0.444	Methionine	% of CP	2.00
bDM		0.454	Cysteine	% of CP	2.40
cDM		0.026	Histidine	% of CP	2.80
sN		0.116	Threonine	% of CP	4.50
aN		0.297			
bN		0.557			
cN		0.030			

All s, a, b and c fractions were assessed at the University of Nottingham 2016

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