



## Hi-Lac

### General feeding dairy cows

Modern genetic merit dairy cows are programmed to produce high yields. However, fertility must be maintained, as well as milk composition and lameness avoided. Cows need to maximize their intake throughout their lactation. High quality ingredients are included in Jameson's concentrates, which will maximize energy in the concentrate without causing acidosis if fed within recommended guidelines. Hi-Lac cake gives farmers the choice of a very high protein concentrate which will support high levels of milk production. Fertility for the high genetic merit dairy cow is declining. For every 100 dairy cows inseminated for the first time, only approx 34 are expected to conceive and carry a calf to term. Ingredients in Hi-Lac cake will help to promote good fertility by helping to get cows into positive energy balance as soon as possible and by the inclusion of essential vitamins and minerals needed for reproduction, such as selenium and copper etc. These are supplied in both protected and non-protected forms.

### Feeding rates & guides

Hi-Lac cake can be fed during lactation. Diets can be formulated to match your forage availability and quality. The Hi-Lac range is high in protein and works well where a protein boost is required, such as where maize silage is fed. Our approach to feeding dairy cows is to look at all the feeds available on the farm together with the target performance and produce a bespoke ration to suit your needs and aspirations.

### Key components and reasons for inclusion

Only high quality ingredients are included, such as wheat, EU distillers grains, sugar beet pulp, molasses and hipro soya. Poorer quality ingredients such as bakery waste etc are not included.

Vitamin E deficiency may increase the risk of metritis, retained placenta and mastitis; with this in mind the HDF cakes contain correct levels of vitamin E. Selenium is also needed for optimal functioning of the immune system and has been shown to help prevent mastitis. Selenium is supplied from a protected source (Selplex, a seleno yeast) and sodium selenite works in conjunction with Vitamin E.

Hi-Lac cakes contain a precise balance of Calcium, Phosphorous and Magnesium, essential to reduce the risk of hypocalcaemia. A level of 24% Crude Protein and high metabolizable energy (13.2 MJ/kg DM) provides the cow with the best opportunity for a successful lactation.

### Disclaimer

Rations should be carefully balanced in terms of nutrient content. They should contain sufficient forage to maintain rumen function and be fortified with an appropriate vitamin and mineral supplement on farms where this is needed. Animals must have constant access to clean water. 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. Ingredients are generally as in the table above, but are subject to change.





## Ingredients

Typical Ingredients	Metabolizable Energy	Crude protein	Benefits / Reason for use
EU distillers	13.8	34.0	Intakes of other less palatable feeds can be stimulated. Good sources of energy and protein. Can stimulate rumen activity, encourages fibre digestion and feed efficiency. Allows energy intakes to be increased without increasing the risk of acidosis associated with high starch feeds.
Rapeseed meal	12.1	38.5	Good source of ERDP. Allows the cow to maximize milk production. Provides the building blocks to drive milk protein synthesis
Palm kernal	12.5	17.0	Promotes milk fat synthesis. Allows energy intakes to be maximized without increasing the risk of acidosis associated with cereal feeding.
Hipro (high protein) soya	13.6	55.0	High levels of DUP. Allows the cow to maximize milk production. Provides the building blocks to drive milk protein synthesis.
Molasses	11.3	20.0	High in sugar making it very palatable.
Wheat	13.8	13.0	High in energy, useful for increasing milk protein yields. High in starch of which 10% is not fermented in the rumen.
Malt residuals			A good source of fibre, whilst maintaining reasonable levels of energy and protein
Wheatfeed	11.7	18.0	Good source of starch for milk production. Starch, fibre and protein provide the building blocks for milk fat and protein synthesis.
Sugarbeet	12.5	11.0	Can stimulate intakes of less palatable feeds, increasing milk production. Provides the building blocks for milk fat synthesis. Allows energy intakes to be increased without increasing the risk of acidosis associated with cereal feeding. Assists in maintaining an optimum rumen pH, kind to the rumen.
Calcined magnesite			A good supply of supplemental magnesium.
Calcium carbonate			A major source of supplementary calcium
Salt			Salt is included to promote saliva production which helps buffer acid in the rumen.
Fat spray			A good source of energy
Dairy minerals			Well balanced minerals supplement
<b>Element</b>			<b>Reason for inclusion</b>
Vitamin A	Essential for eye function and beneficial to reproduction / fertility in cattle.		
Vitamin D <sub>3</sub>	Essential for bone formation and hence growth, involved with calcium and phosphorous absorption.		
Vitamin E	Antioxidant working closely with Selenium in preventing formation of peroxides. Peroxides damage cells. Essential for fertility and for pregnant animals to pass onto young calves.		
Selenium	An antioxidant plays a vital role in immunity. Benefits reproduction and growth. Protects muscles from degeneration. Helps to prevent retained placentas.		
Copper	Essential for bone formation, cardiac function, immunity, reproduction and fertility.		
Magnesium	Essential for growth, repair of body tissue, bone development and milk yield. Needed for enzymes, muscle and nerve function.		
Phosphorous	One of the most important elements being involved with energy production, bone and teeth formation, milk production, appetite and reproduction.		

