

Protected By-pass Fat



THE PROBLEM

In early lactation, the energy intake of the modern dairy cow must be high, as she is not allowed to express her full genetic potential in terms of milk yield and quality. A low feed intake at this stage will lead to an 'energy gap' and the cow will start to mobilise her body fat reserves in order to maintain the energy supply for milk production.

The mobilised fat has to be processed by the liver before it can be utilised. Ketone bodies are produced as a by-product of the fat breakdown, and their presence in the blood can lead to problems with appetite and metabolism.

If the bodyweight loss carries on, it will lead to a rapid decline in milk yield after peak and poor fertility.

THE COMPLICATIONS

The temptation in many situations is to feed as much **cereal** as possible, to try to bridge the 'energy gap'. However, rapid fermentation of the cereal starch will lead to acidic conditions (acidosis) in the rumen and can cause depression in fibre digestion and a reduction in forage intake.

An alternative is to add more **fat** to the diet. This too can lead to complications, because natural fats are hydrolysed in the rumen to release free fatty acids. The presence of excess short chain and unsaturated fatty acids will greatly reduce the rate of fibre digestion in the rumen and depress feed intake. The cellulolytic micro-organisms in the rumen are most susceptible to the toxic effects of fatty acids.

GOLDEN FLAKE

Golden Flake is ideal for inclusion in compound feeds, home mixed concentrates, midday feeds and total mixed rations/ complete feeds for **dairy cows**. High density rations can be produced which allow maximum use of forage. It can be used across a range of species:

Trials with **lactating sheep and goats** have shown improvements in milk quality. The high levels of palmitic (C16) and stearic (C18) fatty acids in **Golden Flake** transfer directly into milk butterfat. The resulting high energy milk improves the viability and vigour of the young suckling lambs, and kids, because natural butterfat is virtually totally digested.

Golden Flake contains no minerals so it does not affect dietary Ca:P (and Mg) ratios. Therefore, it can be fed safely to twin- and triplet-bearing ewes in late pregnancy. It can also be used in high energy creep feeds for faster **lamb finishing**.

Trial work has shown **Golden Flake** to be a cost-effective way to improve feed conversion when added to **intensive beef finishing** diets, particularly during the last 12 weeks before slaughter.

Golden Flake is increasingly being used in rations for **breeding sows** and **fattening pigs**, where it should be blended with less saturated fat sources such as soyabean or other vegetable oils.

Recent trials have shown improved growth rates in piglets whose mothers are receiving **Golden Flake**.

RECOMMENDED INCLUSION RATE

In Compound Feeds:	Up to 5%
In Home-mixed Rations:	Up to 500g/high yielding cow/day
	Up to 100g/lactating ewe/day
	500-100g/milking goat/day
	Up to 4% of diet for pigs

Introduce over a period of several days and mix it with at least one other raw material.

In ruminants: Best results are obtained when used in conjunction with added high UDP protein sources.

ANALYSIS

The base material used in the production of **Golden Flake** is processed under tightly controlled conditions and as such the stability, purity and specification are very consistent. However, in some situations, the can be altered to suit specific requirements.

Fatty Material	99.5%
Melting Point	52-54°C
MER	36.8 MJ/kg
NEL	3.27 Mcal/lb

Fatty Acid Profile (%)

C14	1-2
C16 (palmitic)	47-52
C18 (stearic)	43-48
C18:1	2-7

PACKAGING AND STORAGE

Packed in 25kg sacks. Store in a cool, dry place, out of direct sunlight. Stack no more than 2 pallets high, in order to avoid compression, and leave a walkway between pallets.