

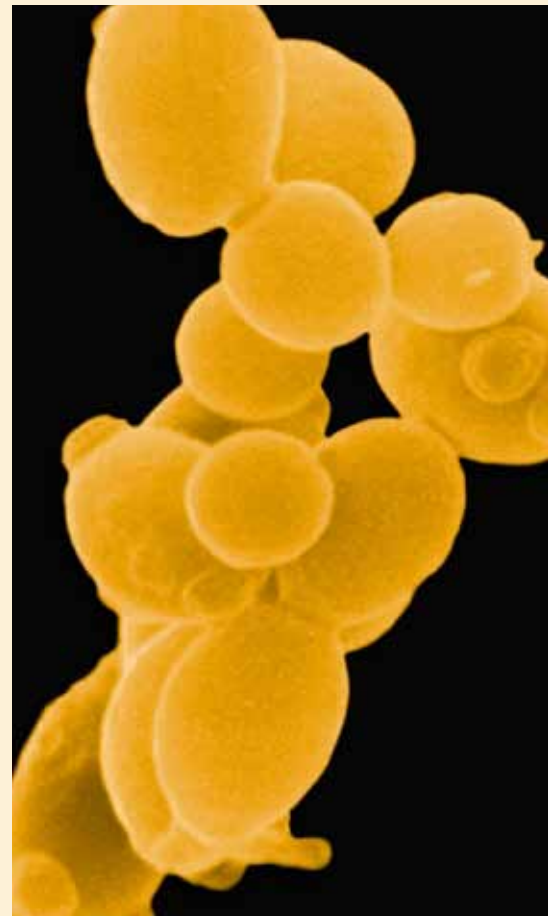


BIOTAL  
**SCgold**

Rumen specific yeast for

## Dairy Cows

for improved performance



Reduces lactic acid buildup  
from feeding

Stimulates appetite

Improves feed efficiency

Increases milk production

# Biotal SC gold

Biotal SC gold contains a unique, live yeast strain *Saccharomyces cerevisiae* CNCM I-1077, the first live yeast EU approved for feeding to dairy cows and selected for its specific and significant activities in the rumen. In addition Biotal SC gold contains highly bioavailable forms of selenium and zinc which provides nutritional benefits to the dairy cow.

## Biotal SC gold stabilises rumen pH

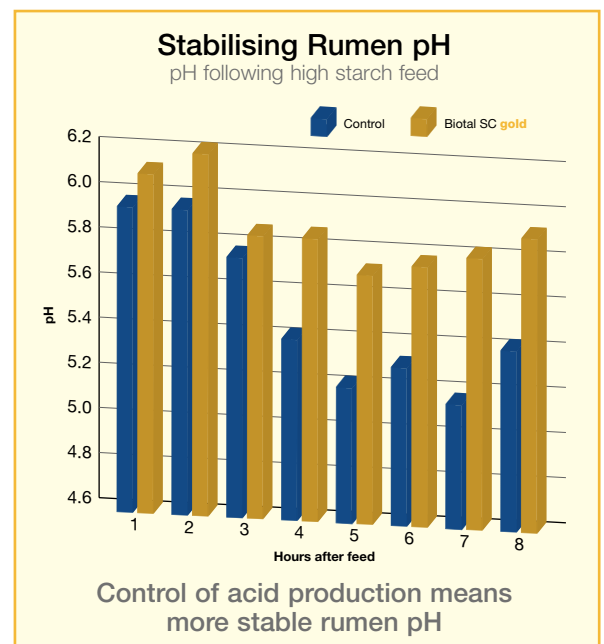
Feeding wet, acidic, grass silage can cause dairy cows to become prone to problems such as acidosis, laminitis and low feed intake, resulting in poor profitability.

Low energy intake leads to low milk yield, milk protein and can cause fertility problems. Supplementing with acidic feeds such as brewers grains can make matters worse.

Biotal SC gold helps to remove lactic acid from the rumen thereby stabilising rumen pH.

As a result, trials have shown:

- higher dry matter intakes
- improved feed efficiency
- increased milk yield
- improved milk quality



## Biotal SC gold enables higher levels of fermentable energy sources to be fed

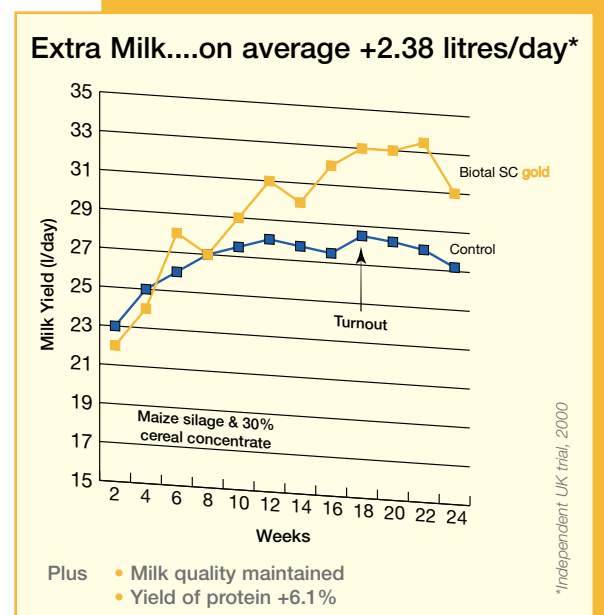
Valuable feeds such as cereals, whether fed rolled, crimped, or combined with wet grass silage, can increase acid loading in the rumen. High yielding dairy cows in early lactation are most at risk when high levels of concentrate are fed.

Biotal SC gold helps to remove lactic acid from the rumen, as well as preventing the overproduction of lactic acid, maintaining rumen pH and avoiding ruminal lactic acid buildup from feeding.

This means that cows get the best out of a highly productive winter diet (see graph).

Fresh grass at turnout also contains many fast fermenting sugars.

Biotal SC gold ensures a smooth changeover from one diet to another which means better energy and protein use delivering more milk.





## Biototal SC **gold** increases fibre digestion

All cows need a certain amount of long fibre in the diet to help them 'chew their cud'. Today there is a greater need to reduce costs and get more milk from forage.

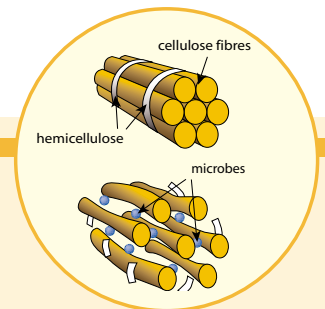
Greater use of alternative forages typically means there is more fibre in the diet. Feeding Biototal SC **gold** results in a higher population of cellulolytic bacteria (fibre digesting bacteria) and rumen fungi.

As a result, specific enzyme activity in the rumen is enhanced which improves digestibility of the forage in the diet. This contributes to greater feed efficiency, increased rate of feed digestion and better feed intake which means more milk from forage is possible.

### Increasing Rumen Fibre Digestibility

	Control	Yeast 1	Biototal SC <b>gold</b>
Dry matter	56.23	55.24	63.99
Organic matter	57.49	56.53	65.03
NDF	21.16	21.66	36.71
ADF	15.29	13.25	28.54
Cellulase	32.91	33.56	45.75
Hemi-cellulase	22.00	21.31	37.47

For all fibre digestion parameters, Biototal SC **gold** showed statistically significant increases



## Biototal SC **gold** increases milk yields

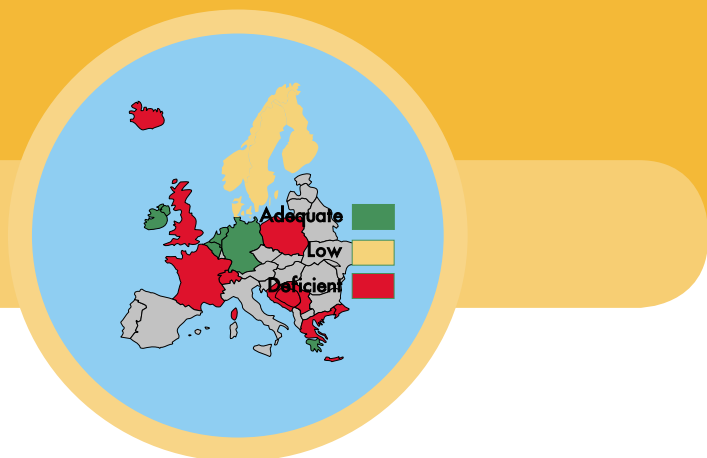
Lactating animals such as high yielding dairy cows need a good supply of metabolisable protein for milk production. Biototal SC **gold** results in a greater rumen

microfloral population which improves the supply to the hind gut, which means there is a lower requirement for expensive by-pass protein in the feed.

	Animal	Milk
Estonia Tartu, University	350 cows	+7.6% / +2.6 litres
California, Field Trial	1200 cows	+4.7% / +1.51 litres
France, Agricultural College	62 cows	+4.3% / +1.31 litres
Germany, Technical University	36 cows	+9% / +3.4 litres
Italy, University Trial	54 cows	+4.6% / +1.51 litres
UK, Kemble Field Trial	180 cows	+4.0% / +1.4 litres
New York Farm Institute Inc	300 cows	+4.6% / +1.9 litres
China, Beijing Agric University	50 cows	+4.8% / +1.52 litres
Saudi Arabia, ABNAE Farm	144 cows	+7.1% / +2.79 litres

## Biototal SC **gold** trials and performance data

- Feed efficiency 12% better
- Milk yield up over 2 litres at peak with no adverse effect on milk quality
- Peak yield 14 days earlier
- Milk protein improved 0.19 points
- Improved dry matter intake
- Live weight loss reduced by 26%



## Biotol SC **gold** provides organic selenium

Recent decline in soil selenium in the UK and parts of Europe (see above) has led to lower background levels in cereals and forages.

Biotol SC **gold** contains selenomethionine, the most bio-available form of selenium, found naturally in crops and forages. Cheaper, inorganic forms of selenium, such as sodium selenate and sodium selenite are not as easily utilised by the animal. When comparing selenium sources a greater proportion of the selenium as selenomethionine is used for protein synthesis and retained by the animal, while more of the inorganic selenium as sodium selenite is excreted in the urine.

Biotol SC **gold** has been shown to help:

- maintain udder health
- reduce bulk tank somatic cell count
- improve fertility
- reduce the incidence of retained cleansings



Biotol SC **gold** contains a highly bioavailable organic zinc chelate. Zinc plays an important part in tissue regeneration, maintaining skin integrity and the manufacture of the keratin lining of the teat canal. These factors help zinc maintain udder health by contributing towards the cows natural repair mechanisms.

Organic zinc has been shown to have a greater effect than inorganic zinc on:

- improvements in growth of hair, horn, hoof and skin
- reduction in somatic cell count of milk
- maintenance of udder health

## Benefits of organic selenium supplementation

Selenium is an important part of the glutathione peroxidase enzyme which works as an antioxidant with vitamin E to prevent cellular breakdown. This means selenium helps to increase the animals immunity to disease and reduce the incidence of :

- muscular wasting
- retained cleansing
- poor udder health
- somatic cell count
- poor fertility

Two factors which affect selenium availability are soil alkalinity which helps selenium uptake by plants and high levels of sulphur which competes for absorption sites with selenium in both plants and animals.

## Product details

### ■ Active ingredients

*Live yeast: Saccharomyces cerevisiae (I -1077) EU approved for dairy cows and beef cattle.*

*Organic selenium yeast NCYC R397.  
Organic zinc chelate.*

### ■ Pack size

*Supplied as a 12.5kg bag. Each bag feeds 100 cows for 5 days at the recommended dose rate of 25gms per cow per day.*



part of the **LALLEMAND** group

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