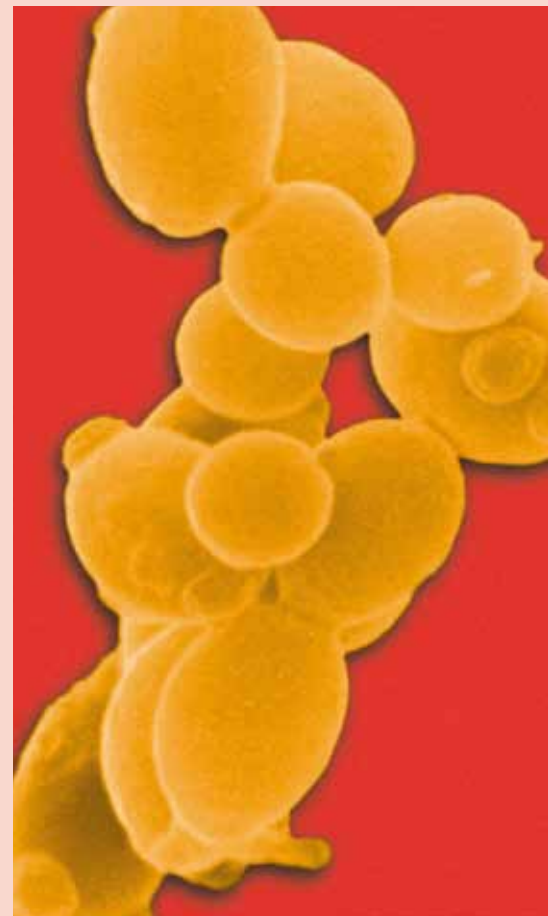


Rumen specific yeast for

Beef Cattle

for improved performance



Helps control ruminal gas production

Reduces lactic acid buildup from feeding

Improves feed efficiency

Increases DLWG

Biotal SC beef

Biotal SC **beef** contains a unique, live yeast strain *Saccharomyces cerevisiae* CNCM I-1077, selected for its specific and significant activities in the rumen and is EU approved for feeding to beef cattle. In addition Biotal SC **beef** contains a highly bioavailable form of zinc which provides nutritional benefits for beef cattle.

Biotal SC **beef** stabilises rumen pH

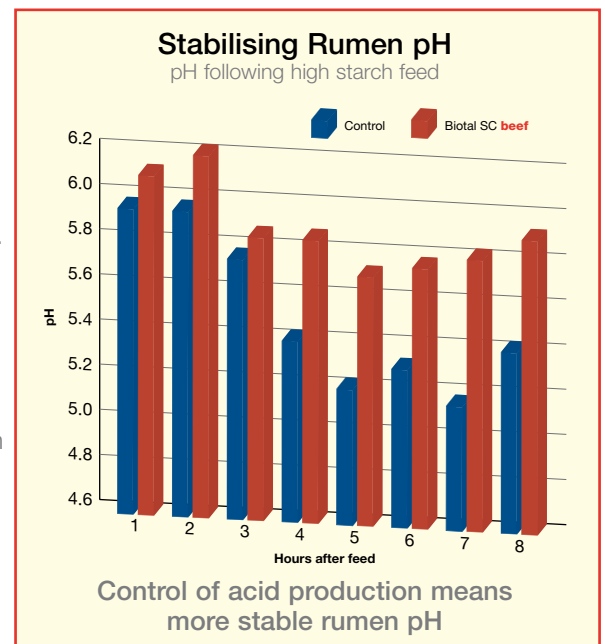
Feeding wet, acidic, grass silage can cause beef cattle to become prone to problems such as acidosis, laminitis and low feed intake, resulting in poor profitability.

Low energy intake leads to poor FCR and reduced daily liveweight gain. Supplementing with acidic feeds such as brewers grains can make matters worse and valuable feeds such as home grown cereals, can be difficult to include in the diet if increased acid loading in the rumen is to be avoided.

Biotal SC **beef** helps to remove lactic acid from the rumen by encouraging the growth of lactate utilising bacteria thereby stabilising rumen pH and preventing acidosis.

As a result, trials have shown:

- higher dry matter intakes
- improved feed efficiency
- increased DLWG
- reduced ruminal gas production



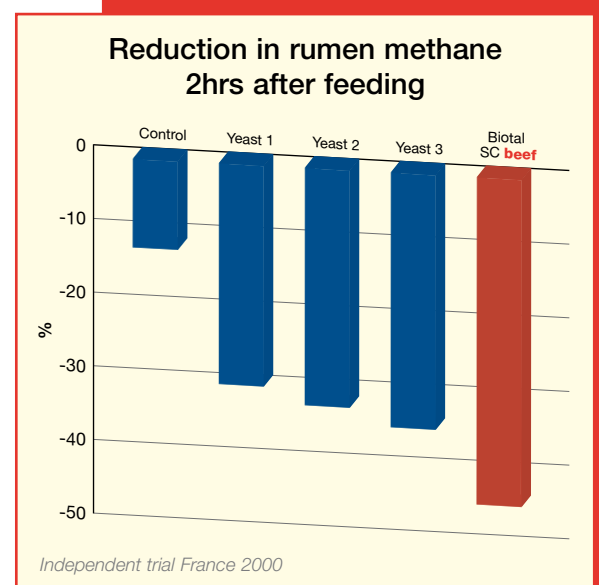
Biotal SC **beef** reduces bloat

Intensively fed beef cattle typically have a high proportion of rolled cereals in the diet. This readily fermentable feed quickly produces gas during digestion. Cattle on this system are not able to eructate gas fast enough during rumination due to the small quantity of long fibre in the diet.

Biotal SC **beef** stimulates the growth of lactate utilising bacteria and promotes non-methanogenic flora, reducing

the amount of methane produced in the rumen during the fermentation process, so avoiding any problems of bloat (see graph opposite).

A more efficient rumen fermentation means less energy is wasted as methane and less protein is lost as ammonia. This means better energy and protein use, delivering increased weight gain.



Biototal SC **beef** increases fibre digestion

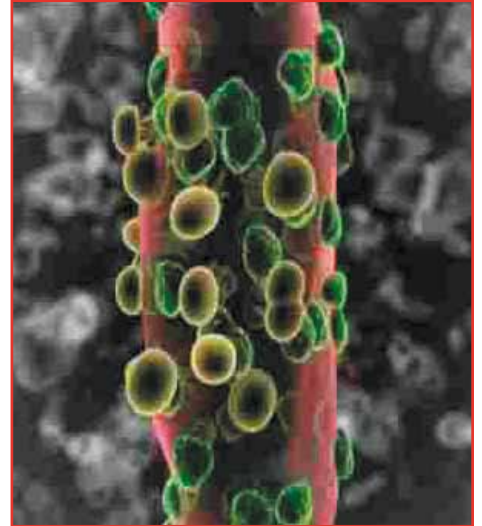
All cattle need a certain amount of long fibre in the diet to help keep a healthy rumen. Today, there is a greater need to reduce costs and obtain more from forage.

Greater use of alternative forages typically means there is more fibre in the diet. Feeding Biototal SC **beef** 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 greater production from forage is possible.

The cellulolytic bacteria also utilise ammonia to manufacture microbial protein which leads to an increased efficiency of nitrogen metabolism and reduced environmental pollution.



Biototal SC **beef** increases DLWG

	Animal	DLWG
Germany, Munich University 2002	36 Simmental steers	+ 6.7% / +97g
UK Charolais beef trial 2000	54 Charolais steers	+ 14.3% / +200g
France, La Haizerie farm 2000	96 Charolais steers	+ 14.8% / +186g
UK Norvite Feed Supplement 2001	41 Simmental bull calves	+ 7.7% / +116g
Italy, Milan University 2002	120 Charolais steers	+ 16.2% / +240g
<p>Intensively fed beef cattle at 1.5kg DLWG finishing, on average this is worth: +180g @ 90p = 16.2p/h/d</p> <p>Finishing cattle on Biototal SC beef costs: 4.8p/h/d for the last 100 days</p> <p>Net margin 11.4p/h/d on DLWG alone!</p>		

Fast growing animals need a good supply of metabolisable protein for lean meat deposition. Biototal SC **beef** 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.

Biototal SC **beef** improves carcass grading

- Improving from R to U+ grade is worth between 4 and 6p/kg*
- Biototal SC **beef** produces up to 30% more U grades
- 340kg carcass could give an improvement worth up to £20/animal

*DEFRA Livestock classification beef and sheep 2001



Biotal SC **beef** provides organic zinc

Biotal SC **beef** contains highly bioavailable organic zinc-enriched yeast. Zinc plays an important part in tissue regeneration, maintenance of skin integrity and the manufacture of keratin, a skin protein found in the hard horn tissue of the foot. Zinc is therefore important in maintaining foot soundness, due to its role in improving the quality of hoof tissue.

Organic zinc has been shown to have a greater effect than inorganic zinc on improvements in growth of:

- hair
- horn and hoof
- skin

The skin is the first line of defence against disease, so organic zinc supports the animals own natural immunity to skin infections such as ringworm.

Healthy animals with an attractive coat look good and perform well.

Usage guide

Liveweight	Daily feed rate
100kg	4g
200kg	8g
300kg	12g
400kg	16g
500kg	20g

e.g. for intensive beef cattle fed ad lib, include 1.6kg into each tonne of finished feed.

Benefits of organic zinc supplementation

Some factors may reduce the availability of zinc to the animal. These include consumption of immature grass which affects digestibility and feeding late cut hay which is poorly digestible and contains low levels of zinc. Ensuring sufficient zinc supplementation in the diet helps prevent the following problems:

- hair or wool loss
- thickening of skin
- poor mobility
- infertility
- poor growth
- skin lesions

Some trace elements such as sulphur reduce uptake and other metal ions such as manganese, iron and copper compete for absorption. Contamination of silage with soil at harvesting can also reduce the uptake of zinc.

Product details

■ Active ingredients

Live yeast: *Saccharomyces cerevisiae* (1-1077) EU approved for beef cattle. Biotal zinc-enriched yeast.

■ Pack size

Supplied as a 25kg bag. Each bag feeds 100 cattle for over 12 days at the recommended feed rate of 20gms per head per day.