

## **New Methionine Source Boosts Herd Profits**

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Including a new methionine amino acid product in dairy rations has improved the income from John and Rob Slater's herd in Staffordshire by £14,000 per year, where the cows are in perfect health, incredibly content and highly productive.

In common with most other UK milk producers, John and Rob Slater have faced an increasing struggle to produce a profit from their 200 acre Lions Farm at Warrilow Green near Uttoxeter in recent years.

With milk prices tumbling and costs increasing, two years ago they decided to contract the entire production from their 180 *Lionhart* Holsteins to award-winning cheese manufacturer Joseph Heler in Cheshire. The contract specifies minimum quality parameters of 4.1% butterfat and provides a healthy premium of 0.24p/litre per 0.1% above that, plus 0.45p/litre per 0.1% increase in protein above 3.25%. However, the penalties for falling below those minimum standards keep the Slaters' minds sharply focused on maximising quality throughout the year.

To ensure that those requirements are met, John and Rob have optimised the use of home-produced forages, with maize and wholecrop silages used throughout the year and red clover featuring in all silage reseeds.

The dairy ration, which is fed at 54 kg/head/day, comprises 20 kg of grass silage, 10 kg of maize silage, 10 kg of whole crop, together with 6 kg of a 14% protein/high energy blend. It also includes 3 kg of soda wheat, 2 – 3 kg of 48% Brazilian soya, 1.5 kg of Quality Liquid Feeds' Allstock 30, 180 g of vitamins, minerals and yeast, 25 g of MetaSmart™, the new methionine source, plus hay and straw to balance.

Dry matter intakes are often an issue with such diets, which is why liquid feeds are fed consistently to all stock to maintain high intakes and optimise rumen function. With this year having been particularly challenging because of dramatic variances in silage and sward quality, Steve Jackson of Quality Liquid Feeds suggested that the Slaters try MetaSmart to further improve forage digestibility. Impressed by the results of extensive trials conducted with the product throughout Europe, they decided to try it for a month.

"With butterfat levels dipping below the critical base level in May, we had to do something," explains Rob. "Our herd is already in the top hygiene band so it was a question of investigating all the other possible ways of maximising returns. We recognised that, if it lived up to its claims, this product could easily pay for itself and because flow meters are fitted in the parlours we knew that the effects would be fully traceable. With the high-yielders housed year-round it was an ideal situation to trial the product.

"Initially we included two litres of neat MetaSmart in every three-tonne mixer wagon of feed and milk recorded during the month-long trial, so we knew exactly where we stood at the end of it. We'd been told that the effects would be seen almost immediately and they were. We assessed its effect on every one of the cows and saw a consistent benefit across all our yield groups.

"During the three weeks following the trial, when the product was withdrawn we watched the protein content fall right away. It dipped below 3.25% and was obviously heading towards 3.1%, the level it had reached at the same time last year.

That would have meant taking a 0.25p/litre hit on the price we receive, so we had no hesitation in reinstating MetaSmart into the diet. However, as the inclusion rate is just 25 g/cow/day we decided that it would be more accurate if the product was added to the QLF Allstock 30 liquid feed to produce a more stable and uniform mix than might have been achieved on-farm. That has been confirmed by dispersion trials.

"I've got to say we were both surprised and very pleased with the results", says Rob, who, like many herds producing milk for cheese, sees quality fall when diets vary.

"The financial benefits of using the product speak for themselves. The return of 35.9p/cow/day from a product that costs around 13p/cow/day is staggering. In addition to an average yield increase of 1 litre/cow/day, butterfat has also increased by 0.15% to 4.27%, and protein by 0.11% to 3.36%, substantially above our 2005 averages. We estimate that it will be worth an additional £14,000 per year across the whole herd.

"Our objective is to make the best of what is essentially a simple milk contract. The herd average is 8,500 litres, but within that figure we have some cows that are producing 12,500 litres. Apart from increasing yields and quality, another of our objectives is to keep replacements to a minimum, so herd health and fertility are important. We've had issues with herd fertility in the past and because MetaSmart helps to lower the energy gap during early lactation we're hoping for further improvements. The animals are now in perfect health and very content."

Matthew Stott of Kemin UK, the company that markets MetaSmart within the UK, commented: "Methionine is an essential amino acid, critical to a number of functions, including progesterone synthesis, formation of low-density lipids that prevent the toxins that can cause ketosis and synthesis of glutathione which helps to prevent mastitis. It also improves protein utilisation and lowers nitrogen excretions. Sub-optimal methionine levels mean that the cow is unable to function at full performance and therefore milk yield, protein and butterfat suffer."

"Although methionine has been used to supplement poultry rations for more than 20 years, the liquid products used in monogastric rations simply don't have the same efficacy in ruminant diets. The unique mode of action of MetaSmart makes it the only methionine source that is both bioavailable and rumen-active. This patented molecule revolutionises amino acid nutrition in dairy cows."

"In addition to increased milk yield, protein and butterfat, the benefits of which are seen almost immediately, this product also has significant longer-term benefits. Introduced two to three weeks before calving, at a reduce dose, it helps to prepare cows for lactation. Early lactation trials have demonstrated an average 2kg/cow/day increase in yield, with improvements of 0.14% in protein and 0.18% in butterfat. We have also seen a four-day reduction in the calving to service interval and a 10% improvement in first inseminations because of improved cow condition and metabolism."

"With up to a third of the UK's milk production going for cheese production, the potential is there for UK dairy producers to benefit by up to £86/cow/year from this new technology. Producers on liquid contracts can expect to improve returns by approximately £26/cow/year."