KELVIN CAVE LTD

Technical Article

by Kelvin Cave Ltd

Cows at Zsigaháza Dairy Farm of AGROPRODUKT Co Pápa, Hungary, site of the trial

Crimping Trial

"CRIMPING home-grown cereals can give dairy farmers 'considerable advantages' over feeding dry or bought-in cereal products," says Andy Strzelecki of Kelvin Cave Ltd. By reducing the effect of world grain price fluctuations and producing a concentrate feed that is more rumen-friendly and digestible than dry grain, herd economic performance can be considerably enhanced. However, the importance of using an effective preservative at ensiling is paramount, and can result in a milk yield difference of as much as 0.9 litre/cow/day. This has been demonstrated by a recent large scale dairy trial that compared the effects of different treatments.

The trial was conducted in 2010 by Professor Dr. Endre Brydl of the Faculty of Veterinary Science, Svent István University, Budapest. The Professor, who is Head of the Herd Health and Veterinary Ethology Department at this, one of Europe's oldest and most respected Veterinary Universities, had demonstrated the clear benefits of feeding high-moisture crimped maize compared to dry maize in a previous experiment in 2006. In this latest trial the effects that different treatments applied to crimped maize had on herd health and productivity were examined.

Milk yield data was collected from 163 high yielding Holstein cows, which were fed identical rations containing 3kg/head of crimped maize treated either with Crimpstore or Biocrimp, an additive containing Lactobacillus buchneri 40788 and enzymes.

The cows were divided into two groups, with care taken to ensure that previous lactation performance was reflected equally in each group. Within each group sub-groups of 10 clinically healthy animals (the nucleus groups) were designated for sampling of blood and rumen fluid. After a two week adaptation period daily measurements of group milk yield and quality were recorded, together with weekly samplings of blood and rumen fluid from the two nucleus groups. Sampling and recording continued for 4 weeks, after which the two groups

were swapped to the opposite ration, a further two week adaptation period ensued, and then the sampling procedure was repeated.

“The results are of major significance to the livestock industry because they demonstrate that the choice of treatment for crimped grain can have a major impact on the economic performance and health of animals”, says Mr Strzelecki. “The cows did not lose more body condition as a result of the higher milk production, and blood tests showed better energy balance in cows in periods when they were fed the Crimpstore treated grain. Cost of treatment in this trial was £7.16/tonne for the Crimpstore and £6/tonne for the Biocrimp, but, assuming a farm-gate milk price of 25p/litre, an extra £75 could be earned for every tonne of Crimpstore treated grain fed.”

“Although this trial used crimped maize grain”, he continues, “other comparative work conducted by Teagasc, the Irish agricultural research body, on crimped barley, has demonstrated that treatment with Crimpstore results in superior DM retention, organic matter digestibility and higher ME than treatment with Biocrimp.”

Mr. Strzelecki suggests that in order to get the best from their crimped cereals farmers need to harvest the crop at the right stage, ensure effective nutrient preservation by use of a buffered acid preservative, and exercise a high level of good clamp management from filling to feed-out.

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