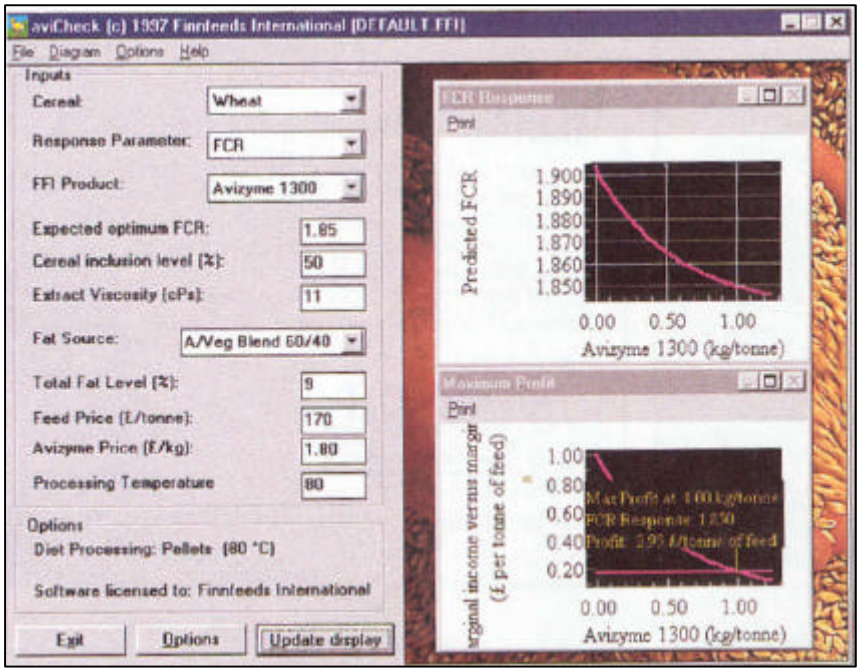
# PRODUCTS

## Feed Enzyme Dose Optimisation




The introduction of Avicheck™, the new service from Finnfeeds International represents a breakthrough in feed enzyme technology. For the first time, enzyme inclusion rates can now be matched to cereal quality, allowing the cost-effectiveness of feed enzyme use to be maximised.

The culmination of extensive R&D, backed up by testing under commercial conditions, Avicheck™ integrates cereal quality and enzyme response prediction with production economics. This enables dose-optimisation of enzyme for broilers fed wheat or barley-based feeds, producing significant economic benefits for both producers and feed compounders.

Introducing Avicheck™ at a recent meeting in London, Dr Michael Pack, Finnfeeds' Technical Services Manager said that the variability of wheat and barley quality seen throughout Europe, between growing regions, years and varieties has an impact on broiler performance.

"Feed enzyme use is widely accepted within the broiler industry as a means of both improving the nutritive value of wheat and barley, and also of reducing the variability that exists between samples," he stated. "Until now, the lack of an accurate method for *in vitro* prediction of cereal quality has meant the recommendation of fixed doses for feed enzyme use to ensure economic gains achieved in the vast majority of situations."

Dr Pack cited a number of trials clearly demonstrating the improvement in quality and the reduction in variability achievable with enzyme use. "In work carried out on a range of wheats grown in both the UK and in France, Avizyme 1300 addition at the current standard dose of 1kg/ton not only improved broiler feed conversion ration (FCR) from 1.80 to 1.74, but also dramatically reduced the FCR variation from ±0.05 to 0.03."

Illustrating the direct relationship between the performance variation resulting from wheat and barley variability and digesta viscosity in the gastro-intestinal tract, Dr Pack explained the importance of *in vivo* viscosity as a measure of cereal quality. It has been shown that in wheat and barley-based feeds, 60-80% of performance variation is accounted for by digesta viscosity.

"The importance of viscosity led to the development of Finnfeeds' Viscometric Enzyme BioAssay (VEBA), but although highly effective as a research tool and for demonstration purposes, the method is impractical for commercial screening of cereal samples," he explained.

"The newly developed Avicheck™ extract viscosity assay now allows determination *in vitro* from small samples of cereal, giving fast and accurate predictions of digesta viscosity that correlate closely to *in vivo* results.

"Reduced cereal quality is represented by increasing viscosity and, within the model, this information is combined with the response to enzyme inclusion expected across a range of cereal qualities. The result is an accurate and reliable prediction of broiler performance response to increases in enzyme dose," continued Dr Pack. "The cost from benefit from increased FCR or metabolisable energy (ME) can then be related to the response expected, and the cost of enzyme itself, to produce optimum dose recommendations for maximum profitability."

The model is PC-based and incorporates a range of inputs to fine tune the predictions to match individual situations. Inputs required include feed ingredient information, the type of feed processing used, feed cost and enzyme price.

Available as a service to customers through local distributors, customers' samples will be analysed at the company's UK laboratory, with the results passed to the distributor for dose optimisation calculations.

"We have known for some time that adaptation of enzyme dose rates to match cereal quality would be more cost-effective," concluded Dr Pack. "The launch of Avicheck™ represents the next step in feed enzyme use for broiler producers using wheat or barley-based feeds and is the result of years of research into the mechanisms and modes of action involved. - *Finnfeeds International, PO Box 777, Marlborough, Wiltshire SN8 IXN, UK. Fax +44 (0)1672 517778.*

No. 2000 on inquiry card.

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