

TEAGASC GRANGE: M. McGee *et al.*

Beef Nutrition

Evaluation of Feed Ingredients for Beef Cattle Diets

The conventional method of overcoming deficiencies in nutrient supply from forage is to supplement with concentrates. For grass-based beef production systems in Ireland most concentrates are fed during the pre-slaughter or finishing period of the animal's life. The need to increase beef cattle production efficiency without a deleterious effect on carcass traits or beef quality, while simultaneously decreasing excretions of nutrients to the environment, is increasingly important.

Ireland is a deficit country in the production of native cereals and proteins for animal feed, and accordingly production must be supplemented through the importation of feed ingredients from countries worldwide. These ingredients are primarily by-products from oilseeds, cereal processing, fruit processing, sugar industry, distilling industry and, more recently, the renewable energy sector or biofuel production. The beef sector is a predominant user of feed by-products. Inherent to by-product feedstuffs, particularly relative to cereal grains (or seeds), is the fact that their chemical composition is liable to change more rapidly over time as manufacturing processes and efficiencies evolve. Consequently, re-evaluation of the feeding value of these feedstuffs is required periodically. Of specific interest are the by-products from the rapidly expanding renewable energy sector, particularly dry maize (corn) distillers and wheat distillers, but also other predominant by-products such as soya hulls and palm kernel meal.

A series of studies are on-going at Teagasc, Grange characterising the feeding value of selected imported by-product feedstuffs for beef cattle in terms of, intake and digestion characteristics, growth, feed efficiency and product quality – carcass and meat.

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