

Title: The Net Energy Value for Commonly Used Plant Ingredients for Poultry in Australia

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Authors: M. Choct

Summary

The Australian poultry industry has a total farm gate value of \$2.8 billion and it is estimated to employ some 30,000 people directly and 60,000 in related enterprises. Feed is the highest component of production cost (65-75% of production cost) and the poultry industry uses approximately 23% of all compound feed produced in Australia. An improvement in feed efficiency can be achieved by accurately measuring dietary energy.

This pilot project was initiated to examine whether formulating poultry diets based on net energy (NE) values would give an advantage over those formulated on energy values obtained using the current default system of energy measure – the apparent metabolisable energy (AME).

Due to the extreme difficulty in measuring NE, only the most commonly used Australian raw materials were assayed. These included wheat, barley, sorghum, millrun, sweet lupin, soybean meal, canola meal and meat meal.

Broiler diets formulated on NE values gave a clear advantage in feed conversion efficiency over those formulated using the AME values, resulting in savings of over 80 grams of feed per kilogram liveweight gain, over a 35-day growth period.

There is no doubt that the use of NE value for feed formulation is clearly advantageous, however, due to the tedious nature of the NE system the establishment of a NE database for practical feed formulation still requires further development.