

Project Summary



PRJ-011564: Review of the Nutrient Content of Australian Feed Ingredients

Producing feed for broilers is the primary cost of chicken-meat production. Thus, formulation of a cost-effective diet that will meet broiler nutritional requirements is critical for an efficient and profitable industry. To ensure this can be achieved, the nutrient specifications of feed ingredients must be accurately determined. However, Australian broiler nutritionists have expressed concern as many nutrient specification databases contain dated information, a small sample size, or lack Australian specific data. Additionally, cross-checks, compiling and maintaining current and reliable data is a time consuming and costly task for each nutritionist to undertake themselves.

The compilation and assessment of the nutrient specifications provided to Australian broiler nutritionists will help to solve this challenge by aggregating the most up-to-date information available into one resource. It will also highlight ingredients or nutrients which are lacking data or are highly variable and require further characterisation. This is important to make companies aware of any areas that are lacking and have high demand for new data. This will ensure the characterisation of ingredients may be improved for future updates of the database.

This project directly addresses the expressed need of broiler integrator nutritionists compiling and reviewing current nutrient specifications in the one resource.

This project will compile a database of Australian and global feed ingredient nutrient specifications for common Australian feedstuffs used in poultry diets. These specifications will be attained from commercial companies, and where data is lacking, from publications or other online sources. The database will then be assessed for the amount of variation present, and whether the number of samples is sufficient to obtain a good estimate of the nutrient value of the feedstuff, or if more data is needed. The database itself will also be made available to poultry nutritionists, industry and researchers.

variation within the database and areas which require further sampling by companies or further study by researchers to properly characterise the ingredients.

This database will be made available in two formats, electronic and printed, to ensure accessibility.

The first phase of this project involved a survey of integrated Australian broiler nutritionists to identify the common feed ingredients used by industry and the nutrient specifications they would like included in the database.

Following this, access and permissions to publish the data from the source companies was acquired and the data was collected for each ingredient identified in the survey, cross checked, and compiled into the main database. Data was also collected from publications to supplement areas which were lacking.

Data for each source company will be aggregated into tables for nutritionists to compare individual values and a summary and review of the entire dataset will also be provided to assess



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Outcomes

Assessment of the compiled data is currently ongoing. However, it is apparent that while some ingredients and nutrients have an abundance of data, some ingredients or nutrients are lacking in sample number or show a wide range of variation, which is what we hypothesised.

Being able to identify these areas will give the industry the opportunity to build on these knowledge gaps and greatly improve the accuracy of feed formulation.

The desired outcome of this database is to:

1. Provide a compilation of nutrient specifications which aggregates the most up-to-date information available into one resource.
2. Highlight ingredients or nutrients which require further characterisation, or where there is high demand for data, either by companies within the feed industry or further investigation by researchers.

Implications

This database will provide poultry nutritionists, industry and researchers with an up-to-date resource compiling nutrient specification for Australian feed ingredients which also identifies feed ingredients and nutrients in need of further analysis and study. Therefore, this database is expected to greatly improve the accuracy of feed formulation, which should improve the efficiency and profitability of the Australian chicken-meat industry.

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Dr Amy Moss, Postdoctoral Fellow

University of New England

+61 2 6773 5217 | amoss22@une.edu.au

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