Methods for the analysis of premium livestock grains

D. S. Petterson\textsuperscript{A}, D. J. Harris\textsuperscript{B}, C. J. Rayner\textsuperscript{C}, A. B. Blakeney\textsuperscript{D} and M. Choct\textsuperscript{E}

\textsuperscript{A}Agriculture Western Australia, Locked Bag 4, Bentley Delivery Centre, WA 6983, Australia.
\textsuperscript{B}Chemistry Centre WA, 125 Hay St, East Perth, WA 6000, Australia.
\textsuperscript{C}State Chemistry Laboratory, Cnr Sneydes and South Rds, Werribee, Vic. 3030, Australia.
\textsuperscript{D}Cereal Solutions, PO Box 201, North Ryde, NSW 2113, Australia.
\textsuperscript{E}University of New England, Armidale, NSW 2351, Australia.

Abstract

The literature contains a wide range of reported values for the content of most chemical constituents of feed grains and meals. It is not possible to assess accurately how much of this variation is due to genotypic and environmental factors and how much to differences in methodologies between laboratories. We have reviewed the literature for the preparation and analysis of feed grains (cereals, legumes, and oilseeds) and made recommendations for procedures considered to give the most accurate and reliable results. Recommendations are also made for a quality assurance scheme, an inter-laboratory evaluation program, and the use of reference materials. Australia-wide adoption of these practices should ensure that any future variations observed can be ascribed to genotype and/or environment. This review is part of a national premium feed grains quality project which, in turn, is part of a program to provide more accurate and reliable information about the true value of our feed grains to the domestic and international feeds industries.

Full Text