

PRELIMINARY STUDIES ON THE CONTENTS OF MAJOR MINERALS IN VARIOUS FEEDSTUFF

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Major minerals especially magnesium, phosphorus and calcium play an important role in the development and growth of ruminants and poultry. While most feedstuffs naturally contain these major minerals at specific levels, many types of feed formulation approach are also being developed to optimize the absorption of certain minerals for profitable animal production. This study was conducted to determine and classify the contents of major minerals found in feedstuff received from various commercial and private feed mills as well as farmers at Veterinary Public Health Laboratory (VPHL). Various feed samples received were analysed using ICP-MS to determine the composition of each type of feed. The feedstuffs were classified into four categories of ruminant, poultry, grass or forages and others. Ruminant feedstuff showed a high amount of potassium (6000-17000 mg/kg) and calcium (3500-9000 mg/kg) with phosphorus and magnesium ranging from 2000-5500 mg/kg and 1900-2500 mg/kg respectively. This result is similar to poultry and others feedstuff. For grass or forages, calcium, potassium, phosphorus and magnesium ranges from 2000-6000 mg/kg, 5500-10000 mg/kg, 900-2000 mg/kg and 3000-4500 mg/kg respectively. The results showed variations in the amount of mineral content in the different type of animal feedstuff which can be useful in feed formulation. The information obtained in this study can be used in optimizing the correct contents of minerals and reduce production cost if possible in order to formulate an effective feedstuff that can highly benefit animal production.

Keywords : Minerals, feedstuff, feed formulation, animal production