

Poultry Feed Technology

Animal feeds are the food given to animals which are domestic often refers to fodder in course of care and management of farm animals by humans for profit. Supply of quality feed ensures the health of animals. Animal wellbeing is highly dependent on feed that reflects well-balanced nutrition. Some modern agricultural practices, such as fattening cows on grains or in feedlots, have detrimental effects on the environment and animals. A branch of the science of livestock management that studies the scientific principles and methods of proper feeding of farm animals to ensure their normal growth, development, and high productivity and to improve existing breeds and develop new ones. The breeding of agricultural animals is concerned with developing theoretical principles and practical methods for pedigree work, a key element of which is the selection of the best animals based on an evaluation of the animals and their ancestors and progeny. The most important breeding methods are pure breeding, cross-breeding, and hybridization. Genetic methods are being developed for controlling heterosis in crossbred and hybrid animals. Immunogenetic methods are frequently applied to control the parentage of animals. The uniqueness of this book hence lies in the author's way of reconstructing the chapter delving deep into the areas of the subject. The book will be useful not only to the students of animal husbandry but also to general reader.

Contents: Gross Necropsy Findings and Hepatic Histopathology • Chicken Feed: The Ideal Formula • Statistical Models for Association Testing • Feed Manufacturing Technology: Current Issues and Challenges • Analytical Framework and Data Requirements • Toxicity of Certain Inorganic Elements • Research Field: Digestion, Feeding and Feed Value

Divyesh Pandey is a Designated Professor in the field of poultry science. In the doctorate level his research topic was- Effect of protein and energy sources and bulk density of diets on growth performance of chicks. He has several publications includes- Tillage, Silviculture and Waste Management – Reducing Phosphorus Inputs to Watersheds from Poultry Production, Effect of Feather Meal as a Source of Valine for Lactating Sows and The lysine requirement and ratio of total sulphur amino acids to lysine for chicks fed adequate or inadequate lysine.

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Preface

Feed is obviously the major component involved in terms of technology and cost. The feed industry thus plays a major role in providing the balanced feed for increasing the animal productivity. The Compound Livestock Feed Manufacturers Association from the feed sector have a total installed capacity of over 10 MMT per annum and produce about 4 MMT of animal feed per annum. The total estimated requirement of balanced feed in the country is around 60 MMT. While the broiler feed segment is at technological threshold and requires creative solutions to improve further, there is relatively greater scope for feed improvements in the layer segment. As for livestock, animals are fed with a small quantum of concentrates and feeding of productive animals, though relatively better, they still have to be fed with balanced nutritious diets to harness full potential. Shrimp feed, like the broilers is on a better scale of development while the fish feed market holds good scope for use of formulated feeds. Therefore the Indian Feed Industry is all set to grow in order to catch up with growing demands of livestock production and combat rising prices of raw material. Animal agriculture has been changing rapidly for the last two decades. One of the most significant changes has been in the area of feed requirements for optimum performance. Genetic improvements are placing constant pressure on feed manufacturers to produce quality feeds that match the increased requirements of improved breeds without creating additional physiological or health stress. Increased understanding of nutrition, the environmental impact on animal performance, and even philosophical differences between nutritionists have caused feed manufacturers to alter "business as usual." Additional factors, such as the increased demand for high value specialty feeds for pets, equine, aquaculture, ratites, early weaning diets for nursery pigs and the like, have contributed to the need for improved feed manufacturing techniques.

Mixing is considered to be one of the most critical and essential operations in feed manufacturing regardless of whether it's on-farm or in a commercial facility. Lack of proper mixing can lead to reduced diet uniformity, affecting not only animal performance but regulatory

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