

Nutrient Requirements And Feeding Of Finfish For Aquaculture Cabi

Aquaculture now supplies half of the seafood and fisheries products consumed worldwide and is gaining international significance as a source of food and income. Future demands and fisheries products can only be met by expanded aquaculture production. Such production will likely become more intensive and will depend increasingly on nutritious and efficient aquaculture feeds containing ingredients from sustainable sources. To meet this challenge, Nutrient Requirements of Fish and Shrimp provides a comprehensive summary of current knowledge about nutrient requirements of fish and shrimp and supporting nutritional science. This edition incorporates new material and significant updates to information in the 1st edition and also examines the practical aspects of feeding of fish and shrimp. Nutrient Requirements of Fish and Shrimp will be a key resource for everyone involved in aquaculture and for others responsible for the feeding and care of fish and shrimp. It will also aid scientists in developing new and improved approaches to satisfy the demands of the growing aquaculture industry. Nutrient requirements, deficiencies, and excesses. Physical characteristics and suitability. General considerations for feeding management. Nutrient requirement tables. Feed composition tables.

Aquaculture is more than a science in its infancy; it is now recognized as a viable and profitable enterprise worldwide. It will continue to grow and supply an increasingly larger percentage of fishery products consumed because the oceans are inadequately managed and their yield is unpredictable. Supply, price, and quality can be controlled more effectively when fish are raised under managed conditions, like corn in a field. As aquaculture technology has evolved, there has been a trend toward higher yields and faster growth which has necessitated enhancing production by replacing natural foods with prepared diets. In many aquaculture operations today, feed accounts for over half of the variable operating cost. Feeding fish in their aqueous environment is on dimensions beyond those considered in feeding land animals; the nutrient requirements, feeding practices, and feeding environment are unique for fish. Knowledge on nutrition and the practical feeding of fish is essential to successful aquaculture. This book is intended to be helpful to students, scientists, practicing nutritionists, and aquaculturists. It covers the nutrient requirements and deficiency effects for various fishes. It discusses nutrient sources and preparation of research and practical feeds. It gives direction for designing and conducting nutrition and feeding experiments. Feeding practices for several commercially important fishes representing diverse culture systems (coldwater fish, warm water fish, crustaceans, and mollusks) are presented. One book, of course, cannot be all-encompassing in the area of fish nutrition and feeding.

Nutrient Requirements for Domestic Animals

INRA nutrient requirements, recommended allowances and feed tables

Nutrition and Feeding of Fish

Effect of Environment on Nutrient Requirements of Domestic Animals

In the years since the third edition of this indispensable reference was published, a great deal has been learned about the nutritional requirements of common laboratory species: rat, mouse, guinea pig, hamster, gerbil, and vole. The Fourth Revised Edition presents the current expert understanding of the lipid, carbohydrate, protein, mineral, vitamin, and other nutritional needs of these animals. The extensive use of tables provides easy access to a wealth of comprehensive data and resource information. The volume also provides an expanded background discussion of general dietary considerations. In addition to a more user-friendly organization, new features in this edition include: A significantly expanded section on dietary requirements for rats, reporting substantial new findings. A new section on nutrients that are not required but that may produce beneficial results. New information on growth and reproductive performance among the most commonly used strains of rats and mice and on several hamster species. An expanded discussion of diet formulation and preparation--including sample diets of both purified and natural ingredients. New information on mineral deficiency and toxicity, including warning signs. This authoritative resource will be important to researchers, laboratory technicians, and manufacturers of laboratory animal feed.

Nutrient Requirements of Laboratory Animals, Fourth Revised Edition, 1995 National Academies Press

Good nutrition is fundamental to the success and sustainability of the aquaculture industry in terms of economics, fish health, high quality product production and minimizing environmental pollution. This book provides a unique, complete coverage of current information on nutrient requirements, feed formulations and feeding practices of commercially important aquaculture species cultured around the world. Each chapter contains detailed feeding information on specific species and is written by an expert nutritionist on that species. The book is of interest to those working professionally in the industry, graduate level students and researchers.

Handbook Of Applied Animal Nutrition Textbook Student Edition

Nutrition and Feeding of Dairy Goats

Sheep, Goats, Cervids, and New World Camelids

Nutrient Requirements and Feeding of Buffaloes and Cattle

Nutrient Requirements, Balancing Rations, Protein Supplements, Suggested Rations

This classic reference for poultry nutrition has been updated for the first time since 1984. The chapter on general considerations concerning individual nutrients and water has been greatly expanded and includes, for the first time, equations for predicting the energy value of individual feed ingredients from their proximate composition. This volume includes the latest information on the nutrient requirements of meat- and egg-type chickens, incorporating data on brown-

egg strains, turkeys, geese, ducks, pheasants, Japanese quail, and Bobwhite quail. This publication also contains new appendix tables that document in detail the scientific information used to derive the nutrient requirements appearing in the summary tables for each species of bird.

The exercising horse competes at various levels in different disciplines and is also increasingly used for leisure riding and driving as well as hobby farming and agritourism. This varied use of the horse of today creates challenges for those who are responsible for the feeding of horses, as well as to feed producers and manufacturers. This book provides an outstanding synthesis of knowledge in physiology and metabolism, nutritional requirements and feeding strategies. Use of performance aids and the question of feed contaminants and doping are explained and discussed according to EU legislation on the marketing and use of animal feeds and doping rules in horse sports. The improved knowledge and understanding of the background of the horse's performance and nutritional physiology helps to meet the nutritional requirements of working (or exercising) horses such that their genetic potential can be used properly. This book discusses the following seven subjects: -nutrients and tissue metabolism; -adaptations; -energy requirements; -protein requirements; -mineral, electrolytes and vitamins requirements and function; -feeding strategies; -performance aids and feed contaminants and doping. This book is the fourth step of further discussion on the evaluation and prediction of the requirements of different types of horses covered in the scope of the working group Nutrition of the Horse commission at European Association of Animal Production (EAAP). All those concerned by racing, riding and feeding in equine industry will enjoy this valuable resource. It is a reference book for scientists, veterinarians, advisers and practitioners in the equine industry, as well as for teachers and students in equine science.

Updating recommendations last made by the National Research Council in the mid-1980s, this report provides nutrient recommendations based on physical activity and stage in life, major factors that influence nutrient needs. It looks at how nutrients are metabolized in the bodies of dogs and cats, indications of nutrient deficiency, and diseases related to poor nutrition. The report provides a valuable resource for industry professionals formulating diets, scientists setting research agendas, government officials developing regulations for pet food labeling, and as a university textbook for dog and cat nutrition. It can also guide pet owners feeding decisions for their pets with information on specific nutrient needs, characteristics of different types of pet foods, and factors to consider when feeding cats and dogs.

Horse Feeding and Nutrition

Nutrient Requirements of Fish and Shrimp

Eleventh Revised Edition

Sixth Revised Edition

Equine Nutrition and Feeding

Since 1944, the National Research Council (NRC) has published seven editions of the Nutrient Requirements of Beef Cattle. This reference has guided nutritionists and academia and the cattle and feed industries in developing and implementing nutritional and feeding programs for beef cattle. The cattle industry has undergone considerable changes since the seventh revised edition was published in 2000 and some of the requirements and recommendations set forth at that time are no longer relevant or appropriate. The eighth edition of the Nutrient Requirements of Beef Cattle builds on the previous editions. A great deal of new research has been published during the past 14 years and there is a large amount of new information for many nutrients. In addition to a thorough and current evaluation of the literature on the energy and nutrient requirements of beef in all stages of life, the eighth edition provides new information about phosphorus and sulfur contents; a review of nutritional and feeding strategies to minimize nutrient losses in manure and reduce greenhouse gas emissions; a discussion of the effect of feeding on the nutritional quality and food safety of beef; new information about nutrient metabolism and utilization; new information on feed utilization, rumen metabolism and postabsorptive metabolism; and future areas of needed research. The tables of feed ingredient composition are significantly updated. Nutrient Requirements of Beef Cattle represents a comprehensive review of the most recent information available on beef cattle nutrition and ingredient composition that will allow efficient, profitable and environmentally conscious beef production.

'Equine nutrition' gives insight in updated feed evaluation systems based on net energy, global amount of amino acids, and feed intake. These systems allow accurate calculation of the nutritive value of feeds, the formulation of well-balanced rations to achieve production or utilisation goals, and the prediction of equine performance based on the quantity of feed intake. 'Equine nutrition' provides an update of the nutrient requirements for all categories of equine. Tables of recommended allowances based on long term feeding trials at INRA are proposed. These recommendations and the simple approach to formulation of rations based on the use of a maximum amount of forage have been successfully applied. The importance of grass intake during summer for the different categories of equines is evaluated and grazing management is described. Feed allowances and feeding practices are discussed in respect of health and behaviour of the equine and of the preservation of environment. The feed tables list 169 roughages and 71 concentrates feeds. Data have been derived from trials on horses, carried out at INRA and measurements of voluntary intake for most of the forages. This book also deals with several distinct pedagogic tools dedicated to 'equinisation', a guide to 'body condition scoring in horse' and 'Equine Rami' for horse grazing and farming management. This book is an essential source for scientists, teachers, students, advisers and professionals.

As members of the public becomes more conscious of the food they consume and its content, higher standards are expected in the preparation of such food. The updated eighth edition of Nutrient Requirements of Beef Cattle explores the impact of cattle's biological, production, and environmental diversities, as well as variations on nutrient utilization and requirements. Enhanced than previous editions, this edition expands on the descriptions of cattle and their nutritional requirements taking management and environmental conditions

The book clearly communicates the current state of beef cattle nutrient requirements and animal variation by visually presenting related data via computer-generated means. *Nutrient Requirements of Beef Cattle* expounds on the effects of beef cattle body condition on the state of compensatory growth, takes an in-depth look at the variations in carcass composition, and discusses the important effects of the environment and stress on food intake. This volume also uses new data on the development of a fetus during pregnancy to prescribe nutrient requirements for gestating cattle more precisely. By focusing on factors such as product quality and environmental awareness, *Nutrient Requirements of Beef Cattle* presents standards for acceptable nutrients in a complete and conventional manner that promotes a more practical understanding and application.

Fourth Revised Edition, 1995

Recommended Allowances and Feed Tables

Second Revised Edition, 1977

Nutrient Requirements of Horses

Nutrient Requirements of Beef Cattle

Proper formulation of diets for small ruminants depends on adequate knowledge of their nutrient requirements.

Each of these popular handbooks contains comprehensive information on the nutritional needs of domestic animals and includes extensive tabular data. All are paperback and 8 1/2 x 11.

Some books come with diskettes or Cds that allow users to predict nutrient requirements of specific animals under various conditions and at various life stages.

Since 1944, the National Research Council has published 10 editions of the *Nutrient Requirements of Swine*. This reference has guided nutritionists and other professionals in academia and the swine and feed industries in developing and implementing nutritional and feeding programs for swine. The swine industry has undergone considerable changes since the tenth edition was published in 1998 and some of the requirements and recommendations set forth at that time are no longer relevant or appropriate. The eleventh revised edition of the *Nutrient Requirements of Swine* builds on the previous editions published by the National Research Council. A great deal of new research has been published during the last 15 years and there is a large amount of new information for many nutrients. In addition to a thorough and current evaluation of the literature on the energy and nutrient requirements of swine in all stages of life, this volume includes information about feed ingredients from the biofuels industry and other new ingredients, requirements for digestible phosphorus and concentrations of it in feed ingredients, a review of the effects of feed additives and feed processing, and strategies to increase nutrient retention and thus reduce fecal and urinary excretions that could contribute to environmental pollution. The tables of feed ingredient composition are significantly updated. *Nutrient Requirements of Swine* represents a comprehensive review of the most recent information available on swine nutrition and ingredient composition that will allow efficient, profitable, and environmentally conscious swine production.

Nutrient Requirements of Ruminants in Developing Countries

Nutrient Requirements of Beef Cattle:

Seventh Revised Edition: Update 2000

Nutrient Requirements of Swine

Principles of the Nutrition of Ruminants Nutrient Requirements of Animals Nutritive Value of Feeds : an Introduction to the Book : Alimentation Des Ruminants

Nutrient Requirements of Domesticated Ruminants draws on the most up-to-date research on the energy, protein, mineral, vitamin and water requirements of beef and dairy cattle, sheep and goats. It defines the responses of animals, in weight change, milk production and wool growth, to quantitative and qualitative changes in their feed supply. It has particular application to grazing animals. Factors affecting the intake of feed are taken into account and recommendations are given according to the production systems being used; for instance, the feed intake of a grazing animal is affected by a larger number of variables than a housed animal. Examples of the estimation of the energy and nutrients required for the different production systems are given, as well as the production expected from predicted feed intakes. The interactions between the grazing animal, the pasture and any supplementary feeds are complex, involving herbage availability, diet selection and substitution. To facilitate the application of these recommendations to particular grazing situations, readers are directed to decision support tools and spreadsheet programs. *Nutrient Requirements of Domesticated Ruminants* is based on the benchmark publication, *Feeding Standards for Australian Livestock: Ruminants*, published in 1990 by CSIRO PUBLISHING on behalf of the Standing Committee on Agriculture. It provides comprehensive and useful information for graziers, livestock advisors, veterinarians, feed manufacturers and animal nutrition researchers. The recommendations described are equally applicable to animals in feedlots or drought yards.

Aquaculture is now recognized as a viable and profitable enterprise worldwide. As aquaculture technology has evolved, the push toward higher yields and faster growth has involved the enhancement or replacement of natural foods with prepared diets. In many aquaculture operations today, feed accounts for more than one-half the variable operating cost. Therefore, knowledge of nutrition and practical feeding of fish is essential to successful aquaculture. This book is not written exclusively for scientists but also for students, practicing nutritionists, and aquaculturists. It covers the known nutrient requirements and deficiency effects for different fishes, and digestion and metabolism of nutrients and energy. It discusses nutrient sources and preparation of practical and research feeds. It gives directions for conducting fish nutrition and feeding experiments. Feeding practices for salmonids, channel catfish, tilapias, shrimps and hybrid striped bass are presented. Since the first edition of this book was printed, the National Research Council of the National Academy of Sciences has revised the nutrient requirements for fish. These revisions are in the present edition. Other additions to this revised edition are chapters on nutrition and fish health, and bioavailability of nutrients. Each original chapter has been meticulously revised and updated with new information. Aquaculture is a dynamic area and new technologies are being introduced continuously; therefore, some of the material discussed in this revised edition may become obsolete quickly. Nonetheless, the material presented has been thoughtfully selected and updated to make it of maximum use to persons whose interests

range from general aquaculture to animal nutrition to feed manufacture.

This is the second edition of *Horse Feeding and Nutrition* which was originally published in 1980. It provides the latest information available for those interested in the feeding and nutrition of horses. This new edition has been entirely revised to include the large amount of new research information that has become available since publication of the first edition. Three new chapters have been added, entitled *Feeding and Health-Related Problems*, *The Complexity of Proper Bone Formation*, and *Exercise Physiology*. New feed and food crops, improved methods of production and processing, increased productivity of animals and crops, changes in animal products including more lean and less fat in meat and less fat in milk, longer shelf-life requirements of animal food products, and a myriad of new technological developments have resulted in a need to continually re-evaluate nutrient requirements and supplementation. Sample diets are given, useful as guides in developing diets for horses. Suggested levels of protein, minerals, and vitamins for use in horse diets are presented. These can be used as guides which can be modified to suit the various feeding situations encountered in horse farms. The volume of scientific literature is increasing rapidly each year. Moreover, its interpretation is becoming more complex. This increases the need for summarizing and interpreting these new developments in up-to-date books such as in this one. Sample diets-useful as guides in developing diets for horses Suggested levels of protein, minerals, and vitamins for use in horse diets These can be used as guides which can be modified to suit the various feeding situations encountered in horse farms

Nutrient Requirements and Feeding of Finfish for Aquaculture

Nutrient Requirements of Sheep

Nutrient Requirements of Laboratory Animals,

Manual of Equine Nutrition and Feeding Management

Nutrient Requirements of Poultry

Beef Cattle Feeding and Nutrition is the third in a series of books on animal feeding and nutrition. These books are designed to keep readers abreast of the rapid developments in feeding and nutrition. These developments have resulted in changes in diets, the use of new feed processing methods, improved use of by-product feeds, and more supplementation with minerals, vitamins, amino acids, and nonprotein nitrogen compounds. The book is organized into four parts. Part I focuses on the nutrient requirements of beef cattle. Beginning with a review of rumen physiology and energy requirements, the remaining chapters discuss the vitamin, mineral, and protein, requirements of beef cattle. Part II on feedingstuffs includes studies on pasture and other forages; hay and haylage making; silage and crops for silage; and concentrates for beef cattle. Part III includes studies on breeding herd nutrition and management; and milk production and calf performance. Part IV on cattle finishing covers cattle finishing systems; feedlot disease; and economics of cattle feeding.

The book is useful to post-graduate students of Animal Sciences, teachers and scientists of animal nutrition discipline, personnel of feed industry involved in feed manufacturing and marketing, field veterinarians, animal husbandry extension workers and progressive animal farmers & animal lovers. Contents: Part I: Applied Nutrition I (Livestock and Poultry Nutrition): Introduction to Feeding of Livestock-Importance of Scientific Feeding-Feeding Experiments / Evaluation of Feeds by Digestion Experiments / Methods Adopted for Arriving at Nutrient Requirements of Livestock and Poultry; Energy and Protein Requirements for Maintenance, Production and Reproduction Requirement for Minerals and Vitamins / Feeding Standards-History-their uses and Significance / Nutritional Requirements of Indian Cattle and Buffaloes / Unconventional Feeds: Characteristics and their Utilization in Livestock and Poultry Feeding / Small Ruminant Nutrition / Poultry Nutrition Formulation of Poultry Diets / Swine Nutrition / Efficiency of Feed Conversion to Animal Products in Farm Animals and Poultry Part II: Applied Nutrition II (Human, Pet, Rabbit and Laboratory Animal Nutrition): Body Composition of Animals / Effect of Processing on Nutritive Value of Foodstuffs / Hygienic Preparation and Preservation of Foods / Formulation of Special Diets for Therapeutic Purposes / Cat and Dog Nutrition / Rabbit Nutrition / Laboratory Animal Nutrition / Appendix: 1. Metabolic size for live body weight (Wkg 0.75) / Conversion factors / Prefix names of multiples and submultiples of units Swine Nutrition is a comprehensive text-reference that deals with the various aspects and knowledge in swine nutrition. The book is basically about nutrient utilization by swine. The topics discussed concerning this subject are factors influencing swine nutrition, nutrient bioavailability, appetite and feeding behavior, physical forms of feed, environment and management, immunocompetence, genetic and sex considerations, mycotoxins, and intestinal microbiology. Major and unique feedstuffs, feeding regimen in different stages of growth, and techniques in swine nutrition research are also elaborated. The text will be useful to students of advance swine nutrition courses as well as those seeking information in swine nutrition.

Eighth Revised Edition

Beef Cattle Feeding and Nutrition

Nutrient Requirements of Dogs and Cats

Nutrient Requirements of Rabbits,

Ninth Revised Edition, 1994

Fish Nutrition, Fourth Edition is an up-to-date, authoritative presentation of all key elements of the nutrition of fish and crustaceans. As aquaculture is rapidly expanding, more than 200 herbivorous and carnivorous species occupy a diverse range of ecological niches, and have therefore evolved to utilize a wide array of food sources. This new edition highlights these differences and covers the complexity and challenges associated with fish nutrition, addressing nutrient requirements to produce high-quality, healthful and sustainable resources, the essential nutrients for fish species, including proteins and amino acids, vitamins, minerals and essential fatty acids, a feed quality assessment, and fish pathology. Led by a team of international experts, this edition provides readers with new information on the use of high-throughput technologies in fish nutrition research, the role of feeds on the community structure of the microbiome, and advances in essential nutrient requirements. Features expansive updates to the previous edition, including a new chapter dedicated to diet analysis and evaluation Addresses the roles of fish nutrition and feeds on sustainability and the environmental impacts of aquaculture Covers basic nutritional biochemistry and applied nutritional topics

"Since 1944, the National Research Council (NRC) has published seven editions of the Nutrient Requirements of Beef Cattle. This reference has guided nutritionists and other professionals in academia and the cattle and feed industries in developing and implementing nutritional and feeding programs for beef cattle. The cattle industry has undergone considerable changes since the seventh revised edition was published in 2000 and some of the requirements and recommendations set forth at that time are no longer relevant or appropriate. The eighth revised edition of the Nutrient Requirements of Beef Cattle builds on the previous editions. A great deal of new research has been published during the past 14 years and there is a large amount of new information for many nutrients. In addition to a thorough and current evaluation of the literature on the energy and nutrient requirements of beef in all stages of life, this volume includes new information about phosphorus and sulfur contents; a review of nutritional and feeding strategies to minimize nutrient losses in manure and reduce greenhouse gas production; a discussion of the effect of feeding on the nutritional quality and food safety of beef; new information about nutrient metabolism and utilization; new information on feed additives that alter rumen metabolism and postabsorptive metabolism; and future areas of needed research. The tables of feed ingredient composition are significantly updated. Nutrient Requirements of Beef Cattle represents a comprehensive review of the most recent information available on beef cattle nutrition and ingredient composition that will allow efficient, profitable, and environmentally conscious beef production"--Publisher's website.

Deals with feed evaluation systems, the nutrient requirements of ruminant livestock and the feeding value of a wide range of feedstuffs. This book lists about 800 typical forages, 65 crop residues and 120 concentrate and by-product feeds. It is suitable for teachers, specialist scientists and industrialists.

Fish Nutrition

Equine nutrition

Feeding of Ruminants

Nutrition of the exercising horse

Nutrient Requirements of Domesticated Ruminants

Proper formulation of diets for horses depends on adequate knowledge of their nutrient requirements. These requirements depend on the breed and age of the horse and whether it is exercising, pregnant, or lactating. A great deal of new information has been accumulated since the publication 17 years ago of the last edition of Nutrient Requirements of Horses. This new edition features a detailed review of scientific literature, summarizing all the latest information, and provides a new set of requirements based on revised data. Also included is updated information on the composition of feeds, feed additives, and other compounds routinely fed to horses. The effects of physiological factors, such as exercise, and environmental factors, such as temperature and humidity, are covered, as well. Nutrient Requirements of Horses also contains information on several nutritional and metabolic diseases that horses often have. Designed primarily as a reference, both practical and technical, Nutrient Requirements of Horses is intended to ensure that the diets of horses and other equids contain adequate amounts of nutrients and that the intakes of certain nutrients are not so excessive that they inhibit performance or impair health. This book is primarily intended for animal nutritionists, veterinarians, and other scientists; however, individual horse owners and managers will also find some of this material useful. Professors who teach graduate courses in animal nutrition will find Nutrient Requirements of Horses beneficial as a textbook.

Each of these popular handbooks contains comprehensive information on the nutritional needs of domestic animals and includes extensive tabular data. All are paperback and 8 1/2 x 11. Some books come with diskettes or CDs that allow users to predict nutrient requirements of specific animals under various conditions and at various life stages.

"This publication represents a revision of the report entitled 'Feeding standards for Australian livestock. Ruminants' that was issued in 1990 by CSIRO Publishing in conjunction with the Standing Committee on Agriculture"--Introduction.

Ruminant Nutrition

Swine Nutrition

Beef Cattle Feeding Suggestions

Nutrient Requirements of Dogs

Applied Nutrition, 2/E

Manual of Equine Nutrition and Feeding Management S A practical manual for applied labs on the nutrition and feeding of horses In the Manual of Equine Nutrition and Feeding Management, a team of equine nutritionists and educators delivers a comprehensive manual perfect for use in an applied laboratory setting. This book explores critical ideas in equine nutrition, from plant identification to determining the cost of feeding. The laboratory concepts and assignments contained within this book combine the practical aspects of feeds and feeding with the technical aspects of equine nutrition. Each chapter is organized to include an introduction, objectives, and questions for further study; and is supplemented with additional activities to aid in the retention of the presented material. A companion website provides worksheets, with an instructor key with answers to the lab activities and assignments available to instructors. The book also includes: A thorough introduction to the equine digestive system, including the primary and secondary organs of digestion Comprehensive explorations of plant identification, pasture, hay, and concentrates for horses Practical discussions of by-product feeds and additives, including explanations of the concepts of "as sampled" and "dry matter" In-depth examinations of how to determine the nutrient content of feeds and the use of feeding standards and English-metric conversions Ideal for pre-veterinary and equine studies students, the Manual of Equine Nutrition and Feeding Management is also an indispensable resource for veterinary medicine and veterinary technician students, equine nutritionists, and the owners and breeders of horses.

PART-I Applied Nutrition-I (Livestock feeding) 1 Feeding Experiments in Animal Nutrition 2 Determination of Digestibility Coefficients 3 Estimation of Nutrient Requirements for Various Body Functions 4 Feeding Standards in Animal Nutrition 5 Nutrient Requirement and Feeding of Cattle 6 Nutrient Requirement and Feeding of Buffaloes 7 Nutrient Requirement and Feeding of Goats 8 Nutrient Requirement and Feeding of Sheep 9 Nutrient Requirement and Feeding of Swine 10 Nutrient Requirement and Feeding of Poultry 11 Nutrient Requirement and Feeding of Ducks 12 Utilization and Economics of Unconventional Feedstuffs PART-II Applied Nutrition-II (Human, Pet and other animals nutrition) 1

Composition of Various Food Products in the Human Diet 2 Nutrient Requirement and Feeding of Human Being 3 Modification of Diet under Selected Conditions 4 Hygienic Preparation, Preservation and Storage of Feed Stuffs 5 Processing of Various Feed Stuffs 6 Nutrient Requirement and Feeding of Laboratory Animals 7 Nutrient Requirement and Feeding of Dog 8 Nutrient Requirements and Feeding of Cats 9 Nutrient Requirements and Feeding of Horse Appendix (i) Appendix (ii) Appendix (iii) Index. Nutrient Requirements of Small Ruminants