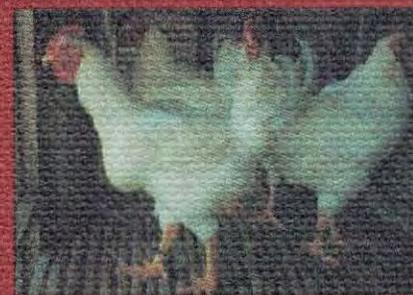


# BIODIVERSITY OF LIVESTOCK AND POULTRY GENETIC RESOURCES IN THE PHILIPPINES

Dr. Orville L. Bondoc







**BIODIVERSITY OF  
LIVESTOCK AND POULTRY  
GENETIC RESOURCES  
IN THE PHILIPPINES**

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**Philippine Council for Agriculture,  
Forestry and Natural Resources  
Research and Development  
Department of Science and Technology**

**Los Baños, Laguna  
1998**

**First Printing 1998**

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**ISBN 971-20-0455-4**

**Bibliographic Citation:**

Bondoc, Orville L. Biodiversity of livestock and poultry genetic resources in the Philippines. Los Baños, Laguna: IAS-CA/UPLB and PCARRD/DOST, 1998. 141p.

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# PREFACE

Biological diversity in farm animals comprises an important share of the total variation among living organisms from all sources including terrestrial, marine and other aquatic ecosystems. Their conservation is often justified for reasons related to their current commercial value, uses in scientific research, public sentiment, and as insurance against future risks. Unfortunately, local applications of animal breeding and genetics theory to judiciously utilize and genetically improve the various breeding herd or flocks have not succeeded much in developing a self-reliant and sustainable breeder base.

In this regard, “**Biodiversity of Livestock and Poultry Genetic Resources in the Philippines**” presents vital information that are required in the effective and efficient management, improvement, and conservation of domestic animal genetic resources. This

book also hopes to promote public awareness and better understanding and appreciation of diversity within species, between species, and ecosystems involved in local animal production.

Cognizant of the current and long-term thrusts of the Philippine Council for Agriculture, Forestry and Natural Resources (PCARRD), this book is particularly useful in enhancing the directions and activities of the local livestock and poultry R and D programs. At the same time, this shall serve as a practical reference guide for many agricultural learning institutions. This book written by Dr. Orville L. Bondoc of the Institute of Animal Science, University of the Philippines Los Baños is indeed a significant contribution to document characteristics and performance potentials of livestock and poultry breeds/strains in the country.



BEATRIZ P. DEL ROSARIO  
Officer-in-Charge  
PCARRD



# FOREWORD

Diversity of animals as well as plants came about mainly as an evolutionary adaptation to their ever-changing environmental milieu. Climatic and geophysical differences, for example, are two of the major driving forces toward biodiversity.

As agriculture developed and farmers grew crops and raised animals, sports that attract their fancy were carefully nurtured and propagated. In the meantime they imposed selective breeding to improve their stocks. Such farming practices also became driving forces that created diversity of crops and poultry and livestock. For example, before chickens were domesticated some millenniums ago, only four different varieties or subspecies of the wild jungle fowl could be found. But subsequent domestication, selection and breeding of new types, crossbreeding and many other human interventions resulted in hundreds of different breeds, varieties and strains of varying sizes, colors, conformation and other physical and physiological features.

With increasing economic importance and commercialization of livestock, however,

farmerstended to keep only those breeds and varieties that were more productive and profitable to keep. Keeping of animals for their beauty or variety and uniqueness became rarer and rarer. Less productive ones slowly disappeared in the farming landscape along with whatever genes that made them unique. In time only the few economically important breeds remained while others disappeared or at the verge of extinction. It was only in the 1970s when the scientific community sounded the alarm of the increasing erosion of genetic diversity in poultry and livestock.

It is in this historical perspective of the state of diversity of the genetic resources of poultry and livestock that the present book written by Dr. Orville L. Bondoc takes important significance. This book will certainly be useful to government policymakers, animal breeders, extension workers and livestock raisers as they contemplate issues on the continued progress of the livestock sector through maintenance of diversity of genetic resources not only for the survival of the animal industry but in the whole world.



CECILIO R. ARBOLEDA  
Dean  
College of Agriculture, UPLB

# AUTHOR'S MESSAGE

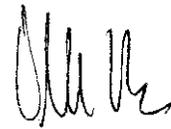
Biodiversity of domestic animal genetic resources are naturally portrayed in their appearance, performance, and unique adaptive qualities. This variation is brought about by inherent differences between and within breeds/strains, and by environmental differences in local production and marketing systems; physical conditions between islands, provinces or regions. Unfortunately, vivid descriptions of them remain undocumented and in some cases, are now forgotten. Alternatively, information on them are limited and associated with and limited to imported, commercial, exotic breeds.

In line with the improvement, utilization, and conservation objectives of the Philippine Genetic Resources Improvement Program (Phil-GRIP) for farm animals, this picture book reports on the genetic biodiversity of livestock and poultry breeds and strains in the country. It features important farm animals such as the carabao, cattle, horses, goats, sheep, pigs, chickens and ducks. Scientific names, common names in the vernacular, types, population

numbers and distribution, origin, and commercial and popular breeds/hybrids are given for each farm species. Whenever available, their performance characteristics (breed standards) and variability are also provided. An attempt was especially made to minimize the technical aspects in the manuscript in order to suit the needs of a diverse group of users.

At the end of the book is also given an interesting section on "*Recollections of Animal Improvement Work at the U.P. College of Agriculture*". It highlights the past accomplishments by world-known Filipino animal breeders and more importantly, illustrations of animal genetic resources that we once have had.

It is hoped that this document provides a standard reference work for all concerned with livestock and poultry production in the Philippines, particularly involved in their genetic improvement. Finally, let us all join together to "capture and preserve" these treasures as part of our national heritage.



ORVILLE L. BONDOC

# ACKNOWLEDGMENTS

The author gratefully acknowledges the valuable assistance provided by the commodity experts/readers from the Institute of Animal Science, UPLB namely, Dr. Vicente G. Momoñgan (on carabaos), Dr. Benedicto A. Parker (on cattle), Dr. Francisco F. Peñalba (on pigs and horses), Dr. Cesar C. Sevilla (on goats and sheep), and Dr. Angel. L. Lambio (on chickens and ducks).

Appreciation is also due the Animal Breeding Division Staff namely, Mr. Michael R. Alviar, Mr. Cenon C. Cerezo, Mr. Gonzalo B. Hemedez, Mr. Noel Lalog, Mr. Hospicio G. Natural, Jr., Ms. Beatriz R. Garcia and Ms. Dominga C. Lat for their unselfish support provided in the conduct of the research project entitled "*Characterization and Documentation of Domestic Animal Genetic Resources in the Philippines*". The splendid lay-out works and cover design of Mr. Simeon R. Manahan, Jr. of ACD-PCARRD is highly commendable. The expertise of Mr. Simplicio "Pol" Veluz in photography is very much appreciated.

Special thanks are extended to the following: the Livestock Research Division, PCARRD-DOST headed by Dr. Patricio S.

Faylon and Dr. Edwin C. Villar; Mr. David Avante (DA No. 4, Quezon Agricultural Experiment Station, Lagalag, Tiaong, Quezon); Mr. Gabriel S. Katigbak (International Training Center on Pig Husbandry, Agricultural Training Institute, Marauoy, Lipa City); Mr. Leonardo Sureta (Camarines Sur State Agricultural College, San Jose, Pili, Camarines Sur); Dr. Emilio M. Cruz (Central Luzon State University, Muñoz, Nueva Ecija); Dr. Dan Aquino (Philippine Carabao Center Gene Pool, Muñoz, Nueva Ecija); Dr. Andresito M. Millamena and Dr. Bernabe B. Cocjin (West Visayas State University, Iloilo City); Dr. Rommel C. Lanzanas (National Stud Farm, Lipa, Batangas), and countless colleagues and friends who unselfishly shared the use of their colored photo/slide collection and information about domestic animal genetic resources.

This book was supported by funds from the Department of Science and Technology (DOST) through the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD) and the Philippine Agriculture and Research Foundation, Inc. (PARRFI).

## **Dedication**

To my wife *Lilian*, and our daughters *Cyril Alexis* and *Koreen Aneska*.

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