

AGRICULTURAL BIOTECHNOLOGY

Priorities and Policies
In the Philippine Setting

P.G. de Guzman
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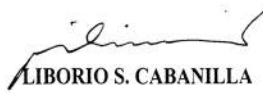
FOREWORD

The application of biotechnology tools has had and is having significant contribution in many facets of agriculture. Increased productivity and food availability; reduced dependence on agricultural inputs; and greater stability in farm production are just few of the essential advantages of biotechnology. With limited agricultural land, the pressures of a rapidly growing population in the food equation could be addressed more effectively through biotechnology.

Biotechnology is an essential ingredient in the current effort to modernize agriculture. But the application of biotechnology tools to complement conventional technologies raises a number of policy issues: How much public investments should be poured into agricultural biotechnology R&D and what are the benefits that could be derived from of these investments? How safe are biotechnology processes and products? How should biotechnology ownership be protected? How could society maintain a balance between economic and environmental concerns in the use of genetic resources?

This monograph offers readers a perspective on the past and current initiatives on agricultural biotechnology R&D in the Philippines. It also provides a cursory analysis of the issues mentioned above and offers policy directions that would hopefully address these issues. The report is an off-shoot of the research project entitled *Analysis of the Role of Policies in the State and Prospects of Biotechnology: Biosafety and Intellectual Property Rights (IPR) in the Philippines* undertaken by researchers from the Institute of Strategic Planning and Policy Studies (ISPPS) and the National Institute of Molecular Biology and Biotechnology (BIOTECH), University of the Philippines Los Baños (UPLB).

We earnestly hope that the information and policy recommendations contained in this monograph could be used in designing policies that would help further improve biotechnology R&D in the country.



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LIST OF ACRONYMS

AFMA	-	Agriculture and Fisheries Modernization Act
ARA	-	Academic Research Agreement
BAI	-	Bureau of Animal Industry
BAR	-	Bureau of Agricultural Research
BPI	-	Bureau of Plant Industry
BFAD	-	Bureau of Food and Drugs
BFAR	-	Bureau of Fisheries and Aquatic Resources
BFD	-	Bureau of Forest Development
BGA	-	blue green alga
BIOTECH	-	National Institute of Molecular Biology and Biotechnology
BNF	-	biological nitrogen fixers
BPI	-	Bureau of Plant Industry
CBD	-	Convention on Biological Diversity
CDA	-	Cotton Development Authority
CLSU	-	Central Luzon State University
CMU	-	Central Mindanao University
CRA	-	Commercial Research Agreement
CRDI	-	Cotton Research and Development Institute
DA	-	Department of Agriculture
DENR	-	Department of Environment and Natural Resources
DFA	-	Department of Foreign Affairs
DOH	-	Department of Health
DOST	-	Department of Science and Technology
DUS	-	distinction, uniformity, and stability
EO	-	Executive Order
ERDB	-	Ecosystems Research and Development Bureau
EU	-	European Union
FAO	-	Food and Agriculture Organization
FNRI	-	Food and Nutrition Research Institute
GATT	-	General Agreement on Tariffs and Trade
GMOs	-	genetically modified organisms
GNE	-	Group of National Experts
GRAIN	-	Genetic Resources Action International
IACBGR	-	Inter-Agency Committee on Biological and Genetic Resources
IBCs	-	Institutional Biosafety Committees
IPB	-	Institute of Plant Breeding
IPO	-	Intellectual Property Office
IPRs	-	intellectual property rights
IPs	-	intellectual properties
IRRI	-	International Rice Research Institute
ITDI	-	Industrial Technology Development Institute

NAST	-	National Academy of Science and Technology
NCBP	-	National Committee on Biosafety of the Philippines
NCPC	-	National Crop Protection Center
NCRDC	-	National Crop Research and Development Center
MSI	-	Marine Science Institute
NIB	-	National Institute of Biotechnology
NIMBB	-	National Institute of Molecular Biology and Biotechnology
NMP	-	National Museum of the Philippines
NNIB	-	Network of national Institutes of Biotechnology
OECD	-	Organization of Economic Cooperation and Development
OVPRE	-	Office of the Vice President for Research and Extension
PAMB	-	Protected Area Management Board
PAWB	-	Protected Areas and Wildlife Bureau
PBR	-	plant breeder's right
PCA	-	Philippine Coconut Authority
PCAMRD	-	Philippine Council for Aquatic and Marine Research and Development
PCARRD	-	Philippine Council for Agriculture, Forestry, and Natural Resources Research and Development
PCC	-	Philippine Carabao Center
Philrice	-	Philippine Rice Research Institute
PIC	-	prior informed consent
PTFST	-	Presidential Task Force for Science and Technology
PVP	-	plant variety protection
RA	-	Republic Act
R&D	-	research and development
rDNA	-	recombinant DNA
S&T	-	science and technology
SCUs	-	State Colleges and Universities
SRA	-	Sugar Regulatory Administration
STMP	-	Science and Technology Master Plan
SU	-	Silliman University
TMU	-	Traditional Medicine Unit
TRIPs	-	Trade-Related Aspects of Intellectual Property Rights
UIPO	-	University Intellectual Property Office
UNEP	-	United Nations Environment Programme
UNIDO	-	United Nations Industrial Development Organization
UP	-	University of the Philippines
UPLB	-	University of the Philippines Los Baños
UPOV	-	Union for the Protection of New Varieties of Plants
UST	-	University of Sto. Tomas
VAM	-	vesicular-ambuscular mycorrhiza
ViSCA	-	Visayas State College of Agriculture
WHO	-	World Health Organization
WTO	-	World Trade Organization