ADMINISTRATIVE ORDER No. 21
Series of 2005

SUBJECT: **Establishing the Agricultural Biotechnology Center of the Department of Agriculture**

WHEREAS, biotechnology is a vital tool for research and development (R&D) with a great potential for delivering products and technologies that will enhance agricultural productivity and profitability, and eventually improve the well-being of the Filipinos;

WHEREAS, the commercialization of biotech products is needed to enable Filipino farmers to compete in a globalized economy and to deliver solutions to technical problems affecting crops, livestock and fisheries;

WHEREAS, the Agriculture and Fisheries Modernization Act (AFMA) of 1997 recognizes biotechnology as a tool for modernizing agriculture, but only a limited portion of the total annual budget for agricultural research expenditures is being allocated for biotechnology;

WHEREAS, the consolidation of biotechnology into a R&D framework in the DA would facilitate and promote efficient use of government resources, allow scientific exchange between scientists engaged in biotech research and unrestrained access to available technologies, and enable the DA to effectively craft and implement a market-driven national agricultural biotechnology agenda, guided by President Gloria Macapagal-Arroyo's 10-point agenda for national development;

WHEREAS, Executive Order No. 162 issued on October 16, 1999 provides that the Secretary of the Department of Agriculture may group, integrate and merge agencies/units to ensure coordination of actions, particularly in the implementation of action programs of the Department, and authorizes him to determine the agencies or attached agencies and corporations necessary to carry out the Department's mandate and reoriented roles as provided under the AFMA;

WHEREAS, this proposal to establish the agricultural biotechnology center will not entail creation of new positions and is consistent with the rationalization efforts of the government;

WHEREAS, the Philippine Rice Research Institute (PhilRice), having state-of-the-art biotechnology facilities, highly trained biotechnology experts and practitioners, corporate and fiscal flexibility, management and financial experience and expertise essential for commercialization of agricultural biotechnology, and being the lead institution for the national rice R&D network, is the agency that could provide an environment most conducive for conducting and coordinating agricultural biotechnology R&D;

WHEREAS, a network of existing DA research centers is in place that conducts agricultural biotechnology R&D and with facilities and manpower that can be tapped and be pooled to save on meager government resources, consistent with government's rationalization efforts and thrust for establishment of small and medium scale enterprises;

WHEREAS, this network consists of the Philippine Carabao Center (PCC), the Philippine Coconut Authority (PCA), the Bureau of Fisheries and Aquatic Resources (BFAR), the Bureau of Plant Industry (BPI), the Sugar Regulatory Administration (SRA), the National Tobacco Administration (NTA), the Fiber Industry Development Authority (FIDA), the Cotton Development Administration (CODA), the Bureau of Animal Industry (BAI), National Dairy Authority (NDA), National Meat Inspection Service (NMIS), other agricultural biotechnology

research centers of the DA Regional Field Units (RFUs), the Bureau of Agricultural Research (BAR) and its Network of Agricultural Biotechnology R&D Agencies, and others;

NOW, THEREFORE, I, ARTHUR C. YAP, Secretary of Agriculture, by virtue of the powers vested in me by Section 7 of Executive Order No. 292 (Administrative Code of 1987) dated July 27, 1997 and Sections 2 and 9 of Executive Order No. 162 dated October 18, 1999, do hereby issue this **ORDER** promulgating a legal and institutional framework for rationalizing agricultural biotechnology R&D and commercialization in the Department of Agriculture within the corporate structure of the Philippine Rice Research Institute (PhilRice), Science City of Muñoz, Nueva Ecija to be called the Agricultural Biotechnology Center, as follows:

I. GOAL OF THE CENTER

The Center shall have the main goal of implementing a rationalized, effective and efficient agricultural biotechnology research and development agenda for the Department of Agriculture with the end view of generating improved agricultural technologies, productivity and enhanced commercial potential, value, and activities for crops, livestock and fisheries. This goal will result in the creation of more jobs, establishment of small and medium enterprises engaged in the commercialization of agricultural biotechnology, increased farmer and agricultural biotechnology innovators' incomes, and contribute to the attainment of national food security and global competitiveness.

II. POWERS AND FUNCTIONS OF THE CENTER

The Center shall have the following powers and functions:

1. To develop and commercialize agricultural biotechnology and derive income thereof for the benefit of its innovators and to support its operations.

2. To rationalize agricultural biotechnology R&D and commercialization agenda for crops, livestock, and fisheries within the DA.

3. To establish and operate a bioinformatics facility, including networks and servers, for efficiently accessing, managing and utilizing biotechnology-related information.

4. To train a cadre of young scientists from the DA, including students, in cutting-edge biotechnology tools and applications, including genomics and bioinformatics, in order to enhance national capacity for biotechnology development and commercialization.

5. To seek, consolidate, process and disseminate relevant information on the benefits and risks of crops, livestock and fisheries biotechnology.

6. To negotiate and receive funding from local and international, public and private, donors communities, and forge modes of beneficial collaborations with them.

7. To extend technical and scientific support to assist the research work of all research centers and units of the Department network engaged in biotech research upon request.

8. To perform other functions necessary for the accomplishment of the goal of the Center.

III. PRIORITY COMMODITIES

Guided by AFMA and the policy and strategic framework of the DA, the Agricultural Biotechnology Center, through its Governing Board shall develop a focused biotechnology R&D agenda initially for the following commodities, and for other crops which it may identify or determine as necessary in the long term:

1. Rice
2. Corn (white corn)
3. Coconut
4. High-value crops such as mango, garlic, onion, eggplant, cotton, tobacco, sugarcane, banana, abaca and other crops that will be identified later on as priority crops
5. Cattle (dairy and beef)
6. Carabao (dairy and beef)
7. Small Ruminants (sheep and goat)
8. Non-Ruminants (Hog, chickens and ducks)
9. Fish and other priority aquatic resources such as bangus and tilapia

IV. EXPECTED OUTPUTS

1. State-of-the-art genomics and biotechnology facilities and manpower for the crops, livestock and fisheries sectors are to be put in place at the Agricultural Biotechnology Center based at PhilRice and other centers of excellence;

2. Focused, resource-efficient, globally competitive and market-driven biotechnology agenda for the country's most important crops, livestock and aquatic resources are developed for sustained implementation;

3. Databases and knowledge management systems for bioinformatics are generated and shared among the country's biotechnology practitioners and clients;

4. State-of-the-art biotechnology approaches are applied to enhance productivity and profitability of key crops, livestock and fishery commodities of the Philippines;

5. Products and processes derived from biotechnology that can increase productivity, profitability, sustainability, and improve human health are developed;

6. National capacity on crop, animal and fisheries biotechnology R&D are developed and enhanced;

7. Regular training programs on molecular biology and bioinformatics are packaged for different groups in the crops, animal and fisheries sector;

8. Strong and beneficial collaborations are forged with private sector and international organizations;

9. Commercialization and public acceptance of biotechnology-derived products and processes and establishment of small and medium enterprises for the purpose are facilitated; and

10. Functioning and workable models for commercialization of agricultural biotechnology, and an effective and efficient incentive system for the generation of such agriculture biotechnology.

V. INITIAL PROGRAMS, PROJECTS AND ACTIVITIES

The following major activities shall be pursued:

1. Establishment of the Agricultural Biotechnology Center at PhilRice and the DA Network of R&D;

2. Development of locally and globally competitive crop, animal and fisheries biotechnology R&D agenda and yearly review of targets and accomplishments;

3. Training of current and prospective biotechnology researchers and regulators through purposive training courses and degree programs, internships and fellowships;

4. Implementation of approved biotechnology projects for identified key crops, and in the future, animal and fishery commodities through in-house and shuttle research approaches, subject to existing biosafety rules and regulations;

5. Accessing, processing and generating databases and knowledge management systems for bioinformatics and sharing among biotechnology practitioners and clients;

6. Development and validation of proposals for biotechnology R&D for submission to donor communities;

7. Forging of R&D and commercialization collaborations with national and international research agencies, the private sector, and non-government and people's organizations;

8. Conduct of a general education campaign on biotechnology and special public awareness campaigns on biotech products and processes nearing commercialization;

9. Participation as stakeholder in the review of existing regulatory frameworks for effective commercialization of biotechnology products and processes;

10. Greenhouse and field-testing of biotechnology-derived products;

11. Negotiations for the acquisition of IP held by international communities and the private sector;

12. Registration and commercialization of locally developed biotech commodities by the center; and

13. Promulgation of guidelines for incentives to generate agricultural biotechnology.

VI. ORGANIZATION, STRUCTURE AND MANAGEMENT OF THE CENTER

1. The Governing Board

   The highest policymaking body of the Center shall be a Governing Board, which shall be chaired by the DA Secretary or his designated Undersecretary, with members comprising of the heads of the member agencies, or their designated representatives of the existing network of Research and Development within the

DA. Representatives from the private sector, non-government organizations, as well as farming, consumer, industry and commercial groups may be included as decided by the Governing Board. The Secretary may also request two (2) independent experts on biotechnology to sit in the Board as advisers. The Board shall provide leadership and direction in the rationalization of the agricultural biotechnology R&D and commercialization programs of the DA. It shall set the policies and approve the programs, plans, activities, budgets, investments, and expenditures of the Center, the Technical Boards, including the designation of staff to help operate the Center, and conduct R&D and commercialization activities. The Board shall also approve the incentive system and structure for commercialized agricultural biotechnology.

2. The Center Director

The Center shall be managed on a day to day basis by a Director who shall be designated by the Board to serve full-time, for three (3) years, renewable for another term. The Executive Director of PhilRice shall serve as the Interim Director of the Center until a Director is designated by the Governing Board. The Center Director shall implement the programs, projects, plans, activities, rules and regulations promulgated by the Board.

3. Divisions and Units of the Center

The Governing Board shall designate to the Center, staff including the scientists, researchers, and personnel from the member-agencies of the DA Network of R&D to handle Thematic Research Programs such as Genomics, Genetic Engineering, Market-Assisted Breeding, Biochemistry/Microbiology, Mutagenesis, Bioinformatics and Intellectual Property. Their tasks shall include R&D planning and implementation of R&D projects and commercialization.

4. The Technical Board

Three Technical Boards for crops, livestock and fisheries whose members may be drawn from member-agencies, industry, farmer groups and consumer organizations shall be established directly under the Governing Board. The Technical Board shall provide technical support and advice on all scientific and technical issues on the formulation and prioritizing of R&D agenda, and implementation of research.

VII. LIASON WITH RELEVANT DEPARTMENT/AGENCIES

The Center shall maintain close coordination with other institutions implementing crops, animal and fisheries biotechnology R&D such as members of the BAR agricultural biotechnology R&D Network, the Philippine Council for Agriculture, Forestry and Natural Resources Research and Development (PCARRD), Philippine Council for Advanced Science and Technology Research (PCASTRD), Philippine Sugar Research Institute (PHILSURIN), University of the Philippines, Los Baños (UPLB), state universities and colleges (SUCs), and other agencies outside of DA.

VIII. FUNDING

The core funding for the operations of the Center shall be provided by the Office of the Secretary of the Department of Agriculture from its annual regular appropriations. The Director of the Agricultural Biotechnology Center is authorized to source out funds for

its operation from any of these possible sources: an initial budget identified in the 2005 GAA of the DA Biotechnology Program allocated for the initial operation of the Center; national banner programs of government for crops, livestock and fisheries; the DA Biotechnology Project (PL480 fund) and the agricultural biotechnology funds of the Bureau of Agricultural Research (BAR); contributions from the funds of the member agencies of the center and the network, local or foreign donors whether private or public, grants, endowments, equities, investments, capital contributions, loans, and any other source.

IX. FUND MANAGEMENT

All funds released to the Center including those generated from all forms of commercialization of agricultural biotechnology shall be managed and disbursed by the Center Director, under the fiscal control and management procedures of PhilRice provided for in Executive Order No. 714 dated August 1, 1981 as embedded in Executive Order No. 1061 dated November 5, 1985 and as may be approved by the Governing Board.

X. REPEALING CLAUSE

All existing issuances inconsistent with this Order are hereby modified, revoked or repealed accordingly.

XI. SEPARABILITY CLAUSE

The provisions of this Order are hereby declared to be separable. In the event that one or more of its provisions are held to be inconsistent, the validity of the other provisions shall not be affected thereby.

XII. EFFECTIVITY CLAUSE

This **ORDER** shall take effect immediately.

Signed on **7th** July 2005.

ARTHUR C. YAP (signed)
Secretary