

PRIORITIES IN THE BIOTECHNOLOGY INDUSTRY CLUSTER

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The Philippine National Science and Technology Plan (2002-2020) states that the development priorities in biotechnology are its applications in agriculture, forestry and natural resources, health/medical sciences, environment, energy and manufacturing and process engineering. Applications have been identified in these sectors as follows:

For agriculture and fisheries – varietal improvement and sustainable production for food security; for forestry – maintenance and maximization of forestry resources; for health/medical sciences – prevention, diagnosis and treatment of diseases; for marine sciences – development of marine bioindustries; for energy – development of renewable energy resources; for manufacturing and process engineering – development of novel processes of manufacture using life forms as miniature factories to produce the desired products and for environment – bioremediation.

The plan also indicates that the priority research and development areas for biotechnology processes and technologies are in the following: plant tissue culture; immuno-based diagnostics, protein and DNA markers; microbial transformations; plant transformations; genome mapping; cloning single genes; and mammalian tissue culture.

The sectoral R&D councils have formulated their medium term plans consistent with the NSTP priorities. In agriculture R&D in biotechnology is geared to generate breakthroughs such as fertilizer substitutes, genetically engineered plants and animals, biological control of pests and diseases, and plant and animal diagnostics. In industry R&D will be focused in the production on specialty chemicals which includes food additives and intermediate chemicals used in food and chemical processing more particularly enzymes, organic acids, polymers for films, coatings and flavoring agents. In health diagnostics which aid in the treatment of diseases as well as development of vaccines especially on emerging diseases and other infectious diseases have been identified.

Consistent with the above priorities and pursuing the strategy of niching and clustering the Department of Agriculture, Department of Trade and Industry and the Department of Science and Technology pushed the creation of a Biotechnology Cluster under the Export Development Council. This is seen as a