

WORKSHOP OUTPUT

What is Agricultural Biotechnology to Developing Countries in Southeast Asia?

- ◆ Biotechnology is officially recognized by these countries to provide tools for sustainable agricultural development.
- ◆ Biotechnology includes many tools--- fermentation, tissue culture, markers, diagnostics, and genetically modified organisms among them.
- ◆ However, each country should define its own priorities based on its needs using cost-benefit analysis, comparing various methods of attaining similar objectives, and involving all stakeholders in determining biotechnology priorities. Depending upon the tool, biotechnology can provide the following opportunities to attain sustainable agriculture.
- ◆ Opportunities to:
 - ◇ Reduce soil erosion through a technology that reduces or totally eliminates tillage;
 - ◇ Reduce or eliminate the use of chemical pesticide or other inputs that upset the environment; and
 - ◇ Increase yield, productivity, and incomes of farmers through a number of means such as
 - * Reduction of other production input such as water and fertilizer;
 - * Ensuring crop yields despite the vagaries of stress environments;
 - * Offering a farm-level method of adding value to farm produce;
 - * Adding new value such as higher value trait; and
 - * Shortening cropping cycle.
- ◆ However, particularly pertaining to GMOs, each country must address the following concerns:
 - ◇ Biosafety issues;
 - ◇ Public perception and public awareness;
 - ◇ Agreement with other countries on the approach to regulation;
 - ◇ Socioeconomic issues; and
 - ◇ Ethical issues.

RECOMMENDATIONS

What are Required for the Effective Development and Use of Biotechnology in the Southeast Asian Region?

- **Capacity Building, aimed at providing an enabling environment**
 - ⇒ Policy, consisting of articulated direction by political leaders
 - ⇒ Institutions, referring to those engaged in research, regulation, communication and transfer of technology
 - ⇒ Resources, including financial support and the scientific support of scientists, technicians, management level and support staff
 - ⇒ Regulatory framework, regulating the movement of GMOs but not research itself.
- **International cooperation contributes significantly to the successful development and application of agricultural biotechnology in developing countries through**
 - ⇒ Information and communication technology (ICT), and
 - ⇒ Centers of expertise approach, nodes or clusters that can work together on a common area or serve as contact point in a particular area.
- **Information sharing and policy dialog for all stakeholders at national and regional levels**
- **Use of technology, technology should reach farmers and farmer cooperatives and eventually consumers**
- **Intellectual property is important as it is the gateway to access to the technology. While biosafety issues are already being addressed quite adequately, addressing IP issues lags behind.**

Recommendations for SEARCA

- Training of researchers for the all the competencies needed.
- Exchange of experts in policymaking, IPR, biosafety, information sharing, and ICT.
- Establishment of database on agricultural biotechnology information in the region and database on resource persons.
- Establishment of a pooled or linked website within the region to serve as electronic means for exchanging ideas and information.

