Participatory Evaluation of Biotechnology Research Units of the National Center for Genetic Engineering and Biotechnology of Thailand

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Outline

- **Biotechnology in Thailand**
- **Evaluation: Approach, framework and methodology**
- **Results**
- **Recommendations**
- **Discussion**
- **Conclusion**

Biotechnology in Thailand

- **National Center for Genetic Engineering and Biotechnology (BIOTEC) 1983**
- **Agriculture, healthcare & industry**
- **8 network research units in major universities.**
- **Specialized areas: plants, marine, medical, cassava, rice genome, shrimp, pilot plant & natural resources**

Evaluation

- **Performance in past 3 years**
- **Evaluation done during Sep-Dec, 2003.**
- **Objectives:**
  - **To assess quality & impacts of research**
  - **To propose future direction**
  - **To recommend on management**

Evaluation: 5 units

- **BIOTEC Central Unit**
- **Marine Biotechnology Research Unit**
- **Medical Biotechnology Unit**
- **Plant Genetic Engineering Unit**
- **Biochemical Engineering and Pilot Plant Research and Development Research Unit**

Participatory Approach

- **Rationale: Build ownership of recommendations to improve implementation.**
- **Members are involved in the process.**
- **More realistic and actionable recommendations.**
- **Evaluation is constructive.**

Framework: Balanced Scorecard (BSC)

- **Customers: How do customers see us?**
- **Finance: How do we maximize the benefit using the available budget?**
- **Internal process: What are we good at?**
- **Learning & growth: How do we continue to add value?**

Methodology

- **Document review**
- **Site-visit**
- **Interview with director**
- **Focus group discussion: 2 hours**
- **Questionnaires**

Result: Research Performance

- **Technology development:** patents but few industrial users.
- **Research projects:** most effective; some high quality papers.
- **Technology transfer:** low to medium success, GMO plants blocked by law.
- **Human resource development:** similar to university departments.
- **Technical services:** all but medical unit did.

Result: Research management

- **Customers:** granters, tech users, public; sources of know-how & cheap tech.
- **Finance:** as budgeted; medical unit invests in foreign links.
- **Internal process:** good in research; poor private sector contact; limited tech transfer.
- **Learning & growth:** mentoring failed with few senior researchers; few opportunities to keep up with rapid advances.

Recommendations

- **Use BSC to improve management.**
- **Core function: tech development by R&D.**
- **Non-core function: training & technical services.**
- **Work with private sector.**
- **Right mindset: develop technology by doing needed R&D.**
- **Wrong mindset: R&D to spin off technology.**
- **Improve communication & human relation.**

Discussion

- **Participatory evaluation:**
  - **Researchers were eager to implement the recommendations since they felt the ownership.**
  - **Participatory evaluation may fail when the researchers were inhibited to share ideas.**
- **BSC framework:**
  - **Simplified BSC created awareness among researchers.**
  - **Full BSC must be quantitative & costly.**

Conclusion

- **Participatory evaluation helps in the implementation of the recommendations because the researchers feel the ownership of the recommendations.**
- **Simplified BSC was useful in guiding the evaluation of the research management and recommendations.**