



Social Science in the CGIAR

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Pachico and Henry highlighted three factors that may affect successful implementation of CIAT's Land Use Program:

- The complexity of the problems makes the setting of research priorities of tremendous importance.
- Valuation problems, particularly externalities, may not be settled easily.
- Monitoring of research progress will be critical to maintaining financial support for research.

***Issues and Options for Social Scientists in Global Germplasm Improvement**

Derek Byerlee, CIMMYT

Several global centers--IFPRI, ISNAR, and IIMI in particular,--are dominated by social science. Acknowledging this fact, Byerlee's presentation and the discussion focused on the role of social science in global germplasm improvement. The paper highlighted new opportunities for social science in germplasm research and defined organizational issues in exploiting these opportunities.

Byerlee outlined three areas of social science research historically addressed by global germplasm centers:

- Activities focused on the generation and adoption of technology. In these activities, ex-ante participation in design and evaluation is necessary to ensure that social and economic perspectives (from farmers or society) are addressed in the decisionmaking process. By feeding back information and analyzing input supply, ex post studies of adoption also may be useful for the technical scientist in designing new technologies.
- Assessment of research resource allocation and impact studies to document research "payoffs" for research managers. Together, they can improve the efficiency of a research program and provide information to donors.
- Analysis of the commodity sector. This provides a general overview of the circumstances surrounding research decisions, for example, the analysis of supply and demand trends for a specific commodity where the "users" are individual researchers or managers.

Historically, social science has been oriented largely to crop and resource management research. Social scientists have conducted little interdisciplinary research in collaboration with plant breeders or representatives of other disciplines working on varietal development. Farming systems research (FSR) has helped in this area. Byerlee examined important implications of FSR findings for the centers' breeding priorities. Because FSR is not yet well linked to national commodity research programs, however, it is often unclear how site-specific information from FSR can be used consistently in setting priorities for centers with global mandates for germplasm research.

Similarly, social scientists have done little work on breeding strategies and on the efficiency of resource use in crop breeding programs. Byerlee cited two questions:

- What is the cost-effectiveness of increasing productivity through breeding for low-input conditions compared with changing input levels? Few research data are available on this subject.
- What are the costs and benefits of adaptation of center materials by national agricultural research systems (NARS) compared with the costs and benefits of screening imported varieties?

Despite the fact that IARCs and NARS typically devote half of all research expenditures to germplasm improvement, no effort has been made to model alternative plant breeding strategies in economic terms, including a measurable set of inputs and outputs and an array of techniques from which to choose.

New Opportunities

Byerlee cited global trends in germplasm development and the new research opportunities these bring. Social scientists should play an important role in setting priorities for the use of biotechnology tools and techniques, particularly in the ex-ante assessment of their social and economic consequences and in the monitoring and ex-post evaluation of their effects on small farmers and rural laborers (e.g., transfer of herbicide resistance genes to cereal crops).

The growing privatization of research and changing perspectives on intellectual property rights have increased research activities in the private sector in industrial countries. Many see the IARC global centers as a conduit for the transfer of these new biotechnologies to developing countries. Social science may be called on to place economic values on specific genetic traits (e.g., disease resistance) available from the private sector.

The recent Earth Summit in Rio failed to find consensus on economic and equity issues associated with genetic biodiversity. Several mainstream economists have begun analyzing tradeoffs in the conservation of genetic resources; this work will have important repercussions for the questions facing IARCs.

These opportunities raise a series of issues. Social scientists at the global IARCs in the next few years will need to strengthen their capability in social science analysis and to balance their agendas among field-level activities promoting "user" perspective in technology design, activities involving the new biotechnologies and intellectual property rights at the global level, and serving the needs of management in an era of shrinking budgets.

Before this balance can be achieved, a number of organizational questions must be answered:

- Will we need more specialization of social scientists by subdiscipline?
- How can we improve linkages with plant breeders to provide perspectives in technology design?
- How can we improve the collaboration among social scientists working in germplasm-related activities at the various CGIAR centers?
- Can we--and should we--divorce the work of social scientists in global research centers from the work of those in ecoregional centers?

Final questions remain. The slow development of social science capacity in NARS has been disappointing. In many ways the CGIAR social scientists also serve the NARS. (CIMMYT, for example, has had several regional social science programs. For more than fifteen years, the one in Eastern and Southern Africa was devoted exclusively to building the NARS social science capacity.) What is the appropriate division of labor for social scientists in NARS and in the CGIAR centers? How much CGIAR social science capacity should be invested in building capacity in NARS?

Priorities for Social Scientists in an Ecoregional Center

Richard Tutwiler and Willem Janssen, ICARDA

The authors see social scientists within the CGIAR system as part of multidisciplinary teams that use a systems approach to incorporate farmers and their concerns in the research process. They perceive the new ecoregional strategy as bringing increased emphasis on resource management as opposed to individual crop improvement. This implies added weight on a holistic approach in which problems are identified, research topics are conceived, and priorities are set at the regional level. Because resource conditions are site specific, intensive interaction with NARS of the region will be essential.

Tutwiler and Janssen emphasized the importance of setting priorities for social science activities. In selecting priority activities, influence within the center, influence with NARS partners, and the agricultural sector of the region are always considerations. Although the authors appreciate the important contribution of germplasm improvement, they noted that