

**ASTI/IFPRI–FARA CONFERENCE****AGRICULTURAL R&D: INVESTING IN AFRICA’S FUTURE****Analyzing Trends, Challenges, and Opportunities**

La Palm Royal Beach Hotel, Accra, Ghana — December 5-7, 2011

**BACKGROUND DOCUMENT:****OVERVIEW AND OBJECTIVES CONFERENCE THEMES**

Agricultural research and development (R&D) is critical to increasing smallholder productivity and generating agricultural growth in sub-Saharan Africa (SSA). National agricultural research systems (NARS), however, must organize around very complex research agendas, operate under very limited budgets, develop scientific talent, and in general face all of the constraints of small, agrarian countries. A range of regional approaches to organizing agricultural research have been initiated, in particular under the Comprehensive Africa Agriculture Development Program (CAADP) process. Programs of the CGIAR, the World Bank, the Bill and Melinda Gates Foundation, and the U.S. Government’s Feed the Future initiative, among others, have contributed to a significant increase in international funding for agricultural development in the region. However, these programs will all require effective adaptive research capacity in individual NARS in order to have an impact on smallholder productivity. The conference will complement an analysis of three decades of data on agricultural research systems in SSA collected by ASTI with a series of commissioned papers that will suggest a policy road map for strengthening African NARS. The conference will provide a focused set of policy alternatives around the themes of sustainable financing, efficient organization of NARS supported by regional and international capacities, options in training the next generation of agricultural scientists, and processes for effective performance evaluation of research institutes and R&D systems.

**THEME 1 WHY DO AFRICAN GOVERNMENTS UNDERINVEST IN AGRICULTURAL R&D?**

Overview: The major issues explored in this theme are the reasons for low investment in agricultural R&D by SSA governments and the implications for alternative financial and institutional arrangements. The session starts by examining the overall return on past investment in R&D, including the relative contribution of the CGIAR and NARS. The session then uses ASTI data to review past financing of NARS, in particular the division between government and donor funding to agricultural R&D, the volatility of funding levels, and recent changes in donor funding flows. This analysis is complemented by an assessment of the allocation to R&D within overall country level agricultural budgets. These analyses then set the stage for an exploration of alternative financing arrangements for NARS, including levies on export crops, public private contracts, changing priorities in government budgeting, and the potential impact of the CAADP process.

Objective of the panel on donor perspectives: Given the small country problem and the shorter term budgetary priorities of most governments, why invest in agricultural research, what should be invested in, and how much should be invested in agricultural research? How can increasing investments in regional and CGIAR capacities be made productive without ensuring critical capacities in NARS? What are the respective roles of the various major donor organizations and is there a need for more effective coordination across donor investments in agricultural research?

## THEME 2 HUMAN RESOURCE DEVELOPMENT FOR AGRICULTURAL R&D

Overview: Human resources are critical for effective agricultural research. Using ASTI data, the trends in staffing of R&D institutes are reviewed, including the competition for staff with faculties of agriculture. With a high percentage of staff trained in the 1980's, a significant gap in capacity at an advanced degree level is developing and is further hampered by high staff turnovers and an aging scientist pool for many countries. The session then addresses the issue of how to fill the MSc and PhD gap in the near term future, at the same time addressing capacity in faculties of agriculture. These faculties face numerous challenges such as attracting top students, meeting the growing demand for skills by the private sector and NGOs, assuring quality in MSc and PhD degrees programs, participating in regional initiatives and networks, and balancing the role of research in agricultural faculties in relationship to the quality of higher degree training. Alternative suppliers and methods of agricultural degree training are considered, including CGIAR centers, distance education, and obtaining agricultural degrees outside Africa.

Objective of the panel of training needs: Given the aging scientific staff in African NARS, the challenges of keeping abreast of advances in agricultural science and adapting them to African conditions, the increasing costs of graduate training in the North, and the need to maintain quality in graduate training in faculties of agriculture, how should African countries invest in the training of the next generation of African agricultural scientists?

## THEME 3 MEASURING AND IMPROVING THE EFFECTIVENESS OF AGRICULTURAL R&D SYSTEMS

Overview: This theme integrates the issues of reliance on donor funding, organizational change in the NARS, and the push within CAADP for performance measures and addresses performance evaluation of research systems. The session focuses on developing objective standard criteria for tracking incremental improvements in performance of NARS as a result of ongoing reforms and evaluates the potential of implementing such approaches with the CAADP process. As many donors move toward a results based performance framework for evaluating agricultural R&D, the paper reviews the application of ex-ante and ex-post impact assessment, the more recent focus on randomized control trials, and M&E as a learning vehicle within research management.

## THEME 4 ALIGNING AND RATIONALIZING INSTITUTIONAL STRUCTURES OF AGRICULTURAL R&D

Overview: From a policy and investment perspective, fundamental questions include whether the NARS is a viable institutional model for agricultural research for the next decade, what role it will serve, and what organizational options exist for research systems. The evolution from NARS to the agricultural knowledge and information system (AKIS) to the agricultural innovation system (AIS) reflects significant changes in the way the NARS is conceptualized. The session presents an ASTI analysis that reviews the particular challenges for agricultural research in the smaller countries in SSA. Regional approaches are then examined, from both a quantitative perspective and from an institutional perspective. The session then analyzes alternative institutional models for agricultural R&D and the implications for African NARS when managed within an AIS framework. This analysis will be complemented by an overview of the evolution of extension advisory services and the potential for private sector research.

Objective of the panel on perspectives from regional organizations: Given continuing uncertainty about the institutional design of NARS in Africa, funding levels and funding sources for agricultural research, and institutional arrangements between national and international research capacities, is a more coordinated set of institutional arrangements and investment priorities necessary to develop national agricultural research capacities? In turn, how are regional approaches sustainably funded?