Innovative Partnerships for Participatory Technology Development and Extension:
The Community-Driven, Farmer-Centered Approach in the Greater Afram Plains, Ghana

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Introduction
Until recently, a tendency among agricultural research institutions (national and international) and non-governmental organizations was to independently involve farmers and rural community actors in technology development and extension. Inter-institution partnerships between non-governmental organizations, international research and education institutions, and rural community stakeholders were either not common or well documented. The implications of this tendency takes on even greater significance in the current environment of declining fiscal support for international research and extension and increasing globalization of products and markets in which opportunities and potentials for marginal/peripheral communities remain highly uncertain.

Against such challenging contexts, agricultural technology development and extension programming in resource poor environments is more likely to achieve upstream success where innovative partnerships and linkages that harness and build on the collective capitals -social, human, institutional and manufactured- of all stakeholders are creatively devolved. Emergent collaborative partnerships in the field thus become critical social learning laboratories for understanding process and gaining important insights on its limits and possibilities for research and extension.

The main purpose of this paper is to analytically draw on the experiences and insights from one such collaborative partnership in the Greater Afram Plains in Central Ghana to develop a clear conceptualization of workable mechanisms for partnerships in sustainable technology development and extension.

Through in-depth appraisal and analysis, the paper illuminates relational and organizational transformations and determines the impacts on community-based technology development and extension projects in the GAP. The focus on community projects is crucial because the test of a sustainable program of research and extension for agriculture and natural resources management lies ultimately with whether it has an observable and measurable impact on the lives of rural people and their environments.

In documenting, process, impacts and learning, the paper contributes to broader efforts to conceptualize innovative and sustainable approaches to participatory institutional collaboration for international agricultural research and extension.

Methods
The study emphasizes a social learning approach. The approach allows the expression of objective and subjective/experiential perceptions of the diverse elements embodied in a participatory partnership. The paper will draw from data generated through a triangulation of qualitative and quantitative methods, including in-depth content analysis of organizational documents - proposals, field reports, internal appraisal reports; semi-structured inquiries and focus groups.

Results and Conclusions
1. An innovative conceptual and operational framework for participatory, cooperative research and extension for sustainable technology development and natural resources management in complex, resource poor environments.
2. A cluster of critical “learnings” on process facilitation for collaboration in participatory research and extension in resource poor environments.
3. Collective reflection on visions of next steps towards scaling up programs drawing on synergies from successful farmer-led experiences in the field.

Educational Importance
The presentation will contribute to current reflections on emergent approaches for partnership in agriculture, extension and rural development in complex, resource poor environments. It will also contribute to the educational goal of enhancing our understanding of the relational dimensions of the agricultural, knowledge and information systems in developing countries.