WORLD NEIGHBORS

Discussion Paper

Can Farmer Organizations Transform Agricultural Research and Extension?

A Critical Appraisal

By Peter Gubbels World Neighbors

Local farmer organizations can provide crucial help in shaping more effective research and extension.

Introduction

A number of organizations, mainly non-governmental organizations (NGOs), have promoted new forms of participatory, farmer-led agricultural research and extension for marginal areas. These have been termed "farmer first" approaches to agricultural development. Farmer-first approaches have been shown, in a great many cases, to lead to sustainable and productive forms of peasant agriculture — halting environmental degradation, rebuilding livelihoods, and generating local resources for social development.

This transformation of peasant agriculture, however, requires a fundamentally different approach to research and extension. Both government agencies and non-government organizations must enable



peasant farmers to become the principal agents for change.

Agricultural research and extension institutions need to be more responsive to farmers' indigenous knowledge and innovation, and allow farmers to be creative analysts and experimenters rather than passive recipients. Modern science can contribute to this process as a partner and resource, rather than as a source of blueprints for new technologies.

Local farmer organizations can provide crucial help in shaping more effective research and extension for complex, diverse and risk-prone areas.

Advocates of farmer-first approaches recognize, however, that basic changes are also needed within the wider sociopolitical context, if peasant farmer organizations are to influence local agricultural development. Government agencies must yield their historically centralized decisionmaking roles. Farmer organizations must be empowered to negotiate with external agents.

local capacities must be strengthened.

Developing Sustainable, Productive Livelihoods

Development of sustainable rural livelihoods and productive peasant farming systems in West Africa is a major challenge. Most rural poor live in complex, diverse and risk-prone (CDR) areas, with unreliable rainfall and poor soils. Weak infrastructure, scattered



Strengthening indigenous capacity for technology development is central to farmer-first strategies.

While a strong case has been made for farmer-first approaches in theoretical and policy terms, in West Africa, few practical examples in have been documented. The literature tends to engage in generalities with no clear operational guidelines for practitioners. The lack of guidelines for farmer-first approaches is most acute in the area of strengthening peasant organization. Although the need for farmer organizations is recognized, little is known about what works best to bring such organizations into being, and what

populations, distant markets, low prices, and lack of inputs and credit compound natural barriers to productivity.

Most West African governments are undergoing structural adjustment, which further constrains them from providing adequate research and extension. Population pressure is growing, adding urgency to the search for sustainable productivity increases.

One of the greatest challenges, however, is institutional. West African governments have experimented with many agricultural extension and research models. Many follow the "training and visit" (T&V) system's principles of dissemination through visits to individual contact farmers. T&V has been less effective and more costly than its West African promoters had hoped. Other government approaches also have had only limited impact.

Towards a Solution: Farmer First Approaches

Strengthening indigenous capacity for technology development is central to farmer-first strategies. There is growing evidence that farmer-first approaches can succeed. Key to this success are peasant farmer organizations' capacity to diagnose and prioritize their own problems; to access a "basket" of technological options; and to test, evaluate (and perhaps adapt) technologies.

Almost all farmer-first approaches are based on peasant farmer organization, rather than working with individual farmers. New methodologies have emerged to support these alternative approaches to research and extension. They go under a variety of names: Participatory Rural Appraisal (PRA), Farmer Participatory Research (FPR), Participatory Technology Development (PTD), Agroecosystems Analysis, Participatory Action Research (PAR) and Development Education Leadership Teams (DELTA).1 Most of these approaches encourage peasant farmer "ownership" of the technology testing process, and of "farmer-to-farmer" dissemination of proven innovations.

Very few West African government research and extension services, however, have yet

Box 1: Characteristics of a self-supporting farmer organization

According to the International Federation of Agricultural Producers (IFAP), a self-supporting farmer organization must have effective self-management, negotiating capacity, and the ability to raise most of its own money. Sustainable farmer organizations must be "member driven." They require:

- Clear definition of organizational roles and objectives
- Participatory decision-making
- Effective leadership
- A process for holding leaders account able to their constituency
- · Clear lines of responsibility
- · Financial transparency, record-keeping
- Outside recognition and legitimacy Increasingly, agencies promoting farmer organizations build on and strengthen indigenous institutions to meet these re quirements, rather than import Western-style structures such as cooperatives.

OXFAM UK also suggests these additional qualities for effective local farmer organizations.¹⁰

- Internal cohesion and solidarity
- · Critical consciousness/critical faculty
- Active, critical participation
- Collective responsibility
- Reduced dependence; increased self-confidence, self-esteem
- Linkages with (or involvement in creating) similar farmer organizations
- Ability to deal with government agents

World Neighbors West Africa, after a strategic evaluation of its program work, developed a list of eight "capacities" judged critical for effective agricultural development by farmer organizations:¹¹

- Capacity to negotiate with external agencies (e.g. NGOs, research and extension services, credit institutions, donor agencies).
- Capacity to mobilize local resources (farmer experimenters, extensionists, partial self-financing).
- Capacity for broad-based leadership with mobilizing vision, spirit of initiative, ability to conceptualize, animate, and raise awareness.
- Capacity to organize ongoing community self-development such as farmer-to-farmer extension and identifying new technologies.
- Capacity for effective program management: problem diagnosis, needs assessment, plan ning, setting objectives, conceiving indica tors, budgeting, monitoring and evaluation, and reporting.
- Capacity for inter-village linkage; communication and collaboration with other farmer organizations in other areas for cross learning and coordination of efforts to ad dress common problems
- Capacity for democratic, transparent and representative decision making.
- Capacity for identifying, developing and extending improved technologies and improved practices

seriously examined farmer-first approaches and methods. It is important to critically examine how governments might adopt, pilot, and, when they are successful, "scale up" farmer-first approaches. This entails identifying changes in strategy,

policy, and staff management/ training needed to facilitate farmer-first approaches. It also involves learning to strengthen farmer organizations, and working in partnership with them to transform research and extension. Why strengthen farmer organizations?

Many proponents of farmerfirst methods suggest that if peasant farmers are to benefit from public sector research, they must be "empowered" to

influence the direction and content of research.² Farmer organizations can help make research institutions more responsive to diverse needs and conditions.

This approach requires that scientists accept farmers as partners in technology development. Farmer organizations' feedback can make the system more "client oriented" Farmer groups can link research and extension agencies with peasant farmers' indigenous knowledge, innovative capacity, and expectations. The groups can adapt and disseminate agricultural technologies in programs they, themselves, manage and control.4

Strong local institutions make possible collective action and mutual assistance. They encourage self-directed resource management. Through local organizations, people take a cooperative, longer-term view that goes beyond individual interests. With mutual accountability, fewer (if any) external inducements and sanctions are needed.⁵

The idea of strengthening farmer organizations is not new. It has long been recognized that rural development in West Africa often fails because peasant farmers cannot influence design and decision-making. A local organization through which peasant farmers can negotiate their interests has been shown to be key to the success of development projects.6 There is also evidence that externally initiated programs are more likely to be sustainable and equitable if farmer organizations, rather than the state, are given primary



management responsibility.⁷ But farmer organizations are limited in what they can accomplish alone; partnerships with government are likely to be more effective in many instances.⁸

Development of productive partnerships between self-sustaining farmer organizations and government agencies is not easy. There may well be conflicts of interest between state institutions and poor farmers¹² In many West African countries, institutional and sociopolitical interests can weigh heavily against peasant farmer influence over public policy.¹³

"Democratization" in West Africa may have lessened these political constraints, but it is still not clear how to bring about the institutional changes needed within research and extension systems.

How can trained professionals and front-line extensionists "reverse" their traditional roles, serving not as teachers but as advisers, catalysts, conveners and suppliers of "menus" of potential innovations? How can farmers become creative analysts and experimenters, rather than passive recipients, and how can they be empowered to negotiate with external agents?14 Recognizing the need for farmer organizations is only the first step. We need to understand "how those organizations will come into being, how their dynamics will influence the sorts of technology they want, how they will combine technological with other activities, and how they will pressure formal [research] institutions to decentralize..."15

This is a critical issue for West Africa, where the vast majority of peasantry, particularly in risk-prone environments, are unorganized and have no effective voice in deciding research/extension policy or priorities.

Box 2: World Neighbors programs in Bassar, Togo

When initiating work in Togo's Bassar Prefecture in 1984, WN staff asked village communities to compare eight innovations, recommended by the local Ministry of Agriculture, with existing local practices. Almost all farmers preferred their local practice, for rational reasons based on local conditions. When farmers sowed sorghum in lines, as recommended to obtain optimal density, birds dug up and ate the seed after each sowing. The control plots, where farmers used the traditional technique of broadcasting the seed and thinning (and replanting) during weeding, produced higher yields. In another case, 10 farmers experimented with fertilizer, improved maize seed and denser spacing, as promoted by government extension. Eight farmers, who had poor soils, obtained higher yields than those produced on the control (traditional) plots. However, the increase did not cover the cost of new inputs. For two farmers with fertile soil, the yield increased substantially. The innovation was not practical, though, because credit, seed and fertilizer were not readily available. WN then gave participating communities the choice of which innovations to test. WN shifted its emphasis to helping farmers identify a broad range of relevant technologies by contacting a variety of sources. These sources included: • Other NGOs • Peasant farmer organizations in other districts • Innovative peasant farmers within the district • National research stations and extension services • International research stations

Relating Theory to Practice: A World Neighbors Case Study

This case study draws out lessons of World Neighbors' efforts to establish effective farmer organizations. Since 1983, World Neighbors (WN) has supported West African programs intended to strengthen the capacity of marginalized rural communities for agricultural self-development.

WN at first focused on participatory technology development and dissemination. By 1989, however, WN staff became concerned about the

sustainability of communitymanaged experimentation and extension, and gave much more emphasis to strengthening peasant farmer group capacities, particularly in management, leadership, planning and evaluation.

Overview of the WN Approach

WN programs' initial thrust in Togo, Burkina Faso, Mali and Chad was to teach volunteer "peasant farmer experimenters" simple scientific methods to compare new technologies with existing practices. In 1988, WN summarized the major steps of this approach:¹⁶

- 1. Peasant farmer diagnosis of agricultural problems
- **2.** Community identification of potential innovations
- **3.** Community selection of technologies to test
- **4.** Testing of new technologies by farmer experimenters chosen by their communities
- 5. Community evaluation of results
- Community-managed exten sion of successful innovations

This approach began with focus-group interviews and community meetings designed to draw out peasant farmer knowledge about changes in local farming over the past 20 years, and to help farmers analyze underlying problems. (Most villagers said reduced, irregular rainfall and declining soil fertility were their priority problems.) WN staff also asked what indigenous experiments and innovations farmers had developed to address these problems.

Farmers were then asked to assess technologies promoted by government extension services. In each of the programs initiated in Togo, Burkina Faso, Mali, and Chad, WN staff learned that most technologies promoted by government services failed to address farmers' perceived needs (see Box 2).

Results Obtained

By ongoing experimentation and adaptation of technologies, and by organizing farmer-to-farmer extension, organizations supported by WN programs have generated impressive adoption rates within their communities and often beyond the program area. The technologies include:

- Improved short-cycle seed varieties of staple crops (millet, maize, sorghum) that help farmers cope with erratic rainfall and drought, and reduce the "hunger season" via earlier harvests
- New crop varieties (short-cycle cowpeas, soybeans, upland rice)
- Improved production and application of organic manure/ compost
- Improved fallow and alley-cropping/green manure system, using pigeon peas.
- Soil and water conservation techniques (traditional "Zai" method of micro-water harvesting) and permeable contour bunds
- Introduction of dry-season crops (particularly bérébéré, a sorghum that grows from October to February on residual moisture in marshy lands)

Critical Analysis

In 1989, WN began review of its five years of program experience to determine how to "phase out" its support while leaving behind self-sustaining, community-managed experimentation and extension.

This review determined that the major limitation to increased effectiveness and sustainability was inadequate organizational, management, and leadership capacity within the peasant farmer associations WN had helped to establish. These associations were made up of groups of 10 to 14 villages.

Over the next few years WN staff realized additional limitations and weaknesses in its approach.

Farmer Rationality and Indigenous Approaches to Experimentation

WN had been teaching farmers simple scientific methods, to strengthen farmer experimentation and foster collaboration with research stations. However, farmers had their own way of experimenting, using a different rationality.

WN-sponsored field research in Mali documented some aspects of farmers' "adaptive" rationality. Farmers often used their experience, intuition, pragmatism and practical know-how to change the design and execution of their experiments. The experiments often were not separate actions, but an integral part of agricultural production.

Interviews suggested that farmers do not perceive experiments as scientists do, but as continuous "learning by doing and improvisation." The evidence also suggested that this "adaptive rationality" was better suited to a changing, unpredictable environment than was rigid "scientific rationality."

Farmer groups can link research and extension agencies with peasant farmers' indigenous knowledge, innovative capacity, and expectations. The groups can adapt and disseminate agricultural technologies in programs they, themselves, manage and control.

These insights helped explain a problem with WN program work. As WN staff decreased their follow-up and support to peasant farmer experimenters, the farmers often abandoned "improved" experimental methods such as using control plots.

Differential Needs within Communities

WN initially assumed a unity of community interest in declining soil fertility and irregular rainfall. WN did not try to identify more specific needs, or appropriateness of innovations for different socioeconomic, gender, and ethnic status. When WN program staff engaged farmers in collective analysis, the most influential and powerful village voices dominated.



Initially, for a "success" indicator, WN monitored "adoption rates" as a percentage of total number of farm families. This rate often ranged from 30 percent to 60 percent for the more popular innovations. Later, using wealth ranking and social mapping techniques, WN staff found that poorer families, or marginalized groups within the community tended not to participate. Families with better access to labor, animals and land benefitted most. Aside from promoting women's cultivation and use of soybeans, WN gave little attention to women's role and needs in agriculture.

Methodology and Tools Used by WN Staff

Failure to address different interests and to develop more rigorous analysis of agricultural problem-solving stemmed partly from limitations of WN's methodology. WN staff and community leaders only became aware of many of the weaknesses presented here after learning and applying participatory rural appraisal (PRA) methodology. PRA uses tools such as wealth ranking, scoring, social mapping, Venn diagrams, historical profiles and seasonal calendars.

Without such analytical tools, without a participatory learning methodology, and without

helping peasant farmer leaders learn to use the tools directly, WN has realized that the process will continually depend on it program staff.

Human Resource Development

WN's methodological limitations were compounded by its lack of a systematic, rigorous human resource development policy for program staff and farmer leaders, to accelerate their learningfrom program experience.

WN recruited many program staff because of their technical training. Such training was of limited value in WN's approach to agricultural development. Sometimes it even impeded new staff from learning a fundamentally different approach to research and extension.

WN wished to promote "role reversals," an experiential and collegial learning approach to extension, understanding of social processes and analysis, and strengthening of community organization. However, WN underestimated the resources and effort required to help new staff learn the new attitudes and competencies required, and to abandon assumptions acquired in their formal education.

Interaction with research and extension services

WN's approach to collaboration with agricultural research and extension was initially aimed at getting access to a variety of technologies for testing, and, on occasion, to supplies such as improved seeds. This collaboration consisted of regularly sending community delegates to research stations to view the experiments and discuss them with scientists.

Eventually, in Mali and Togo, research station scientists asked WN to help them with on-farm trials of innovations through WN's relationship with community organizations. The scientists decided what technologies to test and designed the protocols. WN staff gradually realized that this scientist-farmer collaboration was not generating a constructive "synergy." All parties, including WN, viewed collaboration as an instrument for their own interests, rather than as a partnership in which all stakeholders worked toward jointly defined objectives.

Scientists were mainly interested in on-farm trials at lower cost. Rather than listening to farmers and modifying their work in view of farmers needs, most scientists were primarily concerned about the scientific integrity of the experiments, and data collection. Generally, scientists did not fully appreciate farmer knowledge or indigenous experimental approaches.

Farmers were mainly interested in access to potentially productive new technologies for testing. WN mediated most of the collaboration. WN failed to develop collegial relations between both parties. True partnership would require, on the one hand, helping farmer groups better understand the workings of western science, and strengthening their power to negotiate. On the other, it would require helping scientists appreciate rural people's knowledge and adaptive rationality to experimentation, and helping them learn participatory methodologies underlying WN's approach.

WN-village Interaction

Using PRA, WN has found that farmers in most of its programs still do not have self-sustaining group capacity to diagnose and solve their problems. The process still depends on WN program staff. At WN West Africa's recent strategic planning conference, field staff listed the "capacities" of self-supporting farmer organizations which require further strengthening (see Box 1).

WN has determined that staff/ leadership training, improving methodology, better interaction with research and extension are key points to improve for greater impact.

Main Lessons

The field results obtained by WN other organizations indicate that without farmer organization, farmer experimentation and diffusion will remain informal, unsystematic, ad-hoc, sometimes secretive and limited to a few individuals working separately. Linkages with outside knowledge systems will remain weak.

Strengthening farmer organization is key to achieving greater impact and to facilitating new and more effective forms of partnership at the local level. It is indispensable for effective "synergy" between NGOs and research/extension programs, and indigenous knowledge systems. The experience of WN lends support to the potential of farmer first approaches by indicating that:

• In CDR areas, research and extension is more effective when it offers a "basket of innovations" that address farmer-defined problems and when it facilitates testing of these tech-

nologies under local conditions by the farmers themselves.

• Farmer analysis offers important insights that differ from those of scientists. Fostering exchange of experiment results and innovations between farmers and between communities is the most effective form of learning and evaluation.

Farmer experimentation can be dynamic and can better accommodate changing circumstances and diversity than conventional research.

Although farmer organization helps make research and extension in CDR areas more effective, field experience shows that it is far more difficult to facilitate the emergence or strengthening of self-sustaining farmer organizations than is commonly supposed. The main lessons relate to the following themes:

- ♦Re-conceptualizing the role of extension.
- *Extension agencies wishing to support a farmer-first approach in West Africa face a fundamental problem: empowering farmer organizations will require changing conditions far beyond the normal scope of government or NGO extension activity.
- *Farmer-first approaches must not only develop organizational capacity for technological creativity, but also farmers' sociopolitical awareness, their organizational management competency, and their ability to negotiate with government extension agencies and NGOs.
- ♦ Extension personnel must shift into a new, collegial learning role as advisors, catalysts and conveners.

Box 3: Issues for Further Documentation and Analysis

Much documentation and analysis remains to be done to develop operational guidelines for policy and practice. The following questions merit special attention:

- 1. What strategies are most effective in strengthening the capacity of farmer organizations to act as partners in re search and extension? How can an intermediary agencies identify and decide which capacities are most in need of strengthening? How, and in what combination or sequence, can these capacities be strengthened?
- 2. What indicators can be used to measure the impact of interventions to strengthen the different capacities required for farmers organizations to become "self-sustaining"? How can farmers themselves be involved in developing indicators which are meaningful and relevant both to them and to agency staff?
- 3. How can intermediary agencies transfer responsibility to farmer organizations for leadership and program management (needs assessment, planning, budgeting, record-keeping, etc.) What process is used to "phase out" direct operational support, and how is "phasing out" communicated to the farmer organization?
- 4. How can agencies assess the capacity of a village-based organizational structure to sustain *participatory* approaches to agricultural experimentation and extension? Is the ethic of "voluntarism" within the farmer organization sustainable over the long-run? Have alternative solutions to sustaining development activities and processes (other than basing them in a farmer organization) been explored? Are their viable alternatives that build on indigenous institutions?
- 5. When promoting self-sustaining farmer organizations, how can agencies ensure that women, poorer families, and ethnic minorities benefit from farmer-managed activities? What forms of conflict resolution between interest groups are most effective? How can the *position of women* be strengthened so that their "voice" may be heard in decision-making, and they can participate in management and leadership functions?
- 6. How can an agency can best assess the *external* environment, (i.e.g opportunities and constraints) in order to develop effective strategies of intervention when assisting farmer organizations to undertake agricultural experimentation and extension activities. What are the key policies of government agencies addressing agricultural development and rural organization that either enable or constrain formation of farmer organization and management?

Human Resource Development within Extension Agencies

Achieving role reversals entails helping extension personnel acquire new attitudes and skills required for "animation," conflict resolution and social analysis at the village level.

Extension workers must be more aware of village decision-making dynamics. They must develop stronger analytical and conceptual skills, and learn to broker "relationship building" between peasant farmer groups and research agencies. They must be committed to developing strong peasant farmer leadership. Functional literacy training, necessary for organizational self-management, is another often essential activity for extension workers, given high illiteracy in many villages.

Development of appropriate methodologies and tools accessible to farmer organizations

Transformation of research and extension requires further development of methodologies for learning from experience, for recognizing and resolving conflict, and for addressing power relationships within villages and between farmers/outsiders.

Such methodologies can foster "collegial" learning between people with different skills, experiences and knowledge.

Since government services or NGOs cannot provide intensive and continuous support in CDR areas, these methodologies need be of a type that peasant farmer leaders themselves can easily learn and apply. Promoting representative and democratic farmer organizations

To benefit poorer farmers and to address different interest groups' needs, NGOs must recognize that rural communities are not homogeneous. While villagers do have common interests, they also have conflicting interests based on factors such as gender, occupation, age and access to resources.

A major question in strengthening farmer organizations has been whether to build on indigenous leadership, with its inherent power structure and values, or to establish "modern" organizations. Traditional leadership and organization evolved to address specific cultural problems. These structures' patterns of authority and decisionmaking are often not geared to address new development problems. However, organizational models developed in another context and "imposed" by outside agencies are unlikely to be appropriate or sustainable.

The real challenge for outside agencies is to help communities themselves develop new patterns of organization and leadership. This will involve participatory tools for analysis, decision-making and evaluation that ensure less influential groups' voices are heard. It also involves developing representative and visionary local leadership.

To transform traditional attitudes and practices over the long term, especially those which exclude women, ethnic minorities, or other marginalized groups from access to power and resources, outside agencies must learn to facilitate negotiation of competing interests.

One way to offset local elites' influence is to promote wider sharing of decision-making and responsibility within the farmer organization. This can be done by encouraging the creation of many different posts within the organization (peasant farmer experimenters, tree

nursery promoters, extensionists, animal health promoters, dry season garden specialists, cereal bank manager, village input supply store manager, collective assets (i.e. tools, bullock cart, water tank) manager, etc. Not only will this lessen each person's work load, it will allow less influential community members to have a "voice" and to gain valuable experience in the public domain (especially women). It also allows a wide range of villagers to benefit from leadership, management, and functional literacy training.

Empowering farmer organizations' capacity to negotiate their interests with external agents

Often, NGOs confuse momentarily successful local application of participatory or action-oriented approaches with per-

manent change or shift in power relations. Case studies of success often ignore the unstable macro-context of power relations. This can create a temporary illusion of empowerment.¹⁸

The limited field experience documented to date, suggests that it is far more difficult than commonly supposed for government extension agencies or NGOs to facilitate the emergence of self-sustaining farmers organizations.

To effectively "empower" farmer groups to negotiate with state technical agencies, NGOs should help peasant leaders learn about the roles, motivation, world view and constraints of agricultural researchers

and extensionists. Helping peasant leaders learn the basic principles of scientific experiments, and how scientists are rewarded (valid data, publishing papers) is important for more balanced peasant-scientist communication and collaboration.

Promoting inter-village peasant associations, and linkages between peasant associations, is essential. Working with individual villages in isolation is unlikely to give peasant farmers enough clout to influence decision-making within formal research and extension.

Developing scientists' and extensionists' appreciation of peasant rationality and indigenous forms of experimentation is important. NGOs should work more to generate "hands on" learning experiences for scien-

tists and extension managers through workshops and participation in PRA interdisciplinary teams.

This will not succeed, however, if there is not also a decentralization of decision-making within agricultural research and extension services, which entails increasing control and influence of representative peasant farmer organizations.

Conclusions

The vast majority of peasant farmers in West Africa remain unorganized. Without strong, community-based organizations and federations, it is difficult to see how the majority will have enough clout to act as a credible and effective partner with government extension agencies.

There are very few self-sustaining, member driven peasant farmer organizations in West Africa with the management capacity to develop and disseminate technology. Appropriate intervention by NGOs and government extension agencies to support the strengthening of peasant farmer organizations is required.

Such intervention should be guided by lessons of experience outlined above if farmer organizations in West Africa are to realize their potential in generating more effective agricultural technology development.

To realize this potential, extension agencies and NGOs must particularly address the follow-

ing issues: commitment to a reconceptualized and broadened scope of "extension" practice; overcome internal institutional constraints to "role reversals" and to empowering farmer organizations; develop participatory learning methodologies and tools; undertake vigorous staff training and re-orientation; learn how to address village dynamics that impede formation of democratic and representative FOs; and decentralize decision-making within research and extension in a way that gives a role to representative Farmer Organizations.

In addition, a number of substantive issues require further analysis and documentation if "like-minded" agencies with a common interest in promoting self-sustaining farmer organizations are to improve the efficiency and effectiveness of their work.

Comments on this paper are welcome. Please address comments to World Neighbors or to Peter Gubbels, 01 B.P. 1315, Ouagadougou, Burkina Faso, West Africa email: Peter @ wn. org

This paper critically assesses the role of peasant farmer organizations in agricultural research and extension in West Africa. The paper begins by reviewing, in theoretical terms, the role of farmer organizations located in complex, diverse and risk-prone (CDR) environments in agricultural development. It then outlines characteristics of self-supporting farmer organizations.

Based on an analysis of field experience, the paper draws out major lessons for improving practice, and raises issues requiring further documentation and analysis. Field experience suggests that if farmer organizations, official research and extension systems, and rural development agencies are to forge new forms of partnership for developing sustainable rural livelihoods, the following conditions must be met:

- redefined "extension" practice with a broadened scope
- · commitment to participatory learning
- willingness to strengthen farmer organizations
- methods to address local or village dynamics when they impede formation of democratic and representative farmer organizations
- vigorous training and re-orientation of extension staff
- decentralized decision-making within research and extension

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