CGIAR Program on
Participatory Research and Gender Analysis
Internally Commissioned External Review

Gordon Prain (CGIAR-SIUPA)
Helen Hambly (ISNAR)
Monty Jones (WARDA)
Wardie Leppan (IDRC, Regional Office for Southern Africa)
Luis Navarro (IDRC, People, Land and Water Program)

December 2000

Table of Contents

PROGRAM RESPONSE TO THE REVIEW 4

SUMMARY OF RECOMMENDATIONS **7**

1.0 INTRODUCTION 13

1.1 Background *13*

1.2 Terms of Reference *14*

1.3 Review Process *14*

1.4 Achievements of the Program Based on the Logframe *14*

1.4.1 Program Goal 15

1.4.2 Program Purpose 15

1.4.3 Outputs 16

1.5 Suggestions and Recommendations *17*

2.0 RESEARCH PROGRAM 18

2.1 Participatory Plant Breeding (PPB) *18*

2.1.1 Biophysical methods for participatory research 18

2.1.2 Biodiversity and PPB 19

2.1.3 Inclusion of crop combinations in PPB 19

2.1.4 The quality of PPB 20

2.1.5 Organizational innovation in relation to PPB 20

2.1.6 IPR issues 21

2.2 Natural Resource Management (NRM) *21*

2.2.1 Diversity of thematic concerns 22

2.3 Gender Analysis *22*

2.4 The relationship among PPB, NRM and GA *24*

2.6 What kind of Participatory Research? *24*

3.0 MANAGEMENT AND ORGANIZATION 25

3.1 Planning Group *25*

3.2 Center Liaisons *26*

3.3 Staffing and Prioritization of Work *26*

3.4 Regional Involvement/Decentralization *27*

3.5 Financial Management *28*

3.6 Monitoring and Evaluation of the Program *28*

3.7 Proposal Review Process and Communications *29*

4.0 SMALL GRANTS 29
5.0 METHODOLOGY DEVELOPMENT AND CAPACITY BUILDING 30
5.1 Methodology development *30*
5.2 Capacity building *32*
6.0 PARTNERS AND NETWORKING 33
7.0 PROGRAM IMPACT 35
ANNEX 1: PRGA PROGRAM LOGICAL FRAMEWORK 39
ANNEX 2: SURVEY OF THE ROLE OF PRGA IN THE CENTERS 44
ANNEX 3: CURRICULUM VITA OF REVIEWRS 45
Monty Patrick Jones *45*
Helen Victoria Hambly Odame *72*
Gordon Darge Prain *77*
Wardie Leppan CV not available *85*
Luis Navarro CV not available *85*

Program Response to the Review

1. Program achievements

The Program agrees with the Review Panel's assessment that there has been enormous progress demonstrated by the quality of the research in the small grant projects, the state-of the-art position papers, the expansion of networking, and the strength of support in the donor community in the first three years of a five year workplan. The impact assessment research oriented at documenting the costs and impacts of the use of participatory research methods and gender analysis in the CGLAR and partners research, a focus of the Program's collaborative research efforts, is also referred to as high1y commendable by the Review.

2. Program Goal

The Program concurs with the Review Panel's statement that demonstrating participation by the Centers and their partners in PRGA-related activities is a necessary but not sufficient indicator of mainstreaming. Better indicators of mainstreaming need to be developed, for example the in-kind contributions to PRGA -related activities suggested by the Panel.

The case studies of impact referred to as indicators of the incorporation of PRGA approaches into Center research are those being carried out for PPB (2 cases), NRM (3 cases) and the other small grants projects which have incorporated impact assessment into their proposals and research.

The Panel's comments also indicate that the Program. needs to establish a clear baseline for recognition of its contribution: for example the WARDA initiative cited as predating the formal start of the PRGA in 1997 derived impetus and training materials through participation in the PRGA planning meeting in 1996; similarly the ICARDA work started in 1995 when the recommendation for a systemwide program was formulated at a workshop by many of the current contributors to PRGA-related activities, was visited by Louise Sperling when she was closely involved in developing the design for the ICARDA study comparing conventional, decentralized and participatory breeding.

3. Program Purpose

The Program's purpose is summarized in its logframe as promoting and building capacity for the scientifically sound use of PR and GA. The Panel's survey of Center Liaison scientists attending the PRGA HI International Seminar provided feedback to the panel that while Directors support PRGA approaches, the Centers are not yet formally incorporating these ideas into the core program. This perception of the liaisons may reflect their partial knowledge of their Centers' investment. PRGA made a survey of the full scope of Centers' financial investment and staff working in the Centers on gender or participatory research approaches which was not available to the Panel and is just being analyzed and returned in full to the liaison scientists.

4. Quantitative methods

The panel recommends: "Assemble and refine experiences with innovative statistical/biophysical approaches to PPB trial design, comparisons between farms, integration of results of spontaneous farmer experimentation ("mother-baby" trials) and the analysis of results and disseminate these in accessible, "tricks of the trade" type publication".

The Program is fully convinced that this is of central importance and indeed the recommendation flowed from the enthusiasm of many participants in the III Seminar attended by the Panel. The program intends to move ahead actively to implement this recommendation with a workshop to be organized with the Centers on this theme.

5. Focus in NRM

Focus in NRM is a CG-wide issue given the fragmentation of the NRM research agenda among many Centers and the duplication of similar, overlapping initiatives for which no center-wide coordinating mechanism is in existence. The Panel recommends the PRGA consider 3 models, one of which -- the focus on a few thematic areas within NRM-is closest to the current strategy chosen by the PNRM working group in its recent meeting and email deliberations. We agree that "piggy-backing" a strong NRM initiative has much to recommend it and the PRGA will link closely with the intercenter forum for INRM to explore this option.

6. Gender

The Program agrees that the Women and Technology initiative needs to finalize its position paper and lay out a definitive basis for the Program's work on Gender, through a consultation with Centers, building on the session with several experts in the field conducted for this purpose at the III International Seminar. However, the Program is concerned that the Panel's recommendation to position what is in the first instance a research program in a more explicit and proactive advocacy role may not be welcome to the Program's donors or its clients in the scientific-community. This advocacy is needed from outside the CGIAR system to support the Program's more neutral effort to assess the value-added of gender analysis to research.

7. Regionalization and institutionalization

The Program welcomes the recommendations for regional write/workshops to develop small grant programs, and for mentoring of small grants by PRGA staff and successful projects to support the use of guidelines and best practices as part of a strategy for encouraging Centers and their partners to incorporate PRGA approaches. Elements of this approach has been used most successfully with WARDA in West Africa and ICARDA, and can be rapid1y transferred to other regions

8. "Piggybacking":

The Panel encourages the program to explore alternative ways to make available the benefits of PR/GA approaches to non-social scientists or "inexperienced biologists" (p. 8:recommendation 4.ii), such as creating interdisciplinary partnerships between partners with expertise in PRGA and others

who want to make use the approaches but are not trained to implement them. The Panel suggests piggybacking biophysical research efforts with efforts that are already participatory and require a biophysical research input. We understand that an example might be to unite a breeding program with an NGO strong in PR/GA capacity.

The Program understands that the Panel is responding to the low availability of social science expertise in the Centers relative to biological science expertise, and in particular the very small number of social scientists inside or outside the CG who are experienced in integrating PR/GA methods into biological research processes. Hence the frustration of some biological scientists attending the III International seminar, with the expectation that they should be responsible for including in their research, client participation and impact assessment when they do not have social science expertise readily available for this.

lt may be that the Small Grant terms and conditions are unrealistic and require a level of PR and GA research expertise that is not accessible, or it may be that recipients are not fully living up to commitments. We agree that this does indicate that the Program should tie its small grants much more restrictively to the insertion of a specific kind of expertise and/or cross-disciplinary partnership into the ongoing research process which receives the grant.

9. Capacity Building.

The Program agrees that a better need assessment is required to aid the design and targeting of its capacity-building efforts. The lack of capacity in the small grant partnerships (including CG and non-CG) to apply participatory approaches *to research* at the level of field implementation has been observed by Program staff on site visits and is indicated in the very high level of demand for basic PR/GA capacity building that floods the Program staff. Unfortunately the Program did not pinpoint this issue of weak capacity to apply PR and GA to research processes with the Review Panel, perhaps because we elected not to include field visits in the panel's schedule to save time. The Program. has had extreme difficulty in identifying trainers who can combine gender analysis with agriculture and teach gender analysis or participatory methods as part of a research process as opposed to an eclectic collection of tools for community development. Similarly, few training materials put the application of tools in a biological research process and this has hampered bringing in trainers who know the tools but are ignorant of research processes. The most successfúl partnerships in the Program tend to be ones where capacity building has started at an elementary level and built progressively over time, as has been the case of the annual WARDA PRIGA workshops which have made use of well-tried and. tested PPB, methods. This model, complemented by a need assessment may be one to pursue in combination with the recommendation for regionalization and mentoring by successfúl projects referred to above.

10. The panel recommends three kinds of partnerships for future strategy and the Program concurs that this is a usefúl frarnework for implementation, monitoring and review: research partnerships to generate new knowledge in this field (e.g. the ICARDA PPB; AHI NRM partnership and the bulk of current small grants); technology adoption and impact partnerships (e.g. the WARDA partnership); and partnerships to develop NARS research capacity (capacity-building with Ethiopia and Tanzania on PPB; the seed money grant for P-NRM to CIAD, China for a group of about 30 university graduates trained in PR).

1. CGIAR Program on Participatory Research and Gender Analysis

Summary of Recommendations

The PRGA Program has made rapid and excellent progress towards accomplishing its goals and purposes. In its report, the Review Team identifies a number of areas and accomplishments of the Program that make it one of the most innovative activities within the CGIAR.

However, the Review Team was specifically asked to look critically at current and past PRGA activities and to make suggestions and recommendations where adjustments are felt to be appropriate. Six major areas were identified within which relevant recommendations were formulated: Research Program, Management and Organization, Small Grants, Methodology and Capacity Development, Partners and Networking and Program Impact. These suggestions and recommendations are made in the belief that the PRGA Program clearly merits continuing into a second phase and it is the hope of the Review Team that the observations set out here may help to strengthen the Program in the new Phase.

1. Research Program

i Assemble and refine experiences with innovative statistical/biophysical approaches to PPB trial design, comparisons between farms, integration of results of spontaneous farmer experimentation ("mother-baby" trials) and the analysis of results and disseminate these in accessible, "tricks of the trade" type publications.

ii Continue to support innovative and high quality social and biophysical methods utilized in PPB.

iii Increase the focus of the Program on the contribution of PPB to enhancement of biodiversity conservation and ecosystem resilience through case studies taking a biodiversity angle on PPB.

iv Give increased attention and small grants support to the application of PPB to multiple crop combinations.

v Consider making exploration of PPB with crop combinations one of the criteria of a special set of "cutting edge" small grants in a restructured small grants program.

vi Links continued funding and other rewards to adherence to guidelines and identify "best practices" from these projects that would be available for new projects (capacity building small grants). The use of guidelines and "best practices" could be part of a mentoring and support process involving PRGA personnel and/or those involved in successfully implemented projects.

vii Given the importance of so-called informal seed systems in the organizational framework of crop improvement it is suggested that a higher priority be given in the awarding of small grants to innovative approaches to integrating PPB with these complex but powerful forms of seed diffusion.

viii Systematic study should be undertaken of the existing organizational structures of plant breeding within the CGIAR Centers, with the aim of identifying constraints and opportunities for the incorporation of PR/GA principles and tools in these structures. The recent System-wide review of plant breeding was tasked to look at methodologies, and only touched on institutional issues such as inter-center collaboration, IARC-NARS links, strengthening farmers/women's organizations and involvement with the private sector. The Review team is not aware of an institutional analysis of IARC-NARS plant breeding organization, including seed multiplication and distribution systems.

ix Pursue the existing proposal of PRGA Coordinating Office to systematically address the issue of IPR in respect of participatory plant breeding.

x Whilst maintaining continued close links with IPGRI on the relation of IPR to crop germplasm, PRGA should begin to take a more visible role around the issue of Farmers' Rights and policy formulation within the CGIAR around this issue.

xi To overcome this problem, we suggest three alternative models which the PRGA leadership might like to consider to bring greater coherence and manageability to this component:

Model 1: Limit NRM projects to those which include PPB. This model supports a move towards a much tighter focusing of the Program and especially supports the effort to explore in practice the linkages that exist conceptually between NRM and PPB.

Model 2: Identification of limited number of "focal themes" for NRM with small grants funding of new activities in these areas. The Program is currently using a version of this model, but the Review Team proposes a tighter prioritizing of focal themes than exist at present. Based on evidence during the recent Nairobi Seminar, the strongest candidates seem to be biodiversity conservation and IPM. If biodiversity conservation is to be effectively absorbed by the PPB component, then the PRGA leadership may want to consider limiting the focal areas to IPM and one other area, such as soil fertility management or forest management at the present time. A corollary to this model would be the development and support for mentoring or collegial linkages between these projects and members of the NRM Scientists Group and also closer linkages with other groups that are already working with a focus on the selected themes.

Model 3: "Piggy back" a PRGA component on existing, funded NRM activities which lack this aspect. This offers strong opportunities for mainstreaming through close association with international and national NRM efforts.

xii Discontinue the Women and Technology initiative, or reformulate its design to reflect a more critical perspective on gender and technology.

xiii Come to closure on the State of the Art paper on gender, and provide a clear conceptual framework for incorporation of gender analysis in PPB and NRM. The responsibility of the Program with respect to advocating for change in current research practices would benefit from further discussion among projects and the Centers.

xiv Identify cases of gender analysis in PPB and NRM; for instance the experiences of WARDA or ICARDA where gender analysis has been incorporated and is used to identify target groups (and differences within these groups). These cases need to clearly show how GA can add value to the research; cases would also flag issues for future attention. They should include less-researched issues such as property rights and biotechnology.

xv Incorporate a more explicit attention to gender issues in biodiversity conservation and use. Give greater programmatic recognition to the empirical linkages that exist between PPB and NRM by:

- establishing biodiversity conservation as a clear component of PPB
- working towards a single "sustainable agriculture and natural resource management" Working Group whilst continuing to provide a platform for specific exchanges on PPB or other issues for example.
- concentrating research efforts on a small number of focal areas, consisting of PPB/biodiversity conservation, IPM and perhaps one other area. We would like to propose some actions that might help to clarify this dilemma:

xvi Review the identity of "the subject" of PPB discussions and projects. There is continuing reference to "the farmer" when gender analysis shows that farming is usually a household activity with different actors and diverse interests at play.

xvii Identify one or two "cutting edge" projects in PPB where the focus is on farmer-led breeding. Make these cases the focus of a major methodological interrogation and ground-truthing. Devote adequate human and operational resources to these case studies.

xviii Give more attention to the differences in methodological requirements between functional PPB and its closest equivalent in PNRM research cases that focus on technical, organizational and policy type outputs/results respectively.

2. Management and Organization

i. Clarify, make more transparent and strengthen the Planning Group terms of reference (TORs) both for the PG members themselves but also, possible more importantly, for those interacting with the PRGA such as the small grant recipients and other IARCs.

i. Consider identifying one of the currents PG members affiliated to a CGIAR Center (CGIAR Rep. the NRM position and the PPB position) as the formal link to the group of Center Liaison Scientists. This can help increase the perception of PRGA as a Center-wide Initiative and could increase the ownership of the Program by other centers

ii. Clear TORs need to be developed for Center Liaisons, and ways of interacting with them in addition to the existing program listserves need to be explored.

iii. Scheduled meetings of Liaisons during seminars or symposia

iv. Provide opportunities for exchange visits between the Centers (with funds from PRGA matched by the center concerned).

v. Any new Liaisons who did not attend the 1998 International Seminar should be made familiar with the principles of collaborative partnership adopted by the Planning Group.

vi. Review staffing imbalances between programs and clarify how the resources are distributed between programs, regions and types of activities. (While only minor changes may be possible this phase, the proposal for the next phase would certainly benefit from such as review).

vii. Implement a regionally based, proactive approach to proposal development where potential grantees in a region are brought together in a work/write-shop to identify priorities for the region and collectively develop integrated and/or complementary proposals.

viii. Pursue the possibility of decentralizing the small grants management to a representative IARC in the region. Support funds may be required, although in-kind contributions from Centers could also be explored. It should be noted, however, that the fact that a particular Center in a region becomes active in PRGA does not mean that this is equivalent to a mechanism for regional networking.

ix. NARS-CGIAR regional priority setting activities that are currently in process could benefit from the use of tools and methods developed by the PRGA. The Program should seek to establish a relationship with the ongoing regional dialog and seek to provide a methodological platform for an inclusive, innovative planning process.

x. Small grantees need to be informed in a timely manner about opportunities for follow-up phase funding.

xi. When accounting for what portion of the funding goes to which activities, it would be useful to include in-kind contributions of the IARCs to PRGA. Likewise, the time of staff allocated to various parts of the program should be included in order to give a more accurate picture of the support to each component of the program. This could also be considered an "indicator of PR mainstreaming".

xii. Ensure that from the outset of a project, small grant recipients are informed in a timely manner about opportunities for follow-up funding.

xiii. Put in place an evaluation process for the Program comparable with the emphasis on M&E in the small grants projects.

xiv. Develop techniques for more systematically monitoring changes in the use of PR/GA methods and level of their institutionalization within Centers.

xv. Introduce improved communications between Coordinating Office and grantees, for the sake of clearer understanding on the proposal review and approval process but also for broader aspects of the Program.

xvi. Seek ways for a more proactive communication strategy to be implemented. This should include the search for techniques to engage recipients of grants and Center Liaison scientists more actively in the Program, and the wide targeting of researchers and managers in the Centers.

3. Small Grants

i. Move to use small grants more proactively and as part of a program strategy to further its reach, capacity building and development of a community of participatory research practitioners and partners. Because of this the Review Team does not agree with the option of offering fewer, larger grants. Cases such as the small grant implemented as part of the African Highlands Ecoregional Program show that small grants can generate cutting edge PRGA research results

ii. Review the program strategy to flexibly incorporate different models of small grants in order to strengthen such strategy.

- One potential model is to foster a series of new but related PRGA initiatives or pilot efforts in a region, accompanied by workshops and write-shops for capacity building and also for joint analysis of the experiences for extracting and documenting "cross sectional" lessons. One or more CG Centers could be engaged in each regional initiative as participants in the research, capacity building and management of the effort, networking and funding.
- Another model is similar to the case of the small grant implemented by the African Highlands Ecoregional Program, where the research effort supported by the small grant "piggy backs" on an ongoing NRM effort that meets certain desires conditions, e.g., stakeholders committees, participatory M&E or other.

iii. Small grants could also be used more proactively to empower teams selected for their capacity for cutting edge research and to address key program questions, such as the management of intellectual property rights in PR, ethical dimension and responsibilities in PR, e.g., what happens or should happen to farmer groups formed for research purposes after research ends, etc.

iv. Develop better and well-documented terms of references and guidelines for all small grants, in addition to those available for PPB small grants, and make them available to all stakeholders. These must account for the diversity of small grant models, functions, size and potentially shared management. This will foster more open feedback among grant recipients (and non-recipients) and Program management.

v. Structure and account for each grant including the research grant proper and an added amount, from the same or different funding, to cover management, capacity building, technical and documentation support.

4. Methodology Development and Capacity Building

i. Broaden the Program's methods strategy in order to "bring along" more persuasively the original constituency of scientists in the CG Centers and partner institutions rather than maintaining a fairly independent, "cutting edge" path in the company of a minority of PR/GA exponents in the CGIAR and other institutions. The latter is certainly needed, but the Program will also require better acquaintance with the plans, expectations and constraints of the larger group of targeted researchers, perhaps through a methods needs assessment exercise.

ii. Explore alternative ways to make available the benefits of PR/GA to researchers of different discipline who either do not use PR/GA or apply only the most "functional" aspects of the approach. For example, the program could look into ways to integrate ("piggy back") specific biophysical or social science research with efforts that are already participatory and require more specific disciplinary research input. This can create interdisciplinary partnerships between groups with expertise in PRGA and others that contribute to and benefit from PR/GA. This kind of integration also offers the possibility of being more cost effective and probably more efficient than persuading a group of inexperienced biologists to engage in participatory efforts to design, implement and deliver the results of their work, even if they are strongly supported.

iii. Development and use of simple statistical design and inference tools in field research with farmers should be identified, fostered and supported. These will also contribute to develop stronger partnerships among the program and the researchers it wants to influence.

iv. TAC's proposal for an annual meeting of social scientists in the CGIAR should be encouraged by and used to the benefit of the PRGA.

v. Think more strategically of the type and scheduling of training events to approach the program objectives and make better use of its personnel and other resources.

vi. Base this on a more structured analysis of needs in combination with responses to requests, and also of opportunities to team up with or mobilize other available expertise for capacity building in PR/GA.

vii. Structure and plan capacity building through training, demonstrations, applications and follow-up.

viii. Once well tried and consolidated, package specific training modules and materials in ways that permit to delegate their next rounds delivery to partners or through electronic means (e.g., interactive CD ROM) and more conventional forms of dissemination.

ix. Target capacity building on participating communities, at least to facilitate the identification of local "champions" and "PRGA leaders". The presence and interaction of a team with the community on a fairly continuous long-term basis is probably the most important factor to motivate and energize community participation and readiness to innovate and provides an excellent capacity-building environment. It should also provide an "exit strategy", i.e., what will be left in the community in terms of capacity for independent follow up after the projects ends. This is an ethical responsibility of all true PRGA efforts.

x. Repackage existing training materials to serve better the needs and capabilities of different sections of users within the PRGA constituency. One such group includes the members of field teams. Many of them are not researchers or have less training than the researchers that existing materials target now.

xi. In some cases translation from English is also a strict requirement.

xii. It is clear that to enhance its reach closer to the ground, the Program must find ways to complement its Internet and other high tech centered approach with more conventional learning approaches (e.g. curriculum development, smaller workshops).

5. Partners and Networking

i. Continue the development of the participatory, gender-responsive research mechanisms and particularly explore how the CGIAR liaison scientists and other stakeholders including NARS partners can play a larger role.

ii. Explore further means to improve communication, information and knowledge flow with the CGIAR, NARS and other stakeholders

iii. Continue to develop printed publications for its partners and peers but some of these should also be targeted to specific groups including donors, directors, development agents and farmers. "Lay" publications such as "Crossing Perspectives in PPB" or "Equity, Well-being and Eco-system Health" have been much appreciated, but they are too long for important groups such as donors. Furthermore, efficient and cost effective media for rapid dissemination of information, including videos, electronic forms and web publishing should be extended, as much as possible, to stakeholders including NARS partners, development agents and farmers.

iv. As the PRGA continues to strengthen, partnership and networking strategy should consider the following elements:

- research partnerships focused on well-defined problems aimed at generating new knowledge in PPB, NRM and gender analysis at the regional level (i.e. Africa, Asia and Latin America) under the umbrella of the PRGA;

- partnerships to enhance technology development, adoption, gender analysis and impact at regional level; and
- partnerships to develop research capacity in NARS with inputs from institutions like IFPRI on agricultural and NRM policy and ISNAR on research policy and management

v. Develop a strategy for managing and periodically reviewing its partnerships and networks for greater effectiveness and efficiency.

vi. Greater conceptual clarity be given to the notion of affiliated project and its networking and partnership status clarified or the PRGA Coordinating Office consider terminating the arrangement. To leave this as a purely administrative arrangement may lead to confusion with respect to the attempt to use the networking links as a means to ensure a certain level of quality in projects associated with the Program.

5. Program Impact

i. Efforts to strengthen Program capacity to monitor and assess impacts are highly commendable. PRGA is encouraged to maximize use of internal and external resources through collaboration. The Program should document its impact on its collaborating institutions and on food security, poverty reduction and natural resources management through a comprehensive analysis and interpretation of recently available PRGA-survey data. The Program should also include a component and identify indicators for monitoring and evaluation of projects to assess progress being made.

ii. Continue to strengthen its training activities (including more structured needs assessment and follow-up) and its research fellowship mechanisms to enhance individual, group and institutional capacity building

CGIAR Program on Participatory Research and Gender Analysis

1.0 Introduction

1.1 Background

The PRGA Program has its origins in a 6 day international seminar and planning workshop in 1996 which developed a proposal and five year workplan with stakeholders from more than 50 institutions (IARCs, NARS and NGOs). The proposal and workplan were submitted to TAC and approved in October 1996, and the Program began to implement the workplan in April 1997. The workplan and the associated logframe form the basis for annual reporting and are the backbone of program activities.

The 1996 Planning Workshop participants formed three working groups: the participatory plant breeding group (PGB), the natural resource management group (NRMG) and the gender-working group (later integrated into the workplans of the PBG and the NRMG). The participants in these working groups identified the role of the Program as to address knowledge and methods gaps in existing research activities and workplans included identified gaps. They envisaged the workplans as being carried out by a network of loosely coordinated actors drawn from across a wide cross-section of the stakeholders represented at the meeting. The Program therefore began to implement the workplans with a part time Coordinator (J. Ashby), a part-time facilitator for the PBG (L. Sperling) and an arrangement with the NGO SHRISTI to facilitate the NRMG.

By 1998 it became clear that there was need for more than facilitation to conduct the necessary "state of the art" review papers and design the small grant program to catalyze innovative research to address these gaps. A full-time staff of specialists was therefore gradually assembled, including a sociologist (L. Sperling) specialized in PPB to facilitate the PBG; an economist specialized in gender and impact assessment (N. Lilja) and a gender specialist (M. Fernandez, who left the program in June 2000). In addition the Program now supports two international postdoctoral fellows: an anthropologist with gender analysis expertise (B. Gurung) based in Asia with CIMMYT's Nepal Program and a sociologist (P. Sanginga) based with the ICRAF-coordinated African Highlands Initiative. In Latin America one M.Sc. political scientist facilitates the Spanish-speaking PPB network from CIAT, Colombia. The NRMG is presently supported with part-time facilitation from an ecologist with PR experience (A. Braun). Other postgraduate students and visiting scientists have also been brought into the Program in different capacities.

At the planning meeting in 1996 the various stakeholder groups present decided to nominate an individual to join a Planning Group with advisory functions on policy and strategy to assist the Program Coordinator, analogous to the way a board of trustees functions. Members of the Planning Group represent stakeholders designated as the Donors, CGIAR Centers, NARS, NGOs, Plant Breeding, Natural Resource Management, Gender, Farmer organizations and the Convening center.

Although no External Review was formally built into the workplan, the PRGA Coordination, anticipating the end of this phase of the project in 2002, commissioned this External Review to provide a critical reflection on the Program in preparation for the new phase.

1.2 Terms of Reference

Terms of reference consisted of four elements (full terms of Reference can be found in Annex 1):

Assessment of PRGA's progress towards increasing the extent and quality of participatory research approaches and gender analysis used in participatory plant breeding (PPB) in CG Centers and their most important partners in reference to the Objectively Verifiable Indicators (OVIs), listed in the PRGA Program logframe (also see attached - Program Goal and Purpose).

Assessment of the progress in the current PPB 5-year workplan including an assessment of the relative priorities to date among the 5 outputs of the participatory plant breeding workplan. Is the Program carrying out this workplan with the appropriate balance among different outputs to reach its goals?

With reference to the work carried out by the Program to-date, is the organization of the Program Staff and the Working Groups appropriate for the Program to achieve the planned outputs and to reach its goal, with a suitable balance in the level of effort given to Natural Resource Management (NRM), Participatory Plant Breeding (PPB) and Gender Analysis.

Based on the assessment of the progress to-date, suggestions and / or recommendations for improvement were made.

1.3 Review Process

The review was carried out entirely during the PRGA III International Seminar and Small Grants Workshop, held in Nairobi from 6 to 11 November, 2000. With such limited time, the Review was based on published materials made available during the week, presentations by and interviews with the PRGA staff and informal interviews with different Program stakeholders. In addition, a simple questionnaire was used with Liaison scientists to gain a better, semi-quantified, insight into the state of participatory research and gender analysis in the different Centers. The Review Report has been organized in two parts. The first part consists of a review of the achievements of the Program, based primarily on comparing current achievements (after three years of the Program) against the Indicators and Milestones associated with the Goal, Purpose and Outputs of the five-year Program. The main part of the Report consists of Suggestions and Recommendations for changes in different parts of the Program, which may help to achieve even greater success than has been already achieved in the past three years. Even though the several suggestions may appear to require an expansion in the work responsibilities of the program, they must be treated as options to be chosen and focused strategically.

1.4 Achievements of the Program Based on the Logframe

This section examines the Program Logical Framework. It maps the Program's indicators and milestones against its stated goal, purpose and outputs. The information in this section is a combination of both the team's observations during the review, documentation or factual information provided by the Program and information exchange between the review team and Program following the first draft of the review paper.

By any measure, there has been enormous progress in the implementation of the CGIAR Program on Participatory Research and Gender Analysis. This is demonstrated by the quality of

on-going PPB small grants projects, the extent of commissioned and in house publications on several areas of concern to the Program, the growth of networking linkages made possible through an active Listserve and energetic Coordination and by no means least, the strength of support built up and maintained in the donor community. It should be remembered that the Sections below review Outputs achieved over three years in what is a five-year timeframe.

1.4.1 Program Goal

The first OVI calls for increased capacity to use PR/GA in at least 50% of Centers at the end of 5 years. It is clear that there are already some very positive experiences within Centers and these are increasingly being shared within meetings such as the Symposium in Nairobi. This helps to build enthusiasm and ultimately to expand capacity in the participating Centers and in other institutions. Bringing about increased capacity in 50% of Centers still appears ambitious and further thought needs to be given as to how it will be verified at the end of five years. Documentation on progress made thus far, which indicates that more tan 50% of the Centers have participated in PR activities, is a good and necessary indicator but not sufficient in its analysis of PR increased capacity and incorporation in Center programming.

The second OVI calls for the documentation of the impact of PR/GA on technology development processes and research organization through at least 10 case studies. It is not very clear if the case studies of impact refer generally to the use of PR/GA (in which case the OVI seems to have already been met by the case studies presented in the Quito proceedings/book of case studies) or if the impact is related to the actions of the PRGA Program, particularly in relation to CGIAR Centers. If the latter, then the OVI might not have been satisfied yet, though the current attention to impact assessment within the Program should deliver these case studies well before the end of the five year period.

1.4.2 Program Purpose

In terms of assessing and developing methodologies and organizational innovations for gender-sensitive PR and operationalizing them in PB and NRM programs, this is still early days, though clear inroads have been made in some CGIAR Center's core programs. Evidence from a survey of Center Liaison scientists suggests that whereas individual Directors of Centers may be open to PR/GA ideas, this is not yet translating into the formal incorporation of these ideas into the Center's core program (See Table 1). This suggests that the small grants activities and other aspects of the Program may need to be used more strategically for creating credibility for PR/GA work and helping to encourage its incorporation in core programs (see next Section).

Farmer representation has not yet been achieved and may be easier to do so if the Program is decentralized.

In summary, at the level of goal and purpose it is clear to the Review Team that several Centers have participated and contributed significantly to specific activities and outputs of the PRGA program. However, it is less clear the extent to which such participation has been part of a definite strategy by particular Centers to incorporate PR/GA principles and tools into their core research programs, the achievement of which is the central challenge for the PRGA Program. The team feels that part of the problem may be the need for better documentation of what has been done and achieved in this regard and this is included as a recommendation in Section 7. However, a rethinking of PRGA strategy may also be required to improve this kind of

mainstreaming and we hope that several of the suggestions and recommendations made in Section 1.5 can contribute to that process.

1.4.3 Outputs

(Note: detailed achievements for each output is included in Annex 1)

Output # 1 calls for effective participatory methods in PB assessed & developed with focus on farmer-led and formal-led breeding including both plant selection (segregating lines) and variety selection (fixed lines). Related to this output, the Program has produced three "State of the Art papers" on formal-led PPB, farmer-led PPB and biotechnology-assisted PPB. A PPB Guideline has also been produced, which is still in draft form. 'Lay' scientific publications have also been produced (e.g. Crossing Perspectives). The Program has also supported in different ways a number of non-PRGA publications by NARS, other CGIAR Centers and Northern institutions of key interest for scientific use and/or public awareness.

Three international seminars with PPB as a major component and two regional symposia specifically on PPB have been organized over the past four years with important methodological papers presented by invited participants.

An innovative small grants program has been run, which includes formal and farmer-led PPB and both stable and segregating lines. A successful Listserve has been established which has facilitated substantive discussions in both English and Spanish on PPB issues.

The Program has also supported Ph.D. research on strategic methodological issues.

Output # 2 calls for beneficiary groups to be more accurately targeted & involved in PB through methods developed for involving direct/indirect stakeholders.

The Small Grants program has included a component on beneficiary assessment and has promoted integrated approach among stakeholders.

Impact assessment tools have been developed and impact assessment of PPB projects is on going to assess participation of beneficiaries among other things.

Several publications have focused attention on stakeholder analysis and the effectiveness of different methods for involving users. The Listserve has also held two discussions on stakeholder identification and on impact assessment.

Capacity building workshops focusing on gender and stakeholder analysis have been conducted in Latin America and in Asia, and both have given attention to better targeting and involvement of beneficiaries.

PPB products are user differentiated (e.g. WARDA, ICARDA reports) to a certain extent depending on the project. Much of this work preceded the formation of PRGA - WARDA started their work in 1996 and ICARDA in 1995. However, this existing work was reinforced and the system wide initiative provided extra legitimacy.

One potential beneficiary group only involved to a limited extent has been extension personnel. Links with public extension services appear to have been infrequent (important exception is WARDA-Guinea), but links with NGO extension more common. Some Northern universities are also involved but the basis for their involvement requires clarification in the Program strategy. Involvement of other stakeholders such as the private sector could be relevant, but it is not apparent.

Output # 3 calls for effective organizational forms for operationalizing PB being identified and developed in research process

A number of case study publications, either by PRGA or by partner institutions (e.g. WARDA) has demonstrated the operationalization of PPB at a large scale. The "State of the Art" papers have also discussed scaling up processes.

A report on organizational options for PPB has been proposed. This is a relevant thematic paper and should be given priority. Similarly, organizational analysis implicates gender relations and requires attention in relevant projects or reports.

Capacity building provided through training and consultancies has been effective. However, better need assessment and follow-up to training should be encouraged.

Output # 4 calls for user access to PPB products to be strengthened through identification of effective organizational forms and links to supporting seed services

Workshops and symposium papers have addressed the issue of strengthening seed systems. Three small grants projects also address seed system issues. The state of the art papers also include discussions on seed systems.

More work needs to be done in this area and there are indications that the Program is aware and acting on this need (See below, Section 2.1).

Output # 5 User access to PPB products strengthened through identification of appropriate benefit-sharing mechanisms and clarifications of expectations.

A new project on Property Rights Ethics and Best Practice in PPB was initiated 1999 to address benefit-sharing and other issues. A Listserve discussion is addressing the issue of ethics and best practice. Similar themes were also tackled in regional symposia and in the International Seminar in Nairobi.

It should be noted that several new thrusts were identified after the formulation of the original Logframe. These include:

- the necessity to explore the potential relationship of biotechnology and PPB
- the urgent need to look at property rights issues
- greater emphasis on farmer-led work in strategic and systematic ways

1.5 Suggestions and Recommendations

Though the Program has made rapid and excellent progress towards accomplishing its goals and purposes, as the previous Section indicates, the Review Team have been specifically asked to look critically at current and past activities and to make suggestions and recommendations where adjustments are felt to be appropriate. We felt the need to take a more systematic view than is possible when looking at individual outputs, and we have identified six major areas for attention:

- Research Program
- Management and Organization
- Small Grants

- Methodology and Capacity Development
- Partners and Networking
- Program Impact

These areas are each discussed in separate sections. The Summary pulls these various recommendations together into a view of the next phase of the Program that we strongly recommend should be approved.

2.0 Research Program

2.1 Participatory Plant Breeding (PPB)

As already mentioned, the Program has been very successful in generating a number of outputs, including state-of –the art reviews of the formal and farmer breeding systems and the role of biotechnology, guidelines for participatory plant breeding, an active listserve and a strong suite of PPB small grants research activities. The Program was fortunate to be able to build on emerging or existing innovative work going on in several Centers involving PPB (for example ICARDA, WARDA and ICRISAT) and this has helped to provide a springboard for the Program. PRGA has strengthened those activities through contributing greater coherence and mutual support, and this has been a major success. These and other linkages with already on-going work seems to have provided the basis for a successful listserve which is the vehicle through which the PPB Group seeks to advance sharing of ideas, mutual understanding and innovation. PRGA also supports these on-going activities in some cases through the small grants program and in all cases through methods dissemination, especially social and organizational methods. These have been introduced through training activities in the case of WARDA and in the case of ICARDA, through participation of the breeder in meetings and interactions with the PRGA staff. The small grants program supports several new initiatives also which are separately discussed in a later section.

Despite the successes, there are a number of areas where the PPB activities might be further improved to address the needs of farmers and researchers.

2.1.1 Biophysical methods for participatory research

The Review Team has gained the impression through presentations, documents and discussions with beneficiaries of the Program that PRGA has been successful in disseminating sociological and organizational methods (e.g. the Guidelines for Participatory Plant Breeding) and this has been very useful for the pioneer breeders involved in PPB. This is not to say that the Program has therefore nothing further to contribute to the development of sociological and organizational aspects of PPB methodology. The attention given to the "quality of participation" in the recently held Third International Seminar in Nairobi demonstrates recognition by the Program of the continued need to push for cutting edge methods in both the social and the biophysical sciences. The Review Team fully supports this concern.

Currently there is also increasing attention being given to impact assessment methods, including economic assessment and this also will be very important for quantitative demonstration of the effectiveness of the approach. It is also the right time to begin to pull together experiences in

different regions with novel ways of experimentation, data management and data analysis that can contribute to the essential scientific robustness of PPB. This is of central importance to assist with "mainstreaming" efforts. PRGA is clearly fully committed to an interdisciplinary approach to PPB and indeed the recently completed State-of-the-art papers on Formal- and Farmer-led PPB and on Biotechnology-assisted PPB all had biophysical scientists as senior authors. The Review Team had no opportunity to review these documents, which are not yet widely available. Nevertheless, there is certainly a need to provide easy, rapid access to biophysical and statistical "tricks of the trade" and "best practices" which will support the scientific quality of PPB.

Recommendations

- Assemble and refine experiences with innovative statistical/biophysical approaches to PPB trial design, comparisons between farms, integration of results of spontaneous farmer experimentation ("mother-baby" trials) and the analysis of results and disseminate these in accessible, "tricks of the trade" type publications.
- Continue to support innovative and high quality social and biophysical methods utilized in PPB.

2.1.2 Biodiversity and PPB

Although the potential of PPB to help maintain or enhance crop genetic diversity *in situ* is being explored in some of the small grants case studies the biodiversity conservation/PPB relationship is yet to be fully integrated into the Program. It is suggested that the Program could more systematically explore this relationship through case studies looking at PPB from the point of view of continuous, adaptive evolution of crop species, with the breeder as source of continuous variability on which the farmer selects in response to shifting environmental, commercial and cultural requirements. This increased attention to biodiversity will clearly help to link PPB with NRM components of the Program. Furthermore, given the frequently noted variability in the crop genetic conservation practices of men and women, the inclusion of an enlarged attention to biodiversity will also offer increased opportunities to understand the role of gender in the conservation and use of agricultural crops.

Recommendation

- Increase the focus of the Program on the contribution of PPB to enhancement of biodiversity conservation and ecosystem resilience through case studies taking a biodiversity angle on PPB

2.1.3 Inclusion of crop combinations in PPB

Formal plant breeding and ten of the eleven current small grant projects focus attention on individual commodity crops. Whilst the process of exploring the application of PPB methods will probably benefit from a continued focus on individual crops, the Program should give increased attention to PPB involving crop combinations. The support of this approach in the small grant activities in Yemen is highly commended. The Review team fully endorses the view that engaging with the multiple cropping systems characteristic of most small-scale, low income farming will underline further the importance of farmer selection. It will also emphasize the need for breeders to provide materials that are adapted to local farm realities rather than to optimal performance under high input, monocropped conditions. It will also provide another link with the NRM thrust.

Recommendations

- Give increased attention and small grants support to the application of PPB to multiple crop combinations.
- Consider making exploration of PPB with crop combinations one of the criteria of a special set of "cutting edge" small grants in a restructured small grants program (see below).

2.1.4 The quality of PPB

The Review team commends the generally high quality of PPB research currently being supported within the small grants program. We feel that part of the explanation for the high quality and the successful implementation is due to the clear and demanding guidelines developed by the PPB Coordinator for proposal development. For this reason it is felt important to maintain proposal guidelines as a means to ensure and if possible expand research quality.

Recommendation

- Links continued funding and other rewards to adherence to guidelines and identify "best practices" from these projects that would be available for new projects (capacity building small grants). The use of guidelines and "best practices" could be part of a mentoring and support process involving PRGA personnel and/or those involved in successfully implemented projects.

2.1.5 Organizational innovation in relation to PPB

Although organizational innovation is part of the program purpose, less attention has been given to this than to the elaboration of methods for PPB. This is understandable given the short duration of the Program and the need to prioritize. The PRGA Coordinating Office is aware of this current imbalance and there are clear intentions to expand the research attention currently being given to this area. For example, an important aspect of the organization of crop improvement are seed delivery systems and study of these systems is included the 5-Year Work plan. Three small grants currently address aspects of seed systems and a seminar was recently co-sponsored by PRGA on this theme, for east and southern Africa. However, increased attention needs to be given to the opportunities for innovation in farmer- and community-led seed multiplication and distribution and to look at the feedback effects on plant breeding. From the point of view of mainstreaming PR/GA approaches in the CGIAR, there is also a clear need for looking at the organization of plant breeding within the Centers, including the institutional linkages with seed delivery systems. Only through such an analysis will it be possible to identify opportunities for strengthening PR/GA across the CGIAR system.

Recommendations

- Given the importance of so-called informal seed systems in the organizational framework of crop improvement it is suggested that a higher priority be given in the awarding of small grants to innovative approaches to integrating PPB with these complex but powerful forms of seed diffusion.
- Systematic study should be undertaken of the existing organizational structures of plant breeding within the CGIAR Centers, with the aim of identifying constraints and opportunities for the incorporation of PR/GA principles and tools in these structures. The recent System-wide review of plant breeding was tasked to look at methodologies, and only touched on institutional issues such as inter-center collaboration, IARC-NARS links, strengthening farmers/women's organizations and involvement with the private sector. The Review team is not aware of an institutional analysis of IARC-NARS plant breeding organization, including seed multiplication and distribution systems.

2.1.6 IPR issues

The Review Team supports the proposal made by the PRGA Coordinating Office to systematically address the issue of intellectual property rights in respect of PPB. We agree with the PRGA assessment that PPB risks falling between the provisions of Breeders' Rights and Farmers' Rights (even though the latter's current provisions seem still unclear) and thus policy recommendations are rather urgently needed. Several CGIAR Centers and other organizations are engaged in research or review of IPR issues and PRGA has been coordinating with those such as IPGRI where there is an overlap of interests and has kept other, interested Centers and System-wide Programs such as IFPRI and CAPRi informed through the Listserve. Nevertheless, there does seem a clear comparative advantage on the part of the PRGA Program to take a lead within the CGIAR System with respect to Farmers' Rights, which is not currently considered an IPR issue, but an institutional/political issue.

Recommendations

- Pursue the existing proposal of PRGA Coordinating Office to systematically address the issue of IPR in respect of participatory plant breeding.
- Whilst maintaining continued close links with IPGRI on the relation of IPR to crop germplasm, PRGA should begin to take a more visible role around the issue of Farmers' Rights and policy formulation within the CGIAR around this issue.

2.2 Natural Resource Management (NRM)

NRM is a more recent area of work within the PRGA Program than PPB. In order to establish an NRM group that could diversify awareness of and facilitate experience sharing in the use of PR/GA approaches in NRM, a listserve was set up in 1997 under the moderation of the Indian Institute of Management in Gujarat. The assessment of PRGA staff of this listserve is that it lacked a sufficiently broad conceptual and thematic perspective on the diverse types of participation. The listserve has been dormant for 2 years.

In order to stimulate the NRM component of the project, a new staff member was hired mid-1998 to address both gender concerns and NRM issues. Her response to the failure of the listserve was to hold an NRM "Innovators' Meeting" in the UK in 1999, attended by participants identified by an informal network of senior researchers providing advice and assistance to the PRGA Program (rather confusingly referred to as "the NRM Resource Group" though it appears to have no corporate identify and does not function as a group). Through this meeting an "NRM Scientists Group" was established which does have some corporate identify via a workplan they developed and the provision of a small budget. The NRM/gender specialist with responsibilities for both the Scientists' Group and small grants activities, left the program in mid-2000. This provoked some rethinking of the NRM component and a part-time consultant facilitator was recently hired to work specifically with the Scientists' Group on a book-writing project and to stimulate networking among the PRGA NRM practitioners. This should help to consolidate and orient the Group and to stimulate the listserve as has happened in the case of PPB.

Parallel with these developments, the NRM small grants program was initially launched through a BMZ grant in 1998. This grant required an impact assessment of the use of participatory research and gender analysis in different types of NRM research efforts. To these already diverse

set of BMZ-funded projects have been added additional small grants projects with funds from the Ford Foundation with rather different donor-driven goals (farmer-centered research, gender analysis) and resulting in a different suite of projects. Four of these 12 NRM small grants principal investigators are also members of the NRM Scientists Group established in the 1999 meeting.

The more complex initiation of NRM activities combined with the greater diversity of issues and an undefined methodological approach has led to some problems in the implementation of this component of the Program. Probably staffing changes has exacerbated these problems. The Review team suggests that the diversity of thematic concerns in the NRM component need to be reconsidered.

2.2.1 Diversity of thematic concerns

The diversity of subject interests (soils, IPM, forestry etc), levels of focus (micro, meso and macro) and philosophy (technology and management tools or developmental process) in both the NRM Scientists Group and the small grants makes it very difficult to arrive at a coherent program component. In practice, NRM is too broad a focus for the Program to deal with, especially given the fact that currently the part-time Coordinator of the PRGA Program is also in overall charge of the NRM small grants activities.

Recommendations

- To overcome this problem, we suggest three alternative models which the PRGA leadership might like to consider to bring greater coherence and manageability to this component (see also Figure 1)

Model 1: Limit NRM projects to those which include PPB. This model supports a move towards a much tighter focusing of the Program and especially supports the effort to explore in practice the linkages that exist conceptually between NRM and PPB.

Model 2: Identification of limited number of "focal themes" for NRM with small grants funding of new activities in these areas. The Program is currently using a version of this model, but the Review Team proposes a tighter prioritizing of focal themes than exist at present. Based on evidence during the recent Nairobi Seminar, the strongest candidates seem to be biodiversity conservation and IPM. If biodiversity conservation is to be effectively absorbed by the PPB component, then the PRGA leadership may want to consider limiting the focal areas to IPM and one other area, such as soil fertility management or forest management at the present time. A corollary to this model would be the development and support for mentoring or collegial linkages between these projects and members of the NRM Scientists Group and also closer linkages with other groups that are already working with a focus on the selected themes.

Model 3: "Piggy back" a PRGA component on existing, funded NRM activities which lack this aspect. This offers strong opportunities for mainstreaming through close association with international and national NRM efforts.

The relative benefits of these models are further discussed in section 3.1.4 below.

2.3 Gender Analysis

Gender analysis is still in need of consolidation and integration into the overall Program. Its integration into the participatory research focus of the Program is not consistent.

Again, the historical antecedents are important. The earlier Gender and Diversity Program of the CGIAR had two components: one related to gender staffing in the CGIAR and another concerning gender analysis in research. Each sub-program had a coordinator and specific

workplan. When the program was dissolved in 1996, the gender research component was absorbed into the establishment of the PRGA program. The CGIAR staffing aspects retained the name of the Gender and Diversity Program and is currently convened by ICRAF. All CGIAR centers had "gender liaisons" whom interacted with the gender program. The PRGA Program also inherited this liaison function.

The gender component of the PRGA encountered some difficulties. From being a separate component of the PRGA Program after being absorbed from the CGIAR Gender and Diversity Program, gender was merged in 1998 with the responsibilities of the NRM coordinator rather than being mainstreamed throughout the entire Program. Furthermore, the gender component of PRGA has not been well defined, nor has it sufficiently evolved with the rapidly changing thinking around social analysis. Thirdly, new gender-related initiatives in the CGIAR such as the Women and Technology Initiative were taken on by the PRGA. The review team found that this activity not only appeared to be "added on" to an already full agenda of the PRGA, but its WID perspective on technology issues was hardly cutting-edge. The report "An approach to technological innovation: The Resource to Consumption System" should have addressed, for example, critical areas such as women's access to biotechnology and information technologies and the socio-political dimensions of the paper's "resource-to-consumption" framework.

Within the projects supported by the PRGA there are apparently different types of gender analysis taking place, just as there are different types of participation. In most cases, projects are generating sex-disaggregated data and reporting results accordingly. Apparently in very few projects gender relations are analyzed with reference to social and political issues (e.g. property rights, income disparities, etc.) although there are some interesting opportunities to do so, particularly within the small grants projects.

PRGA staff and the gender specialist on the planning group remarked that they were reluctant to strongly advocate a gender perspective in PPB and NRM. Instead, they argue that good social analysis of gender roles and relations is also good science. While this is certainly true, it could also represent a missed opportunity. Greater advocacy for a gender perspective can be expected to provoke more searching debate, more explicit highlighting of key issues and more penetrating research questions, allowing the Program to advance knowledge about gender relations in agricultural and natural resources research. The Program should also recognize that advocacy and awareness building are needed because of the entrenched nature of gender-blind research methods, even among researchers who consider their work to be participatory.

Recommendations

- Discontinue the Women and Technology initiative, or reformulate its design to reflect a more critical perspective on gender and technology.
- Come to closure on the State of the Art paper on gender, and provide a clear conceptual framework for incorporation of gender analysis in PPB and NRM. The responsibility of the Program with respect to advocating for change in current research practices would benefit from further discussion among projects and the Centers.
- Identify cases of gender analysis in PPB and NRM; for instance the experiences of WARDA or ICARDA where gender analysis has been incorporated and is used to identify target groups (and differences within these groups). These cases need to clearly show how GA can add value to the research; cases would also flag issues for future attention. They should include less-researched issues such as property rights and biotechnology.
- Incorporate a more explicit attention to gender issues in biodiversity conservation and use.

2.4 The relationship among PPB, NRM and GA

In common with many participants in the recent Seminar, the Review Team felt rather uncomfortable with the separation of PPB and NRM components, given the obvious importance of natural resource management issues in PPB. Several seminar speakers emphasized this point. We sympathize with the view that the current coherence and level of activity of the PPB Group was achieved through much struggle and negotiation between and among social and biological scientists, and that the merging of this group into the NRM component could threaten to undo the integrity of the PPB group. On the other hand, the Team considers it important to identify some ways to move towards greater overall integration, which is in keeping with the idea of sustainable agriculture and natural resource management captured in the CGIAR mission statement.

Figure 1 envisages an intersection of common concerns between plant breeding, NRM and PRGA. The three models discussed under Sub-section 3.1.2 above are alternative ways of addressing these intersections. Model 1 would concentrate research on aspects of NRM linked to PPB, such as biodiversity conservation, nutrient response of varieties etc. Although this model has the advantage of a high level of focus it may prove too restrictive, since it would exclude an important area of NRM work involving IARCs and many other institutions, where plant breeding is not at all involved.

Recommendations

- give greater programmatic recognition to the empirical linkages that exist between PPB, NRM and Gender by:
- establishing biodiversity conservation as a clear component of PPB
- working towards a single "sustainable agriculture and natural resource management" Working Group whilst continuing to provide a platform for specific exchanges, on PPB or other issues for example.
- concentrate research efforts on a small number of focal areas, consisting of PPB/biodiversity conservation, IPM and perhaps one other area.

2.6 What kind of Participatory Research?

The Review Team noted some tension present in both PPB and NRM research activities and discourse between the focus on products and the focus on process, especially processes involving the building of social capital and a contribution to local development and empowerment. In the case of PPB this dichotomy concerns on the one hand the implementation of collaborative research - "functional participation" - to successfully develop locally adapted varieties. On the other hand it concerns the move towards farmer-led breeding, the involvement with multiple crops, a concern with the effects on biodiversity, the empowering of local communities who would utilize breeders more like service providers and a disconnection from the normal power structures in which technologies and expertise flow downwards and outwards. In the case of NRM, there appears also to be a dichotomy, but it seems less stark than in the case of PPB, mainly perhaps because a model of formal-led NRM is not really available within the CGIAR at present. In fact, NRM as a research area is really still being developed. The dichotomy is therefore more around different orientations, on the one hand towards defined products or outputs (methods, technologies, best practices, policies etc) and on the other, towards institutional process (community agreements and actions, advocacy etc).

Given that the overall goal of the PRGA Program refers to poverty alleviation and equity issues and that the Purpose refers to organizational innovations the Review Team feels that there is a need to overcome the dichotomies and deal with both effective and efficient outputs as well as sustainable processes. This will be especially important as the Program moves to locate PPB within a broader natural resource management context. On the other hand, we also recognize the concerns of the Program that a preoccupation with process can undermine the attention to scientific quality on which the mainstreaming of the approach is felt to rest.

Recommendations

We would like to propose some actions that might help to clarify this dilemma:

- Review the identity of "the subject" of PPB discussions and projects. There is continuing reference to "the farmer" when gender analysis shows that farming is usually a household activity with different actors and diverse interests at play.
- Identify one or two "cutting edge" projects in PPB where the focus is on farmer-led breeding. Make these cases the focus of a major methodological interrogation and ground-truthing. Devote adequate human and operational resources to these case studies.
- Give more attention to the differences in methodological requirements between functional PPB and its closest equivalent in PNRM research cases that focus on technical, organizational and policy type outputs/results respectively.

3.0 Management and Organization

For a variety of reasons PRGA has undergone a number of developments and changes in its short history. These changes have affected the structure of the program and understandably the ad hoc nature of these changes has resulted in a rather complicated organogram, an imbalance in the types of support to the regions and program areas and confusion on the part of many people interacting with the PRGA as to how it operates.

3.1 Planning Group

The Planning Group (PG) is a case in point. Although there are Terms of Reference for the PG, these are not well known or understood by participants attending the recent Seminar. Up to now, the PG has been acting as a loose advisory body to the Coordinator on broad strategic issues. However, as the Program has expanded there is a good argument to strengthen it, making it more like a Board of Trustees perhaps, meeting more regularly than the current bi-annual arrangement.

There is a clear desire for greater transparency on the composition of the Board and on the process of electing/appointing its members. (This is not to say that the original appointments were not done in a transparent way but with the considerable turn over in participants to the bi-annual seminars, few of the Nairobi participants seemed aware of how that was done originally and fewer still understand how new appointments are made, what their term is, etc.).

While the desire for an Executive Committee (EC) of the PG is understandable (and something with which the review team has little problem), the first order of business should be the creation of a well functioning PG. For similar reasons expressed above, if or when an EC is set up, one or more of the CGIAR slots should be represented.

Recommendations

- Clarify, make more transparent and strengthen Planning Group TOR both for the PG members themselves but also, possible more importantly, for those interacting with the PRGA such as the small grant recipients and other IARCs.
- Consider identifying one of the currents PG members affiliated to a CGIAR Center (CGIAR Rep. the NRM position and the PPB position) as the formal link to the group of Center Liaison Scientists. This can help increase the perception of PRGA as a Center-wide Initiative and could increase the ownership of the Program by other centers
- The Review Team recognizes and welcomes the fact that the PRGA Coordination is already addressing many of these issues as a result of the recent Planning Group meeting.

3.2 Center Liaisons

The Center Liaisons appear to have been inherited from the Gender Program in 1996 and all those interviewed expressed confusion as to their relation to the PRGA. A key area of misunderstanding concerned the perception of the PRGA program, which was seen as fixed and inaccessible to initiatives coming from the Centers. Many of the Liaisons had no idea that they could propose activities or request support. The rather rushed lunch time meeting of the Liaisons at this year's annual meeting provided insufficient opportunity to address these issues adequately, though subsequent meetings with the Coordinator did help significantly to clarify the situation and to create different perceptions.

If cultivated and supported, the Liaisons could play a crucial role in mainstreaming PR/GA methods in their IARCs, especially if they occupy a position in their institution from which they can act as a change agent.

Recommendations

- Clear terms of reference need to be developed for them and ways of interacting with them in addition to the existing program listserves need to be explored
- Scheduled meetings of Liaisons during seminars or symposia
- This could be strengthened by providing opportunities for exchange visits between the Centers (with funds from PRGA matched by the center concerned)
- Any new Liaisons who did not attend the 1998 International Seminar should be made familiar with the principles of collaborative partnership adopted by the Planning Group.

3.3 Staffing and Prioritization of Work

As mentioned above, there appear to be some imbalances in the staffing between the two program components of NRM and PPB, especially since the departure of the Senior Scientist responsible for gender and NRM matters in June 2000. Furthermore, the support for PPB work in the various regions is also uneven, with a full-time Junior Fellow supporting Latin America but no equivalent position in Africa and Asia. Limited time for communicating among regionally posted staff and concerns raised about the labor intensity of the small grants program – an important mechanism for mainstreaming – may also indicate that the staffing complement needs to be reviewed.

Obviously, major staffing changes might not be possible in this phase. The review team has not had an opportunity to really assess the budget available and obligations to the various funders in

order to evaluate the possibilities. However, it does seem that the present staffing complement is insufficient for the set of tasks, which the Program is seeking to implement.

Connected to the staffing issue is the perception, on the part of the review team that despite a detailed logframe and 5 year workplan, it appears that there are no guidelines as to what percentage of the resources should be dedicated to PPB and NRM, likewise with the regional distribution and the types of activities (small grants, training and capacity building, information, etc). The review team is obviously not in a position to make recommendations regarding numbers but a framework (Figure 2) is included which may help in this process. (Please note, the numbers in the diagram are purely for illustrative purposes and in no way represent the review team's thinking on distribution).

Recommendations

- Review staffing imbalances between programs and clarify how the resources are distributed between programs, regions and types of activities. (While only minor changes may be possible this phase, the proposal for the next phase would certainly benefit from such as review). Figure 2 could be a useful tool for prioritizing the different areas and activities of the program).

3.4 Regional Involvement/Decentralization

The review team felt that much could be gained from regional networking and applaud the attempt to do so with the LAC PPB network and Steering Committee in Latin America. Some of the problems, associated with that attempt (lack of involvement in the listserve etc.), can be addressed by being more proactive on the small grants and developing a more collaborative approach to proposal development (e.g. through workshops/writeshops).

The regional approach would be strengthened if the monitoring of and support for the small grants was decentralized to a regional institution. This would ensure greater buy-in to the program, would help with the mainstreaming in the CG system and would reinforce the identity of the program as center-wide. Where this would be located depends on a number of factors.

Recommendations

- Implement a regionally based, proactive approach to proposal development where potential grantees in a region are brought together in a work/write-shop to identify priorities for the region and collectively develop integrated and/or complementary proposals. (See next section on small grants for further details.)[1]
- Pursue the possibility of decentralizing the small grants management to a representative IARC in the region. Support funds may be required, although in-kind contributions from Centers could also be explored. It should be noted, however, that the fact that a particular Center in a region becomes active in PRGA does not mean that this is equivalent to a mechanism for regional networking.
- The Review Team feels that the NARS-CGIAR regional priority setting activities that are currently in process could benefit from the use of tools and methods developed by the PRGA. The Program should seek to establish a relationship with the ongoing regional dialog and seek to provide a methodological platform for an inclusive, innovative planning process.

---

1 The recent small grant workshop in Nairobi, which brought together most of the grantees, was an important attempt to develop a supportive network amongst the grantees. Ideally, the workshop should have led to the sharing of ideas and collaboration. Unfortunately, despite the efforts of the PRGA staff, grantees ended up defending their papers as at any normal academic conference. By following the approach above to future small grant development, the panel feels that greater collaboration will be the result.

3.5 Financial Management

Many small grantees were uncertain as to whether there would be any funds for a follow-up phase. (In the case of PPB, the time frame is necessarily quite long yet the grants appeared not to have taken that into account.) While the review team is aware of the nature of funding within the CG system and the problems and uncertainties which are created by that, it is important to ensure continuity with the small grants and that grantees are informed well ahead of time what possibilities exist for continuation of funding.

The PRGA has not been able to document the full extent of in-kind contributions, including staff time, of the CGIAR centers and collaborating organizations. These resources represent one aspect of "buy-in" from partners in the Program.

Recommendations

- Small grantees need to be informed in a timely manner about opportunities for follow-up phase funding.
- When accounting for what portion of the funding goes to which activities, it would be useful to include in-kind contributions of the IARCs to PRGA. Likewise, the time of staff allocated to various parts of the program should be included in order to give a more accurate picture of the support to each component of the program. This could also be considered an "indicator of PR mainstreaming".
- Ensure that from the outset of a project, small grant recipients are informed in a timely manner about opportunities for follow-up funding.

3.6 Monitoring and Evaluation of the Program

While the small grants appeared to be monitored and evaluated and urged to undertake impact assessments, the PRGA did not integrate these tools into its own management cycle. (The Program is, however, regularly monitored through six monthly reviews that assess progress against the logframe and staff work plans). On-going impact assessment of the Program, then, is something than should be added.

While the current internally commissioned review is an important step, such quick reviews are not sufficiently informed to provide the basis for fine-tuning the program, which in any case should be an on-going activity. An important concern of Program impact assessment should obviously be the degree to which the Program has contributed to any growth of PR/GA methods and level of institutionalization that is evident in the CG system. This means of that there is urgent need for systematic documentation of methods used and level of integration of PR/GA in different Centers. The results of an initial, rapid attempt by the Review Team to carry out such a monitoring using the PRGA Program's own tools in included in Annex 2. Important as this monitoring is, the Program will of course recognize that there will always be many factors exogenous to the Program, which also influence this process.

Recommendations

- Put in place an evaluation process for the Program comparable with the emphasis on M&E in the small grants projects
- Develop techniques for more systematically monitoring changes in the use of PR/GA methods and level of their institutionalization within Centers.

3.7 Proposal Review Process and Communications

The proposal review process for the small grants was apparently very rigorous with outside experts brought in to help. Unfortunately, for some reason, most grantees were unaware of the process. (The team was unable to discuss with those who had proposals turned down so it is not clear if the same can be said for them.) This also implicates the broader issue of communications within the Program. In a number of areas the review team has highlighted the need for greater transparency and better communication. When raised with some members of PRGA Co-ordination, they suggested that much of the information on the PRGA and specifically the PBG was available on the web site and its general e-mail listserve. (They also argued that small grantees are often contacted directly on a number of issues relating to grant selection and monitoring. As mentioned above, though, this was not how the majority of the small grantees, interviewed by the team, perceived it.)

Unfortunately, web sites are passive and in many cases difficult to access. Many have irregular or no access to e-mail. While the review team does not have any immediate solutions to offer, clearly non-electronic based forms of communication have to be explored thoroughly.

Recommendations

- Introduce improved communications between Coordinating Office and grantees, for the sake of clearer understanding on the proposal review and approval process but also for broader aspects of the Program.
- Seek ways for a more proactive communication strategy to be implemented. This should include the search for techniques to engage recipients of grants and Center Liaison scientists more actively in the Program, and the wide targeting of researchers and managers in the Centers.

4.0 Small Grants

The significant progress and achievement obtained through the Small Grants was stated above. Small Grants have certainly enhanced the reach of the program across geographical areas, subject matters and stakeholders. Because of their capacity building and multiplier effects, they have contributed to the progress of the program in mainstreaming PRGA in the CG System and their partners.

However, management of these grants is also time and resource consuming. Because of this, the Program is currently considering the option of making a few big grants that could also address some of the pressing questions. This option may be a response to several factors:

There is no consensus, in the program, regarding the net value added by these small grants, especially when considering their heavy management and transaction costs.

Even though they are considered part of the capacity building efforts, small grants do not appear very well incorporated as part of the program plans and strategies to reach objectives – there is an impression that small grants have generally been treated and viewed as complementary efforts, sometimes cumbersome or externally motivated and supported.

The grants have not tended to be uniform in type, size or management style.

General management and changes introduced in handling small grants have not been well-explained or timely, e.g., variant size of NRM grants.

Recommendations:

- Move to use small grants more proactively and as part of a program strategy to further its reach, capacity building and development of a community of participatory research practitioners and partners. Because of this the Review Team does not agree with the option of offering fewer, larger grants. Cases such as the small grant implemented as part of the African Highlands Ecoregional Program show that small grants can generate cutting edge PRGA research results
- Review the program strategy to flexibly incorporate different models of small grants in order to strengthen such strategy.
- One potential model is to foster a series of new but related PRGA initiatives or pilot efforts in a region, accompanied by workshops and write-shops for capacity building and also for joint analysis of the experiences for extracting and documenting "cross sectional" lessons. One or more CG Centers could be engaged in each regional initiative as participants in the research, capacity building and management of the effort, networking and funding.
- Another model is similar to the case of the small grant implemented by the African Highlands Ecoregional Program, where the research effort supported by the small grant "piggy backs" on an ongoing NRM effort that meets certain desires conditions, e.g., stakeholders committees, participatory M&E or other.
- Small grants could also be used more proactively to empower teams selected for their capacity for cutting edge research and to address key program questions, such as the management of intellectual property rights in PR, ethical dimension and responsibilities in PR, e.g., what happens or should happen to farmer groups formed for research purposes after research ends, etc.
- Develop better and well-documented terms of references and guidelines for all small grants, in addition to those available for PPB small grants, and make them available to all stakeholders. These must account for the diversity of small grant models, functions, size and potentially shared management. This will foster more open feedback among grant recipients (and non-recipients) and Program management.
- Structure and account for each grant including the research grant proper and an added amount, from the same or different funding, to cover management, capacity building, technical and documentation support.

5.0 Methodology Development and Capacity Building

5.1 Methodology development

The development of methodologies is a means to develop the capacity and motivation of agricultural researchers in the CGIAR and partner research groups to incorporate participatory approaches and gender analysis to improve their research delivery and impact. This is a central challenge of the PRGA program.

On this, the program has documented a series of past experiences (state of the art studies) and also of newer efforts supported by the program itself in which PR and GA efforts have been included.

The availability of guidelines also indicate progress in extracting some common lessons in terms of best practices and principles to design, plan and implement participatory research.

Progress is more noticeable in the case of PPB than in the case of NRM. Progress appears also weaker in the case of the development and proper incorporation of gender analysis in PR (see also sections 3.1.1., 3.1.2., and 3.1.3. above).

Despite the significant evidence and the progress attributed to the program, in terms of documentation and in terms of a community that is embracing participatory approaches and gender analysis in research, some central challenges remain.

These relate mainly to:

- the originally targeted researchers in the CGIAR Centers and partners, and
- to the development of methodological elements or tools that
- facilitate further the incorporation in and contribution of these researchers to PRGA efforts and
- the incorporation of the benefits of PRGA in the design and delivery of their own research and results.

The Review Team is aware that the Program has made significant progress in these fronts, and this was confirmed by people interviewed who found PRGA methods guidelines they were aware of to be attractive and clearly beneficial. However, interviews also indicated that some commodity and disciplinary researchers have either missed out so far on available information or have methods expectations that have not yet been met.

The most common concern is the lack of methodological elements or tools that will help researchers use newly acquired technical knowledge and skills in a participatory mode, though some researchers are also concerned that this could imply the need to learn and practice new skills and maybe encroach on other disciplinary fields. Examples cited include statistical tools that allow the use of observations from different farms as replications, while accounting for the higher level of variability associated with this situation. Another example is tools that facilitate the use and analysis of non-parametric variables such as ranking in combination with more familiar parametric variables and observations.

There is also an expressed need for "bridging tools" by researchers, to facilitate interdisciplinary collaboration between social and biophysical scientists. It is not immediately clear whether the difficulties are being mainly experienced by social scientists or biological scientists or whether they are associated with handling quantitative or qualitative data. It seems to depend on the discipline and experience of the respondent. Nor is it clear whether the respondents consider that the development of these tools is or should be a responsibility of the PRGA program alone. The review team feels the Program should be more aware of these concerns when targeting its core constituency.

Most probably, if the Centers become committed to enhance their capability and use of PRGA they should also become more proactive in helping to develop these missing "bridging tools". In the same manner, they could also become more willing to complement better their critical mass of breeders with a critical mass of social scientists (not only economists). This should create regular opportunities for biological scientists to work together with scientists experienced in PR and GA, which is what this program is trying to accomplish with very limited resources now.

Recommendations

- It is advisable and consistent with the Program's mandate that it broaden its methods strategy in order to "bring along" more persuasively the original constituency of scientists in the CG Centers and partner institutions rather than maintaining a fairly independent, "cutting edge" path in the company of a minority of PR/GA exponents in the CGIAR and other institutions. The latter is certainly needed, but the Program will also require better acquaintance with the plans, expectations and constraints of the larger group of targeted researchers, perhaps through a methods needs assessment exercise.
- There are already good indications of opportunities to integrate better the work and interest of the PRGA and that of other CGIAR and similar partner researchers. The experience of WARDA is a good one and there are others cases that include lighter forms of participation that probably need acknowledgement as methodological options under certain circumstances.

- The Program should also explore alternative ways to make available the benefits of PR/GA to researchers of different discipline who either do not use PR/GA or apply only the most "functional" aspects of the approach. For example, the program could look into ways to integrate ("piggy back") specific biophysical or social science research with efforts that are already participatory and require more specific disciplinary research input. This can create interdisciplinary partnerships between groups with expertise in PRGA and others that contribute to and benefit from PR/GA. This kind of integration also offers the possibility of being more cost effective and probably more efficient than persuading a group of inexperienced biologists to engage in participatory efforts to design, implement and deliver the results of their work, even if they are strongly supported.
- Specific efforts such as those cited by the team in the table immediately below, and that of Richard Coe of ICRAF on the development and use of simple statistical design and inference tools in field research with farmers, which was presented in the poster session, should be identified, fostered and supported. These will also contribute to develop stronger partnerships among the program and the researchers it wants to influence.
- TAC's proposal for an annual meeting of social scientists in the CGIAR should be encouraged by and used to the benefit of the PRGA

Examples of innovative methods in demand by PRGA Partners

Disciplines	***Quantitative Methods***	***Qualitative Methods***
Biological	***New methods for analyzing incomplete datasets or non-replicated trials e.g. ICARDA***	***Use of indigenous knowledge to develop indicators for NRM monitoring e.g. SWNM PR soil health indicators***
Social	***New applications e.g. multiple component analysis and logit analysis of preference rankings with non-parametric statistics e.g. CIAT***	***Combinations of local, qualitative indicators of poverty with GIS or hand-drawn maps with GIS***

5.2 Capacity building

Capacity building on the design, planning, and implementation of participatory efforts have implications not only for improving the delivery and impact of research but also for wider human and social capital formation among the actors as well as in the targeted communities.

The Program in this regard has made good progress. The effort of two regionally based (Asia and Africa) PRGA fellows has been instrumental.

This includes a series of specific training efforts and events that include: international workshops and hand on work with applied researchers in different regions, development of regional work of trainers, international conferences and symposia, development and dissemination of training materials, and the production of guidelines, state of the art studies and reports of participatory research experiences.

Even though the range of activities implemented and their results are impressive, some of these capacity building efforts appear to have been designed on a short call or as one off efforts, probably to capitalize on opportunities or to respond to specific requests or pressures. To improve further, the review team has several recommendations.

Recommendations

- Think more strategically of the type and scheduling of training events to approach the program objectives and make better use of its personnel and other resources.
- Base this on a more structured analysis of needs in combination with responses to requests, and also of opportunities to team up with or mobilize other available expertise for capacity building in PR and GA.
- Structure and plan capacity building through training, demonstrations, applications and follow-up.
- Once well tried and consolidated, package specific training modules and materials in ways that permit to delegate their next rounds delivery to partners or through electronic means (e.g., interactive CD ROM) and more conventional forms of dissemination.
- Target capacity building on participating communities, at least to facilitate the identification of local "champions" and "PRGA leaders". The presence and interaction of a team with the community on a fairly continuous long-term basis is probably the most important factor to motivate and energize community participation and readiness to innovate and provides an excellent capacity-building environment. It should also provide an "exit strategy", i.e., what will be left in the community in terms of capacity for independent follow up after the projects ends. This is an ethical responsibility of all true PRGA efforts.
- Repackage existing training materials to serve better the needs and capabilities of different sections of users within the PRGA constituency.
- One such group includes the members of field teams. Many of them are not researchers or have less training than the researchers that existing materials target now.
- In some cases translation from English is also a strict requirement.
- It is clear that to enhance its reach closer to the ground, the program must find ways to complement its Internet and other high tech centered approach with more conventional learning approaches (e.g. curriculum development, smaller workshops).

6.0 Partners and Networking

Although any partnership has, and needs, its own specific goals, partners and mode of operation, it is necessary to recognize general principles and mechanisms. When partners are carefully managed and maintained, the best mechanisms can be promoted further, and transaction cost minimized. . Noting that the planning group adopted the principles of collaborative partnerships drawn from the Ford Foundation Program on Organizational Change in 1998, the Team reviewed the PRGA's partnerships and networks from the point of view of effectiveness and efficiency.

The Review Team noted that in response to the need for cost-effective institutional innovations, especially in the face of declining resources, the PRGA has developed partnerships that enhance participatory research methodology development and facilitate diffusion of technological products. The Team recognized two kinds of managed partnerships at the PRGA: Participatory Plant Breeding (PPB), and Participatory Natural Resource Management (NRM).

The Review Team found that some partners within the CGIAR and national scientists and their supervisors are not fully aware of the PRGA policies and procedures and work rules and that communication between PRGA and some partners is inadequate. Discussions and surveys carried out by the Team shows that some partners only partially appreciate the participatory nature of planning to guide the Program's future activities as they are not adequately involved or consulted in the decision making in the PRGA. There is also only a partial feeling of ownership, particularly by some liaison persons of the CGIAR centers. It was also evident to the Team that although partners may not be of equal size, or receive equal small-grant support from the PRGA, each partners' contribution was valued as equally important. The Team, however, found some

confusion about the role of the liaison persons, coordination, small grant project proposal funding and how collaborators interact with the PRGA and the Planning Group.

The Team commends the PRGA for initiating the PPB, and NRM electronic networks. These networks are composed of liaison persons and external resource persons, to support field researchers using the participatory methods in Africa, Asia and Latin America. Network efforts are also complemented with information and materials posted on the PRGA listserve and Web site. The Team noted that these networks might be effective means linking partners and exchanging relevant information. However, some participants have difficulty accessing the web site.

The Team notes that between 1997 to 2000 (inclusive), PRGA and its collaborators have published journal articles, conference papers and book chapters. In the same period several research and training titles have been published under the PRGA imprint. Public awareness brochures and publications have been released.

One aspect of networking, which is not clear to the Review Team, is the role of affiliated projects. The Review team noted that in some cases PRGA acts as a conduit for funds going to so-called "affiliated projects", as for example IRRI's work on PPB in Eastern India. It is not clear to the Review Team what is the purpose of this affiliation, especially given the fact of minimal influence of PRGA methods and approaches in the implementation of the IRRI project. It seems to remain a purely administrative arrangement.

Recommendations

- The PRGA should continue the development of the participatory, gender-responsive research mechanisms and particularly explore how the CGIAR liaison scientists and other stakeholders including NARS partners can play a larger role.
- The review team therefore suggest that the PRGA explore further means to improve communication, information and knowledge flow with CGIAR , NARS and other stakeholders
- The PRGA should continue to develop printed publications for its partners and peers but some of these should also be targeted to specific groups including donors, directors, development agents and farmers. "Lay" publications such as "Crossing Perspectives in PPB" or "Equity, Well-being and Eco-system Health" have been much appreciated, but they are too long for important groups such as donors. Furthermore, efficient and cost effective media for rapid dissemination of information, including videos, electronic forms and web publishing should be extended, as much as possible, to stakeholders including NARS partners, development agents and farmers.
- As the PRGA continues to strengthen, partnership and networking strategy should consider the following elements:
    - research partnerships focused on well-defined problems aimed at generating new knowledge in PPB, NRM and gender analysis at the regional level (i.e. Africa, Asia and Latin America) under the umbrella of the PRGA;
    - partnerships to enhance technology development, adoption, gender analysis and impact at regional level; and
    - partnerships to develop research capacity in NARS with inputs from institutions like IFPRI on agricultural and NRM policy and ISNAR on research policy and management. Good examples are the PPB program in Latin America and the WARDA plus 17 NARS program in West Africa
- The Team recommends that PRGA develop a strategy for managing and periodically reviewing its partnerships and networks for greater effectiveness and efficiency.
- It is suggested that either greater conceptual clarity be given to the notion of affiliated project and its networking and partnership status clarified or the PRGA Coordinating Office consider terminating the arrangement. To leave this as a purely administrative arrangement may lead to confusion with respect to

the attempt to use the networking links as a means to ensure a certain level of quality in projects associated with the Program.

7.0 Program Impact

The formation and development of PRGA is recognizable in two major respects. First as an emerging credible institution of scientific excellence, and second as an institutional innovator in crafting effective partnerships. The PRGA has pioneered development of new participatory approaches that have attracted awareness and interest in some of the CGIAR centers and NARS as a novel mode of collaboration and cost-effective way to bring science to bear on the problems of the poor. The Team noted that the PRGA has concentrated its efforts in impact assessment on documenting the impact of PR approaches and the use of GA as research methods in several case studies. This work assesses the effects of different types of participation and different application of GA on the research process, outputs and its costs. The Team noted that assessing the impact of use of the PR methods is different from the evaluation of the Program's impact. As a result of concentrating all available capacity in producing results that will benefit the CG and other partners, the program has not yet formulated impact assessment plan designed to document the Program impact on research partnerships, capacity building, and partners ability to conduct PRGA work in general. The PRGA should continue to conduct systematic impact assessment to generate convincing evidence about the usefulness of the participatory methods for improving research efficiency, targeting specific beneficiary groups and meeting CGIAR goals of poverty alleviation and protecting the environment. This evidence is essential for mainstreaming the use of these approaches in the CGIAR scientific community.

In assessing the impact of the PRGA Program's achievements in research partnerships, capacity building, gender analysis and policy dialogue on the CGIAR centers in the last four years, the Team had little in the form of documented evidence in these four areas.

PRGA's achievements, however, are well documented. The Team believes that PRGA's achievements during the period 1997 to 2000 have been significant. The Team gives credit to the PRGA for initiating and conducting several impact assessment workshops and studies with small-grant recipients and other affiliated projects. The Team notes that except for 6 NRM BMZ supported studies designed to do impact assessment, some small grant recipients are not happy with the overburden due to the additional workload in conducting impact assessment studies. The PRGA should be careful not to overload the small grant recipients. This may reduce efficiency and such studies should be limited to those that are willing and have the capability to handle them.

Capacity building is an area that TAC no longer finds attractive. Yet the PRGA is currently committing approximately 20% of its budget to group training, workshops, support to research fellows and scholars and other capacity building activities. This strategy appears successful.

Recommendations

- In order to document its impact and receive reciprocal acknowledgement for the work done, the program needs to establish a protocol, which ensures that recognition will be given to all partners involved in the work.
- The PRGA's efforts to strengthen its capacity to monitor and assess impacts are highly commendable. PRGA is encouraged to maximize use of internal and external resources through collaboration. The Program should document its impact on its collaborating institutions and on food security, poverty

reduction and natural resources management through a comprehensive analysis and interpretation of recently available PRGA -survey data. The Program should also include a component and identify indicators for monitoring and evaluation of projects to assess progress being made.

- The Team encourages the PRGA to continue to strengthen its training activities (including more structured needs assessment and follow-up) and its research fellowship mechanisms to enhance individual, group and institutional capacity building and to bring NRAS into mainstream PRGA research.

Figure 1.- Models of PRGA Research

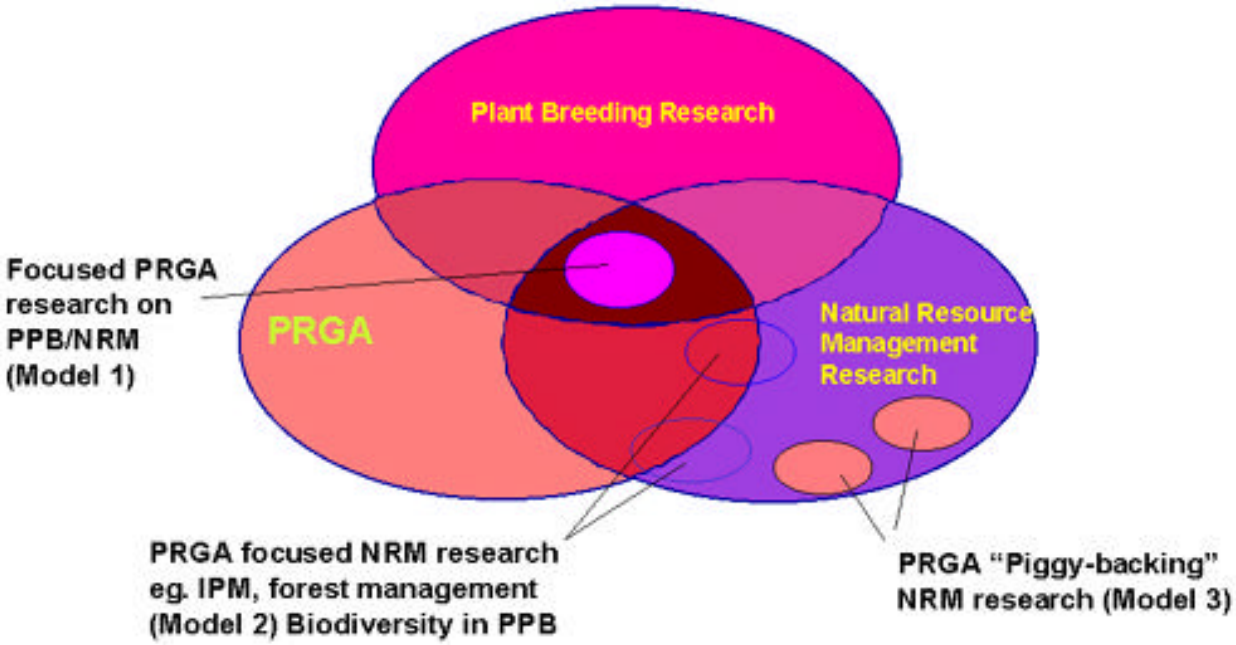
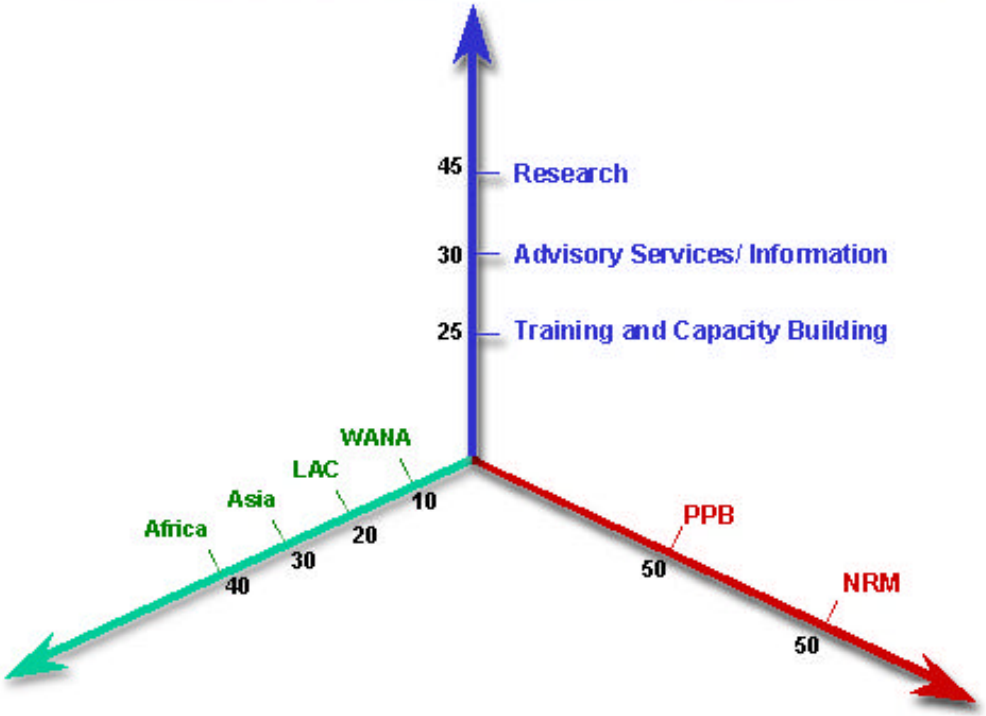


Figure 2.- Prioritizing activities along different dimensions



Annex 1: PRGA Program Logical Framework

Milestones mapped against Outputs, November 2000 (Draft 2)

1. Effective participatory methods in PB assessed & developed with focus on farmer-led and formal-led breeding including both plant selection (segregating lines), variety selection (fixed lines). Outputs include the following:

Overview 'State of Art papers'

* McGuire, S., G. Manicad and L. Sperling. Technical and Institutional Issues in Participatory Plant Breeding: Done from the Perspective of Farmer Plant Breeding, 1999 (PRGA Working Document No.2).

* Weltzien, E., M. Smith, L. Meitzner and L. Sperling. Technical and Institutional Issues in Participatory Plant Breeding from the Perspective of Formal Plant Breeding. A Global Analysis of Issues, Results and Current Experience, 2000 (PRGA Working Document No.3).

* Thro, A.M. and C. Spillane. Complement or Contradiction: Biotechnology-Assisted Participatory Plant Breeding, 2000 (PRGA Working Document No.4).

PPB Guidelines

Plant Breeding Working Group/PRGA Program. Guidelines for Participatory Plant Breeding. version 3, April 2000 (PRGA Working Document No. 1)

Regional PPB Symposia

* Latin America and the Caribbean, August 1999. International Symposium on Participatory Plant Breeding in Latin America and the Caribbean: An Exchange of Experiences, Quito, Ecuador (in Spanish, Proceedings issued in CD-ROM form, in Spanish).

* South and Southeast Asia, May 2000. International Symposium on Participatory Plant Breeding and Dynamic Biodiversity Enhancement in Asia: An Exchange of Experiences, Pokara, Nepal.

** (Note that the regional symposia had two interconnecting programs for those interested in PPB; one program for formal scientists and development personnel, and one specifically for farmer-breeders. Interchange was encouraged, while giving high visibility to both types of breeders).*

Small grants (include support for both formal and farmer led PPB work, with stable and segregating lines) heavy focus on methods. Examples

* Formal-led, stable lines: EMBRAPA/CNPMF, Brazil

* Formal-led, segregating lines, Zamarano/IPCA, Honduras

* Farmer-led, segregating and stable, LIBIRD, Nepal

International Symposia of PRGA.

Number I, Cali, September 1996, Number II, Quito, September 1998,

Number III, Nairobi, November 2000.

All three had key scientific papers and discussion on methods in PPB. Examples include analysis of:

* Effects of decentralization versus participation (J. Witcombe, International Seminar I.)

* Process and Product Impacts of PPB, for both formal-led and farmer-led programs (Plant Breeding Working Group, International Seminar II)

* Methods to enhance the Quality of Science in PPB (S. Ceccarelli, International Seminar III).

Expert Consultation: Research Design Issues in Participatory Plant Breeding, The Hague, June 1997.

Training Workshops on PPB methods (often joint and reiterative): (helps to sharpen ongoing field research and validate/refocus methodology itself.) Examples,

* WARDA/PRGA, April 1998, 1999

* ICARDA/PRGA (both PPB and NRM), May 1999

* Eastern African NARS (DFID-funded grant): Oct 1998, March 2000

* ICRISAT/SADC (with PRGA resource support), July 1997

* Malawian NARS, April 1998

Plant Breeding Group, listserve discussions in English, April 1997 onwards. Examples of methodological themes:

* Working with segregating materials (versus stable) together with farmers

* Defining breeding goals jointly in PPB

Plant Breeding Group, listserve in Spanish--Fitomejoramiento (FMP), established August 1999, (similar themes as in English serve)

Ongoing inventories of formal-led and farmer-led PPB (which describe type of participation, gender analysis, breeding methods, process and product effects, etc.

'Lay' scientific publications for Donors, Research Managers and other decision-makers to diverse methodologies and results of PPB. Example: Crossing Perspectives: Farmers and Scientists in Participatory Plant Breeding, 1999.

Joint Publication of NARS key work (PRGA/NARS), with strong focus on methodological analysis: for example, EMBRAPA/CNPMF (Brazil) Monograph, 2000

Ph.D. support to strategic methodological issues. Examples:

* Frew Mekbib, University of Alemaya/University of Norway, Characterizing Seed Systems.

* Antonio Lopez, CORPOICA/University of Wales, Incorporating farmers' knowledge and formal models of their decision-making in participatory improvement of cassava-maize intercropping.

Publicity/awareness building (ongoing) for non-PRGA publications of key methodological interest'- e.g. work by: WARDA (PVS booklets), ICARDA (CGIAR Outstanding articles, IPGRI (In-Situ Guides), DFID Plant Sciences (edited Volumes on PVS/PPB), Wageningen Agricultural University (relevant Ph.D. theses).

2. Beneficiary groups more accurately targeted & involved in PB through methods developed for involving direct/indirect stakeholders

Small Grants: each has been designed with strong beneficiary focus. Six- monthly PRGA reviews assess and promote rigorous stakeholder diagnosis, involvement, and joint evaluations.

Focused 'Social Methodological' Research: comparing effectiveness of different PRGA diagnostic methods. DFID-funded PPB projects in East Africa (affiliated projects).

Capacity building workshops designed expressly to integrate PRGA perspectives with technical strategies, examples:

* CIP/PRGA Gender-stakeholder learning workshop, Peru March 1999

* CIP/PRGA Vietnam Gender/stakeholder workshop, March 2000

PPB Guidelines document strong element of stakeholder analysis and incorporation (draft 3). Special Annex of Gender and PPB, draft 1,

Impact Assessment Tools: describe types of participation and gender analysis currently being undertaken and aim to link them to outcomes.

Impact Assessment of PPB (ongoing). Extensive Inventory (ongoing), Inventory aims to describe range of process and product results and to link these with types of participatory approaches and gender analysis implemented.

Overview Paper, Social Issues in Participatory Plant Breeding. Susanna Hecht.

Plant Breeding Group, listserve discussions in English, April 1997 onwards. Examples of themes related to beneficiary targeting and assessment:

* Stakeholder identification

* Impact assessment from varied stakeholder perspectives.

3. Effective organizational forms for operationalizing PB identified and developed in research process

PRGA Publishing of case studies working at large scale: e.g.: Brazil Monograph, 2000

Awareness building of case studies working large scale, e.g.: WARDA Monograph (Spark that lit the flame)

PPB Overview Papers (both the Formal-led PPB Overview Paper and Farmer-led Overview paper) integrate discussion of: organizational options, progress made on scaling up process and product, and key organizational avenues of inquiry for the future.

4. User access to PPB products strengthened through identification of effective organizational forms and links to supporting seed services

Seed System Workshop: Strengthening Seed Systems in East and Central Africa in periods of Stress (June 2000)

Small Grants on seed systems issues:

* ICRISAT/Mali: on Characterizing Seed Systems

* FIDAR/CIAT: Participatory development of low-cost simplified rustic tissue culture propagation for cassava

* IPGRI: Farmers' practice of domestication and their contribution to improvement of yams in West Africa (includes extensive seed systems' analysis)

Regional Symposia present papers with strong seed system focus, Example: Vom Brocke, Weltzien and Christina on Seed Systems in Rajasthan India (Pokhara, May 2000).

PPB Overview Papers (both the Formal-led PPB Overview Paper and Farmer-led Overview paper) integrate discussion seed systems and how they are presently linked to PPB programs. (The discussion in the formal-led paper is particularly extensive).

5. User access to PPB products strengthened through identification of appropriate benefit-sharing mechanisms and clarifications of expectations

IPR special project: Property Rights Ethics and Best Practice in PPB, initiated, 1999 (ongoing).

Plant Breeding Group listserve Discussion in English: Ethics and Best Practice, ongoing.

Plant Breeding Group listserve Discussion in Spanish. Fitomejoramiento Participativo (FMP). Ethics and Best Practice, ongoing.

Regional Seminar presentations on same theme: to share information, get critical feedback, and sharpen standard of PPB/IPR discussion.

QUITO, AUGUST 1998

Pokhara, May 2000

III PRGA International Seminar presentation on PPB/IPR theme, Nairobi, Nov. 2000

PRGA-PPB clarifying note

1. Several new thrusts were identified after the initial Logframe: the necessity to explore the potential relationship of biotechnology and PPB; the urgent need to look at the Property Rights Issue.

2. Progress on technical issues on Formal-led PPB has been strong. Further, a surprising number and breadth of Farmer-led PPB cases have been described. A key challenge will be to strengthen Farmer-led work in strategic and systematic ways.

3. The seed systems issues and organizational issues will become more important thrusts in the next few years. Groundwork is being done now to move in a more concentrated manner here.

4. The above four outputs were identified in September 1996 when the Plant Breeding Working Group assembled in Cali, Colombia for the First PRGA International Seminar. At that time, the focus of the PRGA was on innovative methodology development and institutional innovation.

Since that time, a newer thrust, on Mainstreaming PRGA approaches in the CGIAR, has been added. For PPB, some of the key developments in reaching very senior CG managers include:

A. International Centers' Week Seminar, October 1999: "The Science of Gender Analysis and Participation in Participatory Plant Breeding." This seminar sought to give an overview of key trends in the PPB field and was attended by some 50 CG Senior Managers, National Ministers and Research Directors, Donors and other interested parties.

B. TAC Review; Plant Breeding Strategies in the CGIAR. Intense interaction by the PRGA with this review team helped to solidify support for PPB within the CGIAR as a whole. This External Review team made the critical recommendation (Oct 2000) that Participatory Plant Breeding should become an organic part of the IARCs work.

C. Outstanding Scientific Article within the CGIAR, 2000. Award to the ICARDA PPB team. (Note: Sperling supported the initial development of the research plan-- through a consultancy conducted in June 1996).

Annex 2: Survey of the Role of PRGA in the Centers

The Center Liaisons attending the PRGA workshop were asked to fill in the following form outlining where PRGA fits within the various dimensions of their organizations. This tool was meant for assisting in the organizational development of an individual organization and was not meant for cross-organizational comparison purposes. Furthermore, the table is normally developed through a lengthy workshop process whereas the liaisons were asked to fill the table in on their own in 15 minutes. The results below then summarize some of the trends as seen by the liaisons of nine centers.

ORGANIZATIONAL DIMENSIONS	**ORGANIZATIONAL CHARACTERISTICS**		
	MISSION/MANDATE	**STRUCTURE**	**HUMAN RESOURCES**
TECHNICAL DIMENSION The essential parts	POLICIES AND ACTIONS For the majority of centers, PR/GA methods are mentioned in the strategies but few have specific budgets for such work.	TASKS AND REPONSIBILITIES For the majority, the tasks and responsibilities for work on PRGA are not made explicit.	*EXPERTISE* The majority of the Liaisons consider training in PRGA to be inadequate in their Centers and some emphasize the poor understanding of gender that exists. It was also pointed out that training is more often given to NARS partners than to CG staff. Only two felt their centers had sufficient personnel.
SOCIO-POLITICAL DIMENSION The process or power play	*POLICY INFLUENCE* Only a minority felt that their boards and senior management were sensitive to PR/GA issues.	*DECISION MAKING* There is more evidence of PR approaches being taken into consideration by directors than the formal incorporation of these approaches within the strategies of the centers.	ROOM FOR MANOEUVRE The majority of centers provide space for innovation though in some cases much more at the program level than at the center level. However, status attached to the innovations is much less clear and in some cases receives an ambiguous response.
CULTURAL DIMENSION The personality	ORGANIZATIONAL CULTURE Even though space for innovation exists, the cultural symbols and images of the majority of centers rarely support PR/GA innovation. There is even less evidence that such work is appreciated or associated with high quality research.	*COOPERATION* The overwhelming majority value teamwork within the organizations as well as collaboration with outside institutions.	*ATTITUDE* At the individual level there seems to be a positive attitude towards PR/GA though several emphasized that this was stronger at the regional and program level and, much higher at the field level than the laboratory.

Annex 3: Curriculum Vita of reviewrs

CURRICULUM VITAE

Monty Patrick Jones

PERSONAL DATA

Date of Birth February 5, 1951

Nationality Sierra Leonean

Marital Status Married, 5 Children

Education PhD University of Birmingham, UK 1983,Plant biology

M.Sc. University of Birmingham, 1979, Plant Genetic Resources

B.Sc. Njala University College, University of Sierra Leone, 1974, Agriculture General

Address Acting Director of Research

Deputy Director of Research and Rainfed Program Leader/Principal Rice Breeder and Head, Rice Improvement Program

01 BP 2551

Bouake, Côte d'Ivoire

Telex. 69138 ADRAO CI

E-mail. *M.JONES@CGIAR.ORG*

Office Tel. (225) 63 45 14

Residence Tel. (225) 63-38-90

Specialization Research/Project Management and Monitoring

Crop Improvement: Breeding/Biotechnology/Biosafety

Plant Genetic Resources

Networking in technology generation and dissemination

Career Goal Professional assignments with international agricultural research and development institutions, in public and private domains, for research management and crop improvement and its development with implications in growth and profitability of agriculture in developing and developed countries.

LANGUAGES & DEGREE OF PROFICIENCY

English	Excellent
French	Good

PROFESSIONAL TRAINING

April 1999	Leadership and management course in TGR, Alexandria, USA
Aug. 1982	Advance course on data management for gene bank, USDA, Belteville, USA
Sept. 1979	Practical seed technology for gene bank. IBPGR, Edinburgh, UK
March-Sept 1976	Rice production specialist course, IRRI, Philippines.
Oct. 76-May 77	Advanced training course in rice breeding and genetic evaluation and utilization at IRRI, Philippines.

MEMBERSHIP OF SCIENTIFIC SOCIETIES

- American Biographical Institute
- Rice Genetic Co-operative

. Association for the Advancement of Agricultural Sciences in Africa

. Common Wealth Association of Science and Agricultural Societies

. Agricultural Society of Sierra Leone

. American Society of Agronomy

AWARD

. Distinguished leadership award for services in rice varietal development in West and Central Africa give by the American Biographical Institute in 1991.

. **The King Bouduein Award to WARDA due to my work on interspecific hybridization between the African and Asian rice species. This award was given by the CGIAR in 2000.**

SKILLS AND EXPERIENCE

. Research management and monitoring

. Writing and editing of reports.

. Conference/Seminar co-ordination and presentation.

. In dealing with government organizations in Africa and else where in the world.

. In working with extension agents, NGOs and farmer groups.

. Project identification for tropical small holder families e.g.

- . Feasibility studies.
- . Project design and appraisal
- . Project implementation.

. Administration, management (Leadership) and evaluation of multidisciplinary, multicultural research projects.

. Staff recruitment and career development.

. **Proficient in a number of computer software (WordPerfect, Microsoft Word, Microsoft Power Point, Harvard Graphic, dBASE, SAS, MSTAT). Good knowledge of network system.**

COUNTRIES VISITED ON CONSULTANCIES AND DUTY TRAVEL

Africa: Twenty-four countries in West and central Africa and Egypt, Ethiopia, Kenya, Madagascar, Tanzania, Uganda, Zambia, Zimbabwe and South Africa.

Others: Brazil, Belgium, China, Colombia, France, Germany, Hong Kong, Indonesia, India, Italy, Japan, Lebanon, Malaysia, Philippines, Syria, Thailand, United Kingdom, and USA.

EMPLOYMENT RECORD AND RESPONSIBILITIES

1. January 1991 to Present

Employer West Africa Rice Development Association (WARDA)

Duty Station Main Research Centre and Headquarters, Mbe/Bouake,
Côte d'Ivoire

Position **.** Acting Director of Research (From July 2000 to date)

. Deputy Director of Research and Rianfed Program Leader.

. Principal Rice Breeder and Head of Rice Improvement Program (Breeding, Biotechnology, Genetic Resources and Crop Protection: Quarantine and Biosafety regulations).

. Co-ordinator of two of 16 research projects of WARDA. (1) Creating new low management plant types for resource poor farmers in rainfed ecosystems and (2) Development of environment specific breeding approaches for drought resistant rice varieties.

. Co-ordinator of the Regional Upland, Rainfed and Irrigated Rice Breeding Task Force. Rice Breeding Network comprising 17 West African countries.

. Co-ordinator of the Regional Mangrove Swamp Rice Research Task force. Regional network involving 6 West African Countries.

. Co-ordinator of the the West and Central Africa network on Participatory Research and Gender Analysis.

. Project Leader of the Africa/Asia Joint Research on Interspecific Hybridization between the African and Asian rice species. This international project comprises 22 senior scientists from WARDA, IRRI, CIAT, ORSTOM, Cornell University and Yunan Academy of Agricultural Sciences, China and 17 NARS scientists from West Africa. This program is supported by the UNDP/TCDC.

Responsibilities

As Deputy Director of Research and Rainfed Program Leader, I direct the process of research prioritization and monitoring, and I am responsible for the allocation and monitoring of human and financial resources according to research priorities within the research/program/project framework. As the Program Leader is ultimately responsible for the delivering on project objectives, I initiate regular reviews to assure scientific excellence. The regional, multidisciplinary and output-oriented nature of WARDA's research requires that the Leader/Co-ordinator forges and maintains strong team spirit among disparate nationalities and diverse disciplines. It also requires that the Leader/Co-ordinator develop a reasonable understanding over a range of disciplines. Additional responsibilities include identifying regional research opportunities and networking, additional donor support for research, leading project proposal development, and monitoring/reporting projects.

As Co-ordinator of three regional Task Forces/networks, a major responsibility has been to develop and co-ordinate regional genetic improvement, including biotechnology and participatory research for the uplands, rainfed and irrigated lowland ecosystems and general rice research for the mangrove swamps. The co-ordinator also plays a major role in project identification and allocation of funds for special regional projects.

Activities

. Co-ordinate rice research with emphasis on the rainfed rice program of WARDA.

. Design and implement the rice varietal improvement, including biotechnology program in collaboration with national scientists, extension workers and parastatals in West Africa.

. Cooperate with all other disciplines of WARDA's research programs in finding solutions to problems limiting upland, hydromorphic and lowland rice production in West Africa.

. Lead the WARDA biotechnology program and help to develop regional capacity in biotechnology research and to create regional awareness in biosety and quarantine regulations.

. Collect and characterize African rice germplasm of *O. sativa* and *O. glaberrima* and their wild relatives and develop interspecific hybrids for low management ecosystems in collaboration with scientists from Africa, Asia, Latin America and developed countries like the USA and France.

. Test imported rice for their adaptation to the spectrum of upland/hydromorphic rice growing conditions in West Africa.

. Breed new varieties, using biotechnology tools to combine as many desirable characteristics as possible.

. Maintain a collection of rice varieties and lines as working materials.

. Strengthen NARS in West Africa through effective dissemination of improved varieties, breeders' materials and promising progenies and obtain information about their performance relevant to the improvement of NARS rice production systems.

. Assist in strengthening NARS research capability through manpower development and provide advice for purchase of suitable physical facilities.

. Establish linkages with international and other national organizations responsible for rice research, training, extension and production in West Africa.

Major Achievements

. Through my leadership, a strong foundation for comprehensive regionally based rice research and breeding/biotechnology programs have been established. The program emphasizes the development of high and stable yielding rice varieties and accompanying agronomic practices for the spectrum of rice growing conditions in West and Central Africa, in collaboration with NARS scientists, through the regional Task Forces/networks. The activities of each Task Force are designed to maximize the transfer of improved technologies (i.e. varieties and low-cost cultural practices) to national rice research and development programs. Due to the increased flow of appropriate materials to NARS, several promising rice varieties have been identified, released for mass cultivation or are in the pipeline for release. Others are already being widely cultivated by farmers in the region.

.As rice breeder, I expanded WARDA's hybridization program to incorporate genes, not only for high yield potential, as was the case in previous breeding programs for West Africa, but also for resistance/tolerance to major stresses such as drought, blast, acidity and weed competitiveness into improved rice varieties.

. A breeding program for low input rainfed rice production systems was initiated in 1991 to developed improved varieties suited to low management production systems (cultivated by about 80% of the resource poor rice farmers in West Africa). Several improved rice varieties have been released or are in the pipeline for release in 17 West and Central African countries.

. A wide hybridization program was initiated in 1991 to introgress important traits between *O. sativa* (Asian) and *O. glaberrima* (African) rice species to increase the genetic variability of each varietal type. This resulted to a major breakthrough as we not only defined methodologies and procedures for crossing these two species, but also developed true interspecific hybrids with important morpho-agronomic traits for weed suppression and higher levels of resistance/tolerance to major biotic and abiotic stresses. This program attracted financial support (US$ 2 million over 3 years) starting in1997 from the Rockefeller Foundation and the Government of Japan for an international collaborative project aimed at developing low management rice varieties that are well suited to resource poor farmers' conditions. Through this project, funds were made available by the Rockefeller Foundation in 1996 for the establishment of a biotechnology (anther culture and molecular marker-aided selection) program at WARDA. Project team comprises scientists from WARDA (13) including two molecular biologists, IRRI

(4), CIAT (2), ORSTOM (2), Cornell University (1) and rice breeders, extension and NGO workers from 17 West African countries. I am the project leader responsible for the implementation of the project. Through this program WARDA received the Kind Bouduein award given by the CGIAR in 2000 and a regional consortium on sustainable rice-based production is being implemented.

. I helped to establish a systematic germplasm collection from 17 countries in West Africa and to undertake morpho-agronomic characterization of newly collected rice varieties and classification of varietal types through isozyme analysis. We have built-up the genetic base at WARDA from about 2000 in 1991 to over 16000 accessions in 2000 and have developed a germplasm data management system in collaboration with the System-Wide Information Network on Genetic resources (SINGER) project.

. I started a new approach to on farm technology development and dissemination (Farmer participatory varietal selection and breeding) in 17 countries in West and Central Africa. In this approach farmers are taking the lead in selecting varieties and other technologies that are acceptable to them using their own criteria. This approach has proved very popular with farmers and also a good measure of the acceptability of new varieties. It has therefore attracted funds from the Japan Government, Rockefeller Foundation and the GATSBY Foundation in the UK.

2. July 1988 to December 1990

Employer The International Institute of Tropical Agriculture (IITA).
USAID/IITA/NCRE Cameroon Cereals Program.

Duty Station Dschang, West Cameroon.

Position Co-ordinator, Rice Research Program and Principal Rice Breeder.

Activity

.To provide leadership for overall planning, development and implementation of the rice research program for Cameroon.

. To design and implement the rice varietal improvement program in collaboration with national scientists/extension workers and parastatals in Cameroon.

. To assist in the extension of improved rice varieties to extension personnel, NGOs and farmers.

. To assist in institutional development (Manpower and Physical facilities).

Major Achievements

. An hybridization program was initiated in 1988 to incorporate genes for desirable characters into already identified promising introductions. At the end of September 1989, 52 successful crosses have been made. Eighty percent of crosses involved incorporating genes for tolerance/resistance to low temperature, iron toxicity, rice yellow mottle virus, the African rice gall midge and blast and ten percent for appropriate grain quality characteristics. A rapid generation advance technique was developed and national staff trained in procedures for handling breeding materials.

. A cold room for rice germplasm conservation was constructed at Santchou in West Cameroon in 1989. Total rice genetic variability collected from Cameroon was for the first time conserved in the cold room as a working collection. Morpho-agronomic characterization of available germplasm and a data management system were initiated.

. A screen house was constructed at Dschang to facilitate screening for low temperature tolerance, a major constraint to increased rice production particularly in north west Cameroon. Through this program, several promising varieties were identified and two lines were released for cultivation in northwest Cameroon in 1991.

. **Work in upland rice research was started in 1988 at Sanchou, West Cameroon after a two years break. A multi disciplinary team of scientists comprising a breeder (myself as leader of the program), agronomist, entomologist, pathologist and an economist screened several varieties on station and promising selections on farmers fields in collaboration with extension workers and NGOs.**

. Impact studies including constraint analysis was initiated in July 1989 in collaboration with the Testing and Liaison Unit (TLU).

3. September 1975 to June 1988

Employer National Rice Research Station (RRS). Seconded to the WARDA Regional Mangrove Swamp Rice Research Project.

Duty Station RRS, Rokupr, Sierra Leone

Positions **.**Head of the Varietal Improvement Program/Senior Research Officer (September 1983 to June 1988).

.Head of the Varietal Improvement Program/Research Officer. (October, 1979 to August, 1983).

.Assistant Research Officer (July, 1978 to September, 1979).

.Research Assistant (September, 1975 to June, 1979).

Responsibilities

As head of the rice varietal improvement program for mangrove swamps of West Africa, I had regional responsibility to develop improved rice varieties for the spectrum of mangrove swamp conditions encountered in West Africa.

Other Activities Include :

. Seed multiplication, purification and distribution to mangrove swamp rice farmers in West African countries.

. Post harvest technology studies in collaboration with the Agricultural Economist.

. Rice based cropping system research for associated mangrove swamp.

. Technology assessment and transfer program for mangrove swamp rice farmers in six West Africa.

. Socio-economic surveys of small farmers in Sierra Leone, The Gambia, Guinea, Guinea Bissau, Nigeria, and Senegal

Major Achievements

. **Constructed the WARDA-Rokupr cold room and took responsibility for the genetic resources activities. Between 1980 and 1988 over 1000 mangrove swamp rice accessions collected from 6 West African countries were evaluated for morpho-agronomic traits, biotic and abiotic stresses. A catalog of mangrove swamp rice germplasm was produced in 1986.**

.Particular interest was on breeding for tolerance to soil stresses and I developed laboratory screening techniques and varieties tolerant to salinity, iron toxicity, acid sulphate soils and seedling drought. Several papers on stress tolerance of mangrove swamp rice varieties were published.

. Varieties I developed are currently widely cultivated by farmers in six countries in West Africa. These varieties include: ROHYB 15 (WAR 1 or ROk 22) ROHYB 6 (ROk 21), WAR 81-2-1-2, WAR 77-3-2-2, WAR115 and WAR100 series.

4. July 1974 to August 1975

Employer	Government Rokel Secondary School.
Position	Senior Teacher and Head, Agriculture Program.
Duty station	Freetown, Sierra Leone.
Activities	I taught biological and Agricultural Sciences and I was responsible for all farm activities.

5. Part Time Employment

Employer University of Sierra Leone

Position Part time lecturer

Duty station Njala University College. Njala, Sierra Leone.

Period 1985-1988 (Four to eight weeks each year).

Activity

I lectured Agronomy 441 to final year Agriculture General students each year during my annual leave. This was a four credit hour course on plant breeding and genetics.

SELECTED CONSULTANCIES

. Served as consultant to review several international research programs, the most recent in 2000 being the review of the CGIAR System Wide Program on Participatory Research and Gender Analysis.

. Reviewed research on rice in Cameroon, Guinea, Guinea Bissau, Sierra Leone and Nigeria.

. Advised and assisted to develop national research programs of several African countries including Benin, Burundi, Cameroon, Chad, Côte d'Ivoire, the Gambia, Guinea, Guinea Bissau, Kenya, Liberia, Rwanda, Senegal, and Sierra Leone. Advice to policy makers include aspects related to rice research, development and networking for food security and poverty alleviation.

PUBLICATIONS

Research Dissertations

.Jones, M.P. (1974). Phosphorus fixation capacities of some Sierra Leone soils. B.Sc. Agric. degree dissertation.

.Jones, M.P. (1979). Germination and seedling development of rice in salinized culture solution. A dissertation for an Ms. in Conservation and Utilization of Plant Genetic Resources.

.Jones, M.P. (1983). A study of salt tolerance in mangrove swamp rice. A Ph.D. thesis for the degree of Plant Biology.

Publications in Scientific Journals/Newsletters

. Jones, M. P. (1998). Basic breeding strategies for high yielding rice varieties at

WARDA. Jpn. J. Crop Sci. 67, extra issue 2 .

.Jones, M. P. (1998). Food security and major technological challenges: The case of rice in sub-Saharan Africa. Jpn. J. Crop Sci. Vol. 67, extra issue 2.

.Jones, M. P. (1997). Diversity and potential of *Oryza glaberrima* Steud in upland rice breeding.Breeding science Vol. 47, No. 4.

.Jones, M. P., et al (1997) Interspecific Oryza Sativa L. X O. Glaberrima Steud. progenies in upland rice improvement. Euphytica 92: 237 - 246.

.Jones, M. P., et al (1997) Diversity and potential of Oryza Glaberrima Steud. in upland rice improvement. Breeding Science. 00: 1 - 5, (In press).

.Jones, M.P., D.E. Johnson, and T. Kouper. (1996). Weed competitiveness in upland *O. sativa* and *O. glaberrima* rices. IRRI Rice Res. Notes 2 (1) 32-33.

.Jones, M.P., Jeutong, F. and Tchatchoua, J. (1992). A survey of rice diseases in Cameroon. Plant disease. 77:133-36.

.Jones, M.P. et al. (1991). Diseases of rice in Cameroon. IRRI Technical Newsletter 16(1) 19-20.

.Jones, M.P. et al (1990). Promising cold-tolerant and high-yielding rice lines for Ndop Plain, Northwest Cameroon. IRRI Technical Newsletter 15(3) 17-18.

.Jones, M.P. (1990). Rapid evaluation of salt tolerance of mangrove-swamp rice varieties. Trop. Agric. (Trinidad) 67(3) 199-203.

.Jones, M.P. and D. Janakiram. (1990). CICA 8 and IITA 222, new rice varieties for irrigated areas of Mbo plain in West Cameroon. IRRI Technical Newsletter, 15(5) 14-15.

.Jones, M.P. et al (1989). Yield potential of irrigated rice IR7167-33-2-3 and Tainan V at Ndop plain. IRRI technical Newsletter, 14 (5). 19.

.Jones, M.P. (1989). Rapid generation and improvement of salt tolerance in photo period sensitive mangrove swamp rice varieties and breeding lines. Environmental and Experimental Botany 29(4) 417-422.

.Jones, M.P. et al (1989). Yield potential of IR7167-33-2-3 and Tainan V at Ndop Plain, North West Cameroon. IRRI Technical Newsletter, 14(4) 23-24.

.Jones, M.P. (1988), Rohyb 6-WAR-6-2-B-2. A new rice variety for medium season mangrove swamp of West Africa. WARDA Tech. Newsletter 8 (1) 5-7.

.Jones, M.P. (1988). Root distribution of rice varieties in saline mangrove swamps. WARDA Tech. Newsletter 8 (1) 5-7.

.Jones, M.P. (1988). Comparative performance of improved and traditional varieties under acid sulfate soils. WARDA Tech. Newsletter 8 (1) 12-14.

.Jones, M.P. (1987) Main and ratoon rice crop performance in Mangrove swamps. IRRI Tech. Newsletter 12 (2) 11-12.

.Jones, M.P. (1986) Genetic analysis of salt tolerance in mangrove swamp rice. In. Rice Genetics. Proceedings of the International Genetic Symposium. International Rice Research Institute, Los Banos, Philippines 27-31 May, 1985, P. 411-422.

.Jones, M.P. (1986). Ratooning methods to synchronize flowering in photo, sensitive and non-photo sensitive rice varieties. WARDA Tech. Newsletter 6 (1) 13-15.

.Jones, M.P. (1986). Comparative yield and other characteristics of the main and ratoon rice in tidal mangrove swamps of West Africa. WARDA Newsletter 6 (1) 18-20.

.Jones, M.P. (1986). Rohyb 15-WAR-3-3-B-2, a new rice variety developed for the salt limited, short season mangrove swamps of West Africa. WARDA Technical Newsletter 6 (1) 15-18.

.Jones M.P. (1984) Variability in salinity tolerance by rice in mangrove swamps of Sierra Leone. WARDA Technical Newsletter 5 (1) 34-36.

.Jones, M.P. and D. A. Wilkins (1984). Screening for salinity tolerances by rapid generation advance. IRRI Newsletter 5 (1) 34-36.

.Jones, M.P. and J.W. Stenhouse (1984) Inheritance of salt tolerance in mangrove swamp rice, IRRI Newsletter 9 (3) 9-10.

.Jones, M.P. and J.W. Stenhouse (1984). Monitoring salt content in the Rokupr trial area - Sierra Leone. WARDA Technical Newsletter 5 (1) 12-14.

.Jones, M.P. and J.W. Stenhouse (1983) Varietal performance in mangrove swamps of Sierra Leone. WARDA Technical Newsletter 4 (1) 11-13.

.Jones, M.P. and J.W. Stenhouse (1983) Salt tolerance of mangrove swamp rice varieties. IRRI Newsletter 9 (1) 8-9.

.Jones, M.P. (1980) A method for rapid evaluation of salt tolerance of rice varieties and breeding lines. WARDA Technical Newsletter 2 (1) 19-20.

.Jones, M.P. (1980) Improved rice varieties for mangrove swamps. J. Agric. Soc. of Sierra Leone. 10: 32-44.

Dingkuhn, M., M.P. Jones, D.E. Johnson. And Sow. (1997). Growth and Yield potential of *Oryza sativa* and *O. glaberrima* Upland Rice Cultivars and their Interspecific Progenies. Fields Crops Res. (in press)

.Johnson, D.E., M. Dingkuhn, M.P. Jones, and M.C. Mahamane. (1997). The effect of weed competition on *O. sativa* and *O. glaberrima*, and the influence of plant type. Weed Res., submitted.

.Johnson, D.E., C.R. Riches, R. Diallo, and M.P. Jones.(1997). Striga on rice in West Africa; crop host range and the potential of host resistance. Crop Protection 16 (2), 153-157.

.Dingkuhn, M., M. P Jones., B. Fofana and A. Sow. (1997). New high-yielding, weed competitive rice plant types drawing from *O. sativa* and *O. glaberrima* genepools. Pages 37 to 52 in Kropff et al (Eds.) Application of System Approaches at the Field Level (Vol. 2). IRRI, Philippines.

.Riches, C. R., D. E . Johnson., and M. P . Jones (1996). The selection of resistance to *Striga* species in upland rice. Pages 674 to 680 in Moreno et al (Eds.) Advances in Parasitic Plant Research, Sixth International Parasitic Weed Symposium, Codoba, Spain.

.Sarawat, K. L., M. P. Jones and S . Diatta. (1995). Response of upland rice to phosphorus in an ultisol in the humid forest zone of West Africa. Fertilizer Research. 10: 1-7.

.Stenhouse, J.W. and M.P. Jones (1984) Grain yield of ROk 5 and some traditional rice varieties in mangrove swamps of Sierra Leone. WARDA Technical Newsletter 5 (1) 26-27.

.Stenhouse, J.W. and M.P. Jones (1984). Grain yield of ROk 5 and some mangrove swamp improved rice varieties in Sierra Leone. WARDA Technical Newsletter 5 (1) 30-32.

.Bangura, F.J., Jones, M.P. and H.M. Bernard. (1987). Deep flooded rice growing areas near Tormabum, Sierra Leone. In Deep Water Rice. 12 3-6.

Poster Articles

.Jones, M. P., Audebert, A. and Sarawat, K. (1995). Breeding for drought tolerance in West Africa upland and hydromorphic rice germplasm. 1st Inter drought meeting. Montpellier, France,. August 28 to September 2,1995.

.Jones, M. P., Dingkuhn, M. and Audebert, A. (1995). Anther culture and wide hybridization for West Africa upland rice improvement at WARDA. 3rd Rice Genetic Symposium. Manila, Philippines, 16-20 October, 1995.

Feature Articles

.WARDA Annual Report. (1996). Something new out of Africa. Pp. 13-20.

.WARDA Annual Report. (1996). Farmers in the driving seat. Pp. 21-26.

.Dingkuhn, M., M. P Jones., B. Fofana and A. Sow. (1995). New high-yielding, weed competitive rice plant types drawing from *O. sativa* and *O. glaberrima* genepools. Pages 27 to 35 in WARDA Annual Report for 1996.

.Jones, M. P. and Aedsina, A. A. (1991). Screening upland rice germplasm under low and high-input systems. WARDA Annual Report, pp. 33-38.

.Jones, M. P., Heinrichs, E. A., Johnson, D. E. and Riches, C. (1993). Characterization and utilization of *O. glaberrima* in upland rice improvement. WARDA Annual Report. pp. 3-12.

Book

. Jones, M. P., Dingkuhn, M., Johnson, D. E ., and Fagade, S. O. (1997) Inter specific hybridization: progress and prospect. Proceedings of the workshop: Africa/Asia joint research, interspecific hybridization between the African and Asian rice species (*O. glaberrima* and *O. sativa*). Pp. 231.

Book Chapters

.Jones, M. P. (1994). Agroecological zones and rice production systems in sub-Saharan Africa. In: Training in Mangrove Rice Production. Instructor=s Manual. West Africa Rice Development Association. pp. 3-16.

.Jones, M. P. (1994). Characteristics and breeding of mangrove rice varieties. In: Training in Mangrove Rice Production. Instructor=s Manual. West Africa Rice Development Association. pp. 25-32.

.Jones, M. P. (1994). Morphology, growth and development of the rice plant. In: Training in Mangrove Rice Production. Instructor=s Manual. West Africa Rice Development Association. pp. 33-44.

.Jones, M. P. (1994). Improvement of rice varieties for mangrove swamps. In: Training in Mangrove Rice Production. Instructor=s Manual. West Africa Rice Development Association. pp. 53-63.

.Jones, M. P. (1994). Traditional rice varieties of West African mangrove swamps. In: Training in Mangrove Rice Production. Instructor=s Manual. West Africa Rice Development Association. pp. 47-52.

.Jones, M.P. (1994). Breeding objectives, methods and procedures. In: Training in Mangrove Rice Production. Instructor=s Manual. West Africa Rice Development Association. pp. 64-74.

.Dingkuhn, M.P. Jones, B. Fofana and A. Sow. 1997. New high-yielding, weed competitive rice plant types drawing from *O. sativa* and *O. glaberrima* genepools. In: M.J. Kropff, P.S. Teng, P.K. Aggarwal, J. Bouma. B.A.M. Bouman, J.W. Jones and H.H. van Laar (eds.). Application of Systems Approaches at the Field Level, Vol.2. Kluwer Academic Publishers (Doordrecht/Boston/London), ISBN 0-7923-4287-9. Pp. 37-52.

.Agyen-Sampong, M., Jones, M.P. and Fomba, S. (1992). Rice improvement in the mangrove swamps of West Africa: The state of the art at WARDA Rokupr, Sierra Leone. In Developing World Agriculture. pp. 97-105

Technical Reports and/or Monographs

.WARDA, 1998. New rice for Africa. pp 20.

.WARDA, 1999. Focus interspecific. pp 24.

.Jones, M. P., and Becker, M. (1995) Rice production and research in Guinea Bissau. Consultancy Report to the Institute of Agronomic Research, Bissau. pp. 22.

.Jones, M. P. (1995). The rice plant and its environment. WARDA Training Guide. pp. 32.

.WARDA, 1996. Crossing African and Asian rice species. Advanced in rice research WARDA. pp.10.

.WARDA, 1996. Working the genetic treasures of African rice species. Bintu and biodiversity. WARDA. pp. 7

.WARDA. 1997. Interspecific hybridization project. Brochure. WARDA. pp. 8.

.A decade of mangrove swamp rice research (1989). WARDA Regional Mangrove Swamp rice Research Project, Rice Research Station, Rokupr, Sierra Leone. 52 pp.

.A manual for rice production in the mangrove swamps. (1986) WARDA Regional Mangrove Swamp Rice Research Station, Rokupr, Sierra Leone. 42 pp.

.Diseases of rice in Cameroon (1989). Jones, M.P. et al. 22 pp.

.ROHYB15-WAR-3-3-B-2, A bonanza for West Africa. A new rice variety developed (1986). WARDA. 6 pp.

Major Conference Papers

Jones, M.P., M. Dingkuhn, G.K. Aluko, and M. Semon. 1996. Progress in crossing Asian rice (*O. sativa* L.) with African rice (*O. glaberrima* Steud.). In; Crop Productivity and Sustainability B Shaping the Future. Abstracts of Poster Sessions, 2nd International Crop Science Congress. National Academy of Agricultural Sciences, New Delhi, India, p.10.

Jones, M.P., M. Semon , and K. Aluko, 1997. Characterization and utilization of *Oryza glaberrima* Steud; in upland rice breeding. In: Proc. of wide hybridization: prgress and prospects. Pp. 43-59.

Jones, M.P., M. Dingkuhn, G. K. Aluko, and M. Semon, 1997. Using backcrossing doub led haploid breeding to generate weed competitive rices from *O. sativa* x *O. glaberrima* Steud, genepools. In: Proc. of Wide hybridization: progress and prospect. Pp. 60-79.

Jones, M.P., and T. Dalton. >Qualitative and Quantitative Data Analysis of Farmer Participatory varietal Selection Results=. Paper presented to the 1997 Annual Upland Rice Breeding Task Force, Bouaké, March 1997.

.Jones, M.P., Dingkuhn, M. and Mande, S. 1997. New breeding approaches to upland rice improved: The use of *O. sativa* and *O. glaberrima* crosses. In Press: Upland Rice Consortium/Breeders Workshop: Pandang, Indonesia, 4-13th January, 1996.

.Jones, M.P., Mande, S., and Aluko, K. 1997. Upland Rice situation in West Africa; prospects and priorities for the future. In Press. Upland Rice Consortium/ Breeders workshop: Padang, Indonesia, 4-13th January, 1996.

.Jones M. P. 1994. WARDA=s work and progress in upland rice breeding for West Africa. In: Proc. International Upland Rice Breeders= Workshop; Scientific papers. Montpellier, France. September 6-10, 1993.

.Jones, M.P., Singh, B.N. and Miezan, K. 1994. WARDA=s Varietal nomenclature system. In: Proc. International Upland Rice Breeders= workshop: Scientific papers. Montpellier, France. September 6-10, 1993.

.Jones, M.P. 1994. Germplasm collection and conservation activities in West Africa: The role of the West Africa Rice Development Association. In: Proc. Action Plan on Safeguarding and Preservation of the Biodiversity of the Rice Genepool. IRRI, Los Banos, Philippines. February 28- March 3, 1994.

.Jones, M. P. (1989). Problems and progress in developing farmer adapted rice varieties for mangrove swamp environment. WARDA Annual Rice Review Meeting at WARDA-Bouake, Cote d=Ivoire, 24-26 April, 1989.

.Jones, M. P. (1989) Rice screening for tolerance to low temperature in Cameroon. IRTP-Africa Workshop at ICIPE Headquarters, Duduville, Nairobi, Kenya, 20-23 March 1989.

.Jones, M. P. (1989). Rice Production and Research in Cameroon. IRTP-Africa Workshop held at ICIPE. Headquarters, Duduville, Nairobi, Kenya, 20-23 March, 1989.

.Jones, M. P. (1988). Current status of Varietal improvement for acid sulfate soils of West Africa and the use of biotechnology for further improvement. International Conference on strengthening collaboration in Biotechnology: International Agricultural Research and the Private Sector. Arlington, Virginia, USA, 17-21 April, 1988.

.Jones, M. P. (1988). Breeding mangrove swamp rice for tolerance to salinity. Seminar paper given at IITA Ibadan on 1st May, 1988.

.Jones, M. P. (1987). The current Status of Varietal improvement in mangrove swamp rice: screening for salinity tolerance in mangrove swamp rice varieties and breeding lines. IRTP-Africa Workshop at St. Louis, Senegal, 14-16th October, 1987.

.Jones, M. P. (1986). Rice breeding for adverse soils in the mangrove swamps of West Africa. Paper presented at the 3rd International Symposium on Acid Sulfate Soils at Dakar, Senegal, from 6-11th February, 1986.

.Jones, M. P. et al (1984). The value of improved seeds for agricultural development in Sierra Leone. Workshop on seed production and distribution in Sierra Leone at Makeni, Sierra Leone, 20th November, 1984.

Dingkuhn, M., M.P. Jones, D.E. Johnson, B. Fofana, and A. Sow. 1997. *O. sativa* and *O. glaberrima* genepools for high yielding, weed competitive rice plant types. International Workshop of the Rainfed Lowland Rice Consortium, December 1996 in Ubon, Thailand. IRRI, proceedings in press.

Dingkuhn, M., D.E. Johnson, M.P. Jones, and A. Sow. 1997. The physiological basis for developing low-management upland rice plant types. Workshop on wide hybridization, M=bé, 1996. Proceedings in press

Dingkuhn, M., M.P. Jones, D.E. Johnson, B. Fofana, and A. Sow. Breeding Strategies for Rainfed Lowland Rice in Drought-Prone Environments. S. Fukai, ;, Cooper J. Salisbury (Eds.). ACIAR Proceedings N0. 77. Australian Centre for International Agricultural Resaerch, Camberra, Australia, 1997. Pp. 144-145.

Under-Graduate and Post-Graduate Research Projects

Since 1983, I have supervised several final year B.Sc., M.S.c. and Ph.D. students' projects. These projects form part of the requirements for the offer of degrees by the following Universities.

University of Abidjan, Cote d=Ivoire

.Developing drought-resistant rice varieties using biotechnology techniques. Doc. 3e cycle. 1995. By A. O. Daleba.

.Determining the ecosystem that promote anther culturability in various rice Varietal types. Doc. 3e cycle. 1996 . By M. Dobo.

.Determining characteristics that give rice varieties the ability to suppress or tolerate weeds. Doc 3e cycle. 1996. By K. Tarhonde.

.Study of Interspecific rice crosses for weed suppression or tolerance. D.E.A. 1996. By E. A. kouassi

.Screening Interspecific rice crosses for resistance to blast and drought. D.E.A. 1996. By H. Diandue.

.Comparative performance of selected upland rice varieties under high and low input management systems. D.E.A. 1993. By K. Tarhonde

University of Science and Technology, Kumasi, Ghana

.Varietal screening and genetic analysis for iron toxicity tolerance in rice. M.Phil. 1996. By J. O. Nipah.

Centre University de Dschang, Cameroon

.Screening rice varieties for tolerance to low temperature. (1989). B.Sc. By B S Asanga

. A technique for rapid evaluation of rice germplasm for tolerance to low temperature. (1990) B.Sc. By B A N=Guew

The University of Sierra Leone

.The variability in tolerance to sodium chloride within mangrove swamp rice varieties. (1983). B.Sc. By J. B. Jabatti

.Effect of acid sulfate soil stresses on the growth of mangrove swamp rice varieties (1984). B.Sc. By B . Jallo

.Effect of depth of flooding on vegetative growth of some mangrove swamp rice varieties. (1984). B.Sc. By B. A. Koroma

.Rice Breeding for Acid sulfate soil conditions (1986). M.Sc. By J. B. Jabati

With Center University de Dschang, Cameroon

.Screening rice varieties for tolerance to low temperature. (1989). B.Sc. By B. S. Asanga

.A technique for rapid evaluation of rice germplasm for tolerance to low temperature (1990). B.Sc. By B. A. N'Gue

REFEREES

Dr. Amir Kassam
Senior Agricultural Research Officer
Research, Extension and Training Division
Food and Agriculture Organization
Via delle Terme di Caracalla
Rome - 00153
ITALY
Tel: +39-06 57056225
e-mail: amir.kassam@fao.org

Dr. Tatsuo Fujimura
Senior Research Adviser from Japan Ministry of Foreign Affairs
UNDP/TCDC
515 East 72nd Street, Apt. 28-8
New York, NY 10021
USA
Tel and Fax: (212) 772-1050
E-mail: tfujimura28@msn.com

Dr. Dunstan S. Spencer,
Dunstan Spencer and Associate
27 Guy Street,
Freetown,
Sierra Leone
Tel. (232)228669
Fax.(232)224618
E-mail. SPENCER@SL.BAOBAB.COM

Helen Victoria Hambly Odame

Kon. Wilhelminalaan 308
2274 AV Voorburg, The Netherlands
(31-70) 381-8587 (h)
(31-70) 349-6205 (w)
e-mail: H.Hambly@cgiar.org

Personal Information

Citizenship: *Canadian citizen, resident of Kenya*
Date of birth: *18 October 1964*

Professional Experience

August 1995 to present — **International Service for National Agricultural Research (ISNAR)**
The Hague

Research Officer ***(Information and New Technologies Program- 50% Training and Capacity Building Officer and 50% Gender and Agricultural Research Project Leader)***

- **Project development and evaluation for agricultural research capacity building projects**
- **Analysis of national research management needs and impact evaluation**
- **Coordination of ISNAR contributions to the International Agricultural Research Centers/National Agricultural Research Systems Training Group (INTG) for sub-Saharan Africa**
- **Preparation and production of training modules for training trainers in various management topics (e.g. priority-setting, research program formulation, training needs assessment for genetic resource programs, participatory research, etc.)**
- **Leader of a new cross-program gender initiative for ISNAR's Medium-Term Plan 2000-2003 involving 3 major elements: 1) Information compilation and dissemination in key gender and agricultural research issues (e.g. planning, monitoring and evaluation; women scientists and organizational development; women's self-help organizations and research processes); 2) Collaborative projects with CGIAR and multilateral initiatives; and 3) the Women in National Agricultural Research program.**
- **Support for gender analysis in various ISNAR programs and projects**
- **Representative to CGIAR gender programs (Gender and Diversity Program; Participatory Research and Gender Analysis)**
- **Various consulting services- Operations Evaluation Department, World Bank, PRGA Program**
- **Research and preparation of a training of trainers module on gender analysis in agricultural research management**
- **Research and production of a report and directory on agricultural research planning in sub-Saharan Africa and research and co-editor of the *Agricultural Research Planning Sourcebook***
- **Coordination of an internally commissioned external review (ICER) of ISNAR's training function (Jan. - May 1996)**

- **Organization and preparation of documentation for the CGIAR/FAO Five Year External Review of ISNAR (Jan. - Dec. 1997); collaboration on a methodology to assess ISNAR's impact**
- **Secretary to the ISNAR Board of Trustees (1997 - 2000) and support to ISNAR's governance**

June 1994 to Feb. 1995 — **International Development Research Centre (IDRC), Eastern and Southern Africa Regional Office**
Nairobi, Kenya

*Project Officer - **Environment and Natural Resources***

- **Project management and administration for environment and natural resources in the Regional Office (funding and coordination of research projects on land policy, biodiversity, genetic conservation, and indigenous knowledge)**
- **Project development and monitoring in Ethiopia, Uganda, Kenya, Tanzania, Mozambique, Zimbabwe**
- **Assistance to researchers in planning and budgeting their projects and disseminating results**
- **Negotiation and communication with other donor agencies; recipient institutions such as universities and NGOs and international organizations (UN, CGIAR)**
- **Representation to international research conferences and events on specific areas of interest to the program (e.g. National Environmental Action Plans, Desertification Convention, biodiversity, gender and environment issues)**
- **Review of proposals, donor assessments, project completion reports**
- **Contributions to program development, public awareness and related activities**

May 1993 to April 1994 — **International Development Research Centre**
Ottawa, Canada
Consultant *(Phase II) & Research Assistant (Phase I)*

- **Phase II- Coordination of a special initiative on alternative indicators of environmental sustainability and tracking change in dryland systems**
- **Joint coordinator of the research project entitled, *Grassroots Indicators for Desertification: experience and perspectives from Eastern and Southern Africa***
- **Phase I- Organization of two international workshops and preparation of proceedings**
- **Review and compilation of results of research projects**

Sept. 1992 to May 1993 — **Women, Environment and Development Network (WEDNET)**
Toronto, Canada
Research Associate

- **Bibliographic and logistical support to ten WEDNET research projects at universities and research institutes across Africa**
- **Assistance to the coordinator of the project**
- **Networking with gender and environment researchers and organizations worldwide**

- **Assessment and participation in the final evaluation of the research project activities and findings**

May 1988 to Sept. 1989 — **Institute of Marine and Terrestrial Ecology (IMTEC)**
Toronto, Canada
Program Manager

- **Program management of an urban and peri-urban forestry in the Great Lakes Region**
- **Planning and evaluation of environmental projects including riparian rehabilitation, community forestry and wildlife conservation education**
- **Administrative duties including supervision of support staff; prepare consultants' and sub-contractor agreements**
- **Organize Advisory Board meetings**
- **Corporate and government fundraising and public relations campaigns**
- **Liaison with government conservation authorities for program planning and design**
- **Organization of community meetings and media relations**
- **Participation in three major metropolitan task forces on environmental cleanup**

1989 to present — **Developing Countries Radio Farm Network (DCFRN)**
Toronto, Canada
Advisory Board Member & Scriptwriter/Reviewer

- **Research and writing radio scripts for international broadcast**
- **Topics include community environmental conservation, genetic diversity, community seed banking, women and agriculture and tree-planting**

May 1987 to July 1988 — **United Nations Environment Programme (UNEP)**
Nairobi, Kenya
Intern, Office of the Deputy Director DC/PAC

- **Development of a two databases on wind and water erosion control methods for sub-Saharan Africa**
- **Editing and field testing of an agricultural extension manual on desertification control**
- **Organization of a workshop on soil conservation extension in Kenya**

May 1986 to Sept. 1986 — **Canadian Red Cross Society/ Red Crescent Society of Morocco**
Rabat, Morocco
Delegate/ Trainer

- **Training volunteers and civil police in emergency first-aid and cardio-pulmonary resuscitation in rural and urban sites across Morocco**
- **Public speaking and development education in Canada**

June 1983 to Jan. 1984

YMCA/YWCA of Canada/Peru
Pariahuanca, Peru
Development Worker/ Volunteer

- **Working with farmers in two projects: a potato marketing cooperative and hillslope reforestation project supported by USAID**

Education

January 2000

York University, Faculty of Environmental Studies
Toronto, Canada

Doctor of Philosophy
Title of dissertation: The Implementation and Institutionalization of Agroforestry in Western Kenya: A Gender and Agency Analysis
Subject area: Tropical agroecology and development; focus on environmental issues in sub-Saharan Africa. Research methodology emphasized gender analysis and the application of qualitative data analysis software. Specific area of research is implementation studies of agroforestry research and development policy and projects in the Lake Victoria Basin.
Research Awards/Grants. Environment Canada Tri-Council Secretariat, Eco-Research Fellowship and the IDRC/ John G. Bene Award in Social Forestry

September 1992

York University, Faculty of Environmental Studies
Toronto, Canada

Masters in Environmental Studies
Subject area: Community based environmental conservation
Research Support. IDRC Young Canadian Research Fellowship, Metropolitan Toronto Conservation Authority Award

June 1989

University of Toronto
Toronto, Canada

Bachelors of Arts

Subject area: **Specialist Program in International Development Studies and Minor in Natural Resource Management (all options taken in the Faculty of Forestry)**

Certificate Courses

Salzburg Seminar, Salzburg, Austria
Session 308: Environment and Rural Development, fellowship from the W.W. Kellogg Foundation (November 1994)

Aga Khan Foundation / Sussex University Participatory Research Seminar, Canada
Participatory Rural Appraisal Training for Facilitators (December 1991)

Summer Institute on Gender and Development, Canada
GAD Research Development Course (July 1991)

Sde Boqer Dryland Afforestation Research Field Course, Israel
Hebrew University of Jerusalem Field Course in Dryland Afforestation (April 1987)

Other Professional Skills

Training, Group Facilitation and Public Speaking
Languages: *English, working knowledge of French, Spanish and Kiswahili*
Computer software*: Microsoft Office; Corel Draw, Ethnograph, NUD*IST (qualitative data analysis software), SPSS*

Publications

Hambly, H. (forthcoming) *The Expansion and Contraction of Women's Self-Help Organizations: agricultural research and development involvement with local institutions*. Institute of Social Studies Seminar Series paper, February 9, 2001.

Hambly, H. (forthcoming). *From Workshop to Workplace: An Evaluation of Gender Training in the Management of Agricultural Research*. ISNAR Discussion Paper, The Hague

Hambly, H. 2001. *Engendering Monitoring and Evaluation*. Training Module for the Sustainable Development Women in Development Program of FAO. ISNAR/FAO. January 2001.

Gijsbers, D., Janssen, W. Odame Hambly, H. and Meijerink, G. 200. *Planning Agricultural Research: A Sourcebook*. Oxford: CABI.

Hambly, H. 2000. *Engendering the Logframe*. Paper presented at Gender and Agriculture in Africa: Strategies for Moving Forward. World Bank/ISNAR/UNDP-Africa, May 3-5, 2000, Nairobi, Kenya.

Z. P. França, H. Hambly, and J. I. Cohen. 2000. Training Needs Assessment– Human Resource Development for Genetic Resource Managers. ISNAR Briefing Paper, The Hague.

Hambly, H., Z. Peixoto França and R. Obura. 1999. *Impact Evaluation of Training: A Participant Based Approach*. Paper presented to the African Evaluation Association Annual Meeting, September 13-17, 1999, Nairobi, Kenya.

Hambly, H.V and L. Setswhaelo. 1998. Agricultural Research Plans in Sub-Saharan Africa. ISNAR Research Reports No. 11, The Hague

Kabutha, C. and Hambly, H.V. 1996. *Gender Concerns in Agroforestry*. A paper presented at the first Kenya National Agroforestry Conference, 25-29 March 1996, Nairobi, Kenya.

Hambly, H. V. and T. Onweng Angura. Eds. 1996. *Grassroots Indicators for Desertification: experience and perspectives from Eastern and Southern Africa*. International Development Research Center, Ottawa, 168 pp..

Hambly, H.V. 1994. *Women and Agroforestry: Key Issues for Research*. Paper presented at the Eastern and Southern Africa Regional Conference on Women and Environment, Kampala, Uganda, October 16-19.

Hambly, H.V. 1989. A Case Study of the Kenya Institute of Organic Farming, in S. Warren, ed. *Gender Issues in Social Forestry*. The Aga Khan Foundation, Canada.

CURRICULUM VITAE

Gordon Darge Prain

PERSONAL DATA

NAME:	Gordon Darge Prain
BIRTH:	17th. August, 1950, Manchester, United Kingdom
CITIZESHIP	British
PERSONAL:	Married Giuseppina Dell'Orco in 1980. Three children, Andre 12, Anna 9, Marco 2.
ADDRESS:	UPWARD-CIP, P.O. Box 933,
	Manila, Philippines
LANGUAGES:	Native English speaker; Fluent spoken and written Spanish;
	Fair spoken Italian, French

EDUCATION

Ph.D. in Social Anthropology (Cambridge University, 1984). Economic organization; political and religious methods of social control. Thesis: political economy and religious control in a rice-producing region of Tamilnadu, South India.

B.Sc. in Social Anthropology (London School of Economics, University of London). Special courses in economic anthropology, development issues, linguistic anthropology and ethnomethodology, anthropology of organizations, among others.

AWARDS

UNDERGRADUATE:	London School of Economics Friedman Prize for best Bachelor degree thesis
GRADUATE:	Cambridge University Social Science Research Council Award, 1979
	Smuts Fund Fellow, 1980
	Clare Hall Fund Award, 1983
POST-DOCTORAL:	British Overseas Development Administration, PTAS Award, 1984

EMPLOYMENT EXPERIENCE

2000 –

Coordinator, CGIAR Strategic Initiative on Urban and Peri-urban Agriculture (SIUPA)

As coordinator, I am responsible for giving concrete shape to this new System-wide Initiative, which will function through an Urban Harvest research program working in pilot sites in the major regions of the developing world. In each pilot site I am responsible for catalyzing partnerships between CGIAR centers, international partners involved in UPA, national agencies and local user groups to implement relevant R&D activities through small grants mechanism. At the global level I am responsible for supporting linkages between sites, designing cross site comparisons and stimulating linkage between the SIUPA and other international initiatives in UPA, such as SGUA and FAO.

1997 to 1999

Regional Director, East and South East Asia and the Pacific, International Potato Center

As regional director, I had administrative and research management responsibility for CIP's research, training and information dissemination activities in Southeast and East Asia. A total of 10 IRS were stationed in the region in four countries and an important part of the job was to build strong links between this widely spread team and CIP's national partners through developing a regional research and training strategy firmly rooted in participatory approaches. An important part of the strategy was the development of a coherent platform linking UPWARD and CIP regional activities. A second important area of activity included donor relations, especially linkage and fund raising with the regional donors. During this period I was directly managing an ADB funded project in four Asian countries, Japanese and Swiss funded projects in Indonesia and negotiating the final stages of a project in three countries with ACIAR. A third important area of responsibility included liaison with sister Centers, for administrative purposes in Indonesia and for research collaboration in Vietnam, Philippines and China.

1994 to 1997

Philippines Country Representative, International Potato Center (CIP).

As Country Representative, I have administrative and research management responsibility for all of CIP's research, training and information dissemination activities in the Philippines, at our main office in Los Baños and at three provincial stations. This involves familiarization with a range of technical issues involved in agricultural research, such as plant breeding and clonal screening strategies for both potato and sweetpotato, variety conservation activities, pathogen elimination and seed dissemination programs, IPM component research and physiological issues associated with storage and post-harvest management. It also involves giving advice on the

socio-economic and institutional implications of this research and supporting its contribution to local development.

1991 to 1997

Coordinator, Users' Perspectives with Agricultural Research and Development (UPWARD) Network, South and South-east Asia.

UPWARD is both a research and development network and a small-grants program supporting rootcrop-related research in five countries of Asia. It is funded by the Dutch Government and sponsored by the International Potato Center. I took over coordination of this network one year after the inaugural workshop, and so have had the opportunity to make a large contribution to developing the approach and content of the network. As a network, we seek to stimulate the use of a participatory mode of agricultural R&D with a primary focus on the household by government institutions, universities and among the NGO community in Asia through training activities, workshop and conference events, information dissemination and exchange and especially catalyzing this type of research through small-scale R&D funding. Because the small grants program has a capacity-building function, it is very "hands-on". I have taken the lead role in evaluating proposals, suggesting revisions and giving feedback on the research during site visits with users and the project implementation team. On-site visits are not only used to monitor and give suggestions on the research or development activity, but also to stimulate institutionalization of the participatory approach among research managers and policy makers at national and provincial level and among senior staff in NGOs. After fieldwork, help is given in the preparation and revision of reports and in some cases, in the preparation of UPWARD working papers and contributions to other publications.

Though the R&D program focuses on rootcrops and primarily on sweetpotato and potato, these are taken to be exemplary upland and small-farm crops through which to explore key participatory issues in agricultural R&D. The research program is based on a framework emphasizing sustainable natural resource management and a food systems perspective and is organized through four R&D areas: production systems, currently focusing on soil fertility management, integrated pest management and homegardens; crop genetic resources, focusing on user knowledge and management of biological diversity, including supporting in situ conservation; and marketing, processing and consumption, which emphasizes food chain and food policy issues and opportunities for enhancing income generation among rural households through small scale food and feed processing enterprises. Cross-cutting R&D initiatives include policy studies, monitoring and evaluation, institutionalization approaches, gender and indigenous knowledge. I retain close research involvement at any one time in two or three of the 25 or so R&D activities normally being funded and supported, in order to keep close to the users perspectives and to keep learning.

I am involved in more formal capacity-building activities as organizer/resource person for short UPWARD courses teaching participatory skills and tools in three main areas: general diagnostic appraisals; specific action research activities (IPM approaches, PTD trials, enterprise development); and for monitoring and evaluation. Participatory monitoring and evaluation skills and practice are considered a central component of projects. The network produces a newsletter and regular volumes of R&D papers which both enhance the communications skills of network members as well as disseminating information around the network. I am also involved in supervising thesis research at undergraduate, graduate and Ph.D. levels.

1990 to 1991

Acting Department Head, Social Science Department, International Potato Center (CIP), Lima, Peru

1988 - 1989

Social Anthropologist, Social Sciences Department, International Potato Center, Lima

1986 - 1988

Senior socio-economist, Peruvian (INIAA)-Swiss Seed Potato Production Improvement Project, Peru

1984 - 1986

Post-doctoral Fellow, Overseas Development Administration, U.K. (based in Peruvian highlands)

1982-84

Tutorial assistant, Cambridge University

1979 - 1984

Doctoral Dissertation Research, in Cambridge and in Tamilnadu, South India

1976 - 1979

Undergraduate studies

Studies at London University included a thesis project on the sociology of Indian religion.

1974 - 1976

Freelance ethnographic studies in West Africa

1972-1973

Rock&roll/folk/classical concert organization, poetry sessions, theatre.

1969 - 1972

Newspaper reporter

CURRENT RESEARCH AND DEVELOPMENT INTERESTS

- Urban food security and the urban environment
- Indigenous knowledge and management of plant genetic resources
- User participation and experimentation in agricultural R&D
- Institutionalizing agricultural innovation through local R&D networks
- Participatory monitoring and evaluation

OTHER INTERESTS

Certified scuba diver, jogging, wood carving, photography, cosmology.

SOME RECENT PUBLICATIONS

Articles and Papers

Prain,G., 1993. Mobilizing Local Expertise in Plant Genetic Resources Research. in Boef, de W., K. Amanor and K. Wellard with A. Bebbington, "Cultivating Knowledge. Genetic Diversity, Farmer Experimentation and Crop Research. IT Publications, London

Prain,G., V.N. Sandoval and R. Rhoades, 1993. Networking for low external input and sustainable agriculture: the case of UPWARD. In Alders, C., B. Haverkort and L. van Veldhuizen (eds) Linking with Farmers: networking for low external input and sustainable agriculture. Intermediate Technology Publications, London.

Prain,G. 1994. Local Knowledge and Global Science. The need for partnership in plant genetic resources research. In Prain,G. and C. Bagalanon (eds), Local Knowledge, Global Science and Plant Genetic Resources: towards a partnership. Proceedings of an International Workshop on user participation in plant genetic resources research and development. UPWARD, Los Baños.

Prain,G. and M. Piñero, 1994. Community Curatorship of Plant Genetic Resources in southern Philippines: preliminary findings. In Prain,G. and C. Bagalanon (eds), Local Knowledge, Global Science and Plant Genetic Resources: towards a partnership. Proceedings of an International Workshop on user participation in plant genetic resources research and development. UPWARD, Los Baños.

Prain,G., H.Fano and C. Fonseca, 1994. Involving Farmers in Crop Variety Evaluation and Selection. In Prain,G. and C. Bagalanon (eds), Local Knowledge, Global Science and Plant Genetic Resources: towards a partnership. Proceedings of an International Workshop on user participation in plant genetic resources research and development. UPWARD, Los Baños.

Prain, G. 1994. Marketing and Processing of Sweetpotato in Asia: the experience of UPWARD. In T.Napitupulu, J.W.T.Bottema and D.R. Stoltz (eds.) Marketing and Processing of Food Legumes and Coarse Grains: effects on rural employment in Asia. CGPRT, Bogor.

Prain, G., Il Gin Mok, T. Sawor, P. Chadikun, E. Atmodjo and E. Relwaty Sitmorang, 1995. Interdisciplinary collecting of *Ipomoea batatas* germplasm and associated indigenous knowledge in Irian Jaya. In L. Guarino, V. Ramanatha Rao and R. Reid (eds), Collectiing Plant Genetic Diversity: technical guidelines. CAB International, Oxford.

Prain, G. 1995. Sweetpotato in Asian Production Systems: an overview of UPWARD's first phase research. In UPWARD, Taking Root: Proceedings of the Third UPWARD Review and Planning Workshop. UPWARD, Los Banos.

Prain, G. 1995. Capacity Building and Institutionalization of the UPWARD Approach: building a network. In UPWARD, Taking Root: Proceedings of the Third UPWARD Review and Planning Workshop. UPWARD, Los Banos

Prain, G, 1996. UPWARD and Action Research. Preface to Into Action Research: partnerships in Asian Rootcrop Research and Development. UPWARD. Los Banos.

Prain, G, 1996. Community-based research approaches to conservation with development. In Into Action Research: partnerships in Asian Rootcrop Research and Development. UPWARD, Los Banos.

Prain, G, 1998 The Potential for on-farm conservation of rootcrop germplasm in the Philippines. In Talatala-Sanico, R.L. (ed.), Sweetpotato Genetic Resources Conservation and Use in Asia. MAFF/PRCRTC, Baybay, Leyte Philipppines.

Prain, G, 1998. Etude d'un système informel: le cas des semances de pomme de terre. In Scott, G and D. Griffon (eds) Prix, Produits et acteurs: mèthodes pour analyser la coommercialisation agricole dans les pays en dèveloppement. Editions Karthala, CIRAD et CIP, Paris, Montpellier, Lima

Prain, G, and Piniero, M. 1999. Farmer Management of Rootcrop Genetic Diversity in Southern Philippines. In Prain, G., S. Fujisaka and M. Warren, (eds) Biological and Cultural Diversity: the role of indigenous agricultural experimentation in development. ITP, London

Campilan, D., G. Prain and C. Bagalanon 1999. Evaluation from the Inside: Participatory Evaluation of Agricultural Research in the Philippines. In Knowledge, Technology and Policy, Volume 11, Number 4, Rutgers University, NJ.

Prain, G, 1999. Households and Social Networks in Agricultural Research. In Niehof, A. and P. Terpstra (eds) Households in an Interdisciplinary Perspective. Liber Amicorum for Antine Hardon-Baars. Wageningen University, Wageningen, H &C Publication Series 2.

Books edited

Prain,G. and C. Bagalanon (eds), 1994. Local Knowledge, Global Science and Plant Genetic Resources: towards a partnership. Proceedings of an International Workshop on user participation in plant genetic resources research and development. UPWARD, Los Baños.

UPWARD 1995. Taking Root. Proceedings of the Third UPWARD Review and Planning Workshop. UPWARD, Los Banos

UPWARD 1996. Into Action Research: partnerships in Asian rootcrop research and development. UPWARD, Los Banos.

Prain, G. and C. Bagalanon (eds.) 1998. Conservation and Change: Farmer Management of Agrobiodiversity in the Context of Development. UPWARD, Los Banos

Prain, G., S. Fujisaka and M. Warren (eds) 1999. Biological and Cultural Diversity: the role of indigenous agricultural experimentation in development. ITP, London

Wardie Leppan CV not available

Luis Navarro CV not available