PTD CIRCULAR

Six-monthly update on Participatory Technology Development

This seventh issue of the PTD Circular presents, among other things, some publications that focus very specifically on farmers' own experimentation, discovery and innovation. This includes the first case study in a series started by the FAO Forests, Trees and People Programme on farmer-initiated research.

The study from Rwanda (Christof den Biggelaar 1996) is a delicious appetiser for what promises to be a fascinating series. Also the ILEIA reader on *Farmers' Research in Practice* has finally appeared, as well as the learning guide for PTD, entitled *Developing Technology with Farmers* (both van Veldhuizen *et al.* 1997). A publication that will provoke much discussion and renewed energy to prove the effectiveness of PTD is the book by Sumberg and Okali (1996) on *Farmers' Experiments: Creating Local Knowledge*.

We have given more attention to participatory monitoring and evaluation in this issue, as it is becoming increasingly obvious that this is crucial for PTD programmes. Some of the examples do not come directly from agricultural development but rather from the wider spheres of natural resource management and organisational development. PTD in agriculture cannot be regarded in isolation from these, and much can be gained from greater exchange of information about methods and experiences in these wider spheres. This means that this *PTD Circular* is not as focused on agriculture as earlier ones. We hope to maintain this wider view in the future, and welcome suggestions from you about publications and events on participatory development of technical and social innovations beyond agriculture.

The St Ulrich Group will be meeting again in September in the Black Forest, and we hope that much more material and information will then be brought together. As an informal group, the St. Ulrich group does not have glossy brochures to introduce itself. The box below may serve as a short introduction for those who are interested in the group. ■

ANNOTATED PUBLICATIONS

Bebbington A, Quisbert J & Trujillo G. 1996. ***Technology and rural development strategies in a base economic organisation: 'El Ceibo' Ltd Federation of Agricultural Cooperatives***. AgREN Network Paper 62. ODI, Portland House, Stage Place, London SW1E 5DP, UK. 17 pp.

Bolivia, cocoa, farmer associations, marketing, technology development

Part of a wider study by ODI of the role of small farmer organisations in developing and transferring agricultural technology. Focused on a regional federation of 36 cocoa-producing cooperatives in La Paz Department Bolivia, as a successful case of farmer organisation around technology generation and product transformation and marketing. This was favoured by long-term financial and technical support from external agencies, the isolated location of Ceibo, and specialisation on a cash/export crop.

Biggelaar C den. 1996. ***Farmer experimentation and innovation: a case study of knowledge***

THE ST ULRICH GROUP

In 1993, some Europe-based facilitators of agricultural development met to discuss and compare approaches which were given the generic term 'Participatory Technology Development'. This is the creative interaction between local resource users and external organisations and individuals in improving techniques and systems of using the natural resources in a sustainable way. As the group first met in the village of St Ulrich in southern Germany, it has assumed this as its name. This informal network, which now consists of about 40 persons from various countries in Western Europe, exchanges experiences and insights gained while implementing PTD programmes or while supporting such programmes through training, consultancies etc. The group has a strong pragmatic bias: the emphasis is on further development and promotion of PTD based on hard experience. The members meet annually and maintain contacts between meetings, also for peer review, primarily through electronic means. The St Ulrich Group initiated the *PTD Circular*, currently published by ETC-Netherlands, one of the initiators of the network. The circular is distributed globally to about 1000 organisations or individuals. The St Ulrich Group also encourages communication and learning about participatory approaches through lively 'Dare-to-Share Fairs'.

For further information you may contact the editors of the PTD Circular.

generation processes in agroforestry systems in Rwanda. Community Forestry Case Study 12. Forests, Trees and People Programme, FAO, Viale delle Terme di Caracalla, I-00100 Rome, Italy. 123 pp.

Rwanda, agroforestry, farmer experimentation, gender issues, indigenous knowledge, innovation

Active planting and management of woody species by farmers is relatively new in Rwanda. The farmers' processes of generating knowledge about agroforestry, particularly their experimental methods, were studied. Locally identified tree experts had different knowledge about tree cultivation than did 'normal' farmers. The latter had less land and were more likely to experiment with integrating trees in complex systems with field crops. It proved difficult to differentiate experimentation from normal farming practice, as each season is an 'experiment'. Knowledge production by farmers was oriented to its use but also to a future beyond the farmers' lifetime. Considerable gender differences in knowledge about trees were found. Communication networks for knowledge sharing were weak; here, more support is needed. Highly recommended reading for PTD practitioners.

Boubaker B et al. 1996. ***L'approche participative et integrée***. Office de Développement Sylvo-Pastoral du Nord-Ouest, Route de Tunis, Km 1, 9000 Béja, Tunisia. 105 pp.

Tunisia, action research, forestry, natural resource management, participatory planning, women

In northwest Tunisia, a participatory approach to village planning was developed through a process of training, coaching and facilitation in self-evaluation of development agents by a GTZ (Germany Agency for Technical Cooperation) project. After the villagers analysed their situation and defined their aims and activities, a deeper analysis by a multidisciplinary team of regional and village experts brought together external and local knowledge. Activity plans were negotiated, agreed by contract and monitored jointly. No details are given about how the participatory research is conducted. Special attention is given to the involvement of village women.

Bunders J, Haverkort B & Hiemstra W (eds). 1996. ***Biotechnology: building on farmers' knowledge***. Macmillan Education Ltd, Houndmills, Basingstoke RG21 6XS, UK. 240 pp.

agricultural development, animal health, biotechnology, food processing, genetic diversity, indigenous knowledge, participatory research, plant protection, small-scale farming

Examines farmers' biotechnology practices in animal health, bio-pesticides, food processing and crop genetic resources; assesses the potential of science-based biotechnology research for small-scale farmers in the tropics; and presents a participatory and interactive methodology for developing biotechnologies, building on local knowledge and making use of the latest scientific insights.

Budelman A (ed). 1996. ***Agricultural R&D at the crossroads : merging systems research and social actor approaches***. Agricultural Development Department, Royal Tropical Institute (KIT), Mauritskade 63, 1092 AD Amsterdam, The Netherlands. 247 pp.

agricultural innovations, farming systems research , participation, indigenous knowledge, innovations, participatory technology development

This book presents a selection of papers from the International Symposium on Systems-Oriented Research in Agriculture and Rural Development, held in Montpellier, France in November 1994. The papers were selected for their attempt to merge Franco- and Anglo-phone research traditions with respect to systems research and a social actor approach. This last approach is bringing 'harder', more traditional scientific agro-ecological elements together with 'softer' social processes, and recognizes the variety of actors involved in agricultural change. This is expected to provide new vitality, challenges and issues, requiring researchers to reflect on their future roles in R&D processes. The book provides thought provoking academic reading. A detailed annotated bibliography is added.

Carucci V & Arega Y. 1997. ***How to make a soil conservation-based development plan (local-level participatory planning approach)***. World Food Programme/ Ministry of Agriculture and Natural Resource Development, Addis Ababa, Ethiopia. n.p.

Ethiopia, manual, participatory planning, soil conservation

Manual for development agents (DA) to guide them in preparing workplans for forestry and land husbandry improvement in consultation with farmers. The DA are advised to practise PTD, described as initiating small on-farm and in-nursery trials to test new ideas; farmers record their observations; monitoring and evaluation includes simple cost-benefit analysis. However, few guidelines are offered to the DA on how to go about this type of PTD; the emphasis of the manual is on drawing up local-level plans.

Diop JM & Manintveld K. 1996. **Le développement participatif des technologies pour une agriculture durable avec peu d'intrants externes. 1. Les concepts et les processus. 2. Assignations d'apprentissage pour une formation**. Typescript. ETC-Netherlands, POB 64, NL-3830 AB Leusden, Netherlands. 23 + 39 pp.

Senegal, low-external-input agriculture, participatory technology development, sustainable agriculture, training

PTD concepts and processes are concisely presented, with a case example from Senegal outlining the roles taken by farmers, extensionists and researchers, and the positive and negative aspects of the experience. Includes a large section on low-external-input and sustainable agriculture. The second part is a collection of learning activities, very useful for PTD training courses in francophone countries.

Ford R *et al.* 1996. **Conserving resources and increasing production: using participatory tools to monitor and evaluate community-based resource management practices**. Center for Community-Based Development, Program for International Development, Clark University, Worcester, MA 01610, USA; PRA Programme, Egerton University, Box 536, Njoro, Nakuru, Kenya. 53 pp.

Kenya, natural resource management, participatory monitoring and evaluation, resource conservation

Case study with examples of field uses of participatory tools for monitoring and evaluation. Three communities in Kenya identified their own indicators of natural resource management and recorded relevant changes in community log books (see Razakamanarina *et al.* 1995). This helped them assess the effectiveness of alternative approaches and practices, and to evaluate their own progress in implementing their community action plans. Farmers showed great enthusiasm to experiment with different crops and management techniques. Draft paper presently in circulation among collaborators in this USAID-supported project.

Gnon T. 1995. **Experiments with agricultural innovations: community-level farmer organizations and extension**. In: *Agricultural extension in Africa: proceedings of an international workshop, Yaoundé, Cameroon*, pp 85-94. Wageningen Agricultural University / CTA, POB 380, 6700 AJ Wageningen, Netherlands.

Togo, agricultural extension, farmers' associations, innovations

Reports how the NGO World Neighbors supports farmer experimentation in 14 pilot villages in Togo. Describes food crop diversification and soil fertility restoration trials, and the impact of community-based extension of the results.

Greenough K, Mamam M, Moussa M & Habou S. 1997. ***Etude de milieu***

JOURNALS

Ensayando DPT. A new newsletter in Spanish promoting the spread of information and exchane of experiences on PTD within Peru and Bolivia as well as elsewehere in Latin and Central America. Contains cases, conceptual articles and lists relevant new publications. It is part of a larger PTD support programme in which a number of NGOs working in the Andes region of Bolivia and Peru have joined hands.
Available from: Centro Ideas, Apartado Postal 11-0170, Lima 11, Peru (Email: Postmaster@ideas.org.pe).

Kritische Okologie (In German). This Journal is published by the German Association for Agriculture and the Environment in the Third World (Verein zur Fordering von Landwirtshaft und Umweltschutz in der Dritten Welt, VFLU). The April 1997 issue (vol. 14 (3/4), 1997) is a theme issue on 'participation' with a number of good case studies as well as overview articles. Not only farmer level methodological aspects, but also national and international dimensions get due attention. For German readers a good overview.
Available from: VFLU, Kritische Okologie, Langgasse 24/h, 65183 Wiesbaden, Germany.

PTD TRAINING MODULE

INTRODUCING PARTICIPATORY TECHNOLOGY DEVELOPMENT

A NUMBER OF LECTURETTES

INTENDED LEARNING EFFECT

Participants obtain in a short period of time a systematic overview of (important aspects of) the PTD approach. To be used in combination with practical exercises, goup discussion, etc.

CONTEXT OF THIS MODULE

Every year since 1992, an international training course on 'Biology and Control of Parasitic Weeds' has been organised by the supra-regional project GTZ-UH 'Ecology and Management of Parasitic Weeds'. Attended mostly by African researchers or extension staff, the course pays a lot of attention to field and laboratory methods for agronomic research, to extension approaches and on-farm and farmer-led experimentation, to PTD. Focused lectures are used to introduce key-elements, followed by practical exercises and interactive learning methods. A series of concise overhead sheets have been prepared for the various lecturettes discussing all relevant aspects of PTD. A selection of these is given in this module. The whole set is available at the address given at the end of the module.

More information: Dr. Stefan Kachelriess, Ecology and Management of Parasitic Weeds GTZ-UH, University of Hohenheim (380), D-70593 Stuttgart, Germany. E-mail: kachries@Uni-Hohenheim.DE.

EXAMPLES OF OVERHEADS USED

Designing experiments

Designs should

- be manageable by the farmer,
- improve the farmers capacity to make their own decisions about how to undertake trials (e.g. by improving natural experimentation).

You can assist in:

- Farmer-to-farmer training
- Design workshop
- Testing alternative designs

Looking for things to try

- Identifying priorities / opportunities
- Identifying local community and scientific knowledge/information
- Screening options and choosing selection criteria
- Reviewing existing experimental practice
  - what do farmers try out?
  - how do they do it?
  - why do they do it in this way?

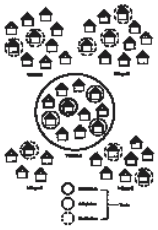
Looking for things to try

Designing of experiments
Involves a number of interlinked steps:

(a) Defining trial objectives;
(b) Determining the required environmental conditions;
(c) Choice of treatments, treatment levels and arrangement of treatments;
(d) Determining replications within and across farms;
(e) Choice of appropriate statistical design(s);
(f) Determining of the plot sizes;
(g) Defining information to be gathered.

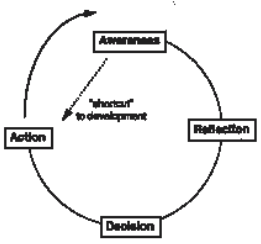
Designing experiments

- Planning and designing experiments
  - who will actually do the experiment?
  - what do farmers expect from researchers (extension staff)?
  - what do researchers expect from the farmers?
  - what treatments do we want to apply?
  - do we need controls?
  - how many times should the experiment be repeated and under which conditions?
  - how do we lay out the trials?
  - how large do we want the experiment to be?
  - what inputs do we need and how can we obtain them?
  - according to what criteria do we select locations?
- Designing evaluation protocols
  - what will be our criteria for evaluating what happens in the experiment?
  - what/when do we need to observe/measure/record/discuss and how do we organise this?



Farmer-led experimentation

learning process



The general sequence of PTD activities

- Getting started
  - Awareness
- Looking for things to try
  - Awareness, Reflection
- Designing experiments
  - Reflection, Decision
- Trying things out
  - Decision, Action
- Sharing the results
  - Awareness, Reflection
- Keeping up the process

PTD as an iterative learning process

et planification participative des actions futures avec les associations Peul Wo'daa'be de Tanout. Lutheran World Relief, POB 11624, Niamey, Niger. 111 pp.

Niger, Fulani, natural resource management, participatory planning, pastoral nomads, PRA

A rare example of a PRA done together with nomadic pastoralists living under arid to semi-arid conditions, which included planning of actions to alleviate the constraints they identified. The difficulties of doing this, even of finding pastoralists who want to analyse and plan together, are frankly discussed. PRA methods become necessary for the lifetime of interaction between outsiders and insiders. PRA becomes a method of participatory implementation and evaluation.

Gubbels P. 1995. **The role of peasant farmer organizations in transforming agricultural research and extension practices in West Africa**. In: *Agricultural extension in Africa: proceedings of an international workshop, Yaoundé, Cameroon*, pp 95-120. Wageningen Agricultural University / CTA, POB 380, 6700 AJ Wageningen, Netherlands.

West Africa, farmers' associations, agricultural research, agricultural extension

Two approaches to partnership in research and extension for agricultural development (OXFAM's Projet Agro-Foresterie in Burkina Faso and World Neighbors programmes in Togo, Burkina Faso, Mali and Chad) are critically analysed. The conclusion is drawn that self-sustaining, member-driven farmer organisations play a crucial role in technology development and dissemination in complex and risk-prone environments.

Hagmann J, Chuma E & Connolly M. 1997. **Farmers' needs propel change and institutional reform in agricultural extension: an action learning experience from Zimbabwe**. In: Forster R, Karkoschka O, Kitz M & Scherler C (eds), *Broadening the agenda: experiences of GTZ-supported projects in rural areas with institutionalising participatory approaches*. GTZ, Unit 425, POB 5180, D-65726 Eschborn, Germany.

Zimbabwe, action research, agricultural extension, institutional development, land husbandry

The participatory approach to innovation development in land husbandry in Zimbabwe (described in several earlier papers by Hagmann *et al.* mentioned in earlier *PTD Circulars*) is now being scaled up in the agricultural extension service AGRITEX. The PTD experiences of GTZ and ITDG projects are used as learning cases for officers in the extension service. Operationalising the participatory extension approach involves substantial changes in organisational culture, roles and attitudes; these are being addressed in an organisational development programme. Institutionalising PTD had required high commitment of all the actors (above all, the head of the extension service), a conducive atmosphere for learning and a focus on human relationships rather than technical issues. But it was important for building PTD 'show cases' to start with a technical focus in direct interaction with farmers, and to expand from there.

Lanting, H. 1996. **The art of facilitating Participatory Technology Development**. Paper presented at the workshop 'The Art of Facilitating', July 1996, Karnataka, India. Available from AME, PO Box 7836, Bangalore, India. 10 pp.

farmer experimentation, soil and water conservation, soil fertility management, pest management, gender issues, participatory monitoring and evaluation, India

A thought provoking discussion of PTD experiences by NGOs in Southern India. Apart from a description of the approach followed, a number of valuable lessons are highlighted: a.o. the difficulties in involving women in the actual experiments, and the need for the NGO to be more aware of available, potential solutions. During evaluation of the experiments farmers showed great ability to analyze trial designs and factors influencing differences in yields among the various plots.

Lloyd-Laney M. 1996. **Putting the people in control: the story of Chivi Calendar**. In: Jassey K (ed), *Engaging participation: the use of video as a tool in rural development*, pp 32-38. Farmesa/FAO, Box 3730, Harare, Zimbabwe.

Zimbabwe, communication, farmer-to-farmer extension, participatory methods, photography

In ITDG's Food Security Project in Zimbabwe, farmers tested and adapted techniques for water harvesting, soil conservation and pest management. They wanted to tell extension workers, as well as other farmers, about their own knowledge and their desire to have access to a plenty of options that they can test in their fields. This report tells how they made a photo calendar to get this message across.

Lysen F. 1996. **How farmers research and learn: The case of arable farmers in East Anglia, UK.Agriculture and Human Values**, vol. 13 (4): 39-47.

farmer experimentation, participatory research, United Kingdom

Whereas research and technology development efforts of farmers in the South are increasingly being documented, there is much less attention for the research role of farmers in Europe and the US. The diversity in local farming systems in East Anglia, UK, makes locally specific research necessary and it is in this that farmers have been found to play an important role, partly by learning while working, and partly by doing more systematic experiments. This contribution stresses the complementarity between farmers' own research and formal research activities.

Mabille Y. 1997. **Learning instead of teaching: Re-activated traditional knowledge makes experts into students.** *Gate* 1/97: 45-47.

Zimbabwe, soil and water conservation, farmer experimentation, participatory extension.

A very easy to read description of the experiences of the 'Con Till Project' (see Hagmann *et al.* 1997) in Zimbabwe with participatory technology development for soil and water conservation. For methodological and other details the reader is referred also to the contribution by Hagmann et al. in the recent book by Van Veldhuizen et al, 'Farmer research in practice' (see this *PTD Circular*).

Mapatano Mulume S. 1997. **Plate-forme pour la recherche paysanne et le renforcement des dynamiques locals (Sud-Kivu, Zaire): concertations entre paysans et cadres ruraux pour une nouvelle dynamique de recherche**. Typescript. 21 pp. Sylvain Mapatano Mulume, BP 274, Cyangugu, Rwanda, Fax (Bukavu) 00873-682 222 611 c/o CERDAF.

Congo, farmer experimentation, farmer-to-farmer extension, farmers' associations, food security, land reform

Report on discussions between farmers and development agents about how the existing groups of farmer-researchers can contribute to rebuilding livelihoods in Eastern Zaire (now Congo). They assess the destruction caused by war and displacement, but also the new ideas gained from refugees. A platform of farmer-researcher groups was created to address not only technical but also social problems in an attempt to gain more food security. They want to use the platform as a 'learning space' for the new actors emerging in the political upheaval. The aim is to create a new dynamic of farmer-led research and farmer-to-farmer extension and to promote social reform, particularly with respect to access to land. The farmer-researchers ask: 'How can others use the achievements of our research if they have no land, tools, animals or seeds?'

Martin P & Quinney S. 1995. ***Participatory Evaluation Project SOS Sahel/UNSO. 1. Final report. 2. Annotated bibliography on participatory appraisal, monitoring and evaluation***. SOS Sahel, 1 Tolpuddle St, London N1 0XT, UK. 87 + 79 pp.

Burkina Faso, Ethiopia, Mali, Mauritania, Sudan, bibliography, monitoring, evaluation, participatory research, PRA

Report on a joint project of SOS Sahel and UNSO to explore methods of involving communities in evaluation of development projects. The idea was to seek examples of successful participatory practices in the projects of these organisations. A few examples of successful local monitoring were found, eg, in farmer-researcher groups. However, despite their rhetoric, few projects had an integrated strategy of participation; this was obvious already in the lack of project self-evaluation. The bibliography refers not only to participatory evaluation, but also to participatory research and farmer-led experimentation and monitoring.

Narayan D. 1996. ***Toward participatory research***. Technical Paper No. 307. World Bank, 1818 H St NW, Washington DC 20433, USA. 265 pp.

participatory research, situation analysis, water management

Focuses on data collection for social analysis, done in a participatory way to enhance local people's skills to analyse and solve problems. Intended for use by technical and social science staff involved in planning and implementing projects in the low-cost water supply and sanitation sector. Identifies the underlying principles of and provides guidance for organising a participatory research process. Describes 33 participatory activities or tools that can be used in community and agency settings, and includes numerous checklists.

PMHE, 1996. **Raising Lunumidella seedlings: Can farmers do it? An experience in farmer experimentation**. Paper presented to the National Workshop on PTD, Kerala, India. Available from PMHE, PO Box 154, Kandy, Sri Lanka. 5 pp, small lettering.

farmer experimentation, participatory monitoring, agro-forestry, seed germination, teak, Sri Lanka

A down-to-earth documentation of 3 years of collaboration between PMHE extension staff and farmers in developing an effective way to enhance teak seed germination, manageble by farmers. Through these years, farmers gradually develop an interest in making their trial and error experimental efforts more systematic.

Prain GD, Bagalanon CP (eds). 1994. ***Local knowledge, global science and plant genetic resources: towards a partnership***. User's Perspective with Agricultural Research and Development (UPWARD), PO Box 933, Manila, Philippines. 300 pp.

farmer-scientist interaction, gene banks, genetic conservation, indigenous knowledge, participatory research, participatory technology development, South-east Asia, sweet potatoes

These proceedings consist of three main parts of which the first addresses some of the broader themes associated with plant genetic resources collection, conservation and evaluation. Part two deals with methods and approaches that have been explored in the collection of varieties, the documentation of local knowledge and the conservation of varieties. The third part comprises experiences with user participative evaluation of unfamiliar varieties and a number of other experiences from Latin America and Asia.

Razakamanarina N *et al.* 1995. **Using village log books for monitoring and evaluation: a guide to community based project management**. APAM/VITA, Mantadia National Park, Andasibe, Madagascar; Program for International Development, Clark University, Worcester MA 01610, USA. 44 pp.

Madagascar, community self-management, methodology, participatory monitoring, evaluation

Explanation and examples of log books kept by villagers in protected and buffer-zone areas to 1) store baseline data collected by them, 2) record their action plans and indicators of progress, and 3) measure the well-being of the community over a longer term. Focused on local organisational development and locally planned microprojects, but also provides some useful ideas for M&E in a PTD process. This is a working draft for trial use in the field and is in a continuing state of revision.

Röling N. 1995. **The changing role of agricultural extension**. In: *Agricultural extension in Africa: proceedings of an international workshop, Yaoundé, Cameroon*, pp 7-20. Wageningen Agricultural University / CTA, POB 380, 6700 AJ Wageningen, Netherlands.

agricultural extension, innovation, knowledge systems, local organisations, natural resource management

Presents four approaches that illustrate the new role of extension: village groups for PTD, local organisations for improving socio-economic status, platforms for sustainable natural resource management, and systems for innovation in agricultural technology. The methodology RAAKS (Rapid Appraisal of Agricultural Knowledge Systems) was used to study the networks of actors who can support innovation.

Rugh J. n.d. **Can participatory evaluation meet the needs of all stakeholders? A case study: evaluating the World Neighbors West Africa program**.. Typescript. CARE, 151 Ellis St NE, Atlanta GA 30303-2439, USA (Email rugh@care.org). 59 pp.

Burkina Faso, Mali, Togo, evaluation, farmer experimentation, participation

The author of *Self-evaluation: ideas for participatory evaluation of rural community development projects* describes the methods he used during an evaluation of World Neighbors programmes in West Africa that had taken a community-based approach to agricultural development through farmer experimentation. Villagers, community leaders, programme staff and representatives of other agencies working in the local area were involved in the evaluation. Participants at village level gained new perspectives on the effect of the programme on their lives. Programme staff learned how to improve monitoring, routine evaluation, analysis and reporting. Headquarters staff were already influenced to make some programme changes before the final report appeared. Even the WN Board of Trustees, though initially expecting a traditional evaluation report, became very supportive of the participatory evaluation process. This case study will soon be published in *Practising Anthropology.*

Sperling L, Scheidegger U & Buruchara R. 1996. **Designing seed systems with small farmers: principles derived from bean research in the Great Lakes Region of Africa**. *AgREN Network Paper 60*. ODI, Portland House, Stage Place, London SW1E 5DP, UK. 15 pp.

Burundi, Congo, Rwanda, beans, genetic diversity, seed production, seed supply, small-scale farming, women

Synthesis of field research in the bean seed sector by CIAT (International Center for Tropical Agricultural) in East-Central Africa together with farmers (mainly women), NGOs, shopkeepers and other actors. Includes observations on the formal seed system, diagnosis of informal channels and reflections on plant genetic management and seed production. Diffusion experiments with small seed packets which were fed into informal channels allowed farmers to explore new varieties, and seed services to expand access to their products. Participatory varietal trials showed the benefits of giving farmers more influence in seed selection. The quality of farmer-produced seed was found to be much higher than commonly thought.

Sumberg J & Okali C. ***Farmers' experiments: creating local knowledge***. Lynne Rienner Publishers, 1800 30th St, Boulder, CO 80301, USA; or 3 Henrietta St, Covent Garden, London WC2E 8LU, UK. US$45. 186 pp.

Ghana, Kenya, Zimbabwe, farmer experimentation, indigenous knowledge, agricultural extension, participatory research, small-scale farmers

Critical analysis of Farmer Participatory Research (FPR) based on a review of literature world-wide and a search for experimenting farmers in Ghana, Kenya and Zimbabwe. The rapid fieldwork yielded no evidence of research-minded farmers, informal R&D systems or potential for synergy between formal and informal agricultural research. All farmers try things out as part of their farming practice. Their experimental methods need not be improved; the need is rather to increase the supply of 'raw material' (seed, ideas etc.) with which they can experiment. Development-driven FPR (which we would probably call PTD) is regarded as a particular model of agricultural extension. This publication draws our attention to the fact that deeper-going studies are needed to prove or disprove many popular hypotheses about farmer experimentation, if PTD is to be further supported by development agencies.

Systemwide Programme on Participatory Research and Gender Analysis. 1997. **A global programme on participatory research and gender analysis for technology development and organisational innovation**. *AgREN Network Paper 72*. ODI, Portland House, Stage Place, London SW1E 5DP, UK. 11 pp.

gender analysis, natural resource management, participatory research, plant breeding

Introduces the programme (mentioned under 'Networking' in *PTD Circular* 6) that brings together research centres of the Consultative Group on International Agricultural Research (CGIAR), national research institutes and NGOs in advancing methodological development and institutionalisation of participatory research with particular attention to women.

Thrupp LA (ed.). 1996. ***New partnerships for sustainable agriculture***. World Resources Institute (WRI), 1709 New York Avenue NW, Washington, DC 20006, USA. US$13.45 + 3.50 p&p. 136 pp.

agroecology, Bangladesh, case studies, Cuba, empowerment, farmer-scientist interaction, Kenya, Nicaragua, participatory approaches, Peru, pest control, Philippines, policy issues, Senegal, sustainable agriculture, USA.

In this report the lessons learnt from nine 'partnerships' for Integrated Pest Management are described. The studies show how these alternatives have been put into practice in a variety of settings - from Kenya, to California, to the Philippines. Each case study highlights the roles of farmers and the many other collaborators needed to make alternative agriculture work. The lessons learnt strongly point to a need to change the role of research and extension. Instead of dictating the terms of agricultural production increases, they will increasingly be called upon to boost local capacity to adapt to changing conditions through training, open communication, political support, and policy forum.

Veldhuizen L van, Waters-Bayer A & de Zeeuw H. 1997. ***Developing technology with farmers: a trainer's guide for participatory learning***. ETC Netherlands / ZED Books, 7 Cynthia St, London N1 9JF, UK. US$15. 224 pp.

adult education, agricultural extension, institutional development, sustainable agriculture, participatory technology development, training

Field-tested learning guide for preparing staff of governmental and

nongovernmental organisations to work together with farmers in developing low-external-input technologies for sustainable agriculture. Stresses interactive learning for organisational development, both in the development agency and in farmers' groups. Includes case study learning exercises, and adds details of resource organisations for obtaining further training materials and audio-visuals.

Veldhuizen L van, Waters-Bayer A, Ramirez R, Johnson D & Thompson J. 1997. ***Farmers' research in practice: lessons from the field***. ILEIA / Intermediate Technology Publications, 103-105 Southampton Row, London WC1B 4HH, UK. 9.95 pound. 320 pp.

case studies, farmer experimentation, farmer innovation, sustainable agriculture

Collection of 17 innovative cases of farmer-led research from Africa, Asia, Latin America and Europe. Gives evidence of how farmers develop and adapt innovations, try them out in different settings, assess their value for improving farm systems, and spread the new ideas and ways of experimenting to other farmers. With several cases covering a period of more than 5 years, aspects of institutionalising PTD and longer-term sustainability issues receive ample attention.

Willcocks TJ, Gichuki FN (eds). 1996. ***Conserve water to save soil and the environment: the evaluation of indigenous water and soil conservation technologies and the participatory development and implementation of an innovative research and development methodology for the provision of adoptable and sustainable improvements***. Collaborative Environment Research Project (ERP) in Kenya, Tanzania and Uganda. Silsoe Research Institute, Wrest Park, Silsoe, Bedford MK45 4HS, UK. 173 pp.

farmer experimentation, indigenous technology, Kenya, nutrient management, participatory technology development, participatory research, soil conservation, Tanzania, Uganda, water conservation

This publication documents the discussions and presentations at an international workshop organized as part of a participatory research programme in three East African countries. Main emphasis in the cases is on documention and analysis of farmers' indigenous practices in soil and water conservation and on participatory methodologies to work towards sustainable improvements in these. A next research stage is proposed in which farmers, extensionists and researchers will further jointly work to improve local practices through a process of farmer-led experimentation.

Witcombe JR, Joshi A, Joshi KD & Sthapit BR. 1996. **Farmer participatory crop improvement. I. Varietal selection and breeding methods and their impact on biodiversity. II. Participatory varietal selection, a case study in India. III. Participatory plant breeding, a case study for rice in Nepal**. *Experimental Agriculture* 32: 445-496.

India, Nepal, biodiversity, chickpea, participatory research, plant breeding, rice, selection, varieties

Participatory varietal selection is a rapid and cost-effective way of identifying farmer-preferred cultivars if a suitable choice of cultivars exists. If not, the more time-consuming participatory plant breeding is necessary. This can be a dynamic form of *in situ* genetic conservation and helps to increase biodiversity, although usually only in a limited area.

FURTHER PUBLICATIONS

Brown D & Korte C. 1997. ***Institutional development of local organisations in the context of farmer-led extension: the agroforestry programme of the Mag'uugmad Foundation***. AgREN Network Paper 68. ODI, Portland House, Stage Place, London SW1E 5DP, UK. 20 pp.

Philippines, agroforestry, farmer-to-farmer extension, institutional development

Ellis-Jones J, Critchley W, Willcocks T 1995. **A participatory farming systems approach to the investigation of indigenous soil and water conservation systems.**. Paper presented to the Southern Africa Association for FSR/E Conference 1995. Silsoe Research Institute, Wrest Park, Silsoe, Bedford MK45 4HS, UK.7 pp.

farmer experimentation, farmer-scientist interaction, farming systems, indigenous technology, Kenya, soil conservation, soil fertility management; Tanzania; technology development, Uganda, water conservation

Lawrence A. 1995. ***The neglected uplands: innovation and environmental change in Matalom, Philippines***.Working paper, 95/11. University of Reading, Agricultural Extension and Rural Development Department (AERDD), PO Box 238, Early Gate, Whiteknights Road, Reading RG6 6AL, UK. 33 p.

farmer experimentation, farmer innovation, forestry, information systems, low-external-input agriculture, Philippines, soil conservation, upland cropping

Magrath P, Compton J, Ofusu A & Motte F. 1997. **Cost-benefit analysis of client participation in agricultural research: a case study from Ghana**. *AgREN Network Paper 74*, pp 19-39. ODI, Portland House, Stage Place, London SW1E 5DP, UK.

Ghana, economic analysis, pest control, postharvest technology

Soura A, Boureima D & Banzhaf M. 1997. **Supporting local people in their management of natural resources in the Sahel**. In: Forster R, Karkoschka O, Kitz M & Scherler C (eds), *Broadening the agenda: experiences of GTZ-supported projects in rural areas with institutionalising participatory approaches*. GTZ, Unit 425, POB 5180, D-65726 Eschborn, Germany.

farmers' participation, natural resources management, Sahel

Sperling L, Scheidegger U 1995. ***Participatory selection of beans in Rwanda: results, methods and institutional issues***.IIED Gatekeeper series, SA51. ISNAR, PO Box 93375, 2509 AJ The Hague, The Netherlands. International Institute for Environment and Development (IIED), 3 Endsleigh Street, London WC1H 0DD, UK. 18 pp.

beans, crop selection, farmer experimentation, farmer-scientist interaction, participatory technology development, Rwanda

Upward 1996. ***Into action research: partnerships in Asian rootcrop research and development***. User's Perspective with Agricultural Research and Development (UPWARD), PO Box 933, Manila, Philippines. 282 pp.

Asia, diffusion of innovations, farmers' participation, genetic conservation, indigenous knowledge, integrated resource management, participatory research, participatory technology development, root crops, small-scale enterprises

NETWORKING

International Conference on Ethnoveterinary Medicine: Alternatives for Livestock Development

Traditional healthcare and management of livestock is the focus of an international conference to be held 4-6 November 1997 in Pune, India. Methods and applications of ethnoveterinary R&D will be shared, including presentations on methods of participatory discovery and technology development. You are invited to submit papers, organise special workshops of 1.5 hours, and develop exhibits, demonstrations and other contributions for a resource- and information-sharing event.

For more information, contact: Dr D V Rangnekaar, BAIF, PB 2030, Asarwa Rd, Ahmedabad 380016, Gujarat State, India, Fax +91-79-2123045, Email baif.ahm@lwahm.nandanet.com

National seminar on Participatory Technology Development

POLICY PAPERS

COOPIBO-Tanzania 1995. **COOPIBO Tanzania country policy paper**. COOPIBO-TZ, Dar es Salam, Tanzania. 14 pp.

Tanzania, participatory technology development, policy issues, institutional development

This brief internal document summarizes the policy of COOPIBO-TZ for its rural development programmes. Central in this is the Participatory Research, Training and Extension approach. In a concise manner this approach and its institutional and internal organizational implications are outlined. A nice example for other NGOs wishing to formulate similar policy statements.

Researchers, extension representatives, and farmers from India and some neighbouring countries came together in Kerala, South India, the 21st and 22nd of November, 1996. They reviewed recent developments within the country with PTD focusing on concepts of PTD, PTD in horticulture, indigenous knowlegde, experimentation in PTD, and the implications for institutional R&D. Cases presented varied considerably as to the extent of real farmer influence in designing and implementing activities.

More information and proceedings: Kerala Horticultural Development Programme, PDR Bhavan, Foreshore Road, Cochin-682016, India.

TRAINING EVENTS AND REPORTS

Laban P. 1997. **Report of PTD/ LEISA workshops for the CEOSS Agro-environmental project**. 1. Main report and 2. Handouts. Coptic Evangelical Organization for Social Services, PO Box 50, El Minya, or PO Box 162-11811, El Panorama, Cairo, Egypt. 37 + 100 pp.

participatory technology development, training, soil fertility management, compost, Egypt

Two PTD workshops were organized in Minya, Egypt, to start-up the pilot agro-environmental project implemented by CEOSS. The first six-day workshop introduced the approach to CEOSS staff while the second brought farmers and staff together to design future joint PTD activities. The (draft) main report details the training process while all hand-outs used are compiled separately. With (a small) part of these translated into Arabic, this report may form the basis for a PTD training guide in Arabic.

PMHE, 1996. **Report of the MASL-PMHE Workshop on Farmer Participation in Agricultural Extension and Research, June 1996**. Available from PMHE, PO Box 154, Kandy, Sri Lanka. 28 pp.

participatory extension, participatory research, farmer experimentation, institutional aspects, policy issues, Sri Lanka

This report documents the process and the main outcome of a two-day workshop which brought together 15 higher level managers and policy makers from both the GO and NGO sector. The workshop reviewed experiences with farmer participation in agricultural research and extension in the country and explored the potential of the PTD approach in this context. It was concluded that both extension and research can and need to pay much more attention to innovation by farmers themselves and link-up with and support farmers' innovation activities.

SHDDP 1996. **Reports of workshops on PTD for dairy supervisors, July 1996 and October 1996**. Southern Highlands Dairy Development Project, PO Box 252, Iringa, Tanzania.

participatory technology development, participatory rural appraisal, training, animal husbandry, Tanzania, farmer experimentation, farming systems research, facilitation

The SHDDP Project in Southern Tanzania under the Ministry of Agriculture aims at gradually modifying its extension approach towards strong farmer participation in technology development and extension. A series of workshops were therefore organized to make field staff coordinators step-by-step familiar with the approach and to develop jointly practical methods in tools for use in the field. Reports of each workshop documenting both content and process are available from the project.

Training in Visualisation in Participatory Programmes (VIPP)
From 28 Sept. to 3 Oct. 1997, you can improve your skills and knowledge in participatory methods for management and training. VIPP combines techniques of visualisation with methods of interactive and experiential learning. Facilitators: Maruja Salas, Timmi Tillmann and Niell McKee, the three founders of VIPP methodology with Unicef in Bangladesh. Language: English. Place: Staufen, 30 km from Freiburg in the Black Forest of southwest Germany. Participants: up to 18 experienced trainers/facilitators from different regions and cultures. Cost: US$1000 including food and lodging, course-related transport, materials and course fee.

For more information, contact: Salas / Tillmann, Gomaringerstr. 6, D-72810 Gomaringen, Germany, Fax +49-7072-912381, Email 101452.2370@compuserve.com

International Course on Farmer-Led Extension
Three-week course in which you can develop your capacities to analyse, plan, manage and evaluate farmer-led development programmes integrating research and extension. The farmer-led approach involves identifying, generating, testing and adapting new technologies to help solve local problems. The primary goal is to strengthen local capacity for experimentation and sharing of innovations. Organisers: World Neighbors, International Institute of Rural Reconstruction and Cornell International Institute for Food, Agriculture and Development. Time: 20 Oct. - 7 Nov. 1997. Place: Silang, Cavite, Philippines. Language: English. Participants: extension planners, administrators and practitioners. Costs: US$2000 including food and lodging, course-related transport, materials and course fee.

For more information, contact: Mila Resma, Education and Training Division, IIRR, Silang, 4118 Cavite, Philippines, Fax +63-46-4020891, Email iirr@phil.gn.apc.org

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PTD Circular
Six-monthly update on Participatory Technology Development
Number 7, August 1997

The aim of this circular is to make documented experiences on Participatory Technology Development (PTD) in Low-External-Input and Sustainable Agriculture (LEISA) known to a wider audience, especially people working in the field. This circular hopes to bridge the information gap by letting people know about recent publications, workshops, training activities and audiovisuals on PTD.

Documents mentioned have either been published recently, or has recently come to our attention. If you have new information in the field of PTD, please let us know, mentioning the source, and send us a copy.

Documents mentioned in this circular should be ordered directly from the source. If no source is given, photocopies are available from ILEIA at cost price.

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