

PTD CIRCULAR

Six-monthly update on Participatory Technology Development



Photo: John Connell

Farmers and an extension agent in Thailand assess a farmer's rice experiment.

to work together with farmer groups in creating or adapting technologies of low-external-input and sustainable agriculture (LEISA). As there are already plenty of good books on techniques of Participatory Rural Appraisal (including the recent training guide by Pretty et al. from IIED, annotated in this circular), the PTD guide concentrates on designing, implementing and monitoring what comes after PRA: farmer-led experimentation with new ideas and farmer-to-farmer extension. Organisations which make bulk orders in advance for copies of the PTD learning guide can help to increase the print run, so that the retail price can be kept as low as possible. If you are interested, get in touch with us now, before the decision is made about the number of books to be printed.

In this issue of the Circular, we will update you on the possibilities of linking up with others through electronic means. For those of you with computer and modem, we have given the addresses of some discussion networks on participatory approaches in research and extension. Let us know about other networks, as we are doubtless behind the times ...

We would welcome your comments about the PTD training modules that have been included in the last two issues and again in this one. Do you find them useful? During the preparation of the PTD learning guide, many of you sent us examples of how you have trained people in different aspects of PTD. Even though the book is now going to press, we would like to continue to collect new training ideas and make them known by means of the PTD Circular.

The editors

● ANNOTATED PUBLICATIONS

Appleton H & Scott A. 1994. **Gender issues in agricultural technology development.** Paper presented at the FAO Panel of Experts on Agricultural Engineering held in Rome, Italy, November 1994. 12 pp. Intermediate Technology Development Group, Myson House, Railway Terrace, Rugby CV21 3HT, UK.

agricultural engineering, gender issues

Looks at how participatory approaches can strengthen the technical capacities of rural people and their choice of technology. Draws attention to the different sets of technical knowledge of men and women. The "outsider" engineer's major role is to facilitate experimentation by technology users, particularly by rural women, who often have a much broader range of technical skills and knowledge than do rural men.

Bonnal J (ed). 1995. **Participation et risques d'exclusion: réflexions à partir de quelques exemples sahéliens.** Participation populaire 9. Rome: FAO. 86 pp.

Africa, Sahel, development projects, natural resource management, rural development

Participatory projects in the Sahel are analysed and classified. Lessons are drawn from 14 projects, including two that were conceived together with local actors; the others were initiated from outside but included participatory elements. As the projects themselves are not described, it is difficult to understand their context. The second part deals with the cases of exclusion and marginalisation in participatory projects, and proposes ways of avoiding these weaknesses. "Horizontal training" in a PTD-like approach (farmer-led experimentation) is recommended.

Castillo GT. 1995. **Social "harvests" from the promise of springtime: user-responsive, participatory agricultural**

This fifth issue of the PTD Circular is the first one to come out under the umbrella of ETC-Netherlands. Past issues were published under the ILEIA project, which has now started a new phase and is giving other emphases in its new programme. While ILEIA will continue to support this publication through its existing documentation services, the costs of administration, printing and distribution of the Circular will now temporarily be borne by ETC, i.e. until we find other funders. With this, the new person in charge of subscriptions and all other matters relating to the administration of the PTD Circular is Manuela Verweel. Welcome, Manuela, into the PTD team!

We are looking forward to the next Dare-to-Share Fair on participatory approaches, which will run during an entire week (26-31 August 1996) parallel to the 9th Conference of the International Soil Conservation Organisation (ISCO) in Bonn, Germany. We hope to see and discuss with many of you about your experiences in PTD.

We had hoped that the PTD trainer's guide "Developing Technologies with Farmers" could already be displayed at the Fair in August, but it will be published somewhat later than originally planned. The text has now gone to London for layout and printing. The book is written primarily for NGOs and development projects wanting to prepare their staff

research . 40 pp. Paper prepared for the workshop "Sustainable Agriculture: Implications for Extension Practice", Wageningen, June 1995. UPWARD, Los Baños, Laguna, the Philippines.

Philippines, genetic resource conservation, participatory research, potato, sweet potato

Good overview of the experiences of researchers associated with the UPWARD network in participatory research. Technology development (TD) processes are analysed, as well as issues related to labour availability, trade relations, food availability, policy development and others. In the TD experiences, mostly from Southeast Asia, farmers play the role of "consultants", "evaluators" of genetic materials, or "co-breeders". In all these cases, the emphasis is on integration of research and extension dimensions.

Christoplos I. 1995. **Representation, poverty and PRA in the Mekong Delta**. EPOS Research Report 6. 40 pp. Research Programme on Environmental Policy and Society, Institute of Tema Research, Linköping University, S-58183 Linköping, Sweden.

Vietnam, participatory diagnosis, political aspects, rural credit, rural poor

This analysis of a farming systems research project targeting poor farmers in southern Vietnam highlights how different actors subjectively speak about poverty. New images of the target groups, as generated by participatory methods, meet national attempts to redefine that target group.

By leaving open the definition of poor farmers, participatory projects become tools for various actors, who give different meanings to poverty to negotiate roles for themselves. Projects are never working with a clean slate. In Vietnam, credit dominates the rural development debate. This study shows how a project, which was intended to focus on participatory approaches to technology development, was overwhelmed by the currently popular solution of credit schemes.

Defoer T, Kant S, Hilhorst T & Groot H (eds). 1995. **Towards more sustainable soil fertility management**. Paper prepared for the Nutrient Cycling Project Workshop, FARM-Africa/IIED, Arba Minch, Ethiopia, 24 Nov. - 1 Dec. 1995. 33 pp. Equipe Systèmes de Production et Gestion des Ressources Naturelles, BP 186, Sikasso, Mali.

Mali, farmer-scientist interaction, impact analysis, soil fertility, sustainable landuse

The farming systems research team of the Institute of Rural Economy is conducting participatory action research designed to guide farmers in improving soil fertility management in the cotton belt of southern Mali. With the help of scientists and computer data, farmers have learned to model and analyse the resource flows on their farms. They then make planning maps showing the improvements they want to make, and evaluate results at the end of each year. The technologies being developed involve crop-residue management, fodder storage and organic fertiliser production.

Drion A. 1993. **La méthode de visite d'exploitation agricole: du rugo au marais**. 34 pp. Fiche Technique 18, Institute des Sciences Agronomiques du Burundi, Service de Prevulgarisation. BP 795, Bujumbura, Burundi.

Burundi, agricultural extension, participatory methods, participatory research

Very practical manual for agricultural professionals. It details procedures for "farmer-led" farm visits. Within a farming systems perspective, it emphasises how innovations are modified and adapted by farmers to suit their various situations.

Engel PGH & Salomon ML. 1996. **Innovation for development**. 224 pp. Royal Tropical Institute, Mauritskade 63, NL-1092 AD Amsterdam, Netherlands.

agricultural extension, innovation, institutional learning, participatory methods

About managing agricultural innovation processes through facilitation: creating favourable conditions, plus an understanding of social and institutional learning processes. Combines theory with case studies, and introduces "RAAKS", a participatory methodology for enhancing innovation.

Eyzaguirre P & Iwanga M (eds). 1996. **Participatory plant breeding: proceedings of a workshop, 26-29 July 1995, Wageningen, The Netherlands** . 164 pp. IPGRI, Via delle Sette Chiese 142, 00145 Rome, Italy.

farmer experimentation, farmer-scientist interaction, genetic diversity, genetic resource conservation, plant breeding

The Wageningen workshop brought together plant breeders, genetic resource conservationists and social scientists to review the state of the art in participatory plant breeding (PBB) and to develop ways to institutionalise it. The concept of PBB includes both scientist-led and farmer-led approaches. The proceedings include the full text of the papers presented at the workshop. Many of them stress the need for stronger farmer involvement in plant breeding and show the potential of this approach. A few also document in detail how farmer-scientist interaction was organised (CIAT Colombia, CIAT Rwanda). It becomes clear that there is scope for such interaction at almost all stages of the breeding cycle, although many cases focus on farmer involvement only at

the final stage to test lines just before their release.

FAO/IIRR. 1995. **Resource management for upland areas in Southeast Asia: an information kit**. FARM Field Document 2. Food and Agriculture Organization of the United Nations, Bangkok, Thailand & International Institute of Rural Reconstruction, Silang, Cavite, Philippines. 207 pp. FARM Program, FAO Regional Office for Asia and the Pacific, Maliwan Mansion, Phra Atit Road, Bangkok 10200, Thailand, Fax +66-2-2800445, eMail fao-rapa@cgnet.com

Southeast Asia, agricultural extension, agroforestry, integrated farming, monitoring and evaluation, resource management, soil conservation, upland cropping, water conservation

A collection of information and training materials developed at a workshop on approaches to natural resource management. Includes sections on farmer-led research, participatory extension, and research-extension-farmer linkages. The main points are concisely stated and illustrated with cases and pictures. A well-designed reference work for trainers and extensionists in agriculture and forestry.

Found WC. 1995. **Participatory research and development: an assessment of IDRC's experience and prospects**. 118 pp. IDRC, POB 8500, Ottawa, Ontario K1G 3H9, Canada.

Africa, Latin America, evaluation, participatory research

Provides an inventory of IDRC's support for participatory research (PR) and identifies the strengths and weaknesses. Particular attention is given to the work in Kenya, such as in developing artisanal fishery with women. Other case studies include CIAT's PR with hillside farmers in Latin America. Based on literature, reports and interviews, the report traces how PR has been used within development settings, considers the circumstances under which PR is most appropriate, and offers an evaluation framework for future assessment of PR projects. It is stressed that much more needs to be known about motivation for personal, institutional or community involvement in PR.

Gubbels P. 1995. **Can peasant farmer organization help transform agricultural research and extension practice in West**

FURTHER PUBLICATIONS

GTZ. 1995. **Participatory learning approaches in multisectoral projects: experiences from rural and urban cooperation in Africa, Asia and Latin America**. Kurzinfor 21. 72 pp (German and English). GTZ Division 425, POB 5180, D-65726 Eschborn, Germany.

Brazil, Burkina Faso, Ghana, India, Kenya, Namibia, Senegal, Sri Lanka, Zimbabwe, participatory methods, participatory planning

Hagmann J, Chuma E & Gundani O. 1995. **Integrating formal research into a participatory process**. *ILEIA Newsletter 11 (2): 12-13*.

Zimbabwe, farmer experimentation, research, tillage

Jayakaran RI. 1996. **Participatory learning and action: a five-minute reference booklet**. World Vision of India, 344 Pantheon Rd, Egmore, Madras 600008, India

action research, community development, participatory methods

IMPROVING FARMERS' OWN EXPERIMENTATION?

REFLECTING ON THE IMPLICATIONS OF IMPOSING SYSTEMATIC EXPERIMENTATION PROCEDURES.

INTENDED LEARNING EFFECT

Trainees realize that the need they see to make farmers' own experimentation efforts more systematic may be less obvious in the eyes of the farmers. For them, this implies making things, which have always been simple, much more complicated.

CONTEXT OF THE MODULE

In Sri Lanka, interest among NGOs and several bilateral development programmes in Participatory Technology Development has increased steadily the past 5 years. One-week training courses are organized regularly to strengthen the capacities of field extension staff of these organizations. Central to most of these trainings is the study of and reflection on farmers' own ways experimentation and the need to strengthen these by introducing systematic experimentation procedures. This module was developed to make field extension staff familiar with various aspects of systematic experimentation while stressing the need for introducing these to farmers with care.

LEARNING ARRANGEMENT

Participants are invited to join the short energiser "Countdown" as in Box 1. They may be made to understand that this experience will be briefly analysed at the end of the session.

The next step is a brainstorming on farmers' own experimentation. Participants are asked to identify in pairs one or more cases in which farmers have experimented on their own with new ideas and technologies. The cases are briefly shared and the gist of each is written on cards, which are put on a board for all to see. A concluding plenary discussion may focus on possible main topics of farmer experimentation, the extent it is practised and/or the characteristics of farmer experimenters.

Using cards again, the same pairs are challenged to identify both strong and weak aspects of farmers' own experimentation. Box 2 summarizes issues frequently raised in such brainstorming. Methodological weaknesses mentioned are reviewed one-by-one as to "why" we find it a weakness (only because it is different from known scientific methods?) and whether farmers have ways to compensate for them.

Next an overview is given of most important elements of systematic experimentation includ-

ing selection of site, size of the plot, number of replications, control plot, number of variables, possibly by way of a small lecture with simple examples. Local cases of experiments by farmers (see next page) are then given to participants for individual analysis in order to practise "playing" with these elements.

Once everyone is confident that they have mastered systematic experimentation, participants are asked to do the energiser Countdown again. In the final discussion, ask the group:

- *Why was counting to 50, something we all know well, so difficult?* Central in most answers will be "because of the new rules!"
- *Who set these new rules?* "You, the trainer, an outsider."
- *What is the relevance for your work, especially looking at this session's discussion?* The parallel with extension workers imposing systematic experimentation on farmers as 'new rules' will be drawn easily. This makes something well known to farmers suddenly very difficult.
- *How can you handle this in your work?* Suggestions may include: offer improved experimental methods as options to farmers (do not impose); introduce possible improvements gradually, one by one; accept that some farmers are interested to go for well set-up experiments while others prefer to continue trying things out in their own way.

Source: PMHE, forthcoming. **PTD Workshop 1996**.
PMHE Project, PO Box, Kandy, Sri Lanka.
Based on Veldhuizen L van, Waters-Bayer A and Zeeuw H de, forthcoming. **Developing technology with farmers: a trainer's guide to participatory learning**.
ZED Books, London, UK.

**EXPERIMENTAL METHODS:
ANALYSING CASES**

Please read these descriptions of farmers' experimentation carefully and answer for each of them:

1. Do you think the described experiment has been well set up, and takes into account the issues discussed today?
2. If not, identify the weakness(es).
3. What suggestion would you give to the farmer for experimentation in the following year?

CASE A

Tillakaratne has had poor rice fields in one of his 3 rice plots for the last few years. He wonders whether the variety he uses is not suitable for the typical soil of that plot. So this year he tries a new variety on that plot to find out whether this one is better than his earlier one.

CASE B

Mallika is interested to find the best way to promote germination of teak-seeds. She cuts 10 seeds open and puts them in 5 polybags, 10 other seeds she puts in water for soaking. As she is tired she stops. The next day she continues. She heats another 10 seeds for 10 minutes and also plants them in 5 polybags. She continues to dry and soak the second 10 seeds for 2 weeks. As she has run out of polybags she plants these seeds under a tree.

CASE C

Rani is interested in chillie cultivation and is always looking for new possibilities to try out. She had earlier worked on a research farm and has seen some of the experiments made there. She has been told that chillie seeds should be sown in beds to get strong plants. She decides to try this out by sowing one third of the seed on a well-prepared bed, while the rest in her own usual way. She takes care to look after both in the same way. When the results of the seed-bed are not better than those of her usual method, she decides making seedbeds is not worth all the work put into making them.

CASE D

Abekoon has been keeping chickens, layers, for the last 2 years. As the price of feed has recently increased considerably, he wants to find cheaper alternatives. He decides to make a smaller, separate pen for 10 of his 100 chicks to try a new, locally made feed. These 10 get a mixture of the earlier feed and the new one, whereas the other 90 get only the earlier feed. He looks after all the chickens very carefully. As he finds after 3 months that the 10 'experimental' chickens have the same egg production as the others, he decides to give all chickens the new mixture.

ENERGYSER COUNTDOWN

- ✓ **OBJECTIVES**
 - To energise participants
 - To help reflect on the impact of simple, externally determined rules
- 👁️ **MATERIALS** None
- ⌚ **TIME** 5 minutes, perhaps several times over a period of two days
- 📝 **PROCEDURE**
 1. Ask the participants to stand up and form a circle. This can be done anywhere, even in the classroom without moving any furniture, as no one will be asked to move.)
 2. Tell the participants: "We are going to do something very easy.....count to fifty. There are only a few rules. Do not say 'seven' or any number which is a multiple of seven. Instead clap your hands. After someone claps their hands, the order of the number calling is reversed. If someone says seven or a multiple of seven, then we have to start again."
 3. When, inevitably, someone accidentally says seven or a multiple of seven, or they forget to reverse the order of counting after someoneclaps, then start up the counting at another part of the circle.
 4. After a few minutes and a few laughs, stop the exercise and tell everyone that we'll try it again later.
 5. At another moment when people need some refreshing, get people to do the exercise again.
 6. Repeat this 3 or 4 times before the debriefing.

Source: Pretty et al, 1995, annotated in this Circular; based on Mayling Simpson-Hebert, pers. comm.

DISCUSSING FARMERS' OWN EXPERIMENTATION

STRONG ELEMENTS

- Location specific*
- Integrates farmer management practices*
- Use local resources; saves government research resources*
- Their numbers compared to number of researchers*
- Holistic analysis, taking whole farming systems into account*
- Results directly adopted by farmers involved*

WEAK ELEMENTS

- Results only locally relevant*
- Compounding of variables*
- Limited use of ideas and information from formal and extension*
- Lack of replications within and over the years; jumping to conclusions.*
- Lack of measurements and recording makes analysis and assessment difficult*
- Relative isolation of farmer experimenters; limited sharing among them.*

Africa? a critical appraisal.

12 pp. World Neighbors, 4127 NW 122 St, Oklahoma City, OK 73120-8869, USA.

Mali, Togo, agricultural extension, farmers' associations, farmer-scientist interaction, NGO, research

Critical assessment of the role of peasant farmer organisations in agricultural research and extension in West Africa, based on PTD experiences of World Neighbors (WN) in Togo, Burkina Faso, Mali and Chad. WN initially tried to teach farmers to experiment, but then became more aware of farmer rationality and indigenous approaches to experimentation. Strengthening farmer organisation is seen as the key to effective partnership between farmers, NGOs and research/extension programmes. The challenge in PTD is to increase the capacity of farmer organisations to negotiate their interests with external agents.

Hagmann J, Chuma E & Gundani O. 1996. **Acknowledging the role of gender in agricultural research and extension: review of experiences of a project in Zimbabwe.** Paper prepared on behalf of the Deutsche Gesellschaft fuer Technische Zusammenarbeit (GTZ), Section 04, Postfach 5180, D-65726 Eschborn, Germany. 15 pp.

Zimbabwe, agricultural extension, communication, gender issues, innovation, research, training

Reviews the learning process of the project Conservation Tillage for Sustainable Crop Production Systems in Masvingo, Zimbabwe, with regard to gender issues in PTD and extension. Intensive interaction with rural families revealed that husbands announce the decisions made by the wives. The project staff observed that women are more the technology testers and men more the innovators. Men were more open to "play around" with new ideas, experiment and take risks. A methodology in innovation development and extension was developed to increase the recognition of women's tasks, achievements and capabilities and thus increase women's confidence and increase men's acknowledgement of the importance of women's roles in PTD.

Hagmann J, Chuma E & Murwira K. 1996. **Improving the output of agricultural extension and research through participatory innovation development and**

extension: experiences from Zimbabwe. *European Journal of Agricultural Education and Extension* 2 (4): 15-24.

Zimbabwe, agricultural extension, farmer experimentation, farmer organisation, innovation, participatory rural appraisal, research, training

Describes the rationale for a change from conventional extension towards PTD in the Conservation Tillage and Food Security Projects in Zimbabwe, as well as the attempts to institutionalise this approach in the hierarchically-structured extension service in Masvingo Province. Dialogue with farmers, farmer experimentation and strengthening the self-organisational capacities of farmers were the major elements in improving the development and spread of innovations. Elements of Training for Transformation and PRA were effective tools in bringing about a role change in extension workers.

Hamilton NA. 1995. **Learning to learn with farmers: a case study of an adult learning extension project conducted in Queensland, Australia 1990-1995.** Thesis, Dept of Communication and Innovation Studies. 196 pp (English with Dutch summary). Agricultural University Wageningen, Hollandseweg 1, NL-6706 KN Wageningen, Netherlands.

Australia, action research, agricultural extension, communication, fallow, farmer-scientist interaction, soil conservation

Participatory Learning and Action Research methodology was applied in developing and using information and knowledge in an extension project concerned with fallow management and soil conservation. Powerful initiators of change were the extension tools developed, such as the Rainfall Simulator, Soil Corer, How Wet and the Fallow Management Game. These allowed the farmers to "play" with their environment, test various options, gather information and enhance their understanding of the problem situation. An exciting example of how farmers' capacities to explore and learn are strengthened through interaction with extension and research personnel.

Konadu MO. 1994. **A preliminary inventory of agricultural projects in northern Ghana involved in participatory technology development and sustainable agriculture in the context of "LEISA".** 44 pp. ILEIA, PO Box 64, NL-3830 AB Leusden, Netherlands.

Ghana, agricultural projects, low-external-input agriculture, sustainable agriculture

This study, commissioned by ILEIA to help in the search for partners for collaborative research, covers both government organisations and church-based agricultural development projects. Brief profiles are given, concentrating more on the LEISA techniques being promoted than the participatory methodologies of developing and adapting them. The hopeful beginning of a documentation process.

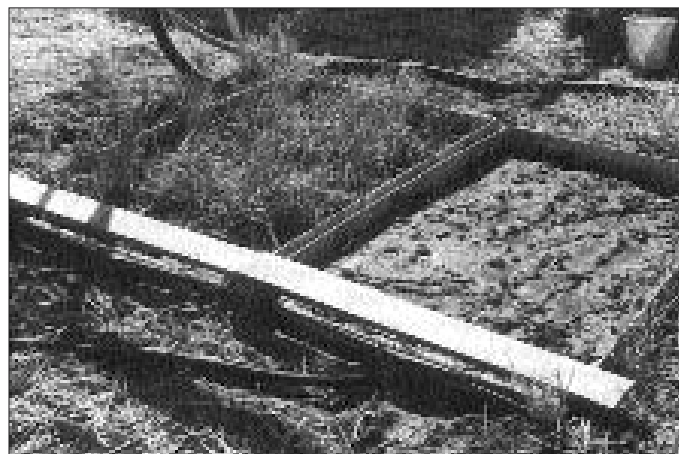
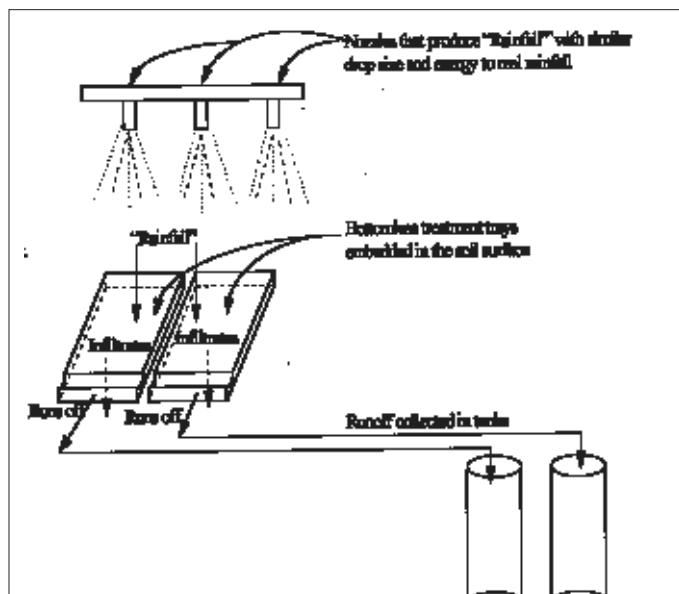
Kornegay J, Beltran JA & Ashby J. 1996. **Farmer selections within segregating populations of common bean in Colombia.** In: Eyzaguirre P & Iwanga M (eds), *Participatory plant breeding: proceedings of a workshop, 26-29 July 1995, Wageningen, The Netherlands*: pp 151-160. IPGRI, Via delle Sette Chiese 142, I-00145 Rome, Italy.

farmer experimentation, farmer-scientist interaction, genetic diversity, genetic resource conservation, plant breeding

A study on involving farmers very early in the plant breeding process. Farmers were given new, basic breeding skills and were challenged to work with F₂ lines, parallel to work by scientists. Discusses the effectiveness of the farmers' breeding efforts and compares their results with those of the researchers.

Levine S. 1996. **Looking for innovation: post-war agricultural change in Niassa Province, Mozambique.** 88 pp. Thesis, Dept of Communication and Innovation Studies, Wageningen Agricultural University, Hollandseweg 1, NL-6706 KN Wageningen, Netherlands,

Mozambique, agricultural extension, agricultural innovations, disasters, farmer experimentation, farmer to farmer extension, indigenous knowledge, resettlement, technological change



A rainfall simulator served as an on-farm learning tool in Queensland, Australia. It allowed farmers to explore the outcomes, in this case, the runoff of water and soil, from different fallow treatments in a risk-free situation. From: Hamilton 1995: Learning to learn with farmers.

Reports the results of a 3-month study on the role of farmer experimentation and innovation on agricultural change in a remote area of Mozambique. Methodological constraints encountered in trying to systematically document indigenous experimentation are explained clearly. From an increased understanding of farmers' continuous and extensive efforts to change and adapt their farming practices, conclusions are drawn about the possible role of agricultural extension. It is suggested that PTD activities be based on providing farmers with theory and insights into fundamental processes related to their daily practices (eg. breeding) and with some basic research principles and techniques (eg. replication, measurement). Highly readable and provocative.

Millar D. 1996a. **The Association of Church Development Projects' experience with Participatory Technology Development.** Paper presented at the ISNAR/ETC Seminar on Participatory Technology Development Approaches, January 1996. 5 pp.

Ghana, farmer-scientist interaction, NGO, savanna

A group of church-based projects in northern Ghana recounts the path they have taken since 1988 in starting up a PTD process with farmers and later trying to draw in researchers. The importance is stressed of making PTD attractive to researchers, yet retaining control of the process so that researchers deal with farmers' concerns and not their own.

Millar D. 1996b. **Rural women and indigenous experimentation: the role of cosmovisions in gender differentiation.** In: *Journal for the Centre for Cosmovisions and Indigenous Knowledge (CECIK) - Northern Ghana 1: 13-17.* c/o TAAP, Box 42, Tamale-N/R, Ghana.

Ghana, cosmovision, farmer experimentation, gender analysis, local institutions, seed planting, technology development

In the process of agricultural change and experimentation, local cosmovisions play an important role. Specific rituals by soothsayers precede most new initiatives. As men act in these sacrifices on behalf of the women, it is difficult for women to engage directly in experimentation. The case shows that they have some room for manoeuvre only as long as the new ideas fit within existing concepts and

practices handed down by the ancestors.

Morse R, Rahman A & Johnson KL (eds). **Grassroots horizons: connecting participatory development initiatives East and West.** 377 pp. Intermediate Technology Publications, 103/105 Southampton Row, London WC1B 4HH, UK.

community development, environmental protection, self-reliance, sustainable development

Concerned with much more than agricultural development, this book grew out of a workshop "People's Initiatives to Overcome Poverty", which brought together practitioners working with marginalised peoples. Experiences of participatory action to overcome poverty in rural and urban areas in the North and the South, the East and the West are reported. The underlying attitudes of promoting locally-based, ecologically-sound and socially-innovative development are central to PTD. The conversational style of the editors' comments makes it a long book.

Nabasa J, Rutwara G, Walker F & Were C. 1995. **Participatory rural appraisal: practical experiences.** 52 pp. Natural Resources Institute, Central Avenue, Chatham Maritime, Kent ME4 4TB, UK.

Uganda, diagramming, mapping, on-farm research, PRA, ranking

Presents PRA not as an end in itself but rather as a tool for establishing partnership among all involved in development activities. Based on longer-term experiences in Uganda, this booklet describes how PRA techniques can be used in various combinations and at various stages in a technology-development process initiated by researchers.

Ndiaye A, Barreto T, Touré T & Fall C. 1996. **Vers un partenariat entre la recherche agricole et ses utilisateurs au Mali: bilan d'étape.** 16 pp. Fondation Rurale de l'Afrique de l'Ouest (FRAO), CP 13, Dakar-Fann, Senegal.

Mali, farmer participation, farmer-scientist interaction, institutional change, research

Abridged English translation: "Pilot programme for the promotion of collaborative research in Mali" (6 pp). Paper presented at the ISNAR/ETC Seminar on Participatory Technology Development Approaches in January 1996. The national agricultural

research institute of Mali is trying to regionalise its work and incorporate a PTD approach. Research users' commissions (CRUs) at regional level are being provided with the means (funds, inclusion in decisionmaking bodies) to influence the formal research agenda. Difficulties are being tackled in clarifying roles of researchers, extensionists and CRUs; ensuring that farmers' concerns are truly represented by the CRUs; and dealing with the narrow mandate of agricultural research, which does not encompass many of the farmers' major concerns.

Prem Kumar PD & Humbert-Droz B. 1994. **Farmers are engineers: indigenous soil and water conservation in a participatory watershed programme.** 40 pp. PIDOW Myrada, Prakruthi Gnana Kendra, Kamalapur - 585 313, Gulbarga, Karnataka, India.

India, farmer experimentation, indigenous knowledge, innovation, soil and water conservation, watershed management

The major part of this booklet documents farmers' indigenous practices in soil and water conservation in Karnataka, India. In the introductory chapter, concrete examples are given of the dynamic character of farmers' knowledge, farmer innovation and experimentation. In a very condensed form, limitations of such experimentation are summarised (method of trial and error too long and costly, lack of links with possibilities developed elsewhere). Strengthening of farmers' experimental and creative powers as well as establishing links with outside sources of ideas are recommended.

Pretty JN, Guijt I, Thompson J & Scoones I. 1995. **A trainer's guide for participatory learning and action.** IIED Participatory Methodology Series. 267 pp. Sustainable Agriculture Programme, International Institute for Environment and Development, 3 Endsleigh St, London WC1H 0DD, UK.

groups, participatory approaches, PRA, training methods, workshops

Designed for both experienced and new trainers of participatory methods, especially Participatory Rural Appraisal, this guide is based on the principles of adult learning and group dynamics. It gives a detailed description of the training process in the field and in workshop settings, and valuable guidelines for organising training events, including their evaluation. The theoretical and conceptual challenges facing trainers are clearly presented. This guide is meant to stimulate ideas as to how training methods can be used, adapted and invented to facilitate participatory learning and action in development. Includes over 100 interactive learning games and exercises.

Scarborough V (ed). 1996. **Farmer-led approaches to extension: papers presented at a workshop in the Philippines, July 1995.** Agricultural Research and Extension Network, Network Papers 59a, 59b and 59c. ODI, Regent's College, Regent's Park, London NW1 4NS, UK.

agricultural extension, farmer experimentation, participatory approaches, technology development

These three Network Papers present the full text of a selected number of papers prepared for the Workshop on Farmer-led Extension, held at IIRR in the Philippines. The first volume, which focuses on farmer-to-farmer extension, in which farmers are the extension agents and outsiders facilitate their work, includes:

- Holt-Gimenez E. **The Campesino-a-Campesino movement: farmer-led agricultural extension.** Review of the CaC approach in Central America, which integrates farmer-led extension and experimentation.
- Bunch R. **People-centred agricultural development: principles of extension for achieving long-term impact.** The author of *Two Ears of Corn* sum-

● TRANSLATED INTO FRENCH

Werner J. 1996. **Développement participatif d'innovations agricoles: Procédures et méthodes de la recherche en milieu paysan.** 256 pp. TZ Verlagsgesellschaft GmbH, Rossdorf, Germany.

innovation, communication, data analysis, farmer participation, methods, on-farm research

marises main lessons from several decades of field experience.

- Sinaga N & Wodicka S. **Farmer-based extension in the marginal uplands of Sumba, Indonesia: a case study of Tananua's experience.** Lessons from an NGO covering a period of 15 years of committed farmer-centred work. Includes programme cost estimates per village and per farmer.
- Pandit BH. **The Nepal Agroforestry Foundation's approach to farmer-led extension.**
- Lopez G. **The villager extensionist in developing nations.** A village extensionist from Costa Rica became a trainer of other extensionists and then an international consultant. He shares his insights from the past 12 years.
- Baile P. **Farmer-to-farmer extension: Pedro Baile's experiences.** A farmer-extensionist from the Philippines shares positive and negative experiences.

The second set of papers describes farmer research activities, supported by researchers and other professionals:

- Dilts D & Hate S. **IPM Farmer Field Schools: changing paradigms and scaling-up.** Recent experiences of the IPM programme in Indonesia.
- Kingsley A & Musante P. **Developing linkages and cooperative exchange among farmers' organizations, NGOs, GOs and researchers.** Again IPM in Indonesia, but with emphasis on institutionalising linkages among all actors through quarterly planning meetings.
- Kamp K. **Teaching the teacher to fish.** An NGO supports women farmer groups to experiment with cage culture in Bangladesh.
- Murwira K et al. **The experiences of the Chivi Food Security Project.** NGO in Zimbabwe integrates a community-organising approach with PTD.

The third group of articles documents other methods and mechanisms used to increase the responsiveness of previously conventional services:

- Ishii-Eitemann M. **Facilitating farmer-NGO-GO collaboration in ecological pest management in Southeast Asia: field-testing a model for inter-agency partnering.** Presents lessons learned in collaboration between various development agencies.

- Peacock C. **Some experiences of women-led extension in Ethiopia.** Women's groups experiment with crossbred goats, forage crops and associated credit arrangements.
- Nguyen Hai. **CIDSE's working experiences in farmer-based extension approaches in Vietnam.** International NGO supports provincial government in making extension more farmer-based.
- Bimoli BP & Manandhar DN. **A farmer-centred extension approach in Nepal.** An honest case study of a government extension service changing from an inadequate T&V system to a more farmer-led, problem-census approach.
- Bhuiyan N & Walker M. **The problem census: participatory public sector extension in Bangladesh.** Experiences with the problem-census approach within a government extension organisation.
- Farouk A & Worsley S. **The CARE-Egypt Farmlink project.**
- Thapa NB. **Action Aid Nepal's experiences with community based agricultural extension workers.** The effectivity of Community Agricultural Workers over the past decade is assessed.

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.

Agricultural Research and Extension Network Paper 60. 15 pp. Overseas Development Institute, Regent's College, Regent's Park, London NW1 4NS, UK.

Burundi, Rwanda, Zaire, action research, farmer experiments, seed production, seed supply, varieties

Synthesis of five years of field research on formal and informal systems of selecting, producing and distributing bean seed. Describes action research involving distribution of seed through local seed outlets. Providing small quantities of seed of many varieties through markets proved to be a good way to reach poorer farmers. Farmers were able to select varieties from research station trials to fit production micro-niches.

Swiss Development Cooperation. 1995. **Agricultural extension.** 40 pp. SDC Agricultural Service, CH-3003 Berne, Switzerland.

agricultural extension, farmer-scientist interaction, institutional aspects, participatory approaches

This sector policy paper gives an excellent synthesis of experiences in agricultural extension and sets out priorities for pluralistic, farmer-oriented extension services. It promotes improved interactions between farmers, extension and research in PTD, farmer ownership of extension structures and farmer evaluation of

extension personnel. A clearly written booklet which deserves reading at all levels of agricultural services. Also available in German and French.

Weltzien ER, Whitaker ML & Anders MM. 1996. **Farmer participation in pearl millet breeding for marginal environments.** In: Eyzaguirre P & Iwanga M (eds). *Participatory plant breeding: proceedings of a workshop, 26-29 July 1995, Wageningen, The Netherlands: pp 128-143.* IPGRI, Via delle Sette Chiese 142, I-00145 Rome, Italy.

farmer experimentation, farmer-scientist interaction, genetic diversity, genetic resource conservation, plant breeding

Documents the many different forms and shapes that farmer involvement in plant breeding can take. It distinguishes between the minimalistic forms ("Participatory Variety Selection") and further-reaching ones ("Participatory Plant Breeding"). All are cases of approaches taken within full-scale formal research programmes. In the final sentence, an alternative scenario is suggested, in which breeding research gives targeted support to farmers' indigenous seed systems.



Photo: Ann Waters-Bayer

PTD aims at strengthening the capacity of farmers to experiment and to analyse their results. Scientists and a farmer in Machakos District, Kenya, examine nodules on the roots of a bean plant to see whether nitrogen is being fixed.

● NETWORKING

Visualisation in Participatory Programmes (VIPP) training course, 22-27 September 1996, Staufen (near Freiburg), Germany. For experienced facilitators in development work wanting to improve their skills in participatory methods of management and training. VIPP combines the techniques of visualisation with methods of interactive and experiential learning. Cost US\$ 1000 including room and board and workshop documentation.

For further details about this or future courses, contact Maria Salas and Timmi Tillmann, Gomaringenstr. 6, D-72810 Gomaringen, Germany, Fax +49-7072-912381, eMail 101452.2370@compuserve.com.

ISNAR-ETC Workshop on Participatory Technology Development, 24 January 1996.

Early this year, a group of 50 researchers from ISNAR, ICRA, ETC, KIT and the Wageningen Agricultural University took one day to review recent advances of PTD and assess its role within formal research institutes. After introductions by the convening organizations, recent cases from Ghana (2 cases), Mali, and Australia were studied. It was concluded that there is still considerable scope and need to expand the use of PTD-type approaches within formal research. The incorporation of a PTD momentum in the overall research

planning process was identified among the major challenges.

Report available from: ISNAR, attn. Dr. H. Elliot, PO Box 93375, 2509 AJ The Hague, Netherlands; fax 31-70-3819677. E-mail ISNAR@CGNET.COM.

The **International conference on creativity and innovation at the grassroots** will be held in Ahmedabad, India, 11-14 January, 1997. It includes a session on **Heuristic tools for understanding and working with local knowledge, creativity, and communication.** This session hopes to study structure and dynamics of local knowledge systems, patterns and processes of farmers' own experimentation and local learning processes, and mechanisms of local communication and exchange.

For a "call for papers" and other information: Dr. B. Simpson, Institute of Social Studies, PO Box 29776, 2502 LT The Hague, Netherlands; fax 31-70-4260799, E-mail simpson@iss.nl; or Dr. A. Pastakia, SRISTI, c/o Dr. A Gupta, Centre for Management of Agriculture, Indian Institute of Management, Ahmedabad 380 015, India; fax 91-79-6427896, E-mail honeybee@iimahd.ernet.in.

AgREN, the Agricultural Research and Extension Network of the Overseas Development Institute, is facilitating an **e-mail discussion** around issues raised in their (printed) network papers. The current

discussion is about farmer-led approaches to extension, focused on issues such as farmer extensionists, scaling up in the public sector, and evaluation of farmer-led research and extension. If you want to join the discussion, send an e-mail message to AGNET-REQUEST@ODI.ORG.UK giving your name, position, address and reasons for joining. People without e-mail can contact Diana Carney at ODI, Regent's College, Regent's Park, London NW1 4NS, UK (Fax +44-171-4877590, Email d.carney@odi.org.uk or agren@odi.org.uk) to ask for the network papers and printed summaries of the discussions. Network membership costs 15 pounds for North-based people, and backcopies of network papers cost 3 pounds each.

PARTalk/PARNET is a computer-based network organised by the Participatory Action Research (PAR) Network at Cornell University, USA. PAR encompasses Participation of stakeholders, Action for positive social change, and Research to help those affected make better decisions. The Network coordinates a PAR electronic discussion list (PARTalk) for exchange on PAR experiences, and a WorldWideWeb site, with archives of PARTalk, full text materials on basic techniques in action research, information for courses, conference lists etc.

Connect: WWW: <http://munex.arme.cornell.edu/parnet>. Discussion list: listproc@cornell.edu or Carla Shafer: CS13@cornell.edu.



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PTD Circular Six-monthly update on Participatory Technology Development Number 5, August 1996

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.

Editors
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Printing
BDU, Barneveld.

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