

# PTD CIRCULAR

Six-monthly update on Participatory Technology Development

*The PTD Circular was initiated by the St Ulrich Group, an informal network of European PTD advocates who meet annually to exchange experiences and address issues of common concern in connection with PTD and related training. It was agreed that ETC/ILEIA would take over the responsibilities for facilitating information exchange about PTD through a twice-yearly annotated bibliography and newsletter. As you can see by the lateness of this issue, we do not always meet the expectations.*

At its most recent meeting in St Ulrich, in the mountains of the Black Forest of southern Germany, the group decided to increase commitment within its very informal structure by working through "peer contracts", an idea brought in by Ueli Scheuermeier from the Agricultural Extension Centre in Lindau, Switzerland.

### Peer contracts for committed participation

Peer contracts work as follows: One person or a small group states what she/he/they plan to do and by when. At least one other person in the group expresses an interest in seeing or hearing the results by signing a "peer contract". This means that this person

commits him/herself to get in touch with the person(s) wanting to carry out the activity and to ask about progress and results.

In our case, each of us first wrote cards about the activities we planned to do and pinned them on a large board under the headings "I/We will do ...." and "by ...", and signed our names on a card beside them under a third heading "Signatures for peer contract". In a second round, we all read each others' cards. We printed (legibly) our names beside the activities that particularly interested us, on a card under a fourth heading "Interested contract partners". We signed our names on the card beside it under "Signatures for peer contract". We now all find ourselves being bugged by other members of the group saying: "Hey, you said you were going to ...."

This peer pressure forces the members of this informal, volunteer group to take responsibility for proposed actions, and the obvious interest of our peers gives us encouragement to do so. We have described this here as an idea for other groups trying to work in a participatory and egalitarian manner, who also want to get things done!

### Electronic Circular

One of the peer contracts is to move into electronic mail for exchange of information about PTD documents and activities. This will be **in addition to the printed PTD Circular**, for those of you who do not have computers, modems and telephone connections. In your future communications with us, when you are sending publications or information about meetings, workshops, research collaboration and so on, to be included in the *PTD Circular*, please give us your E-mail address if you have one.

### ANNOTATED PUBLICATIONS

Adriance J. 1995. **Living with the land in Central America.** *Grassroots Development* 19 (1): 3-17.

*Central America, farmer experimentation, farmer-to-farmer extension, hill farming*

The story of collaboration between World Neighbors and smallholders in Guatemala, Honduras and Mexico to develop ways of regenerating hillside farming. The WN approach is based on local capacity building for self-reliance. Volunteer farmer experimenters assist other farmers in trying out new techniques such as in-row tillage and green manuring on their own farms. Includes details about information clearinghouses and networks to support development of small-scale ecological agriculture.

Barik T, Mohapatra R.N., Pradhan P.L. & Mohapatra B.P. 1996. **Reflections from farmer-led trials in India.** In: *PLA Notes* 27: 4-6. IIED, London, UK. Contact authors: Regional Research Station, Chiplima, Orissa, India 768025.

*India, Participatory Rural Appraisal, farmer-scientist interaction, farmer innovation, participatory research, on-farm trials*

Documents the main lessons from farmer-led trials as part of a Farming Systems Research and Extension programme. First PRA activities in 1992-93 showed the researchers the relevance of farmer practices in groundnut and rice cultivation, as different from the ones promoted by research. These PRAs also revealed main concerns of farmers. These formed the basis for initiation of farmer-led trials. Farmers' rational in designing and planning the trials is illustrated in this article. Gifts of inputs to participating farmers led to problems. The authors stress

**TO BE EFFECTIVE, PTD NEEDS A PARTICIPATORY APPROACH WITHIN THE ORGANIZATION ITSELF, FIELD STAFF SHOULD BE LISTENED TO.**



that farmer-led research takes time to get off the ground and that new criteria are needed to evaluate such farmer-led research activities.

Brunold S. and Scheuermeier U. 1996. **Using agricultural knowledge systems: From an institutional approach to a functional extension model.** In: *European Journal of Agricultural Education and Extension* 3(2): 75-84.

*knowledge systems, institutional development, participatory extension, India, Bhutan*

The authors worked with the concept of "Knowledge Systems" in a number of situations in order to develop appropriate institutional settings for the cases at hand. In the case of animal husbandry in Andhra Pradesh this helped them to find ways how participatory extension and PTD could fit into the larger, local institutional framework. Rather than attempting to identify all possibly relevant institutions and individuals and develop an overall picture, the authors limited their analysis to institutions directly relevant to the functions required in the proposed participatory approaches.

Burnside D.G. & Chamala S. 1994. **Ground-based monitoring: a process of learning by doing.** In: *Rangeland Journal* 16 (2): 221-237.

*Australia, action research, decision making, monitoring, range management, participatory methods*

Describes the "active adaptive approach" to monitoring of rangeland condition by pastoralists,

which treats management actions as deliberate experiments designed to manage effectively and generate better information for reaching the goal of sustainability. Based on ground-based monitoring as a learning mechanism among pastoralists in tropical Australia, to assist their own decision making about land care.

Christoplos I. **Disequilibrium in ecosystems - disequilibrium in agricultural services: what role for the gardeners of the gardening state?** In: *Hjort-af-Ornas A (ed), Approaching nature from local communities: security perceived and achieved* (Linköping: EPOS), pp 198-214. EPOS, Institute of Tema Research, Linköping University, S-58183 Linköping, Sweden, Fax +46-13-284415, E-mail [Norstad@tema.liu.se](mailto:Norstad@tema.liu.se)

*agricultural extension, drylands, environmental management, farmer experimentation, participatory planning*

Thought-provoking piece on the tension between rational ecosystem management, ecological uncertainties and spontaneous human behaviour, focused on extension institutions in dryland areas with high climatic fluctuations. It is pointed out that farmers' (and pastoralists') own experimentation is now being celebrated, whereas the possibility of creativity among extension workers is disregarded or squelched. This critique of participatory approaches raises important questions about the (dis-)equilibrium between sustainability, planning and opportunism.

COMPAS. 1996. **COMPAS, platform for intercultural dialogue on cosmovision and agriculture: report of a workshop.**

62 pp. Comparing and Supporting Indigenous Agricultural Systems (COMPAS) Programme, ETC Netherlands, P.O. Box 64, 3830 AB Leusden, The Netherlands.

*cosmovision, indigenous knowledge, ecological agriculture, indigenous experimentation*

This publication compiles the results of an international workshop. It contains a number of case studies undertaken under the first phase of the COMPAS programme. This programme deepens the study of indigenous knowledge and innovation by focusing on the role of farmers' cosmovision in their management of agriculture and farming. 'Cosmovision' refers to the way people perceive the world. It includes assumed relationships between the spiritual, the natural and the human world. Where most agricultural development work follows a western-based scientific rational, farmers' logic in many places of the world is quite different. By increasing insights into these differences the COMPAS programme hopes to strengthen the diversity of indigenous knowledge systems and thus support farmers in their transition towards sustainable agriculture.

Eer A. van. 1996. **Participation in aquaculture development: an example of Participatory Technology Development in Asian shrimp production.**

In: *BeraterInnen News* 1 (1996): 5-10.

*Thailand, farmer experimentation, farmer-scientist interaction, aquaculture, feed production*

Written in 1996, this article describes the experiences of an aquaculture programme in South Thailand in 1990, which are now analysed as an example of PTD. On the request of 200 organised shrimp farmers, a collaborative research and extension programme was implemented, supported by the National Institute of Coastal Aquaculture. The step-wise process in developing and testing farmer-produced artificial feed is clearly described. In analysing the results and impact the article differentiates between market oriented, intensive, shrimp

farmers, who succeeded in developing an effective local feed, and the semi-intensive farmers who had less success. Application of the results appeared to be strongly influenced by market price developments of commercial feed.

ENDA-GRAF Sahel. 1996. **Cahier de la recherche populaire: apprentissages et créativité sociale.** 120 pp. ENDA-GRAF Sahel, BP 13069, Dakar, Grand Yoff, Senegal; Fax +221-273215; E-mail [graf@sonatel.senet.net](mailto:graf@sonatel.senet.net)

*West Africa, Thailand, action research, farmer-to-farmer extension, farmer associations, land care, social change*

First book in a new collection on "Recherches populaires" (People's Research) which documents research undertaken by peasant farmers, pastoralists, urban dwellers and development agents. Focuses on learning through new forms of social interaction after local people have examined their current situation. Includes an account of mutual learning through exchange of experiences of farmers from Thailand and West Africa.

FAO-IPM Programme. 1996. **The process of local pest problems identification and studies design making to solve the problems.** 10 pp. Internal document FAO technical assistance team to Indonesian National IPM Program, Jl. Taman Margasatwa 61, Jati Padang, Pasar Minggu, Jakarta 12540.

*Indonesia, Integrated Pest Management, participatory problem identification, rice, farmer research*

Using mostly photographs, this document shows clearly the different steps used in this part of the Indonesian IPM programme. Farmers are encouraged to analyse local pest problems and design studies to address these. The Indonesian National IPM programme supported by FAO encourages and supports research and experimentation by farmers on pest management. A number of case studies and reports of workshops bringing farmer researchers together are available in Bahasa Indonesia.

## JOURNALS

**Agricultura familiar: pesquisa, formacao e desenvolvimento.** Nucleo de Estudos Integrados sobre Agricultura Familiar (NEAF), Rod. Augusto Montenegro, Km 07, CEPLAC, 66.635-110 Belem-PA, Brazil.

*Brazil, animal traction, family farming, farmer associations, farmer-scientist interaction, mechanisation*

This first issue (Vol. 1, No. 1, 161 pp) of a journal from the Centre for Integrated Studies on Family Farming appeared in 1996. It is in Portuguese, with English abstracts, and includes articles on PTD in agricultural mechanisation, relations between researchers and farmers, and interaction with farmer organisations in planning and implementing research.

## THE (PEA)NUTS GAME

### RULES AND REGULATIONS FOR NATURAL RESOURCE MANAGEMENT

#### INTENDED LEARNING EFFECT

*Trainees realise the need for agreed-upon rules and regulations among users of scarce natural resources, in order to prevent over-exploitation. To arrive at these, dialogue among users and a process of experimentation are recognised as two key components.*

#### CONTEXT OF THIS MODULE

The nuts game is documented originally as long back as in 1979 (Edney, 1979). It is presently being used in a number of variations, mostly in NRM and sustainable agriculture programmes. It was brought to our attention again by the PPEA project, a livestock development project in Northern Benin. The peanut game, as it is called in Benin, is often used by PPEA to initiate discussion among villagers on the use of common resources. The game is fun, a good starter of events, and brings across very well issues like land use management, limited resources, rules and regulations (or institutional arrangements). Below follows (an adapted version of) the game used by PPEA.

#### LEARNING ARRANGEMENTS

A small group (4-6 persons) sits around an open bowl containing 25 peanuts. The game leader introduces the exercise by unveiling the goal and rules of the game written on a blackboard or piece of paper (see box). These are read by the participants *in silence*. When the game leader gives the signal, the game starts. When the game is completed according to the rules, the total harvest per person and the group total are recorded (and eaten!). A possible recording format is indicated below.

After one group has finished the game, 4-5 new persons are invited to play it in the same way. But before they start, the leader indicates the main issues at stake: the bowl as the shared territory and the peanuts as the natural resources found in the territory (e.g. fertile soil, pasture). Taking nuts represents the use of these resources by the population and the subsequent return of the peanuts to the bowl represents regrowth and regeneration. Every round presents a year and the peanuts taken and eaten are the food produced. If more than 15 pe-

#### THE NUTS GAME

##### GOAL:

*Each player's goal is to get as many nuts as possible during the game.*

##### RULES:

*Upon the organiser's signal, the players take out nuts from the bowl all at the same time, using only one hand. This makes one 'round'. The balance left in the bowl is doubled after each round by the organiser, up to the maximum of 25 nuts. The game is over when the bowl is empty, or after 10 rounds.*

nuts are taken in one round, the land can not return to its original potential, and degradation begins.

After the second group, a third group will be asked to play the game, but now the restriction to remain silent is lifted.

Generally, the first game ends in a few seconds because after the starting signal all participants simultaneously grab all the nuts they can get. Thus, they empty the bowl and no refilling takes place. In the next group, having seen this and having learned the background of the game, people may:

- impose individual self-restraint in taking nuts and/or
- try to encourage other players non-verbally to do the same.

When the restriction of maintaining silence is lifted in the third and possible next groups:

- the group may discuss and decide upon certain measures such as the maximum number of peanuts each person can take per round: agreed self-restraint by all.
- but players may still take more than the agreed share: the need for sanctions.

In a final discussion, the results of the different groups are compared. From the better results of certain groups, issues emerge such as:

- the importance of communication and dialogue;
- the need for cooperation and trust;
- the need for agreed rules and regulations and ways to 'impose' these;
- the group learning process, the trying out, to find most adequate rules;
- issues of equity.

**VARIATION:**

**A FOCUS ON SOIL FERTILITY**

The nuts game can be used equally effective to initiate discussions, both with farmers and with field extension staff, on soil fertility issues and sustainable management of natural resources in general (compare van Veldhuizen et al., forthcoming). In the game leader's intermission after the first group, the emphasis will be on the peanuts as representing soil nutrients being taken out without sufficient replenishment. The final discussion focuses on issues of sustainability of production, recycling of nutrients, and known practices to enhance soil fertility. The PPEA project modified some of the procedures of the game in this variation to ensure a close fit to local farmers' reality.

*More information: PPEA, attn. Horst Oebel and Gilbert Zomahoun, PO BOX 13, Natitingou, Benin. Fax: +229-821100.*

**References:**

*Edney 1979. The nuts game: a concise commons dilemma analog. In: Environmental Psychology and Non-verbal Behaviour (1978-79): 252-254.*  
*Veldhuizen L.R. van, Waters-Bayer A., and Zeeuw H. de. Forthcoming. Developing technologies with farmers: A trainer's guide for participatory learning. ZED Books, 7 Cynthia Street, London N1 9JF, UK.*

<b>REPORTING FORMAT</b>				
	<i>Game 1</i>	<i>Game 2</i>	<i>Game 3</i>	<i>Game 4</i>
<i>Player 1</i>				
<i>Player 2</i>				
<i>Player 3</i>				
<i>Player 4</i>				
<i>Player 5</i>				
<i>Total</i>				
<i>Minimum/</i>				
<i>Maximum</i>				
<i>Average</i>				



Feil P. 1995. **Endogene Neuerungsverbreitung als Teil des sozio-kulturellen Wandels** (Endogenous diffusion of innovations as part of the process of sociocultural change). 274 pp, Margraf Verlag, Hohenloher Str. 2, D-97990 Weikersheim, Germany.

*Benin, diffusion of innovations, indigenous technology, knowledge systems, social change*

A doctoral dissertation in German which analyses the way of life of smallholders in two villages in southern Benin. It is a detailed study of technical change (mainly the distillation of palm wine) not promoted by a formal extension system, and of the influence of changing knowledge systems on farmer's technology development and diffusion of innovations. Write to Petra Feil, Brabantst. 28, D-52070 Aachen, Germany, and insist that she write something in French or English about her work!

Fliert E. v.d., Asmunati R, Wiyanto, Widodo Y & Braun A.R. 1995. **From basic approach to tailored curriculum: participatory development of a farmer-field school model for sweet potato**. 17 pp. Paper presented at UPWARD's 4th Review and Planning Conference. UPWARD, Los Banos, Philippines. And Fliert E. v.d. et al. 1995. **Improving profits from sweet potato: IPM with diversification of markets**. In: *CIP Circular* December 1995: 8-15.

*Indonesia, farmer experimentation, farmer-scientist interaction, integrated crop management, sweet potato, curriculum development, training*

Both documents describe the experiences of a collaborative programme involving researchers from several institutes, NGO staff and farmers. The latter play a central role in developing and testing locally effective ICM practices for sweet potato. In the first season, farmers from 8 hamlets documented their existing cultivation practices as a basis for planning further field experimentation. As a spin-off, the University researched processing and marketing issues. With the results obtained, collaborators were able to design a pilot Farmer Field School for sweet potato, an interactive training model that is popular in many parts of Asia.

Heide W.M van der, Tripp R, and Boef W. de 1996. **Local crop development: An annotated bibliography**. IPGRI, Rome, Italy/CPRO-DLO, Wageningen, Netherlands/ODI, London, UK. Available from: IPGRI, Via delle Sette Chiese 142, 00145 Rome, Italy.

*plant breeding, participatory breeding, genetic diversity, participatory research, farmer-scientist interaction, farmer experimentation, indigenous knowledge*

This bibliography brings together a great number of publications on what is called local crop development: efforts of farmers to manage their variety collection, maintain genetic diversity and gradually adapt and change their local varieties. It includes a.o. a section on indigenous knowledge and innovation and one on participatory research methods supportive to local crop development. Although far from complete and not always up to date, the strength of this latter section is in its clear focus on management of seeds and genetic resources in general.

Ilkcaracan I & Appleton H. 1995. **Women's role in technical innovation**. Food Cycle Technology Source Book. 86 pp. United Nations Development Fund for Women (UNIFEM), 304 East 45th Street, New York, NY 10017, USA. Intermediate Technology Publications (ITP), 103-105 Southampton Row, London WC1B 4HH, UK.

*food processing, indigenous technology, indigenous experimentation, gender analysis, women's role, farmer-scientist interaction*

This source book, first published in 1994 as "Women's roles in the innovation of food cycle technologies", gives evidence of the role of women in the South in technological innovation. A PTD approach is suggested by the authors and documented in the book: one that fully integrates people's local technical knowledge and supports people themselves as the innovators and owners of the process. The 23 case studies presented cover three main themes: women's indigenous knowledge, women's innovation activities, and collaboration between women and outside agencies supporting technology development by women. The case studies confirm, according to the

authors, the importance of women's technical knowledge, often invisible to outsiders, and its dynamic character. Six reasons for supporting indigenous knowledge development and communication are presented. The book concludes with a series of practical guidelines and suggestions for facilitating and supporting technology development by women. All in all an accessible, comprehensive and well-documented publication.

Jonfa E. 1996. **Farmers' on-farm participatory research: experiences in Ethiopia**. In: *PLA Notes* 27: 7-10. IIED, London, UK.

*Ethiopia, participatory research, Participatory Rural Appraisal, on-farm experimentation, soil fertility*

Summarises the experiences of FARM-Africa in Ethiopia since 1991 in supporting experimentation by men and women farmers in a wide range of topics. The approach includes PRA-type situation analysis, planning, implementation and evaluation of trials by farmers, and sharing of the results. Farmers' priority issues fall into three categories: issues which cannot be addressed by farmer research, those which could in principle but need deeper understanding before effective trials can be planned, and those which can be tackled directly by experimenting with possible solutions. Decline in soil fertility is in the second category. FARM developed a topical PRA on nutrient cycling to investigate this problem before planning possible trials. Contact: FARM-Africa, PO Box 5746, Addis Abeba, Ethiopia.

Keulen W.F van, & Walraven S.J.E. 1996. **Negotiations in participation: Improving participatory methodologies with insights from negotiation theory**. Thesis, Department of Communication and Innovation Studies, Wageningen Agricultural University, Hollandseweg 1, 6706 KN Wageningen, Netherlands.

*participatory approaches, conflict resolution, negotiation*

A thorough literature study covering both recent participatory development approaches and theories of conflict resolution and negotiation. The authors focus on 'enriching action oriented'

rather than 'extractive' approaches and on situations in which some form of joint decision making has to take place. They note that little attention is given in participation literature to ways of handling negotiation issues. From the overview of negotiation literature a number of concrete suggestions emerge as to how to achieve conflict resolution, in situations of limited as well as of pronounced power differences. In the first case looking for win-win situations and synergy and creation of effective 'platforms' will often play an important role, whereas in the second case, power-regulating strategies and tactics will be more important.

Lianchamroon W, Srithong P & Stoll G. 1995. **Development of neem-based plant protection practices: a PTD experience from Suphanburi, Thailand**. 7 pp. Misereor, P.O. Box 1450, D-52015 Aachen, Germany.

*Thailand, crop protection, botanical pesticides, neem*

A brief account of how an NGO assisted a number of farmers in testing a plant-based pesticide developed by another farmer. These core farmers now act as resource persons for other farmers interested in experimenting with this method of crop protection.

Murray Bradley S. 1995. **How people use pictures: Annotated bibliography**. IIED, London, UK.

*visualisation, participation*

The use of visuals plays an important role in participatory approaches to development. Not only when people cannot read or write but also in a wide range of other situations. This bibliography presents a wide collection of documents discussing the use of visuals from simply conveying information to raising awareness and consciousness on local development issues. It includes a list of resource organisations.

Reij C, Scoones I & Toulmin C (eds). 1996. **Sustaining the soil: indigenous soil and water conservation in Africa**. 260 pp. Centre for Development Cooperation Services (CDCS), Free University of Amsterdam, Amsterdam, Netherlands. Earthscan Publications Ltd.,

120 Pentonville Road,  
London N1 9JN, UK.

*Africa, indigenous technology, participatory research, farmer-scientist interaction, soil conservation, water conservation.*

This book offers a valuable contribution to the discussion about the role of indigenous knowledge and practices, both in terms of geographical coverage and with regard to its search for rationale and effectiveness of indigenous practices and the dynamics of their development. 'Indigenous' is used here in a dynamic manner, i.e. including technologies originating from elsewhere which local people have adopted. The 27 case studies of indigenous soil and water conservation practices in more than 15 African countries clearly show the great diversity of these practices, depending on agro-ecological and socio-economic conditions and trends.

This diversity and the adaptability of local practices to face changing conditions, particularly the local labour situation, constitute the strength of indigenous practices reported. The book addresses the fundamental question of the role of engineers, agronomists and social scientists wishing to improve farmers' livelihoods, but only in general terms. While the authors' argument is acceptable that this role should be supportive and complementary to farmers' efforts, the challenge of how this could be effectuated in practice still needs to be answered. A few cases in the book, documenting participatory research and extension efforts, show in which direction answers can be found.

Scheer S. 1996. **Communication between irrigation engineers and farmers: the case of project design in North Senegal.** 258 pp. PhD Thesis, Wageningen Agricultural University, Netherlands.

Available from author:  
E. van Reijdtstraat 8,  
7412 EA Deventer,  
Netherlands.

*communication, indigenous knowledge, irrigation, water management, Senegal, farmer-scientist interaction*

Gaps in understanding between farmers and irrigation engineers are very common under prevailing top-down irrigation design and management approaches.

The author of this book demonstrates, on the basis of experiences with small-scale irrigation in Senegal, that this results in poor use and maintenance of irrigation facilities designed by engineers. Inspired by 'soft systems' thinking, he shows ways how irrigation design and management can become effective learning situations in which all parties contribute. The use of visual aids, scale models, as well as small-scale experiments with water distribution at field level are among the methods found to be supportive to such joint learning.

Spore. 1996. **Small farmer innovations: the drive for efficiency.** In: *Spore* 63:5.

*Cameroon, Comores, farmer experimentation, agroforestry, diversification, crop-livestock integration*

Small farmers have always needed to carry out experiments on their farms. This short article draws attention to two cases where small farmers successfully modified and adapted introduced hedgerow systems to suit the local situation and their own priorities. The results are quite different from what researchers expected and promoted. This points to the need for continuous exchange of views between scientists and farmers.

Reckers U. 1996. **Participatory project evaluation: allowing local people to have their say.** 5 pp. Internal project paper of the UNEP's Dryland Ecosystems and Desertification Control Programme Activity Centre. DEDC/PAC, UNEP, P.O. BOX 30552 Nairobi, Kenya; Fax +254-2-623284; E-mail ute.reckers@unep.no

*Kenya, participatory evaluation, desertification, indigenous indicators, drylands*

This short note gives the background and main principles of a methodology for participatory project evaluation being developed in northern Kenya. It is derived from ethnographic interview approaches and emphasises the mediator role of participatory evaluation between local and development cultures. The project aims to produce a practical manual for use by fieldworkers.

Slocum R, Wichhart L, Rocheleau D & Thomas-Slayter B. 1995. **Power, process and participation: tools for change.** 251 pp. Intermediate Technology Publications, London, UK.

*community self-management, empowerment, ethics, gender issues, participatory methods*

In many cases of PTD, insufficient attention is given to differences of gender, class, ethnicity, status and power. The methods and case examples given in this book help to fill this gap. The tools will be useful for local capacity-building for PTD in agriculture as well as other settings. The direct, personal style and good layout make this book very inviting to read.

Stewart S et al. 1995. **Participatory Rural Appraisal: abstracts of sources.** Development Bibliography 11. 467 pp. Institute of Development Studies (IDS), University of Sussex, Falmer, Brighton BN1 9RE, UK, Fax +44-1273-691647.

*bibliography, participatory methods*

Much more than PRA experiences are included here. If you look under the keywords farming systems research, indigenous technical knowledge, on-farm research and participatory research, you'll find some documentation on PTD. The bibliography is also available on diskette and e-mail.

## FURTHER PUBLICATIONS

*Please contact the authors directly for copies of their manuscripts, or more recent versions of them.*

Adoyo F. 1995. **Participatory Technology Development: experiences of Kenya Woodfuel and Agroforestry Programme (KWAP), Busia District, Kenya.** Manuscript. 32 pp. KWAP-Busia, P.O. Box 421, Busia, Kenya.

*Kenya, agroforestry, farmer experimentation, farming systems research, women*

ECASARD. 1997. **The ECASARD framework for participatory technology development (PTD).** 2 pp. Mimeo. ECASARD, P.O. Box 68, Madina, Accra, Ghana.

*participatory technology development, Ghana.*

Franzel S, Kamiri Ndufa J & Holding C. 1995. **Farmer-designed multipurpose tree trials: experiences from East Africa.** Manuscript. 15 pp. ICRAF, P.O. BOX 30677, Nairobi, Kenya; Fax +254-2-521001; E-mail s.franzel@cgnet.com.

*Burundi, Kenya, farmer participation, multipurpose trees, on-farm research*

Gantoli G & Oebel H. 1996. **Manuel du formateur sur la fertilité du sol** (Soil fertility trainer's manual). Projet Promotion de l'Élevage dans l'Atacora (PPEA), BP 13, Natitingou, Benin.

*agricultural extension, audio-visual aids, Benin, soil fertility, crop rotation, participatory extension, teaching aids.*

Holt-Gimenez E. 1995. **La Canasta Metodologica: methodologies for farmer-led experimentation and promotion.** Manuscript. 33 pp. SIMAS, Apartado Postal A-136, Managua, Nicaragua; E-mail simas@nicarao.apc.org

*Central America, farmer experimentation, farmer-to-farmer extension, methodology*

Kievelitz U. 1996. **Conceptual elements, frame conditions and procedural steps for Improved Natural Resources Management on the basis of the RNR concept in the Bhutan-German Integrated Forest Management Project.** BG-IFMP Working Paper 11. 30 pp. BG-IFMP, P.O. Box 362, Thimphu, Bhutan; Fax +975-2-24690.

*Bhutan, participatory landuse planning, social forestry*

Perez E. & Mechielsen F. 1995. **Integrating traditional and scientific experimentation: the experience of the Universidad Camesina in Nicaragua.** Manuscript. 13 pp. Contact: Frank Mechielsen, Visscherij 10, NL-7491 DN Delden, Netherlands.

*Nicaragua, farmer experimentation, indigenous knowledge, traditional methods*

Shrestha P.K., Dhital B.K., Kadayt K.B. & Abington J.B. 1995. **Strengthening farmers' research: the experience of Lumle Agricultural Research Centre in the Western Hills of Nepal.** Manuscript. 7 pp. Lumle Research Centre, P.O. Box 1, Pokhara, Nepal.

*Nepal, farmer experimentation, mountain agriculture, on-farm research, rice breeding*

Simpson B.M. 1995. **Extension practice, farmer innovation, and the lost art of human capacity building: a glimpse into the *Projet Pisciculture Familiale*, Zaire.** Manuscript. 15 pp. Institute of Social Studies, P.O. Box 29776, NL-2502 LT The Hague, Netherlands; E-mail simpson@iss.nl

*Zaire, agricultural extension, diffusion of innovations, farmer innovation, fish culture, technology development*

Sperling L, Scheidegger U & Buruchara R. 1995. **Enhancing small farm seed systems: principles derived from bean research in the Great Lakes region.** CIAT African Occasional Publications Series, No. 15. 30 pp. CIAT Eastern Africa Bean Programme, P.O. Box 6247, Kampala, Uganda. CIAT Réseau pour l'Amélioration du Haricot

dans la région de l'Afrique Centrale (RESAPAC), BP 259, Butare, Rwanda.

*beans, Burundi, farmer-scientist interaction, Rwanda, seed production, seed quality, seed supply, traditional varieties, participatory research.*

Tekelenburg A. 1995. **Peasants' intuition and imagination mobilised: peasant contribution in diagnosis and farm design.** Manuscript. 12 pp. Apartado postal 3534, Managua, Nicaragua; E-mail tekkel@nicarao.apc.org

*Bolivia, cactus pear, diagnosis, farm planning, farming systems development, indigenous knowledge, sustainable landuse*

Versteeg M.N., Amadji F., Eteka A., Gogan A. & Koudokpon V. 1995. **Keeping researchers in track: progress on farmers' adoptability of sustainable mucuna fallowing and of agroforestry technologies through farmer participatory experimentation in Mono Province, Benin.** Manuscript. 12 pp. IITA, Benin Station, Technology Transfer Unit, BP 08-0932, Cotonou, Benin; E-mail iita-benin@cgnnet.com

*Benin, alley farming, fallow, farmer-scientist interaction, mulching, on-farm trials, soil improvement*

## ● NETWORKING

**Annual meeting of St Ulrich Group of European PTD advocates, September 1996.** The St Ulrich Group is an open, informal network of European PTD advocates who meet annually to exchange experiences and address issues of common concern. This year's topics included ethics and quality of PTD training, participatory monitoring and documentation of PTD activities, and scaling-up. Next meeting is scheduled for 19-21 September 1997 in Germany. Central topic will be scaling-up, with cases from governmental settings (Zimbabwe) and indigenous institutions (Panama). *For further information and to obtain this year's report, contact Laurens van Veldhuizen, ETC-NL, P.O. BOX 64, NL-3830 AB Leusden, Netherlands; Fax +31-33-4940791; E-mail office@etcnl.nl.*

**The International Workshop on Soil Conservation Extension** was held in Chiangmai, Thailand, 4-11 June 1995. More than 140 delegates from 24 countries participated. A series of guidelines for effective extension were developed. Many focus on improving collaboration between researchers, extensionists and farmers in setting research and training

agendas, and in developing and spreading relevant technologies. Two publications will come out of the workshop: a workshop report with abstracts of papers and a guideline overview (100 pp) and a collection of selected papers (350 pp).

*Contact: The Secretary, Soil and Water Conservation Society of Thailand, Dept of Land Development Bldg, Chatuchak, Bangkok 10900, Thailand; Fax +66-2-5613029; E-mail oibram@nontri.ku.ac.th*

ENDA-Sahel is implementing a **West African regional support programme on "Peoples' Research"**. Based on experiences gained in Senegal in supporting research and experimentation by farmers and their organisations, ENDA collaborates with interested agencies in the region to further develop, adapt and implement this approach in their respective countries. Direct exchanges and cross visits between farmers and their organisations in the various countries form an important component of the activities. A programme outline is available in French. *Contact: ENDA GRAF SAHEL, P.O. BOX 13069, Grand Yoff, Dakar, Senegal; Fax +221-273215; E-mail graf@endadak.gn.apc.org (or BP 3055 Thies, Senegal; E-mail graf-thies@endadak.gn.apc.org).*



*Source: Sidy L. Dramé from Baobab 13 (1994) AUN/RITA, CP 3, Dakar, Fann, Semegal*



The System-wide Initiative on Farmer Participatory Research and Gender Analysis is a new programme coordinated by CIAT in Colombia. It aims at increasing interest and competence in FPR/GA within the international agricultural research centres and their partner organisations worldwide. The two main areas of interest are natural resource management in the uplands and plant breeding. A recent workshop formulated the main areas of activities and modalities of the programme. Studies, documentation and analysis of experiences with FPR/GA in the field are being proposed, as well as training of trainers, development of training materials and networking.

Contact: CIAT, attn. Jacqueline Ashby. AA 6713, Cali, Colombia. E-mail: J.Ashby@cgnnet.com.

The FAO is collecting and compiling **A toolbox of farmer participatory methodologies and techniques**. A short description of each methodology will be included, following a proposed format including a number of keywords. The collection will cover a wide range of topics related to rural development.

Preparation of the toolbox is coordinated by Jean Morize, 10 Rue du Roussillon, F-78690 Les Essarts Le Roi, France.

## AUDIOVISUALS

IAC. 1996. **Experience and experimentation: How farmers learn and develop sustainable practices**. International Agricultural Centre Wageningen, Netherlands. 23 min. VHS/PAL, VHS/NTSC. Available from: Studio Sahyo, Jl. Bali 11, Widoro Baru, Ngropoh CC, Yogyakarta 55283, Indonesia. Fax: 62-274-517201.

*training, farmer-to-farmer extension, farmer experimentation, farmer-scientist interaction, rice, integrated pest management, Indonesia*

This film is part of the training module "Extension Development for Integrated Pest Management". It demonstrates the process and application of the farmer field school as a model for extension for sustainable agriculture, in general, and Integrated Pest Management, in particular. The setting of the film is wetland agriculture in Indonesia. For the larger part, the video deals with the farmer field school of Pak Yanto. Viewers unfamiliar with the Asian context sometimes find it difficult to appreciate the participatory momentum of the Farmer Field School approach shown in the video.

## TRAINING EVENTS AND REPORTS

### Southern African workshop series on Farmer-Led Extension: The Farmer-to-Farmer Approach .

Experiences with the Campesino a Campesino movement in Central America formed the basis for a series of three workshops on farmer-led extension held this year in Pietermaritzburg, South Africa. Main components of this approach include farmer-led problem analysis, experimentation, promotion and networking, and documentation. The workshops focused on different aspects of the approach: from main principles, through practical implementation aspects, to design and monitoring of farmer-led programmes.

For further information, contact: Erna Kruger & Jo-Anne Simpson, Farmer Support Group, PO BOX 1, Scottsville 3109, South Africa. Fax: -331-68485.



### ETC

PO Box 64  
NL-3830 AB Leusden  
Netherlands  
Fax +31-33-4940791  
E-mail office@etcnl.nl

### PTD Circular Six-monthly update on Participatory Technology Development Number 6, February 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.

### Editors

Laurens van Veldhuizen and Ann Waters-Bayer.

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