What's New in Fallownet?

L.J.M. Ocampo

Fallownet, the online discussion list for development planners, project managers, scientists, researchers, and champions of soil fertility and fallow management in the tropical uplands all over the world, still continues with its thrust of providing an avenue of information and knowledge exchange among its approximately 200 members. The "unorchestrated" group (as referred to by Julian Gonsalves) allows any of its members to come in anytime to ask for information and ask for resources. It has also been a site to launch special topics for discussion.

Since the establishment of the electronic groups in 2001, a total of 266 messages have been posted. All of them have different purpose and deal with variety of topics. To give you some updates of what is happening and what is the latest in the fallownet, top 3 discussions (topics which gathered most responses) were synthesized. As of May 2002, more than 200 messages have been posted. Most discussions revolved around subjects such as potential and effective fallow species, factors affecting the abandonment of lands, and upland fishponds.

Which are the fallow species?

Some species identified as fallow species in discussions include *Pollia secundiflora, Tithonia diversifolia*, and *Chromolaena odorata*. *P. secundiflora*, is a herbaceous plant belonging to Agavaceae family. It is commonly found in second growth forest floors, rolling upland areas under fallow and older plantations with very minimal weeding and cultivation. It grows up to knee high, is not aggressive but is observed to compete well with other broad-leaved species. According to Demi Magcale-Macandog which initiated the discussion about the plant, *P. secundiflora* is catching the attention of some of the upland farmers in Southern Luzon Philippines. She also pointed out other characteristics of the plant such as its decreasing density during the dry season and the regrowth of its stolons during rainy season. Magcale-Macandog also claimed that when the species is allowed to grow in the field, it is capable of conserving soil moisture during the rainy season, especially when rain occurrence is very seldom. It can also prevent soil from hardening. Additionally, *P. secundiflora* bears white flowers, which have aesthetic value, thus the species can also be used as an ornamental plant. However, Meine van Noordwijk of Indonesia conveyed that in the Flora of Java, the genus of *Pollia* is in the Commelinaceae family, unlike in the Philippines wherein *Pollia* belongs to Agavaceae family. *P. secundiflora* is also known to them as *Aclisia secundiflora*. But just the same, its is also classified as an herb, 0.4 – 1.4m, with long creeping stolons, known from 20-1200m above sea level in umbrageous forests. Noordwijk even clarified that Commelinaceae is rather different from the Agavaceae family. A stoloniferous creeper of the

Pollia secundiflora

Commelinaceae is more likely to be a fallow species than an Agavaceace, which tend to be slow growers with subterranean rhizomes rather than aboveground creeping stolons.

Another species that was identified as valuable in nutrient cycling is *Tithonia diversifolia*. *T.diversifolia*, as what has emanated from the discussion, is a plant which thrives in most of the provinces of Northern Luzon, Philippines. It is one of those plant species capable of fertilizing the soil. It is used as green manure (an example of indigenous knowledge of soil fertility) not only in the Philippines but also in other Asian countries, for instance Nepal. However, it is not as abundant in Nepal as it is in Philippines. Catherine Moss shared that research on the potential of *T. diversifolia* as a fertilizer has been carried out by the University of Wales, Bangor and the local NGO LI-BIRD in Nepal.

Chromolaena odorata completes the line up of fallow species discussed in the fallownet. Like *T. diversifolia*, *C. odorata* is also incorporated in the soil of rice paddies to act as green manure. Based from the sharing of Lovereal Ocampo, according to the results of their Participatory Rural Appraisal in Abra (also a province from Northern Philippines), the plant species can reduce the fallow period of 5 years to only 1

Tithonia diversifolia (wild sunflower)

year. Virgilio Villancio even added that, *C. odorata* can also be used for bioremediation especially in mine tailing areas.

Fallownet is also the site for verification of facts and ideas. Due to the e-groups, the issue on some species like *Ipomea batatas, Xanthomonas sagittifolium* and *Pinus insularis* being fallow species were clarified. During the LEK workshop in Baguio in November 2002, sweetpotato was assumed to be a fallow crop being a dominant crop in the mountains of Cordillera, Philippines. However, when the issue was floated in the discussion list, Ben Maata immediately explained that it could never be a fallow crop. According to Maata, sweetpotato has very little nutrient regeneration capacity. Moreover, it is very good in extracting nutrients, but is not capable of replacing anything, according to Delbert Rice. However, sweetpotao has value as a cover crop which prevents soil erosion, added Maata.

"*X. sagittifolium* is a perennial crop," expalined Grace Bengwayan and Ben Maata to answer the inquiry of Virgilio Villancio. Maata further stated that like *I. batatas, X. sagittifolium* can not revive the nutrients of the soil. However, it does not extract nutrients from the soil as much as *I. batatas* does. Also, *X. sagittifolium* is usually harvested for consumption and a little cash, while a fallow crop must be allowed to grow without much intervention from the cultivator.

Additionally, *P. insularis* cannot become a fallow species as elucidated by Michael Bengwayan. Pine needles, according to him, are acidic and have allelophatic effect on crops. Decomposed pine needles raise soil acidity, instead of rejuvenating soil nutrients. However, Dhrup of India, shared the idea that the presence of local varieties

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Providing Knowledge Support...

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With this backdrop, The IFAD-ICRAF Innovations Project promotes farmer-centered innovations which have included labor saving soil erosion control, low cost soil fertility improvements, growing trees on farms, and farmer-run plant material production systems.

Natural vegetative strips or NVS is an example of an innovation being tried out by farmers such as Nang Editha. The soil conservation technology has been proven to spread quickly because it is not labor intensive, and does not compete with crops. It is now being spread in the IFAD-assisted projects in Northern Mindanao and Western Mindanao. Groundwork is now underway for its spread in IFAD-assisted projects in Indonesia, Cambodia and Lao projects.

The Innovations Project is also supporting the documentation and promotion of beneficial fallow management and agroforesty practices. The Soil Fertility and Fallows Network provides information service (such as this newsletter) for research and development community in Asia.

Institutional innovations include forming farmer- based extension support (North Mindanao and Ha Giang ,Vietnam sites) and approaches for negotiating tenure security and resource access rights (East Kalimantan, Indonesia and Cordillera , Philippines projects). The Innovations Project is helping assess experience, draw out field lessons and develop approaches for delivery of services.

Enabling the Facilitators and the Role of the SFM Network

The IFAD-assisted upland projects facilitate upland farmer initiatives that promote soil conservation and agroforesty. Implementation of these upland projects are affected by institutional challenges . They are run by mainstream government agencies which want to be very responsive but are occasionally held back by traditional work paradigms e.g. technology transfer approaches. The technical backgrounds of project staff (either commodity agriculture or forestry) sometimes discourage faming systems-oriented approaches.

To help address this challenge, the Innovations Project helps broker cross pollination of ideas and partnership building (farmer to farmer and between institutions) as well as capacity building. In the Philippines for instance, Western Mindanao farmers interact with their more advanced peers elsewhere. Upland Projects are being linked with the regional Research and Development Networks. An example is the Highland Agricultural and Resources Research and Development Consortium which is working with the IFAD CHARM Project in ensuring the continuous flow of innovations to project communities long after the CHARM project ends. In Cambodia, the Provincial Departments of Agriculture in 4 provinces covered by the ADESS Project are working with the Innovations Project develop staff capacity and information products for poor upland farmers.

Much more needs to be done. For its part, the Soil Fertility and Fallows Network aims to bring further the innovations to the doorstep of the facilitator. This is being achieved by helping project partners get to better understand farmers' soil fertility practices. They are then enabled to access helpful information relevant to farmer needs.

Coffee... break!

Do you know that in Nepal, there are also indigenous plant species that act as fertilizers as well as pesticides! "Ankhe taruwa" (Trichilia connaroides), "Titepati" (Artemisia vassica) and "Asuro" (Adhatoda vassica) have been used as fertilizers and pesticide for the last centuries. The last two species have pesticidic value. All the three species are easily available in Nepal. However, there have not been any research studies about the indigenous plant species.

- shared by Chiranjivi Sharma- Fallownet Discussion List

Fallownetters who contributed in the discussion...

Damasa Magcale-Macandog

-ICRAF-IFAD Information Support Project, Philippines

Meine van Noordwijk

-ICRAF Southeast Asia

Lovereal Joy M. Ocampo

-ICRAF-IFAD Information Support Project, Philippines

Virgilio Villancio

-Institute of Agroforestry, University of the Philippines Los Baños

Ben Maata, Jr.

- Philippine German-Development Foundation, Inc. c/o IIRR, Cavite, Philippines

Grace Bengwayan

Benguet State University, CAR, Philippines

Michael Bengwayan

Igorot Tribal Assistance Group (ITAG), CAR, Philippines

Dhrupad Choudhury

North Eastern Region Community Resource Management Society (NERCRMP), Shillong, India

Paul Burgers

Institute of Development Studies, University of Utrecht (IDSUU)

Roland Bunch

COSECHA, Honduras

Richard Yao

Graduate student, Purdue University

Albert delos Reyes

Samar, Philippines

Jindra Samson

International Center for Tropical Agriculture

What's new...

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have also helped. According to him, the local-agro-germplasm of these varieties has been adapted already to the acidic conditions. Thus yields are still satisfactory.

What "pulls and pushes" farmers in abandoning their land?

Discussion started when Paul Burgers started to crave for knowledge on some lands left by farmers because of factors other than soil fertility. He was referring to reasons such as the attractiveness of cities, which could offer higher quality of living. Roland Bunch had a quick response telling that it would be very difficult to discern how much of the abandoned lands are because of the cities or because of the depletion of nutrients. Bunch further discussed that even if the cause of the land abandonment is the farmers' migration to cities, their decision might have been, still, an effect of the poor condition of the land. He also added that, when people leave their lands there are other factors to consider like the education of the children and the desire of acquiring extra income (for instance, being able to work in the city while having someone to rent his land).

> *"Both the push and pull are significant factors in land abandonment"*

Bunch, in general, identified 2 factors why farmers abandon their lands: a) push factor (people leaving the villages because of the infertility of the soil and other village-based factors) and b) pull factor (attractiveness of the cities).
To support the assumption of Bunch, Burgers in his response stressed that both push and pull factors will be significant in the farmers' decision of leaving their lands. According to him, farmers will have no option to leave if all are just push factors. So there must be pull factors, even if they only reside in the heads of the farmers (assuming that city is like a paradise offering great opportunities), combined with unwillingness to farm anymore (push). However, some farmers who have decided to leave their lands still hold on to them in one way or another (through kinship relations and degree of investment in the land). They may return once they have enough savings to serve as capital and when they think that it is again profitable to start cultivating the land.

How much could you get from "upland fishponds"?

Upland fishpond in Bayyo, Bontoc

Upland fishponds, according to Charles Castro (as shared by Richard Yao), is a practical technology that is still ignored in shifting cultivation territory. Castro claimed that if farmers are encouraged to put up fishponds in the vicinity of their shifting cultivation areas, the water component would motivate them to make their sites more productive. As a result, there would be more verdant farms—enough reason for the farmers not to move on and clear other sites of their forest cover. After all, the major reason why shifting cultivators shift is the declining soil fertility and productivity of the land, says Castro.

> *"The magic word is WATER."*

Furthermore, the food (e.g. fish, snails, frogs, water cress, taro, ducks) component of the ponds would diversify the produce as well as the nutrition of the farmers' family. It would also be a good hedge against drought conditions in the area. Additionally, the availability of water would enable farmers to grow other crops (e.g. mushrooms, fodder, bananas, bamboo, even wetland rice) on one hand, and to raise livestock (e.g. ducks chicken, goats, and pigs), on the other. Other benefits of upland fishponds are encouraging farmers to go into composting, or to go into seedling production. Castro identified the magic word for this technique to be WATER- water to make the farmer, the farm, and the ecosystem healthy.

Albert delos Reyes agreed with Castro's idea. However, he also pointed out the possible problems to be encountered while adopting this technology. Two of these are on degradation and natural resource regeneration as the farmers (especially in the hilly lands) experience nonstop problems on water shortage and irrigation. Thus, effective measures on these constraints must be designed and implemented in the fastest time possible.

But, based on the experiences of Jindra Samson, soil and water conservation is more a concern of the outsiders rather than the farmers within a municipality. Samson explained that in all her diagnoses, it always turns out that farmers are very aware of the soil and water issues but still continue in doing nothing unless an external influence (projects, ideas, incentives) takes place. Samson further added that researchers must be familiar first with the place and the socio-economic and cultural condition of the area before urging the farmers to practice soil and water conservation. The willingness and the need for soil and water conservation must come from the usual farmer practices and ideas on soil and water conservation must be the basic roots of any soil and water conservation plans. In Samson's discussion, she disagreed with Delos Reyes in his protocol of "fastest time". According to Samson, it may be quite dangerous and unsustainable. It may stay progressive while the project is there but once the project leaves, the effect may die. She even suggested of conducting first an initial participatory diagnosis with small selected group of farmers. Through this, a researcher can learn the indigenous ways to prepare plans or researches for them. Smaller groups will also require less investment and more focus on the group needs, which is more sustainable. She further pointed out that protocols should be kept as simple as possible given the farmers literacy background. Developing local farmers to serve as facilitators for other farmers is one effective technique for Samson. Through this, a technology would be translated to farmers. Once the farmers get to understand the importance of it, dissemination is easier.

> *"Knowledge-sharing is at your fingertips"*

These three topics are just some of what are being talked about in fallownet. There are still other interesting discussions in the list....and why not? With the current advent in technology, why would you hesitate to share your knowledge, when in fact sharing is only at your fingertips!

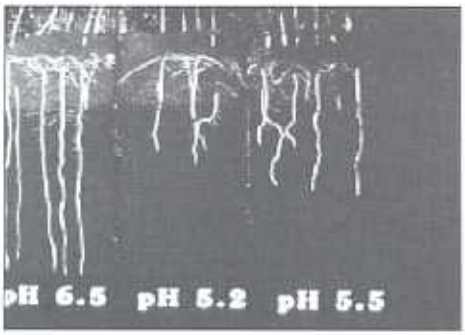
How to Manage...

...continued from page 1

problems such as soil acidity, domination of *Imperata*, and soil erosion – all boiling down to soil infertility.

Acidic Soils

SEA uplands are naturally composed of approximately 118 million hectares of land with pH below 5.0. This case is not a problem with natural forests, wherein there is a closed cycle of nutrients. However, for intense cultivation it is otherwise. In an agricultural cultivation, the land is subjected to human disturbances that make the soil more acidic. Intense cultivation removes topsoil and exposes the naturally acidic



Stunted root growth due to soil acidity

subsoil, or depletes the soil of basic-forming elements. In effect, problems brought by low ph like Al toxicity, decreasing P and other nutrients (N and K) arise.

Al toxicity

Brought about by low ph and too much soluble Aluminum, Al toxicity inhibits plant stunted root growth and reduces nutrient and water uptake—problems that eventually lead to plant growth. Its symptoms include: stunting with leaf scorching, leaf margin scorching, and orange-yellow inteveinal chlorosis.

The decrease in each of the three nutrients in acidic soils is brought by different factors. Naturally, upland soils are low in P. This is brought about by crop removal and leaching of bases such as Ca, Mg, K, and Na. High rainfall in the tropics contribute greatly to leaching of bases from the topsoil. Presence of too much Aluminum in upland soils makes the P unavailable for the plant, since P binds with Al. On the other hand, low organic content causes low Nitrogen content of the soil while, Potassium deficiency is caused by cropping upland soils for several years and lack of application of K fertilizer or organic matter in the soil.

Imperata grassland

Domination of *Imperata*

35 million hectares of *Imperata* grasslands are in Asia. Being not nutrient demanding, *Imperata* thrives well in any type of soil and dominates degraded lands. During dry season dried *Imperata* leaves are prone to fire. After fire, *Imperata* shoots readily regrow while other seedlings are killed during fire. Thus, *Imperata* is termed as a fie-climax species. Toxic leak from its roots and rhizomes also affect the growth of other plants.

Soil Erosion

Being predominantly sloping, uplands are subject to soil erosion especially when the soil has no protective cover from wind and heavy rainfall and when it is disturbed by cultivation. This problem in effect washes away the fertile topsoil, leaving the infertile subsoil, not helpful for plant growth.

> *"Increasing OM is the solution to soil fertility problems."*

Addressing the Constraints

Soil Fertility Management Strategies

Basically, increasing the organic matter is the solution to soil fertility problems. High organic matter is responsible for the slow release of nutrients to the soil just enough for the crop to uptake. It makes the nutrients always available for the plant. To increase organic matter, effective and efficient approaches to soil fertility and integrated nutrient management strategies are needed. Effective strategies include fallowing, green manuring and cover cropping, and contour cultivation.

Fallowing

Fallowing is allowing the soil to rest and take time to rejuvenate its fertility. It usually takes 20 years or so. However, in areas where there are only small lands to cultivate, fallow period is shortened, since farmers will have no other way of living. In some cases, farmers practice improved fallow through the introduction of nitrogen-fixing fallow species, that help the soil regain fertility faster.

Green Manuring and Cover Cropping

Green manure/cover cropping refers to intercrop among traditional crops or to crops planted under tree crops. Gm/cc are allowed to grow fully well after flowering and fruiting for the farmer to harvest the seeds for home consumption, selling, feeds for animals, or planting material. The remaining plant materials are applied on the area surface to serve as organic fertilizers while they decompose.

Sunflower cuttings applied in irrigated rice fields (payew) during land preparation.

Green manures also serve as cover to the soil to prevent soil erosion and to control weeds. They are not only concentrated in leguminous plants. They could be any plants, which serve variety of purposes such as improving soil fertility and controlling weeds, which include *Imperata*. Because green manuring increases

Natural Vegetative Strips

organic matter content, the problem in Al toxicity is also addressed.

Establishment of Agroforestry Systems

Introduction of agroforestry systems through contour planting, natural vegetative strips, improved vegetative strips and rotational alley cropping does not only improve soil fertility but also effectively control soil erosion, thus conserving the fertile topsoil and water. Other agroforestry systems that include planting of timber and fruit trees, which are scattered in the farm (parkland) or along farm boundaries, improve the sustainability of the farming system.

Fallow reduction...

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Growing rice for the second year also revealed that soil pathogens may play an important role in decreasing upland rice productivity in consecutive-year cropping. Interviews with farmers were explainable in an ecological context – for example, the variability within and between crop fields reflects variability of soil fertility, which, in turn, depends on localized topography and physical characteristics of the soil. The farmers responded that the fallow period could be reduced to a minimum of 2-3 years, and there were supporting data to show that this might be associated with increased weed competition and less ash. An ICRAF study in the Mae Chaem watershed revealed that the reduction of the fallow period to 2-3 years has led farmers to introduce fertilizers and pesticides to maintain their regular yields (Thomas et al., 2002).

The biogeochemical studies of the forest-fallow shifting cultivation system showed that nutrient losses via slash burning and harvested rice grain are important outputs of N. P was found to be lost the most via harvested rice grain, while losses through erosion and leaching may be important for K, Ca, and Mg. A quantitative assessment of other pathways of nutrient inputs (e.g., N_2 fixation and soil weathering) and outputs (e.g., erosion and leaching) is needed for a complete description of the biogeochemistry of the ecosystem under forest-fallow shifting cultivation, a critical factor to consider when evaluating its sustainability.

The current fallow period of 5 years appears to be sustainable, from the nutrient cycling point of view and at the present landscape condition, but a further reduction in fallow length may pose some risk to the apparent sustainability of this forest-fallow shifting cultivation. A comparison of nutrient cycling between reduced-forest-fallow shifting cultivation with the longer fallow system and also with fixed-field farming (by simple and/or computer models) is needed to assess sustainability.

Invitations, Notice and Suggestion Box

Invitation to post questions on soil fertility and fallow management in the upland tropics

Dear SFM Newsletter Subscribers,

The editorial team is inviting everyone to post questions related to soil fertility and fallow management in the upland tropics. These questions will be directed to your fellow readers of this newsletter. Send your questions to <macandog@pacific.net .ph> with "Ask the SFM Subscribers" in the subject heading. The questions that you are going to send will be posted in the next issue of this newsletter.

We also encourage everyone to join the fallownet discussion list, just email to <macandog@pacific.net .ph> your email address and you will immediately be connected! Thank you and we look forward to receiving your questions to your fellow readers.

Truly yours,
SFM Editor

Invitation to share info on promising upland farming technologies and experiences

Do you know of promising technologies or practices on soil fertility and fallow management? Would you like related knowledge or experiences be shared to your fellow upland stakeholder? If Yes, you are invited to share them to the readers of SFM. Send a brief description of a promising technology to <macandog@pacific.net.ph> with "Share to SFM Subscribers" in the subject heading. The questions that you are going to send will be posted in the next issue of this newsletter. Entries for this should not be more than 120 words.

Invitation to submit articles on soil fertility and fallow management in the upland tropics

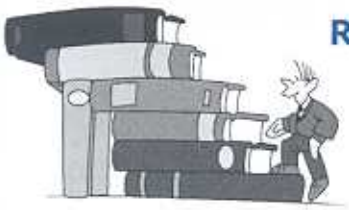
We would like to invite you to submit articles on soil fertility and fallow management in the upland tropics. For inquiries, please write to the SFM editor at <macandog@pacific.net.ph> with "SFM Article Submission" in the subject heading.

SFM Suggestion Box

We welcome your suggestions! Please tell us what other steps should we consider to improve the newsletter's succeeding issues. Please send your suggestions to <macandog@pacific.net.ph> with "SFM Suggestions" in the subject heading.

Notice to SFM Subscribers

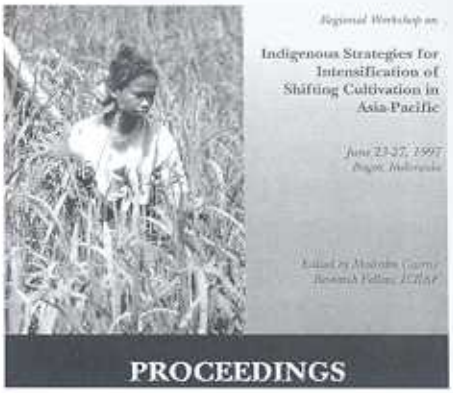
Due to the rising cost of printing and mailing, we would like to encourage our valued subscribers to access the future issues of the SFM Newsletter from the web site of the World Agroforestry Center (ICRAF). We will endeavor to constantly provide hard copies to the active participants of the FallowNet Discussion List. Thank you.



Related Publications

Now there is an easier access to the 1997 Bogor Workshop Proceedings!

The proceedings of the 1997 Bogor Workshop is now available in CD form. This CD contains the complete proceedings of a regional workshop on 'Indigenous Strategies for Intensification of Shifting Cultivation in Asia-Pacific' held at Bogor, Indonesia, on 23-27 June 1997. Copies in CD form have been provided to conference participants, authors of conference papers and donor agencies.



The Best Management Practices: Nutrient Management

This book is one of the Best Management Practices Series published by Ontario Federation of Agriculture in cooperation with the Agriculture and Agri-Food Canada. It contains useful and relevant information about the nutrients needed by crops, sources of nutrients and the best practices for applying nutrients.

Hurry avail one! Another good news is, this book is offered free to the farmers!
For more details, email:
environment@omaf.gov.on.ca

HANDS-ON AGRONOMY
by Neal Kinsey, edited by Charles Walters

A book containing soil fertility guidelines proven by many years experience worldwide, for farmers, ranchers and gardeners or anyone interested in building a top-quality soil in which to grow top-quality plants.

Topics include: The Farming Dilemma, Cation-Anion Connection, Nutrient Action and Interaction, Calcium, Magnesium and Tillage, The Nuances of Nitrogen, Phosporous & Potassium, Using Manures, The Sulfur Connection, Micronurients and their Application, Nutrients and Soil Biology

For details, visit www.kinseyag.com/Publ.htm.

INASP Rural Development Directory 2003/ 2004

The International Network for the Availability of Scientific Publications (INASP) launches a directory which aims to provide access to a wide range of information on rural development. It contains more than 400 international, regional, and national networks and organisations around the globe. It specifically seeks to promote South-South information dissemination and interchange.

The directory is also available in print and on-line at the INASP website:
www.inasp.info/pubs.

Congratulations to the top 3 most active fallownetters! (as of January, 2003)

1. *Ben Maata*
2. *Delbert Rice*
3. *Michael Bengwayan*

NUTRIENT MANAGER

Nutrient Manager

This is the official newsletter of the University of Maryland/Maryland Cooperative Extension Agricultural Nutrient Management Program.

It has already a total of 7 volumes with 1 to 2 issues each. The newletter features different topics about nutrient management for the soil as well as for the crops.

For electronic copies, visit www.agnr.umd.edu.htm
For hardcopies, email js586@umail.umd.edu

Announcements:

CALL FOR CONTRIBUTIONS TO A SOURCEBOOK ON PARTICIPATORY RESEARCH AND DEVELOPMENT

Paper contributions are being soilcited for a propsed Sourcebook on Participatory Research and Development, featuring field-tested concepts and methods for enhancing local people's participation in research. The focus will be on developing-country experiences associated with managing natural resources to support agricultural and rural livelihoods. Copyright-free and highly illustrated, the sourcebook is primarily intended for fieldworkers seeking to learn and apply participatory approaches in their research activities. Development of the sourcebook is a collaborative effort by the Users' Perspectives With Agricultural Research and Development (UPWARD) Network and partners around the world. UPWARD is an Asia-wide network supporting the participatory research and development for sustainable agriculture livelihood, sponsored by the International Potato Center (CIP).

Visit www.eseap.cipotato.org/upward

Contributions are encouraged not only from research and academic institutions but also from non-government organizations (NGOs), extension agencies and community-based groups. For more details about the sourcebook and guidelines for contributions, please contact:

Ms. Hydee de Chavez
CIP-UPWARD c/o IRRI DAPO 7777,
Metro MAnila, Philippines
email: hydee@laguna.net

Soil Fertility Matters

Editor-in-chief	**Dr. Damasa B. Magcale-Macandog**
Associate Editor	**Lovereal Joy M. Ocampo**
Editorial Advisers	**Marian delos Angeles**
	Eduardo Queblatin
	Dr. Julian Gonsalves
Contributors	**George Cadish**
	Dr. Damasa B. Magcale-Macandog
	Lovereal Joy M. Ocampo
	Eduardo Queblatin
	Chiranjivi Sharma
	D.E. Thomas
	Prasit Wangpakapattanawong
	CIP-UPWARD
	IIRR
Photographs	**George Cadish**
	Marc Elgin M. Delgado
	Dr. Damasa B. Magcale-Macandog
	Lovereal Joy M. Ocampo

Please address inquiries, comments, and suggestions to any of the following:

Email: macandog@pacific.net.ph

Tel: +63-49 536-7418, Fax: +63-49 536-2517

CALL FOR PAPERS and CONFERENCES

The Third International Workshop on Agent-based Approaches in Economic and Social Complex Systems (AESCS'04)
May 27-29, 2004, Kyoto University, Kyoto, Japan
Web Site: http://www.ipe.media.kyoto-u.ac.jp/aescs04/

AESCS is held in parallel with The 9th WORKSHOP ON ECONOMICS AND HETEROGENEOUS INTERACTING AGENTS (WEHIA 04.0 http://www.nda.ac.jp/cs/AI/wehia04) in the above date and place.

PAEDA (Philippine Agricultural Economics and Development Association) is calling for papers. Convention date will be from October 23 to 24, 2003. For details, call cdsf office at 049-536-2452 or email cdsf@lb.msc.net.ph.

First South African Academic Colloquium on Indigenous Knowledge Systems

University of the Free State, Bloemfontein, South Africa:29 February- 3 March 2004.

The first South African academic colloquium on IKS is sponsored by the National Research Foundation. It intends to survey existing research in the field and to inaugurate and establish IKS as an authentic field amongst other scientific fields.

For details, visit www.z2a.co.za/iks or email iks@z2a.co.za

1st World Congress of Agroforestry

University of Florida, Orlando, Florida, USA: 27 June- 2 July 2004

Theme: "Working Together for Sustainable Land-Use Systems"

Generally, this congress aims to evaluate progress, assess available options, and design strategies for the future in Agroforestry.

The Program includes plenary sessions, sub-plenary sessions, oral and poster presentations, field trips and exhibits.

For oral and poster presentations, there is a call for abstract to individuals who wish to present their work in any aspect of agroforestry. Deadline: 30 September 2003

For details: email: mrpadgett@ifas.ufl.edu.