



Endogenous Livestock
Development Network
www.eldev.net

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People and Livestock is an occasional newsletter for those interested in promoting socially and ecologically responsible livestock development. It is produced by the Endogenous Livestock Development with support from HIVOS-Oxfam Novib Biodiversity Fund.

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People *and* Livestock

Socially and ecologically responsible development

Focus

Participatory innovation development: Strengthening and mobilizing local innovation and experimentation

In Maysuru village in Tigray, northern Ethiopia, Giday Aregay has to work hard to support her eight children. Her husband has been ill for many years. A while ago, her oldest son, a schoolteacher, bought her a modern beehive for 450 birr (about US\$ 50). As this is very expensive, Giday started making similar beehives using traditional materials such as wood, dung and mud. By widening the spacing between the frames inside the hive, she found she could harvest about 5 kg more honey. She built hives for rearing bees as well, and began selling bee colonies for 450–500 birr each. Now honey and bee colonies are her main source of income.

Like Giday, millions of farmers and livestock keepers observe and experiment, and so develop new and better ways of managing resources. Starting with what they have learnt from their parents and grandparents, friends and neighbours, they add knowledge from other sources, and they modify outside technologies. In contrast to “indigenous knowledge”, which has a static connotation, the term “local innovation” reflects the dynamics of people’s knowledge and its process of expansion.

Preoccupied with introducing innovations from outside, development efforts long overlooked the indigenous knowledge and local innovation of the so-called “target population”. But when these efforts failed to improve the farming and livelihood systems of the poor, outsiders started to have a closer look at what people living under difficult conditions were doing. The value of indigenous knowledge for development became obvious in approaches such as participatory appraisal methods and the documentation and communication activities of the Global Indigenous Knowledge Network. The Honey Bee Network (page 8) documents and shares indigenous knowledge and organizes ways to identify and reward local innovators.

“Participatory innovation development” goes one step further. It not only recognizes the value of indigenous knowledge; it also seeks to mobilize and improve people’s knowledge and management capacities as well as their manipulation of local resources to enhance their use in development.

Non-governmental organizations working closely with communities have long recognized the potential of building on indigenous knowledge and local innovation. They are in a good position to bring together local actors with other stakeholders – scientists, educators, governments, development professionals and others. PROLINNOVA (page 8) is building a global learning network to do this.

Based on: Ann Waters-Bayer and Laurens van Veldhuizen. 2005. Promoting local innovation: Enhancing IK dynamics and links with scientific knowledge. IK Notes 76. World Bank, Washington, DC. www.worldbank.org/afr/ik/iknt76.htm. Giday Aregay's story adapted from: Hailu Araya and Yohannes GebreMichael. 2006. Local and “modern” innovations: What interests whom? LEISA Magazine 22 (3):28–29.

More information: contact Ann Waters-Bayer (waters-bayer@web.de) or www.prolinnova.net

Note to readers

Short contributions for future issues are very welcome (maximum of 500 words). The editors reserve the right to edit contributions and adapt them to the style of the newsletter. We are also happy to include announcements you may have, provided they are relevant to the focus of this newsletter. Please send any information for the next issue to Evelyn Mathias (evelyn@mamud.com).

Experiences in participatory innovation development

Promoting local innovation on the Tibetan plateau

Rangeland Enclosure on the Tibetan Plateau Project

Yan Zhaoli and Ann Waters-Bayer

The Chinese government is allocating rangeland on the Tibetan plateau to individual families, and promotes settlement and fencing there. An EU-funded project, Rangeland Enclosure on the Tibetan Plateau, examines the impacts of these policies on the environment and pastoral wellbeing. It combines participatory and conventional socio-economic and bio-physical research to incorporate local knowledge and concerns. It is identifying and evaluating both endogenous and introduced innovations – especially how people adjust to changes in land tenure and access to resources. ICIMOD (the International Centre for Integrated Mountain Development) coordinates the project's work on participatory approaches, co-management and options for change in collaboration with ETC EcoCulture.

Two initial workshops on rangeland co-management and local innovation took place in Chengdu and Hongyuan in July 2007. Before the first, participants from research institutes and universities in Sichuan, Qinghai and Gansu provinces and Tibet Autonomous Region recorded herders' innovations. At the workshop, the participants learned about local innovation and participatory development, and how to facilitate multi-stakeholder workshops. In the second workshop immediately afterwards, they practised their new skills with men and women herders and people from extension services, development projects, local government and the women's federation.

Here are some examples of local innovations identified at this workshop:

- A herder family in Waqui Township, Hongyuan County, buys 1-year-old yaks in winter, fattens them, and sells them for meat the following autumn (normally yaks are sold at over 4 years of age).
- Many herders in Hongyuan have started to supplement the winter diet of weak yaks by stirring wheat flour into water (some add chopped hay) or making dough with a little salt.
- Ms Gebo, a herder in Masa Village, Qiongxi Township, has revised the fencing on her land to separate summer, autumn and winter pasture. That allows her to manage a rotational grazing pattern.

Travellers in Hongyuan County cannot miss another innovation: "Pastoral Happiness". Some families have pitched fancy tents along the main road to attract tourists who want to experience pastoral culture and food, and to ride horses around the tents.

The workshops encouraged the participants to document and analyse their innovations. These innovations will inspire others and will act as entry points for participatory research to find ways to improve the incomes and lives of herder families. This approach to participatory innovation aims to strengthen the position of herders in research, development and policy dialogue.

Along with ICIMOD and ETC, other partners in the Rangeland Enclosure on the Tibetan Plateau project include the Chengdu Institute of Biology, Lanzhou University, Qinghai Academy of Animal and Veterinary Science, the Tibet Academy of Agricultural and Animal Sciences, Oxford University, the University of Tromsø, and the Macaulay Institute.

More information: Ann Waters-Bayer (waters-bayer@web.de) or www.retpec.eu

A two-step process to help people to learn how to record and promote local innovations

Innovation Africa Symposium highlights local innovation

Innovation Africa Symposium, Kampala, Uganda, 20–23 November 2006

Ann Waters-Bayer and Amanuel Assefa

The Innovation Africa Symposium focused on these themes:

- Concepts and methods in agricultural innovation systems
- Partnerships and other forms of social capital in agricultural innovation systems
- Institutional, policy and knowledge-sharing mechanisms to support agricultural innovation systems
- Enhancing local innovation processes
- Market-led innovation in agriculture
- Building innovation capacity.

Keynote papers covered conceptual and methodological developments in innovation systems, innovations in health and education, and documenting and protecting grassroots innovations.

The concepts of innovation among the 140 participants were fairly diverse. Some regarded innovation as the adoption of technologies introduced from research (“induced innovation”), while others saw it as the outcome of social learning by many different actors. However, all recognized the need for incentives for promoting collaboration between farmers, research and extension services and the private sector (input and output markets) to develop improved technologies and institutional arrangements that can alleviate poverty. It is important to include the private sector and smallholder farmer organizations in activities concerning agricultural innovation systems.

Summing up, Peter Matlon of the Rockefeller Foundation drew attention to the need for: (a) further evolution in institutional structures and mindsets, (b) closer interaction with the private sector, (c) improving the sustainability and scalability of innovation system approaches, and (d) strategic, non-confrontational communication to change policy. He warned against institutionalizing innovation system approaches in a way that builds too much structure and bureaucracy, as this could stifle creativity, opportunism and serendipity. He stressed the need to create an enabling environment for bottom-up innovation to happen.

The symposium was organized and partly sponsored by PROLINNOVA and three international agricultural research centres (CIAT, ILRI and IFPRI) and IIRR-Africa.

More information: Ann Waters-Bayer (waters-bayer@web.de) or www.innovationafrica.org

Developing mineral licks in Ghana

Livestock and wild animals like to lick “siella”, a clayey material found in lowland valleys in Ghana. The siella contains valuable minerals. But taking their animals to the siella outcrops is a chore for farmers in Saboba-Chereponi District. So the farmers started making blocks from siella to bring to their animals instead.

Farmers from one village, Wapuli, did not stop there. They discovered a new source of siella that resulted in a much smoother. They found a way to burn oyster shells, a key ingredient, to produce a whiter block. And they started using wooden moulds for the blocks, replacing the metal and plastic containers they had previously used. That meant the blocks dry faster, are easier to remove from the mould, and have no corrosion stains from the metal.

Based on J. Bruce, N. Karbo, J. Nchor and A. Malex. Participatory video on “Siella” mineral lick: Community film viewing and observed changes in “Siella” lick development in Wapuli and Chagbani, Saboba-Chereponi District, Ghana. www.prolinnova.net

Incentives are needed for collaboration among farmers and others to improve technologies and institutions

Farmers in Ghana found ways to make mineral blocks from a local type of soil

News

Global plan to conserve breeds and genetic diversity

First International Technical Conference on Animal Genetic Resources, Interlaken, Switzerland, 1–7 Sep 2007

Over the past decades, the world has lost nearly 700 of its 7,616 livestock breeds. Some 9% alone have disappeared in the past 6 years. According to the Food and Agriculture Organization of the United Nations (FAO), one-fifth of all breeds are endangered, and the genetic diversity within breeds and lines is decreasing.

These alarming trends are spurring action by stakeholders in livestock development. Delegates from 109 countries at this conference adopted the first internationally agreed framework to halt the erosion of livestock diversity and support the sustainable use, development and conservation of animal genetic resources.

Preparations for the conference began more than 6 years ago. Since then, more than 160 countries have compiled Country Reports, contributing to *The State of the World's Animal Genetic Resources* report developed under the leadership of FAO's Commission on Genetic Resources for Food and Agriculture. The report, together with national and regional consultations and scientific studies, formed the basis for the *Global Plan of Action for Animal Genetic Resources* adopted in Interlaken.

The plan commits its signatories to characterize the breeds in their countries, monitor their (risk) status, initiate conservation measures, and stimulate sustainable use and diversity conservation. At the same time the signatories promise to improve policies and enhance the capacity to address the loss of breeds and diversity.

The Global Plan of Action has the potential to maintain agrobiodiversity and the environment, improve food security and combat poverty. But it is not legally binding, and its success will largely depend on how it will be implemented. So far firm financial commitments from the international donor and development community are lacking. Governments and international organizations – albeit recognizing the need for and value of community-based conservation approaches – tend to favour conservation through freezing cells and other genetic materials. But such conservation measures alone are insufficient to halt breed and diversity loss.

Furthermore, the plan does not address a key cause of biodiversity loss: the destruction of agrobiodiversity through livestock industries – a point strongly criticized by delegates of a Civil Society Forum held in nearby Wilderswil parallel to the FAO conference. Most breed losses have so far occurred in the North. But rising exports of high-yielding breeds and industrial livestock production into the South threaten numerous local breeds that farmers and pastoralists have developed over millennia.

The Global Plan of Action recognizes the contribution local communities, farmers and pastoralists have made to breed development. But it fails to guarantee them certain rights they need to continue their role as independent and responsible breeders and breed managers. These "Livestock Keepers' Rights" include the right to breed and make their own breeding decisions, and to participate in to participate in policy-making processes on animal genetic resources issues. So it is questionable how far the Global Plan will achieve its goals of widespread biodiversity conservation and poverty reduction. Only if governments empower the livestock keepers in the communities to become key players rather than mere implementers will the Global Plan have a chance to achieve its goals on a substantial scale.

Based partly on a press release by the Öko-Institut, Berlin. Contact: Franziska Wolff, f.wolff@oeko.de

More information on FAO conference: www.iisd.ca/biodiv/angr/sep06.html (Earth Bulletin); www.fao.org/newsroom/en/news/2007/1000650/

Contacts: Irene Hoffmann Irene.Hoffmann@fao.org (FAO Conference), Ilse Köhler-Rollefson ilse@pastoralpeoples.org (Livestock Keepers' Rights), Antonio Orati mc2535@mclink.it (Civil Society Forum)

The Global Plan of Action commits signatories to conserve their livestock breeds

Major shortcomings of the Global Plan:

- *It fails to address the erosion of biodiversity through industrialized livestock production*
- *It does not empower livestock keepers as key players in breed conservation*

A wide range of stakeholders must collaborate if local breeds are to be conserved to the benefit of farmers and pastoralists

Managing African animal genetic resources

Workshop on managing animal genetic resources in Africa: Strategies, priorities, livestock keepers' rights, and the way forward, Addis Ababa, Ethiopia, May 2007

About 50 stakeholders in livestock keeping, breeding and management from nine African countries, Europe and India met to discuss the future of African livestock. The workshop helped prepare African stakeholders prepare for the Interlaken conference (see previous story) by allowing them to familiarize themselves with the Interlaken process and discuss and amend the proposed Interlaken Declaration and Strategic Priorities for Action.

The workshop organizers were the Ethiopian Society of Animal Production, the Institute of Biodiversity Conservation, the League for Pastoral Peoples and Endogenous Livestock Development, the LIFE (Local Livestock For Empowerment) Network, the Endogenous Livestock Development Network and the Pastoral Forum Ethiopia. The spectrum of organizers and participants – all stakeholders in animal genetic resources management including nine African National Coordinators on Animal Genetic Resources or their representatives, plus members of government, non-government, community-based and national and international research and development organizations and institutions – is indicative for the wide range of actors and institutions that need to collaborate if measures to halt breed loss are to be effective. Livestock keepers, especially, need to get more closely involved in conservation efforts.

The Addis participants issued a statement recommending that Livestock Keepers' Rights be adopted into the official agenda of the Commission on Genetic Resources for Food and Agriculture. The statement also called for investigations on the implications of patenting and other forms of intellectual property rights on the sustainable management of animal genetic resources, and to discuss a financing mechanism to implement the proposed global plan of action on animal genetic resources (see previous story).

Full report: www.pastoralpeoples.org

A European initiative to save rare animal breeds from extinction – especially during epidemics

European Livestock Breeds Ark and Rescue Net

This new European Union project enables a group of European NGOs to establish Ark and Rescue Centres to rescue animals of rare breeds that face slaughter or other immediate danger.

The Ark and Rescue Centres will:

- offer emergency places for genetically important, endangered livestock,
- offer quarantine places for rare breeds in cases of epidemics,
- keep core-breeding groups,
- offer breeding help for livestock keepers,
- offer a place for the public to see the animal genetic resources of Europe,
- encourage collaboration between organizations and institutes wishing to conserve European animal genetic resources.

Other aspects of the project include working groups to develop suggestions on how Ark and Rescue Centres can maximize the marketing potential of the rare livestock breeds in their care, and a database reflecting the experience collected during the project. The database will be based on the existing Arca-Net (see www.arca-net.info).

In February 2008, a central workshop will take place. If you are interested in becoming part of the project, contact office@save-foundation.net or see www.save-foundation.net/pdf/ELBARN.pdf

Source: SAVE eNews 1/2007

News and information
on livestock patenting

Website on animal patenting

Animal patents are causing increasing concern among livestock breeders. The International Committee for Animal Recording (ICAR) has launched a website, the "Patenting Sentinel and Action Service", with information on legal, technical and practical aspects of animal patenting, as well as worldwide news in the field.

More information: www.psas-web.net

How can Nepal build on
its rich heritage of local
breeds and medicinal
plants?

Endogenous livestock development: The way out for Nepal's food security

K. Kaphle, B.N. Devkota and S. Thapaliya, Institute of Veterinary and Animal Science, Rampur, Chitwan, Nepal

Nepal finds itself in a difficult position in its efforts to produce enough food for its people. Increasing population, disputes over usage rights, and the depletion, mismanagement and exploitation of natural resources pose huge challenges. The country has been unable to meet its planning goals for livestock, despite a large amount of resources devoted to this area. Attempts to introduce industrialized food production bring with them fears of further environmental damage and outbreaks of pests and diseases. And a global agreement on trade could threaten the livelihoods of millions of poor farmers.

Yet Nepal has a wide range of indigenous livestock breeds and a rich variety of medicinal herbs. How best to take advantage of these resources to solve the country's food production problems?

One option is to focus on safe food production using those local breeds and natural medicines. Farmers increasingly understand how to use herbal treatments and other complementary and alternative medicines. Veterinarians are complying with strict guidelines to reduce the misuse of chemical drugs. Vet students are learning complementary and alternative medicines, and animal health camps in remote areas of Nepal emphasize disease prevention and promote local healing practices.

Yet the advance of "modern" science threatens the knowledge base of ethnoveterinary medicine. Documenting this indigenous knowledge is an urgent need. Designating the Institute of Veterinary and Animal Science as a centre for endogenous livestock research would be a major step to preserving Nepal's livestock genetic diversity and its heritage of indigenous knowledge on livestock health and treatment.

Contact: *Krishna Kaphle, krishnakaphlevet@yahoo.com*

Publications

Stepping stones to improve upon functioning of participatory agricultural extension programmes: Farmer Field Schools in Uganda

Prossy Isubikalu

Wageningen Academic Publishers, 2007, 215 pp

When first introduced in Indonesia as a way to improve pest control in rice crops, the philosophy behind the "farmer field school" was one of farmer-centred learning. Top-down approaches had failed; farmers needed an environment in which they could experiment, innovate and learn.

However, as field schools have spread, their original purpose of farmers influencing what they learn has been lost. Instead, the field school curriculum tends to be increasingly focused on introducing externally developed technologies. This, Isubikalu argues, is ineffective in achieving the goal of

farmer field schools: poverty reduction. The system needs radical redirecting. The author calls for a revised model that focuses on catalysing, promoting and building on local innovations.

Source: New Agriculturist, www.new-ag.info

Pastoralism: Drylands' invisible asset?

C. Hesse, C.J. MacGregor, *Drylands Programme, IIED, 2006. Issue Paper 142, www.iied.org/pubs/pdf/full/12534IIED.pdf (368 kb)*

Pastoralism is a rational economic land-use system in which maximum returns, be they economic, social or environmental, are sought from investments. This paper proposes a new conceptual framework that assesses the value of pastoralism beyond conventional economic criteria. The framework aims to provide fresh insights to the contribution of pastoralism to poverty reduction, sustainable environmental management

and the economic development of dryland areas of East Africa in the context of increasing climate uncertainty.

Keepers of genes: The interdependence between pastoralists, breeds, access to the commons, and livelihoods

Ilse Köhler-Rollefson and LIFE Network, 2007. www.pastoralpeoples.org/docs/keepersofgenes_web.pdf

The book focuses on a key threat to the survival of pastoralists and their livestock breeds: the loss of access to grazing areas and water. Pastoralists are losing their traditional pasturelands for many

reasons: new restrictions on grazing in nature reserves, expansion of irrigated agriculture, expropriation by settled villagers, and elimination of fallow land because of intensified cropping.

Less grazing land means that many pastoralists are forced to give up livestock production altogether. This not only translates into the loss of their livelihoods, but also spells doom for many valuable livestock breeds and the gene pool they represent. The book makes the case that pastoralists conserve livestock biodiversity and that their genetically diverse herds form an essential counterweight to the genetically increas-

ingly narrow high-performance breeds.

Based on years of research in rural India, this book has wide applicability to other parts of the world where pastoralism is important.

A film of the same name, co-produced by Moving Images, a Delhi-based documentary film maker, and the League for Pastoral Peoples, has been released. The project was supported by the FAO-Netherlands Partnership Programme.

More information: Ilse Köhler-Rollefson ilse@pastoralpeoples.org, www.pastoralpeoples.org

Coming up

The role of the donkey and the mule in the culture of the Mediterranean

Hydra, Greece, 13–15 Oct 2007

Every aspect of the donkey and mule culture in the Aegean island of Hydra, near Athens, will be discussed during this international conference – from the economics of rearing and maintaining livestock to the shaping of the landscape. The working condition of the animals, gender issues and donkeys in leisure activities will also be discussed.

More information: ed.emery@britishlibrary.net, or www.geocities.com/DonkeyConference

Animal breeding for poverty alleviation: Harnessing new science for greater impact

Nairobi, 8–9 Nov 2007

Conference in honour of John Edward Vercoe, a key player in international livestock research contributing to Australia's cattle industry. Subjects addressed range from DNA technologies to small-holder issues.

More information: www.ilri.org/johnvercoeconference/

New trends in ethnobotany and ethnopharmacology

Leipzig, 8–10 Nov 2007

6th European Colloquium on Ethnopharmacology and 20th Fachkonferenz Ethnomedizin.

Conference themes:

- Skin and wrapper: Dermatology, cosmetics and prevention
- Humans and animals: From ethnozoology and veterinary medicine to bird flu
- Ethnomycology: Inventory of non-hallucinogen mushrooms and of other chitin-containing substances (e.g., insects)
- Toward an anthropology of medications
- Ethics and international rules for an applied ethnobotany and an applied ethnopharmacology: How do we value traditional knowledge?

Contact: Ekkehard Schröder, ee.schroeder@t-online.de, www.agem-ethnomedizin.de

Sustainable agriculture 2007

Brussels, 22–23 Nov 2007

This conference focuses on key aspects of sustainable agriculture and issues that are challenging the food and drinks industry now and in the future – from legislation, to consumer positions, industry outlook to farmers' engagements and progress measurement. Participants will have the opportunity to network with leading industry players and listen and debate with key speakers from EU institutions, NGOs and academia.

More information: www.sustainableagriculture2007.eu

Empowerment of the rural actors: A renewal of farming systems perspectives

8th European International Farming Systems Association Symposium, Clermont Ferrand, France, 6–10 Jul 2008

The symposium will concentrate on questions related to the sustainable development of territories. Themes include:

- Learning, collective action and empowerment for rural reorganization

- Vertical integration: farming systems in food chain
- Adaptive farming systems
- Landscape as a frame for and product of development in rural areas
- Greenhouse gas emission reduction and energy production in agriculture, forestry, aquaculture and mariculture: potentials and impact
- Change in knowledge systems and extension services; role of new actors.

Deadline for abstract submission: 1 Oct 2007

More information:
www.8th-european-ifsa-symposium.org

International grasslands/rangeland congress

29 Jun–5 Jul 2008, Hohhot, China

This is a joint meeting of the 21st International Grassland Congress and the 8th International Rangeland Congress for

scientists and practitioners in grassland and rangeland management from around the world. Focus is on “multifunctional grasslands and rangelands in a changing world”, with the subthemes resources and ecology, production systems, and people and policies.

More information:
<http://igc-irc2008.org>, or contact secretariat2008@hotmail.com or secretariat2008@yahoo.com.cn

Links: Organizations in participatory innovation development

PROLINNOVA

PROLINNOVA is an NGO-initiated programme to build a global learning network to promote local innovation in ecologically-oriented agriculture and natural resource management.

PROLINNOVA seeks to:

- demonstrate the effectiveness of user-led innovation for sustainable development
- build strong farmer-extension-researcher partnerships
- enhance capacities of farmers, researchers and extension agents in participatory approaches
- pilot decentralized funding to promote local innovation

- stimulate national and regional policy dialogue to favour local innovation
- set up platforms for reflection, analysis and learning about promoting local innovation
- integrate participatory approaches to farmer-led innovation and experimentation into research, extension and education institutions.

PROLINNOVA has programmes in 16 countries in Africa, Asia and Latin America. Activities include workshops, training, documenting local innovation, facilitating participatory innovation development, action research, facilitating multi-stakeholder partnerships, participatory video and publications.

More information:
www.prolinnova.net

Honey Bee Network

Honey Bee is a network of individuals, innovators, farmers, scholars, academics, policy makers, entrepreneurs and NGOs from more than 75 countries interested in indigenous knowledge.

The network started some 18 years ago to collect knowledge from the holders, making it a norm to acknowledge the provider of the information with name and reference to protect their intellectual property rights. The source of knowledge – the traditional knowledge holders and grassroots innovators – must be acknowledged if they wish. A

fair and reasonable share of any proceeds that accrue from building on this knowledge must go back to the knowledge holders.

Honey Bee publishes the *Honey Bee*, a newsletter appearing in six Indian languages (Hindi, Gujarati, Tamil, Kannada, Bengali, Malayalam and Oriya) and English. The newsletter stories of local ingenuity with the consent of the knowledge holder. Honey Bee also holds a database of traditional knowledge and grassroots innovations. It has documented more than 51,000 traditional knowledge items and practices.

More information:
www.sristi.org/cms/en/our_network