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Inside

People and Livestock is an occasional newsletter for those interested in promoting socially and ecologically responsible livestock development. It is produced by the League for Pastoral Peoples and Endogenous Livestock Development with support from Misereor.

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LEAGUE FOR PASTORAL PEOPLES AND ENDOGENOUS LIVESTOCK DEVELOPMENT

www.pastoralpeoples.org

People*and*Livestock

Socially and ecologically responsible development

Focus: Industrial poultry monocultures cultivate avian flu

Ilse Köhler-Rollefson and Evelyn Mathias

In late 2003, a new global threat started emerging in Asia: avian influenza. Although not an entirely new disease, its causal agent – an influenza virus of the H5N1 subtype – suddenly became very aggressive, killing whole chicken flocks, spreading to more than 50 countries in Asia, Africa and Europe and even attacking people. So far 241 people have fallen ill and 141 of these have died.

The global response reflected the common arsenal of international veterinary disease control: trying to confine the disease spread and eliminate the virus by culling all domestic birds in infected zones, restricting poultry movements, and other measures. In this way, over 200 million chickens have died or been destroyed because of avian influenza alone in Asia.

In the often hysterical debate surrounding avian influenza, one crucial angle has not been discussed. Virtually all countries in the South remain dependent on continuous imports of grandparent or parent stock for their broiler and layer operations. These imports come from a handful of companies in North America and Europe. Because there are currently only about half a dozen primary poultry breeding businesses globally, industrial chickens throughout the world belong to only a small number of genetically uniform strains – comparable to monocultures in plants.

Apart from Israel, hardly any country in the South has made the effort to develop a genetically autonomous chicken industry. It would be challenging, expensive and time-consuming to catch up with the genetic progress that had been made in the North. The handful of companies that currently supply the whole world with grandparent stock for industrial poultry production zealously guard the genetic composition of their inbred lines. These lines are crossed to produce the grandparent stock. This genetic information is a trade secret, like the formula of Coca Cola.

The grandparent stock are bred in secluded facilities that are hermetically sealed to prevent exposure of these high-performance chicken strains to disease-causing organisms.

Now imagine these birds being transferred into the crowded conditions of southern China. In this part of the world, the avian influenza virus is endemic in the local ducks, which have developed resistance against the virus and show no symptoms of infection. Studies of blood samples suggest that even people have developed antibodies to the H5N1 subtype. Under such conditions it is almost inevitable that the virus is accidentally introduced into industrial chicken farms. The virus could find no better conditions to multiply: among the genetically uniform, densely packed

Note to readers

This issue of the *PaL Newsletter* is the last to be published by the League for Pastoral Peoples and Endogenous Livestock Development (LPP) alone. The Endogenous Livestock Development network (of which LPP is a member) will be responsible for future issues.

The next issue will focus on endogenous livestock development. Guest editors will be Katrien van't Hooft and Getachew Gebru. Short contributions 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 Katrien (katrien.hooft@etcnl.nl).

flocks, with no prior exposure to disease and no natural resistance, it can spread rapidly and increase in virulence. The deadliness of the disease is probably more due to the genetic characteristics of industrial chickens than to the virus itself.

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History provides several examples of the calamities that can occur when isolated populations are exposed to new pathogens to which they have had no chance to develop resistance. Upon first contact with Europeans, Amazonian Indians rapidly perished from common flu. When they first tried to colonize tropical Africa, Europeans died in their thousands from diseases such as malaria – diseases to which local people had developed partial resistance. In the 19th century, the rinderpest virus, introduced with cattle from Asia, wiped out almost the entire African cattle population.

Disease mapping in Thailand shows that outbreaks of avian influenza in chickens especially occurred in areas with many broilers, layer hens and grazing ducks. Areas where native chickens dominated remained mostly free of the disease. While the low number of initial disease outbreaks reported in large commercial units seems to speak against the causal involvement of the poultry industry, there are indications that instead of reporting the outbreak, some industrial producers may have sold their animals when animals started showing disease signs.

A pressing case for more genetic diversity and for integrating traits for genetic disease resistance is staring us in the face

For more than a decade, FAO has drawn attention to the need to conserve domestic animal diversity. One of the most frequently cited rationales for maintaining many different animal and poultry breeds is the need to combat diseases.

With avian influenza, a pressing case for more genetic diversity and for integrating traits for genetic disease resistance is staring us in the face. But the current international and national control strategies go against this line of reasoning. Backyard poultry and migratory birds have been accused as being the source of the problem. Millions of birds belonging to smallholders have been culled. Valuable genetic diversity has been eliminated. But this culling spree has ignored the major role played by the international poultry trade – a role officially recognized only very recently.

The only long-term viable way to prevent further avian influenza outbreaks and prevent the emergence of new diseases would be to discourage the establishment of colonies of susceptible foreign birds in the middle of disease-prone areas. Doing so would require countries to develop their own poultry breeding programmes. They should build on their own local genetic resources, knowledge and institutions. Rather than relying on highly bred but sensitive foreign birds, they should enable their smallholder farmers and commercial poultry breeders to develop their own local, hardy stock.

Sources

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FAO. 2006. *Wild birds' role in HPAI crisis confirmed. But scientific conference fingers poultry business.* www.fao.org/newsroom/en/news/2006/1000312/index.html (accessed 18 July 2006).

FAO & OIE. 2005. *FAO Recommendations of the prevention, control and eradication of highly pathogenic avian influenza (HPAI) in Asia*. FAO, Rome.

Gilbert, M., et al. 2006. Free-grazing ducks and highly pathogenic avian influenza, Thailand. *Emerging Infectious Diseases* 12(2):227-234.

Grain. 2006. Fowl play: The poultry industry's central role in the bird flu crisis", *GRAIN Briefing*. www.grain.org/front/?id=84 (accessed 18 July 2006).

WHO. 2006. *Cumulative number of confirmed human cases of avian influenza A/(H5N1) reported to WHO*. www.who.int/csr/disease/avian_influenza/country/cases_table_2006_08_23/en/ (accessed 24 Aug 2006)

More information: Ilse Köhler-Rollefson gorikr@t-online or Evelyn Mathias evelyn@mamud.com

Useful websites on avian influenza

Food and Agriculture Organization of the United Nations.
www.fao.org/ag/againfo/subjects/en/health/diseases-cards/special_avian.html. (The "Information resources" section includes a list of paraprofessional guides in different languages on the prevention and control of avian flu in small-scale poultry)

Network for Smallholder Poultry Development.
www.poultry.kvl.dk/Information_resources/Avian_influenza_updates.aspx. Avian Flu Interdisciplinary Task Force: contact avianflu@kvl.dk

InterAction, American Council of Voluntary International Action,
www.interaction.org/disaster/avian

New ways to control diseases needed

New disease control strategies must take the effects of globalization, urbanization and burgeoning populations into account

Conventional ways to control zoonotic diseases are not enough to prevent outbreaks. That is shown by the recent outbreaks of avian influenza and other epidemic animal diseases. New strategies are needed that take the effects of globalization, urbanization and burgeoning populations into account.

The "Manhattan Principles", developed by a conference in New York in 2004, list 12 recommendations for a more holistic approach to preventing epidemic and epizootic diseases. They call for a recognition of the link between human, domestic animal and wildlife health and ecosystem integrity; biodiversity conservation; the maintenance of a healthy environment and functioning ecosystems; and investment in improving human and animal health infrastructures, education and awareness raising among the world's people (see www.oneworldonehealth.org/index.html).

For more on the interface between environmental conservation, wildlife, and livestock and human health, see:

- Hammill, A., D. Giannikopoulos, and W. Karesh. 2006. SARS and avian influenza: Exploring the role of conservation and veterinary health in addressing zoonotic diseases in Asia. *In* Steele, P. et al. (eds) *Poverty, Health, and Ecosystems: Experience from Asia*. World Conservation Union and Asian Development Bank, pp. 95–108, www.adb.org/Documents/Books/Poverty-Health-Ecosystems/default.asp
- Osofsky, S.A., et al. (eds). 2005. *Conservation and development interventions at the wildlife/livestock interface: Implications for wildlife, livestock and human health*. IUCN, Gland and Cambridge. www.iucn.org/themes/ssc/pubs/AHEAD.htm

Biodiesel boom in the South – blessing or curse?

The expansion of biofuel production puts sustainable land use by livestock keepers at risk

Rising energy consumption and high oil prices have stimulated interest in new types of fuels. "Biofuels" can be made from various crops, and are easily stored and transported. They are considered climate-friendly, as carbon dioxide released when biofuels are burned is reabsorbed when a new crop is grown.

Depending on the type of crop, however, large-scale biofuel production may use a great deal of energy, offsetting the reduction in greenhouse gases. Furthermore, where farmland is scarce, biofuel production competes with the cultivation of food crops. This may reduce food security and harm poor farmers and consumers. If, as in India, marginal and common areas such as village grazing grounds and biodiversity reserves are used to produce biodiesel, unsustainable biofuel mono-cropping will emerge. This will eliminate the sustainable land use that pastoralists and smallholder livestock keepers have practised for centuries.

To benefit the poor and be environmental friendly, biofuel development in the South must be carefully managed. This will require studies to assess the energy and carbon balances, the long-term sustainability and impacts of the different biofuel crops, the prioritization of locally available plant species and varieties, and the development of small-scale decentralized production within sustainable agricultural systems that meet the potentials and needs of small-scale farmers. Public sector involvement is required to support these activities.

Sources

Sustainet. 2006. (in press). The biofuel hype: Chance or challenge for sustainable agriculture? In: *Sustainable agriculture: A pathway out of poverty for India's rural poor?* GTZ, Eschborn, Germany.

Hazell, P. and J. von Braun. 2006. Biofuels: A win–win approach that can serve the poor. *IFPRI Forum* June 2006, pp. 8–9. *www.ifpri.org/pubs/newsletters/ifpriforum/IF200606.asp*

Oudhia, P. 2004. Jatropha. *Down to Earth* (13)13. *csestore.cse.org.in/fullprint.asp*

Bellagio Brief on livestock keepers' rights

The patenting of breeding processes and individual genes may restrict traditional rights to breed, manage and use livestock

Members of civil society, government, inter-governmental organizations, researchers, livestock keepers and the private sector from 17 countries met in Bellagio, Italy, from 27 March to 2 April 2006, to discuss issues related to livestock biodiversity, indigenous knowledge and intellectual property rights.

The discussions highlighted that the livelihoods of pastoralists and smallholder farmers are threatened by the progressive loss of grazing land for their animals, limitations to mobility, inadequate or inappropriate government policies, and lack of animal health and other services. These developments are also causing the progressive loss of the livestock breeds and species that provide rural livelihoods and life-style options.

Alarmingly, the patenting of breeding processes and individual genes may restrict the rights of the communities and individuals to breed, manage and use their livestock as they choose, thus posing a threat to the viability and continued development of the breeds. For example, a broad patent claim recently filed by Monsanto in 160 countries would, if approved, restrict the rights of breeders to use commonly practised breeding techniques for pigs.

The participants called for the recognition of livestock keepers' inherent rights to continue to use and develop their own breeding stock and breeding practices. National governments must recognize these rights, acknowledge livestock keepers' contribution to national economies, and adapt their policies and legal frameworks accordingly. This is particularly important to pre-empt attempts to use the intellectual property system to obtain control over animal resources that are an important component of the world's food supply.

More information: see www.pastoralpeoples.org/bellagio/ or contact Ilse Koehler-Rollefson, info@pastoralpeoples.org

Pastoralists gathering in Yabello Rangelands in Ethiopia

Ilse Köhler-Rollefson

On 10–19 July 2006, about 300 pastoralists from 60 ethnic groups and 18 countries met in the Borana Rangelands in southern Ethiopia. The meeting was organized by the Pastoralist Communication Initiative of UN-OCHA. Participants identified and discussed the following issues:

Pastoralists from 18 countries discussed organization, networking and intellectual property rights

- What should be the relationship between government and customary institutions?
- How can pastoral organizations organize themselves to be recognized? What should be their activities?
- How can pastoralists help reduce barriers to trade in livestock and their products?
- How to facilitate local pastoral products and encourage local ownership?
- How to reduce the impact of droughts and other hazards?
- How to improve local animal breeds and protect herders' rights to their animals' genetic resources?

Recommendations included:

- Pastoral organizations should raise awareness among their members about the value of indigenous breeds.
- The formation of breeders' associations should be encouraged and supported through training and capacity-building.
- There should be networking and information exchange about the value of indigenous breeds and intellectual property rights issues.
- Pastoral organizations should document the history and length of use of their breeds, such as Red Maasai, Borana, Tuli, etc.
- Pastoral advocacy groups should lobby on intellectual property rights issues in relevant international forums, such as WIPO.

More information, contact ocha-eth@un.org

Publications

Cattle ranching and deforestation

FAO Livestock Policy Brief 3.

Over the past quarter century, forests have been cleared from an area the size of India. Particularly in Central and South America, expansion of pastures for livestock production has been one of the driving forces behind this wholesale destruction.

www.fao.org/ag/againfo/programmes/documents/pol-briefs/default_02en.htm

Gender and desertification: Expanding roles for women to restore drylands

Gurung, J.D. et al. 2006. IFAD, Rome.

This review examines the impact of desertification on women, their role in the management of natural resources and drylands, and the constraints they face. It presents the experiences and lessons of several IFAD-supported programmes and projects including livestock-related activities.

www.ifad.org/pub/gender/desert/gender_desert.pdf

Improving poverty reduction and conservation outcomes in the grassland ecosystem of Mongolia

In Steele, P., G. Oviedo and D. McCauley (eds). 2006. *Poverty, health, and ecosystems: Experience from Asia.* World Conservation Union and Asian Development Bank, pp. 95–108.

Discusses the livestock, wildlife and human health interface and argues that economic development and poverty reduction programmes need to consider adequately biodiversity conservation and sustainable natural resource use.

www.adb.org/Documents/Books/Poverty-Health-Ecosystems/default.asp

Indigenous knowledge inquiries - A methodologies manual for development programmes and projects

Sillitoe, P., P. Dixon and J. Barr. 2004. ITDG Publishing

The manual offers development programme managers and project leaders approaches and tools for the integration of indigenous knowledge in development projects.

www.cplbookshop.com/contents/C1587.htm

Analysis of methods for efficient biodiversity conservation with focus on African cattle breeds

Reist-Marti, S.B. 2004. Dissertation, Swiss Federal Institute of Technology, Zurich

This study found that efforts to conserve livestock that involved breeders were more likely to prevent breed extinctions than using cryoconservation of semen alone.

e-collection.ethbib.ethz.ch/cgi-bin/show.pl?type=diss&nr=15494

Herd movements: The exchange of livestock breeds between North and South

Mathias, E., and P. Mundy. 2005. League for Pastoral Peoples and Endogenous Livestock Development

Analyses the global flows of livestock and poultry breeds between developed countries (especially Germany) and the developing world.

www.pastoralpeoples.org/docs/herdmovements.pdf

Coming up

2nd EAAP Cattle Network Workshop "Development trends in small cattle farms"

Antalya, Turkey, 15 Sep 2006 (in connection with 57th annual meeting of the European Assoc. for Animal Production)

Will discuss developments in the dairy and beef sector from a global perspective; focus on SE Europe, Caucasus, C Asia and the Middle East.

Contact secretariat@cattlenetwork.net

www.cattlenetwork.net/antalya.htm

4th Horizons in livestock sciences conference, "Research for the farm of the future"

Gold Coast, Queensland, Australia 8–11 Oct 2006

Focus on tools and mechanisms in developing future farm enterprises and on policies and processes that scientists and science policy makers must set in place to ensure success.

www.livestockhorizons.com

International workshop on "The future of livestock genetic resources: Under corporate control or in the hands of farmers and pastoralists"

Bonn, Germany, 16 Oct 2006

Addressing NGOs and representatives of livestock-keeping communities, the workshop is a first step to prepare civil society activities around the FAO International Technical Conference on Animal Genetic Resources in Interlaken in Sep 2007 (see below)

Contact: Susanne Gura, susanne@pastoralpeoples.org

www.pastoralpeoples.org

International Conference on the Future of Transhumance Pastoralism in W and C Africa

Abuja, Nigeria, 20–24 Nov 2006

Focus on the pastoral food and product chain: strategies, dynamics, conflicts and interventions.

Contact Jerome Gefu, jgefu@yahoo.com

First International Technical Conference on Animal Genetic Resources

Interlaken, Switzerland, 1–7 Sep 2007

An opportunity to agree on how best to address priorities for the sustainable use, development and conservation of animal genetic resources, and to raise awareness and appreciation among stakeholders and policy makers about these resources.

Contact Irene Hoffmann, irene.hoffmann@fao.org

www.fao.org/AG/againfo/programmes/en/genetics/angrvent2007.html

23rd World's Poultry Congress (WPC2008)

Queensland, Australia, 29 Jun–4 Jul 2008

Call for abstracts: Sep 2006

www.wpc2008.com

Links

EkoConnect: International Centre for Organic Agriculture of Central and Eastern Europe

EkoConnect supports information exchange on organic agriculture including animal husbandry.

www.ekoconnect.de (in English, German, Russian and 7 E European languages)

Herbal folk remedies for animal health in the Netherlands

Database of Dutch herbal folk remedies for animals

Hosted by the Dutch Institute for Ethnobotany and Zoopharmacognosy in Beek-Ubbergen, Netherlands

Contact Tedje van Asseldonk, info@ethnobotany.nl

www.ethnobotany.nl/nieuwe_pagina_1.htm

AgricultureB2B.com

Directory of Agricultural Websites and Agricultural News

www.agricultureb2b.com

Indigenous Peoples' Restoration Network

Web portal to resources on traditional ecological knowledge

Contact Sasha Alexander sasha@ser.org

www.ser.org/iprn/

International Network for Family Poultry Development

An information exchange network to raise the productivity of the family poultry sub-sector. Provides advice and gathers data on family poultry production systems.

To subscribe to *INFPD Newsletter* (twice yearly in English, French and Spanish), contact E. Fallou Guèye, efgueye@refer.sn

www.fao.org/ag/againfo/subjects/en/infpd/