



# Spore

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Website: [www.cta.nl](http://www.cta.nl)

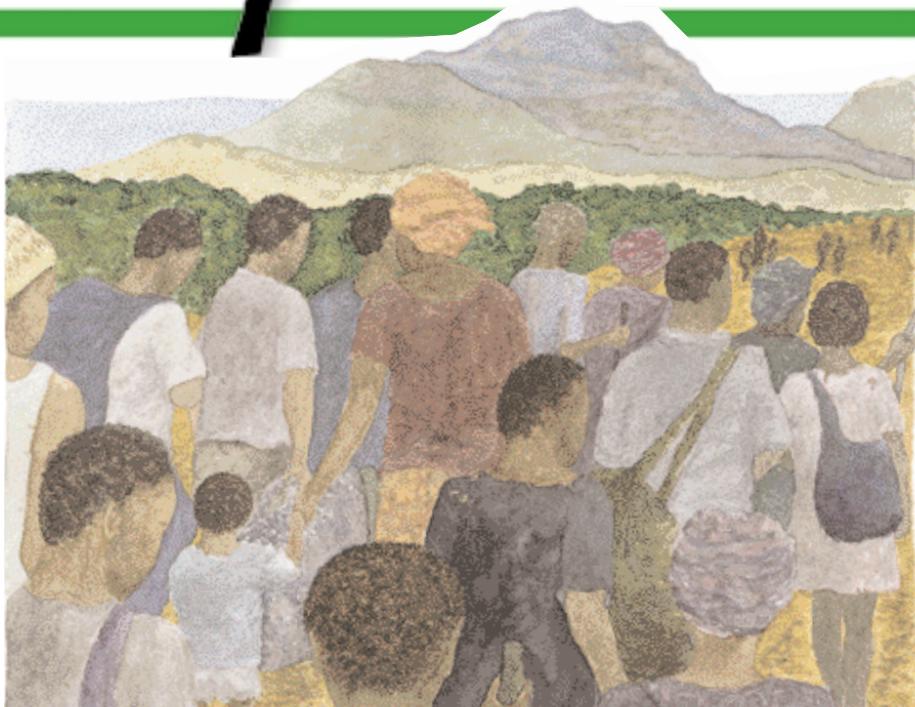


Illustration Terri Andon

## Forced migration and agriculture

# Exodus!

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**Migration is sometimes a calculated grab at a better life, sometimes a horrified flight from killing fields, or an escape from fields that feed too few. It is both a cause and an effect of change in ACP agriculture and rural life, a symptom full of surprises.**

**W**e are all migrants, or descendants of migrants, some of us more than others. Some people choose to move, others have no choice and are 'forced migrants'. The world's first migrants were African: in September 2000, archaeologists announced the discovery of an ancient settlement, established 50,000 years ago in north-east Brazil by, it is conjectured, migrants from central Africa. What pushed them to leave home? Was it the human urge to colonise? Or was it more material, in the need to ensure a richer diet and a safer life?

Despite the sad plight of the so-called voluntary migrant who moves from village to city, or seeks to pierce the none-too-welcoming economies of the North, it is involuntary migration that requires the greatest attention, especially in terms

of rural livelihoods. Today the world has more than 130 million involuntary migrants, forced by circumstance, or coerced by compatriots, to live outside their countries of birth. Of these, 12 million are in Africa. In addition there are several tens of millions of people forced to move within their own country by unrest and violence, natural disaster and extreme economic pressures. Since most involuntary migrants today are rural, the link between migration, agriculture and rural livelihoods is a strong one.

Most involuntary migration arises, according to the Worldwatch Institute, in cases of persecution, warfare and famine. Less extreme 'pushes' are political disempowerment, redrawing of borders and forced resettlement. The most controversial forms, where the definition 'voluntary' is often borderline, are 'economic' and



### In this issue

*The ingenuity people show is never far*

*from the pages of Spore and never more so than in this issue.*

*Our feature articles lead the way, seeking to derive hope out of the crushingly sad story of forced migration. The notion of raising animals in towns demands truly creative city management and organisation. Likewise, making a living from the forest whilst letting the forest live, is a challenge to our thinking, as is fighting AIDS, on which a reader speaks out.*

*You want even more ingenuity? How about catching water from clouds, or harvesting rainwater, or soaking seeds to save them? These and dozens more news items, publications, projects and ideas aim to stimulate readers' ingenuity – of which there is ample proof in 'Mailbox'*

*As we enter 2001 (the real Millennium?), we describe the latest step in the unfolding story of the development of our mandate to serve ACP agriculture through improved access to information and knowledge.*

'environmental' refugees, who are not recognised in international law.

### Opportunities and threats

As a person who represents both the new and the unknown, a migrant induces fear and mistrust. But such emotions gnaw away at any hopes of stability, food security or communal welfare and must be mastered. Any host country or community must learn to identify and to emphasise the elements of opportunity which exist in migration, however scarce and fragile. Migration is a means, unintentional maybe, of sharing knowledge: the introduction of certain food processing and storage techniques, and ways of organising credit and savings schemes, have been catalogued in Ghana, Benin and Côte d'Ivoire as coming from migrants from the Sahel famines of the mid-1970s. In central and southern Africa, seed exchanges have been initiated by resettled refugees. In South Africa, the department of revenue argues that inward migration from as far as West Africa helps to invigorate the (informal) economy. Few such cases are documented; most talk of benefits from migrants occurs at the level of transnational migration. Within ACP countries and other developing countries, most benefits remain largely to be identified.

Migration is however primarily an indicator of a problem, most tragically at times of conflict, within and between countries, and of extreme environmental breakdowns. The hand of man lies heavily on such cases as a civil war between polit-

Here a key strategy is to ensure financial security for re-migrants: those who still have capital are unwilling to invest in agriculture or to entrust funds to banks. This restricts credit to help the cash-impaired develop their economic activities and pin down their essential land rights – land tenure being central in migration-retention strategies also.

But let us be clear. Agriculturally speaking, return and re-settlement strategies are not applicable in the cases of most migrants. They have gone, gone away, and they will not be coming back, nor will they be farming elsewhere. They will go to the market towns and cities. Their departure will carry the blessing, perhaps, of alleviating excess labour in their birthplace, increased cash remittances to family members who stayed and new economic exchanges between town and country, as a CTA co-seminar on urban-rural interaction in Senegal in 1999 (see *Spore* 87) stressed.

### Spirals to oblivion

Current waves of migration reflect the environmental fact that the carrying capacity of the land is reaching its limits. As food production becomes ever more intensive, the pressure grows to expand land use into marginal desert-risk or 'upslope' areas, or into ever-smaller less-productive plots. Even in apparently land-rich Africa, such pressures can boil over into deadly conflict. Worldwatch Institute: "Land scarcity played a critical role in the recent eruption of war in Rwanda". Such scenar-

Despite being seen as a disturbing and unpredictable phenomenon, the benefits of migration include:

- Exchange of agricultural skills and knowledge to the host community, such as new seeds and cultivation methods
- Injection of new productive energy and processing techniques
- New markets for local production

These benefits need to be better identified, and included in strengthened efforts by ACP and other countries to better prepare for future migration.

migrations becomes all the more volatile if we add the notion of climate change, an ongoing phenomenon on which man has little immediate influence. Temperature rises of 2-3 °C in the next 70 years could create floods, droughts and volatile food production in many developing countries – as has been seen for several decades in the Horn of Africa.

### Don't know where, don't know when

In recent years there has already been one exodus, of the people of Haiti to neighbouring United States. There, a sequence of human decisions and the involuntary choices of the poor – overgrazing, deforestation for fuelwood, political competition, misguided aid interventions with alien animal species – have all come together to push people off the land. To have predicted in, say, 1970 that such an implosion would happen in Haiti in the 1990s was impossible – just as few dared to openly predict Rwanda's collapse.

To predict where the next exodus will be is equally impossible, though several zones in ACP countries are often suggested (such as the entire Sahel belt, west central Africa, Great Lakes, and some small and low-lying islands). Rather than wringing our hands and trying vainly to halt the flow, we must accept, no doubt involuntarily, that some people – many people – are being born to run. Somewhere, perhaps in a foreign field or on a foreign hillside, there must be a welcome.

To know more:

'Environmental Quality and Regional Conflict', 1998, D Kennedy, report to the Carnegie Commission on Preventing Deadly Conflict'. Carnegie Corporation, 437 Madison Avenue, New York, NY 10022, USA. Fax: + 1 212 753 0395. Website (full document) : [www.ccpdc.org/pubs/kennedy/kennedy.htm](http://www.ccpdc.org/pubs/kennedy/kennedy.htm)

The Hour of departure: Forces that Create refugees and Migrants.

H Kane, *Worldwatch Paper 125*, Worldwatch Institute. 1995, 64 pp, ISBN 1 878 071 26 2, US\$ 5 • € 5.70

Worldwatch Institute, 1776 Massachusetts Avenue NW, Washington DC 20036-1904, USA Fax: +1 202 296 7365 Email: [pubs@worldwatch.org](mailto:pubs@worldwatch.org) Website: [www.worldwatch.org](http://www.worldwatch.org)



"Who has seen my cows? Who has seen my goats? These leafless trees and this dry land must be why they left". Youssou N'Dour, Senegalese singer in "Without a smile".

ical factions in Chad, savage greed for diamonds (nobody's best friend in truth) in Angola and Sierra Leone, or the famines induced by over-grazing and planning blindness in the Sahel, Ethiopia and the Horn of Africa. People literally place themselves at the mercy of neighbouring communities, countries and ecosystems. UNHCR: "with the spontaneous movement of thousands of desperate people, the results can be disastrous for the environment".

The key issue in post-war or post-disaster migration is re-settlement, either by returning 'home' or in new locations.

ios sometimes intersect explosively with existing conflicts. "In the conflict in Somalia in 1994, most fighting occurred in the farm belt. It is the continuation of a 100-year-old movement of major clans southwards from nomadic grazing areas that have been becoming more and more overpopulated".

As it is with land, so it is with water; there are several simmering conflicts in water-stressed areas in Africa and Asia (see *Spore* 74). Such crises could on their own, with the proper resources, be monitored, mitigated, managed. But the environmental cocktail which will provoke future

Illustration Terri Andon

## Urban and peri-urban livestock production

# When the Ark comes to town

**Millions of people in ACP countries live from livestock farming in towns and their peripheries. Their activities have to be monitored to protect public health and the environment. The urban livestock farming sector is coming in from the margins, and it is set to play an important role in a complex system of food security – if it can be properly organised.**

In the last four decades, the urban population of many ACP countries has expanded more than fivefold. The town is hungry, biting away endlessly at neighbouring lands to extend its periphery. These areas used to be countryside, then they became suburbs, and now they are also used by two breeds of livestock farmers: the old ones who have been there a long time, plus the newcomers who have been attracted by the promises of the town.

The town beckons seductively, drawing in many small farmers, sometimes with two occupations, sometimes the sons of livestock farmers, to start raising rabbits, hens, and guinea fowls. Others bring their herds of animals. A city like Ouagadougou in Burkina Faso is home to 4,000 head of cattle, 6,000 sheep and pigs, 2,000 goats and 19,000 fowls.

### Realising the benefits

Livestock farming does not sit or fit comfortably in the town; for long thwarted and certainly not enabled by town councils and the authorities, the sector shuffles along, more often than not unchecked by both its practitioners and local government. For many a poor family, keeping animals is the main strategy for survival in the town. There are several advantages for livestock farmers, whether recent converts or with years of experience, to operate there. Above all, veterinary services are close at hand, as are processing plants (for pasteurising milk, for example), markets and distribution networks. Even for those who have set up shop on the edge of town, they are close enough to these facilities to make significant savings on transport, not to mention the obvious gains in cutting down on loss of quality of fresh products in transit. The sector is not only a source of fresh produce for the local market, but it also generates employment, especially for women looking after poultry, rabbits and other small animals.

Photo: Liba Taylor/Panos Pictures



There are no drawbacks to urban livestock farming in ACP countries though; the problems vary according to the animals in question. The essential problem lies in feeding the animals, since urban livestock farmers do not grow any fodder. Space is also an issue. On the edge of the town, and above all in the over-crowded centre, it is common to see a herd of animals huddled in a makeshift shelter – with all that that means for risks to animal comfort and health – or on plots zoned for housing construction.

Where urban agriculture has clear benefits for the urban environment, urban livestock farming does not, and the sight of a herd of pigs chomping on urban waste (even if they do add value to it) is not going to persuade inconvenienced local people to think otherwise. Finally, the most important problem is that of hygiene and food safety. Diseases which were once seen as purely rural are starting to take root in towns. Indeed, some studies point to clear links between high infection rates in people and unmonitored methods of slaughtering animals.

### Steer it, don't stop it

“Cities need to encourage urban and peri-urban agriculture, aquaculture, food forestry, and animal husbandry, as well as safe waste recycling, as elements of more self-reliant local food-system initiatives.” This is the broad mission shared by a coalition of farmers, business leaders and community organisations in the book *‘For Hunger-proof City’* (see *Spore* 86, page 8).

For urban livestock production to properly play its role in urban food security, much depends on the ability of the city authorities to change their

planning norms to allow zoning for livestock, to make available viable spaces and to solve the problem of feeding and watering animals. This is a sector whose practices are not yet well-defined, and there is a need to provide training to breeders and information to families and livestock units, and to strengthen health and veterinary services. With such measures, towns and cities in ACP States could draw much benefit from the sector. It is by no means an easy task but, taking the examples of what has been done in urban agriculture in Ghana, Tanzania, Zambia and Zimbabwe (see *Spore* 81, page 2) as well as in Guinea Bissau, the key is to provide a legal framework for organising the sector; this will open the way for breeders to get credit and technical assistance.

There are already a number of organised efforts which show the way forward. In Mozambique, for example, in a belt 30 kilometres around the city of Maputo, 187 cooperatives active in poultry production have formed the General Cooperative Union (UGC). The UGC provides poultry feed for the chickens, technical support to the coops, and operates an abattoir to high hygienic standards for cleaning, plucking, washing and packing the chickens. The entire chain of rearing, slaughter and distribution is perfectly organised: the products are eaten throughout the city and 5,000 poultry farmers earn a steady income. The moral of that story is that without infrastructure or feed-stuffs for the animals and without professional organisation from one end of the chain to the other, urban and peri-urban livestock farming cannot grow beyond the level of the artisan. For the majority of urban livestock farmers, the road has enough pitfalls already.

To know more:

Making better use of animal resources in a rapidly urbanizing world: a professional challenge, by M Ghirotti, article in *FAO World Animal Review*, issue 92, 1999. FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy. Fax: + 39 06 5705 3360.

The full text of the article is available free on Website: [www.fao.org/docrep/x1700t/x1700t02.htm](http://www.fao.org/docrep/x1700t/x1700t02.htm)

See resources on pages 10+11

In the centre of Ethiopia's capital Addis Ababa ('new flower'), cattle graze in the park below the United Nations compound

Photo: Marc Franc/Panos Pictures



## Non-timber forest products

# Pressure, under pressure

**Mushrooms, nuts, wild fruits, medicinal plants, rattan, bamboo... Since time immemorial the forest has been prized for its so-called non-timber products which add much value, on top of timber and paper pulp. But the time for rampant exploitation of this natural wealth is over. People's lives and prosperity depend on it, as do those of future generations.**

**F**or local people living near it, the forest provides food, medicines and fibres, and a cash income from their sale. Forest products are used by some 80% of people in developing countries for food and personal care. Non-wood forest products, also known as NTFPs (see box), have been winning new interest for several years. There is a growing awareness of their contribution to household economies and food security, to national economies and to such ecological goals as the conservation of biodiversity.

In ACP countries, NTFPs are generally in the hands of small-scale farmers and enterprises. More people are employed in harvesting NTFPs and processing them – usually on the spot – than in large forestry companies, and most of them are women : in Zimbabwe 237,000 people worked on NTFPs in 1997, compared with 16,000 in industrial forestry.

Most non-timber forest products are sold locally or in regional markets. In Cameroon their sales are worth several million euros and go far beyond the local market. Market stalls in the conurbations of Douala and Yaoundé are full of such products as butter tree plums or safou (*Dacryodes edulis*), groundnut tree nuts (*Ricinodendron heudelotii*, used as a condiment), dika breadfruit (*Irvingia* spp) and cola nuts; these urban markets represent annual sales above FCFA 100,000 (€ 150,000).

The international market for NTFPs is not so developed, especially given the size of most producers. There are high commercial risks involved, not to mention the barrier of cumbersome customs procedures and the cost of middlemen and shipment. And it takes quite a lot of nerve, and patience, to handle the cyclical nature of international markets where shortfalls follow surges in demand, as night follows day.



Photo Bernard Favre/Louma productions

### Sharing information

Since 1991 the Forestry department of the FAO has run a programme to promote NTFPs, which concentrates on collecting, analysing and disseminating technical information for the conservation of forest biodiversity. Their annual bulletin, *Non-Wood News*, explains the potentials of NTFPs and their contribution to development.

The Tropenbos Foundation ('tropenbos' meaning tropical forest) is an international network of researchers and specialists, supporting research programmes in numerous countries. Its Website has an excellent collection of links to the information, publications and programmes of other research bodies and NGOs involved in the conservation and rational use of forests. The *Newsletter* of the Tropenbos Foundation carries details of projects and studies, such as those underway in Guyana, Cameroon, Côte d'Ivoire, Colombia, etc.

FAO, Viale delle terme di Caracalla,  
00100 Rome, Italy.  
Email: [non-wood-news@fao.org](mailto:non-wood-news@fao.org),  
Website: [www.fao.org/forestry/fop/fopw/nwfp/newsle-e.stm](http://www.fao.org/forestry/fop/fopw/nwfp/newsle-e.stm).

The Tropenbos Foundation, PO Box 232,  
6700 AE Wageningen, The Netherlands.  
Fax : + 31 317 495520.  
Email: [tropenbos@tropenbos.agro.nl](mailto:tropenbos@tropenbos.agro.nl)  
Website: [www.tropenbos.nl](http://www.tropenbos.nl)

### The ABC of NTFPs

There is, today, no standard, agreed definition of 'non-timber forest products'. This article has followed that given by the FAO: "Non-wood forest products include all goods of biological origin, as well as services, derived from forest or any land under similar use, and exclude wood in all its forms". NTFPs can be harvested in their natural environment, or produced in forest plantations or on trees outside the forest. The products range from being used as food or food additives (nuts, mushrooms, wild fruits, herbs, spices, aromatic plants) and as plant materials (fibres, creepers and flowers) and plant derivatives (raffia, bamboo, rattan, cork and essential oils) to animals (game, bees) and animal products (honey, silk).



Photo François Besse/Cirad

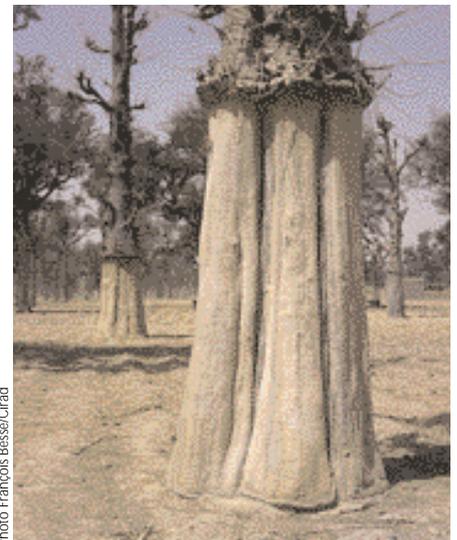


Photo François Besse/Cirad

## Growing international market

All the same, some NTFPs are getting a firm foothold in the international market. Among the lead products are bamboo, rattan, wild honey and essential oils (see *Spore* 86). Often NTFPs serve as the basis for large-scale industrial processing. In Ghana, karité butter is sold to be used on cosmetic products distributed by the international Body Shop chain of shops. The same chain purchases organic honey and beeswax from North Western Bee Products in Zambia for the manufacture of creams and lotions. Similarly, world trade in medicinal plants is booming, carried by a wave of Western consumer demand for soft medicines and natural



Photo: François Besse/Cirad

Agroforestry (ICRAF) and national centres such as IRET, the research institute on tropical ecology in Gabon. They focus on the regulation of taking samples and the introduction of non-destructive techniques including the naturalisation or domestication of species (see box).

Such conservation measures will only work if they enjoy the participation of local communities. This calls for awareness-building and training, and underpinning the community's sense of responsibility with well-defined land rights and policies that enable access to credit and trading opportunities.

And then, when all is said and done, the extent to which forestry policies suc-

Rope-maker adds value to his bark



Honey, wax, fibres, fruit, nuts. Proteins or cosmetics? Who owns the flowers of the ACP forest, who will care for the future harvest?

products: most of this ten-million euro trade is based on forest plants.

Many producer countries are now working hard to exploit the growing economic potential of NTFPs, given their contribution to food security and job creation. But, there is a but. The NTFP sector is coming under increasing pressure from commercial interests. In Cameroon for example, several thousand oil palm trees were cut down by farmers who were so anxious to get quick returns from raffia and palm wine that they did not even bother to climb the trees to pick them. More generally, agriculture is encroaching upon forest areas so much that the forest only exists in national parks or classified zones. In Côte



Photo: François Besse/Cirad

d'Ivoire, many forest species have been gradually lost from agricultural areas even though local farmers need them to earn their living. Such pressures harbour the seeds of conflict, fraud and theft, none of which are going to help conserve the heritage of the forest.<sup>1</sup>

## Priority: improve management systems

Any serious development of non-timber forest products, especially those most in demand, has to ensure their continuity. The conservation of NTFPs is targeted by several measures taken by the FAO, international research centres such as the International Centre for Research on

## Conservation: naturalisation, domestication and ecotourism

When problems arise in forestry, such as disappearing species, or local communities being withheld access to the forest, the usual reaction is to make use of two agroforestry techniques: naturalisation and domestication. The process of naturalisation involves taking an exotic plant (meaning it has come from elsewhere) and acclimatising it to an environment similar to its original habitat. With domestication, wild plants are tended, or even cultivated, without changing their genetic structure. According to a study by Léonie Bonnèhin of Wageningen Agricultural University on farmer domestication of forest fruit trees, experiences with the *makoré* fruit tree in the western part of the Tai national park in Côte d'Ivoire have shown that this approach helps to maintain or restore the biodiversity.

Another approach is to build conservation strategies around ecotourism, as in Ghana, Surinam and the archipelago of Sao Tomé e Príncipe, aiming to instil harmony between tourism and the environment. Modest and unobtrusive buildings and infrastructures blend into the countryside and local community life, thus assisting the maintenance of forest ecosystems and the restoration of areas that have been damaged by overuse. Ecotourism can also lead to reforestation projects, the establishment of nurseries, the distribution of plants to local small farmers and technical assistance in soil conservation.

ceed depends on the ability of a country to develop scenarios which anticipate events. It also depends on involving local communities in shaping those policies. A recent study<sup>2</sup> in the Caribbean repeated the widely known point that the viability of forests and forest resources is the business of men and women. Widely known it may be, but it is an attitude which is not always properly appreciated.

1. *Unasylva*, Vol 50, number 198, 1999, FAO.

2. *Forest policies in the Caribbean*, FAO, 1998.

**A shot of zinc a day...**

■ Using traditional plant breeding techniques, researchers at the International Rice Research Institute (IRRI) have developed a rice variety which is naturally rich in iron and zinc, two vital micronutrients that are normally deficient in a rice-heavy diet. An estimated 2 billion people worldwide suffer ill health due to iron-deficiency, the most widespread nutrient deficiency in the world. The prevalence of zinc deficiency is relatively unknown but it plays an essential role in child growth.

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 Philippines  
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...keeps the doctor away

■ A group of researchers from the Ethiopian Health and Nutrition Research Institute and Wageningen University in the Netherlands, looked into the low rate of growth of healthy infants in rural Ethiopia and concluded after extensive nutrition trials that growth rates can be improved by combating zinc deficiency. The Ethiopian diet does not contain sufficient zinc, or its intake is possibly hindered by the high intake of iron, due to the staple food *teff*, which is iron retentive.

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**New prospects for Kenyan pyrethrum**

■ In Kenya, cultivation of pyrethrum (*Chrysanthemum cinerariaefolium*) has the wind in its sails. Once popular with farmers, it fell out of favour because of the tender handling it needs, and the consequent labour-intensive costs. Kenya used to be the world's leading producer, but production fell from 17,000 tonnes to 4,000 tonnes in a matter of years.

There is a strong world market for pyrethrum in the field of organic pesticides: its dried flower contains 1 to 2% of a chemical element used to make non-toxic insecticides. To encourage renewed cultivation, the Kenyan government has raised the price for the dried flowers to KSH 160.60 (about € 2.21), by KSH 22, or 16%. Encouragement is coming from the Kenyan Agricultural Research Institute too; it is working on less fragile varieties to assist farmers.

△ Kenya Agricultural Research Institute  
 PO Box 57811, Nairobi  
 Kenya  
 Fax : +254 2 58 33 44  
 Email : resource.centre@kari.org

**Study visit learns the hard way, together**

■ Where two decades ago the talk was of rainwater *catchment* for household use and agricultural production, now it is of water *harvesting*. This approach blends revived or new technologies with modern materials and construction techniques and – as the fixing element – community participation.

The expansion of rainwater harvesting in rural areas of Africa has been underway for some time, and a CTA study visit in Kenya in June 2000 allowed practitioners to exchange experiences. Having presented their national papers to launch their ten-day programme, 17 participants from Ethiopia, Ghana, Lesotho, Nigeria, Tanzania and Zambia joined a community group in the Laikipia area north-west of Nairobi and observed, 'hands-on', the construction of a kitchen storage tank for domestic use. They also visited Machakos, south-east of Nairobi, to examine various water harvesting works for agricultural use.

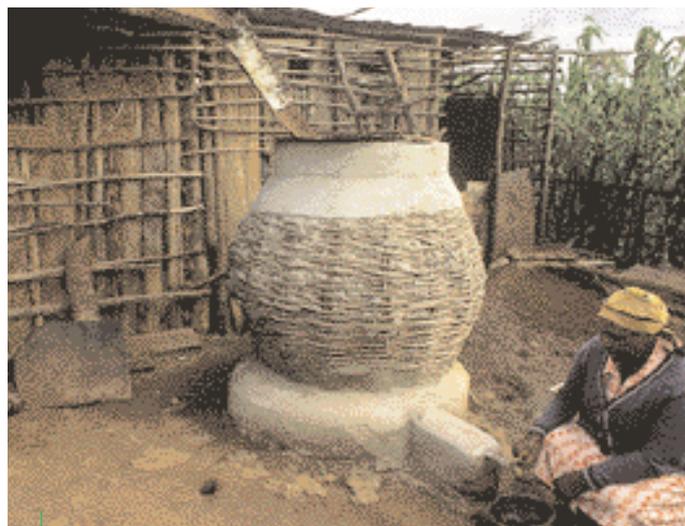
The visit ended with a pooling of lessons about the best uses of kitchen and underground tanks, terracing, retention techniques using plants and the sand-dam, a technology which is growing in interest. A key angle on each technology was its 'gender-specificity', looking at the role of women and, if any, of men. Among their findings: 'community contribution is essential' and 'social mobilisation takes a long time'. Then the real work began:

participants returned home, clutching each other's pledges to apply, adapt and multiply what they had studied so closely.

At least the sides of the tank are well-dressed



Photo Hans Hartung



Reinforced cement tank for kitchen or garden use

Photo Paul Harrison/Sill Pictures

**Land reform: breaking up is hard to do**

■ The government of South Africa recently swung into action a long-standing set of land reform measures, fearful, some say, of being confronted with similar problems to those in neighbouring Zimbabwe. The measures provide for the redistribution of one-third of all arable land to African farmers. In the first five years, three and a half million hectares are due for redistribution. Tens of thousands of (potential) farmers are supposed to pledge sums, according to their means, ranging from ZAR 5,000 to ZAR 405,000

(€ 778 to € 62,985). They will be matched by a government grant – only if the candidate agrees to follow a training course in agriculture. The grant should be used only for agricultural purposes: purchase of the land, equipment and other investments. Depending on the initial deposit, the grant will be for between 80% and 20% of the purchase price of the land – the higher a candidate's own contribution, the lower the grant.

Even at this early stage, the scheme has become grounded. The size of minimal 'own contri-

bution' expected from candidates excludes the poorest of the poor, since it represents more than a year's earnings. A second complaint is that it is a highly selective programme, forcing the candidate purchaser to present a business and financial plan to be approved by several bodies. The major obstacle is that it is a seller's market. Land owners are not rushing to sell off land under these conditions. The question is whether such a scheme will stay afloat.

Source: Mail & Guardian, June 2000

## Two ways to save neem seed

■ It is now officially impossible to claim to have invented something which has been in public use for centuries. On 10 May 2000, the European Patent Office (EPO) revoked a patent which had been granted to the United States of America and multinational corporation W. R. Grace for a fungicide derived from seeds of the neem tree. Since time immemorial, neem has been a tree popular for its

versatile leaves, for reforestation and for its seeds, which contain a natural pesticide and insecticide. A coalition of environmental NGOs (including IFOAM) and politicians lodged an official objection to the patent five years ago. The EPO accepted the objection with the argumentation that the 'invention' lacked an 'inventive step' and 'novelty'.

A wiser approach was taken by Moctar Sacandé of the Centre

National de Semences Forestières in Burkina Faso. He discovered a method to keep dried neem seeds and shared this with the public. Neem seeds are notoriously difficult to store; once dried, the seeds no longer germinate upon soaking, in contrast to seeds such as wheat and maize. Sacandé discovered that when dried to a moisture content below 10% the seeds keep for more than two years with a germination rate of 50%. However, soaking can damage the seed membranes. Soaking the dry seeds in water at a temperature of 35 °C prevents this imbibitional damage.

To know more:

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## Watch our forests...

■ Early in 2000, the World Resources Institute launched the Global Forest Watch, a growing international data and mapping network that combines on-the-ground knowledge with digital and satellite technology to provide information on the state of forests. The first two researched cases focus on Gabon and Cameroon, both parts of the Congo Basin's tropical forests, the second largest contiguous rain forests in the world. The research results are available on paper as well as online.

▲ Global Forest Watch, c/o WRI,  
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Washington, DC 20002 USA  
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Email: gfw@wri.org  
Website:  
www.globalforestwatch.org

## Nature's way: natural predators

■ With growing interest in biological control, it is time to take stock of recent successful experiences in the use of living organisms to prevent or minimise damage caused by insect pests.

In Jamaica, a beetle known as the coffee berry borer (*Hypothenemus hampei*) causes considerable losses in coffee plantations each year. In a pilot project, 25,000 hymenopterous (membrane-winged) insects (*Cephalonomia stephanoderis*) were released in the plantations – to attack the coffee berry borer's larvae. Results have been positive and now plans are being made to release another insect – the *Phymasticus coffea* – to attack the adult pests.

In the northern Pacific, the major trouble-maker is the azalea whitefly (*Aleurodicus dispersus*),

has been released en masse to parasitise the eggs of the maize borer (*Ostrinia furnacalis*). Special training has even been provided to extension workers in the use of another wasp, *Diadegma semiclausen*, to attack cabbage pests, cabbage being a widely grown crop on the high plateaus.

In South Africa, worms have been left to get on with biological control – and eat worms. The microscopic nematode worms feed by perforating plant cells. In sugar cane plantations, another type of worm, *Helicotylenchus dihystera*, have been used to control them and minimise damage. In Senegal, a bacterium (*Pasteuria penetrans*) is being tested to parasitise the gall nematodes (*Meloidogyne* spp) which ruin market garden vegetables. Progress is being made



Photo: Hypozitiira

A beneficial insect for biological control, a female *Encarsia formosa* lays its eggs in a whitefly's 'pupa'. When hatched, the invader's offspring will eat them.

which thrives during periods of drought and attacks a multitude of plants. Its proliferation can be halted by a wasp (*Encarsia haitiensis*) which feeds on its larvae.

Wasps are in favour in Papua New Guinea too, in particular the *Trichogramma plassyensis* which

in the best conditions for this bacterium to develop, such as mixed cultivation of vegetables, groundnuts and cereals, and the preferred composition of the soil, which is ideally sandy, with 10% clay content. All in all, biocontrol is scoring a lot of points.

## Getting to the point

■ With selection of agricultural information becoming more of a daily problem than its scarcity for many people, there is a growing need for more efficient exchange of data between organisations. This requires common standards for describing each other's information, improving access and making it presentable for the final user.

These key issues were addressed by the first Consultation on Agricultural Information Management (COAIM), hosted by FAO in Rome in early June 2000, where more than 200 participants made progress towards standards for information management, including their use on the Internet. CTA assisted the participation of information specialists from several ACP countries, and organised a workshop on impact assessment for information system development. That session, which discussed tools for measuring the utility of a piece of information, confirmed that impact assessment is a hard nut to crack, but essential for the Information Age.

## ...and keep them growing

■ Through its World Seed Programme, the New Forest Project (NFP) will supply any interested party with high quality tree seeds, with a choice from around 13 species, to start local reforestation projects. NFP distributes multi-purpose, fast growing, nitrogen-fixing tree seeds to 100 sites yearly. Brief descriptions about each available seed, including their uses, growing conditions and drawbacks, can be found on their website's Seed Page, which is in English, Spanish and French. Applicants are asked to send NFP a letter describing their environmental conditions, from which NFP determines, which species should be used and will then ship the applicants a nursery starter kit, free of charge.

▲ The New Forests Project,  
731 Eighth Street, SE,  
Washington, DC 20003, USA  
Fax: +1 202 546 4784  
Email: icnfp@erols.com  
Website:  
www.newforestsproject.com

## The right to speak

■ In July 2000, a coalition of farmers' organisations in West Africa (Benin, Burkina Faso, Côte d'Ivoire, Gambia, Guinea Bissau, Mali, Niger, Senegal and Togo) officially joined hands in the Network of West African Farmers' Organisations. The network aims at giving farmers more influence on agricultural policy development at national and international level. Among its opening initiatives was the creation of a fund – supported by the Club du Sahel to the tune of € 2,617,000 (1,700,000,000 FCFA) for 3 years – for strengthening national farmers' organisations.

▲ C/o CNCR  
B P 249, Dakar, Senegal  
Fax: + 221 827 41 01  
Email: cncr@telecomplus.sn

**Livestock, community and environment**

■ For the latest on veterinary medicine and education, livestock / environment interactions, peri-urban livestock, transboundary epizootic diseases and public health, you need to attend the international conference of the Association of Institutions for Tropical Veterinary Medicine (AITVM), from 20 to 24 August 2001 in Copenhagen, Denmark. Conference languages: English and French. The organising committee will try to arrange scholarships for participants from developing countries.

▲ AITVM conference secretariat  
Ridebanevej 3  
DK-1870 Frederiksberg C  
Denmark  
Fax: + 45 35 28 27 74  
Email: nck@kvl.dk  
Website: www.aitvm.org

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**Women to the fore**

■ Training programmes have been launched in Tanzania for women to start and run small food processing businesses. Sponsored by SIDO and UNIDO, they cover aspects of supply, processing of local products, hygiene and business management. So far, 347 permanent jobs have been created by the 240 women trained – and two-thirds of those own their business. The average annual investment made by each business has risen from the 1994 level of US\$ 400 to about US\$ 2000 in 1998. A sound start which will hopefully continue when external funding guarantees come to an end...

▲ Tanzania Food Processors Association  
PO Box 77246  
Dar es Salaam, Tanzania  
Email: sido@intafrica.com

.....  
**Of mites and men**

■ Mites have their uses. They might be pests in crops, in stored and processed foods. They attack fungi and bees, and can be a direct threat to the health of humans and domesticated animals. But mites can play a constructive role in integrated pest and weed management (IPM). Forty years of research expertise led the Plant Protection Research Institute of South Africa to establish the Mite Expert Centre, with training, mite identification and information services, IPM programmes and (bio)pesticide evaluation and use.

▲ A S Dippenaar-Schoeman  
ARC-PPRI, Mite Expert Centre  
Rietondale Campus, Private Bag X134, Pretoria 0001,  
South Africa  
Fax: +27 12 329 32 78  
Email: rietasd@plant2.agric.za

**The future of fog**



Photo: Maritime-Bejdjord/Baobab Productions Inc.

On a good day each square metre of net means 20 litres of mist droplets saved as water

■ If water does not fall from the sky, scoop it out of the air, at least in areas where dew and fog occur regularly and other water resources are scarce. There are several small fog collecting programmes in countries such as the Dominican Republic, South Africa, Nepal and Peru. Collectors are often made of large, vertically positioned sheets of cloth or other fine-meshed material. The largest project to date, in the arid coastal desert of northern Chile, has provided an average of

11,000 l of water per day to a village of 330 people.

In the Cape Verde Islands, António Advino Sabino is an enthusiastic advocate of fog harvesting amongst the farmers living in mountain areas who are increasingly aware of the importance of fog collection to supply water for domestic use or watering animals. Four collectors were installed in Santo Antão in the community of Corda at 1200 metres altitude. Sabino has designed various tailor-made fog

collectors in combination with sand-filters. Previous collectors used window-screens; in the future, these will be replaced with polypropylene Raschel mesh to enable better efficiency and drainage.

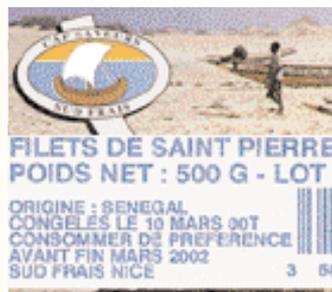
The Meteorological Service of Canada is an important crossroads in the world of fog research, programmes and information dissemination. Their website: [www.msc-smc.ec.gc.ca/armp/](http://www.msc-smc.ec.gc.ca/armp/) offers a lot of information and they publish the *Fog newsletter*. They are also the driving force behind the Second International Conference on Fog and Fog Collection, to be held from 15 to 20 July 2001 in St. John's, Newfoundland, Canada, with the theme of Potential Applications of Fog Water Collection. One part of the programme will focus on the 'role of fog in water planning for developing countries, results of operational fog collection projects, and fog dissipation'.

To know more:

- ▲ Fog newsletter & conference  
Robert Schemenauer,  
PO Box 81541  
Toronto, Ontario  
Canada M2R 2X1  
Fax: 1 416 739 4211  
Email: Robert.Schemenauer@ec.gc.ca
- ▲ António Advino Sabino  
C.P. 534 - Praia  
Republic of Cape Verde  
Fax: +238 624 178  
Email: Procave@cvtelecom.cv

Agricultural uses of occult precipitation  
A N Acosta Baladón,  
Agrometeorological Applications  
Associates, CTA, FAO, EU & WMO.  
1995. 146 pp.  
CTA number 782. 20 credit points

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**Teach a fisherman to market**



■ The sophistication of the European fresh fish market is raising the stakes for ACP producers and exporters, with strict hygiene and packaging standards, tight schedules and a discerning public. Further up the production chain, there are practical barriers to joint efforts in training, market information, modernising equipment and managing shared fish stocks.

These issues, plus the challenge of supplying regional markets,

were the focus of an intensive mobile seminar co-organised by the Spanish Ministry of Agriculture, Fisheries and Food and CTA, in Spain in June 2000. It was attended by 21 representatives of fishery bodies, producers and traders from Angola, Cuba, Dominican Republic, Equatorial Guinea, Ghana, Guyana, Kenya, Mozambique, Namibia, Nigeria, Seychelles and South Africa, plus a full raft of Spanish sector specialists. Participants visited auctions, fishermen's associations and fish processors in the Vigo region on Spain's Atlantic coast. The programme continued in Madrid, visiting the world's largest fish market, Merca-Madrid, and outlining concerted and consistent action for sustainable ACP fisheries. As a source of protein and foreign exchange, they deserve careful husbandry.

## A promising fruit

■ Fruits such as the orange, papaya and tamarind have travelled the world so much that one could easily forget where they originally came from (China, Mexico and Sudan, respectively). Perhaps the Mangabeira (*Hancornia speciosa*) from Brazil will follow in their tracks one day. Delicious and nutritious, it grows in the wild in various regions of Brazil, and is being domesticated by researchers at the Brazilian fruit research agency. The fruit

has the size of a plum, is red with a thin skin and sweet flesh containing one seed. It can be eaten fresh, but is also used in syrup, compotes, wine and vinegar – and its elastic gum serves well in ice-cream recipes. The tree grows between 2 and 10 m high and likes a warm, humid climate.

△ EMEPA – PB  
C P 275 – CEP 58.013-290 João Pessoa  
Brazil  
Fax: + 55 83 222 71 36  
Email: emepa@netwaybbs.com.br

## Plant pest genome sequenced

■ For the first time, a plant pest genome, the bacterium *Xyella fastidiosa* has been completely sequenced. It's a pest of orange trees, which prevents sap from flowing in the host plant, so that the fruits fail to grow and are dry inside. The bacterium is spread by a leafhopper, which farmers try to control with insecticides. The disease it causes is called citrus variegated chlorosis. Around São Paulo in Brazil, 80% of the trees are affected.

The genome was sequenced by scientists in Brazil, who now will

try to use this information to develop better control methodologies. This could involve breeding varieties with a modified iron metabolism, since the Brazilian work has revealed that the bacterium is dependent on iron for its survival.

△ A Simpson  
Bioinformatics Laboratory  
LBI - Laboratório de Bioinformática  
Universidade Estadual de Campinas  
Av. Albert Einstein, 1251 - sala 72  
Caixa Postal 6176  
13083-970 Campinas - SP  
Brazil  
Fax: + 55 19 788 58 47  
Email: lbi@ic.unicamp.br

## A last round of coffee?

■ The surviving remnants of the wild arabica coffee plants growing in the highland rainforests of Southwest Ethiopia are under serious threat. Some 90 per cent of the coffee consumed around the world is arabica coffee, grown on plantations outside Ethiopia. These plantations are at risk from disease, and when disaster strikes, plant breeders turn for genetic help to the coffee's cradle, Ethiopia, which is also home of the largest coffee genebank and of even greater genetic reserves scattered through the forests. These highland forests have lost more than half their trees in the past 30 years, and today they cover less than 2000 square kilometres. They are being exploited for timber and razed to make way for tea plantations and for resettlement of people. These forests possess great genetic variability of arabica coffee and are the best available source of germplasm for the crop's improvement and pest control. (see also *Links* on IPGRI, p 10.)

Source: New Scientist magazine,  
24 June 2000.

## Pulling threads together

■ The cotton sector has faced multiple challenges recently: fluctuating prices and competition in world markets, shortfalls in credit and inputs, poor quality control and falling standards in professional bodies. A symposium on the cotton sector in West and central Africa, organised in Ouagadougou, Burkina Faso in July 2000 by the region's Conference of Ministers of Agriculture (CMA/WCA), tackled these issues head on. The 125 participants, from 12 nations representing all stakeholders in the sector plus international bodies, set up action plans for regional networking to strengthen national bodies in improving production, enhancing regulations, guaranteeing finance and effective exporting.

## Precious resources

■ Following in the footsteps of Cameroon (see *Spore* 86), now Guyana plans to forbid the export of logs of two precious timbers: courbaril wood (*Hymenaea courbaril*) and Guyana crab wood (*Carapa guianensis*). Henceforth they are to be processed in-country, and exported with high added value. In 1998, Guyana's exports of forest products amounted to € 32 million.

Source: Caribbean News Agency

## Islands ecosystems

■ An international symposium on 'Island ecosystems: a conservation and molecular approach' will be hosted by the Centre of Biological and Geological Sciences at the University of Madeira, Portugal, from 5 to 9 March 2001. Conducted in English, the symposium will focus on four areas of conservation, ecology, molecular biology and geology.

△ Prof M Carvalho  
CCBG, Campus da Penteada  
9000 Funchal, Madeira, Portugal  
Fax: + 351 291 705399  
Email: ccbg@ccbg.net

## A goal for women

■ A three-week course on Gender, Organisational Change, Agriculture and Leadership (GOAL), starts on 14 January 2001 at the International Agricultural Centre in Wageningen, the Netherlands, focusing on gender equity planning in agricultural development, the required supportive organisational structure, and how to manage the necessary change in organisations.

△ GOAL  
PO Box 88, 6700 AB Wageningen  
The Netherlands  
Fax: +31 317 495 395  
Email: res@iac.agro.nl  
Website:  
www.iac-agro.nl/frame training.htm

## The seeds of exchange bear fruit

■ Organising seed shows and contests with attractive prizes are a good way to encourage farmers to save, select and exchange seeds, as shown by the Intermediate Technology Development Group (ITDG) - East Africa. The Group has helped two communities in the Tharaka district, central Kenya, to organise annual seed shows after each harvest season. The one-day events bring hundreds of farmers together to publicly display their best crop varieties, many handed down and carefully sequestered and kept since their ancestors first came to the area.

The prizes for the farmers include farm tools, prestige among their peers and the opportunity to buy or barter different species. At one show the Bambara groundnut was introduced in the district; at the next year's show, some exhibiting



Photo: E. Kisiangani

Been going on for years, long before plastic bags were invented

farmers displayed their own Bambara seeds.

ITDG-EA's initiative is infectious. After attending one show, the Semi Arid Rural Development Project (SARDEP) organised their farmers for a similar

exhibition of seeds at Umande in Laikipia district.

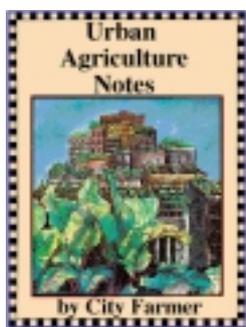
△ E Kisiangani, ITDG-EA  
PO Box 39493  
Nairobi  
Fax: +254 2 710 083  
Email: eric@itdg.or.ke

# Livestock in and around the city

There are several organisations with specific support programmes for urban livestock operators, many of them in the livestock rich Sahel. In Burkina Faso, the 'Centre d'étude, de formation et de réalisations agropastorales' (*Centre for agro-pastoral studies, training and projects*) interacts with a network of journalists who gather and disseminate information about animal health and supply networks (*CEFRAP, BP 276 Ouagadougou 09, Burkina Faso; fax: +226 34 37 79; Email: cercoop.ouaga@fasonet.bf*). In Guinea, the organisation 'Entraide universitaire pour le développement' (*University assistance for development*) provides support and advisory services to livestock organisations and workshops active in raising and rearing cattle and sheep. (*EUPD, BP 2058, Conakry, Guinea, fax: +224 41 14 50; Email:*

*vsf.gui@eti-bull.net*). In Senegal, the 'Association pour le développement de l'élevage' (*Livestock development organisation*) runs training courses and provides support services to urban livestock projects and associated processing projects (dairy and meat products): *ADE, BP 120 Kolda, Senegal, fax: +221 996 13 41; Email: vsfadi@telecomplus.sn*

If you want to widen your scope and exchange experiences with urban livestock specialists all over the world, then the City



Farmer group (*Canada's Office of Urban Agriculture, 801-318 Homer Street, Vancouver, B.C. V6B 2V3, Canada, fax: +1 604 685 04 37; Email: cityfarm@interchange.ubc.ca*) should be your first port-of-call, for a wealth of information and opportunities to exchange with producers, planners, researchers and city managers. City Farmer also provides a question-and-answer service on its Website (*www.cityfarmer.org, or through email*). For its part, the FAO ran an electronic conference on urban agriculture issues (including livestock, environment, hygiene and urbanisation) in August and September 2000; the results can be consulted on the Website *www.fao.org/urbanag*. The new Resource Centre for Urban Agriculture and Forestry (*RUAF-ETC, Kastanjelaan 5, 3830 AB Leusden, Netherlands, fax: +31 334 940 791; Email: RUAF@ETCcl.nl,*



Website: *www.ruaf.org*) includes amongst its missions the promotion of urban agriculture through a good twenty research centres, and information services to urban livestock practitioners through study reports, case studies and a question-and-answer service. Last and by no means least, the International Livestock Research Institute has a rich collection of documentation (journals, monographs, CD-Roms and databases) which are accessible through its two libraries – one is in Kenya (*ILRI, PO Box 30709, Nairobi, Kenya, fax: 254 2 631 499; Email: ILRI-Kenya@cgiar.org*), the other in Ethiopia (*PO Box 5689 Addis Ababa, Ethiopia, fax: +251 1 611 892; Email: ILRI-Ethiopia@cgiar.org*) and on its Website: *www.cgiar.org/ilri*

# The guardians of plant genetic resources



During the armed conflict in Somalia in the mid-1990s, the national germplasm collection was destroyed along with the crops in the fields. At the request of the Somali government, a collector of the International Plant Genetic Resources Institute (IPGRI) hand-carried a duplicate set of 300 samples of sorghum and maize – among the last remaining samples of Somali germplasm – out of the country and deposited it in the Kenya genebank. Since then, it has been used again to revitalise Somali agriculture. IPGRI carries out its global mandate of conserving plant genetic resources, which experts in the field of plant genetic resources need in order to produce improved crop varieties.

IPGRI aims at disseminating and promoting improved strategies and technologies for conserving and managing plant

genetic resources. In over 25 years of its existence it has enabled the number of conservation facilities to grow to around 1308 genebanks today. IPGRI, with 15 branch offices and laboratories, primarily supports national plant genetic conservation programmes and research organisations. It has helped over 100 countries to set up genebanks. IPGRI works on *ex situ* and *in situ* conservation (*in situ* means conserving plant genetic resources in their natural habitat with farmers' participation; *ex situ* is the conservation of seeds for up to 100 years by drying them and storing them at low temperatures). *In vitro* culture techniques – storage of plant tissue – is also an area of IPGRI's work. This technique is necessary for plants that propagate vegetatively, like potato and cassava, or have seeds that do not keep, like cacao and coconut. IPGRI main-

tains a number of databases with summary information on more than 5 million accessions worldwide in *ex situ* germplasm collections. This information is available from its recently updated website together with SINGER, which allows searching across the genetic resource databases of 13 International Centres for Agricultural Research.

Training materials in English, French and Spanish can also be downloaded from IPGRI's website on topics such as an *Introduction to collecting, Ecogeographic surveys, Measuring genetic variation* and the *Guidebook for genetic resources documentation*. A very useful service for the reader of *Spore* with access to Internet is the new searchable *training opportunities database*, which enables you to find agriculture related courses that suit your needs and planning. It includes, besides IPGRI's training pro-



grammes, the courses of more than 70 universities, NGOs and training centres.

Finally, IPGRI publishes newsletters and books that are freely available to the libraries of institutes, universities, research laboratories and genebanks.

IPGRI

Via delle Sette Chiese, 142,  
00145 Rome Italy.  
Fax: +39 06 5750309  
Email: *ipgri@cgiar.org*  
Website: *www.ipgri.org*

# Publications

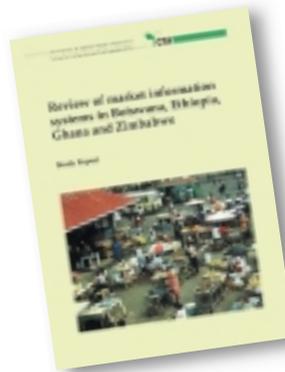
## Which market?

 We all know the value of farmers getting a clear idea of the market for their produce, especially with the world's markets opening up and local price guarantee schemes being condemned to the history books.

The problem for many producers is that the liberalisation which may bring greater market opportunities has also removed some of the government-operated market information services (MIS) on which they once relied for information about prices, delivery and demand. The issue now is how to plug into new services, and indeed how to co-manage them. This study, of typical MIS in four countries,

stresses the need for involving all stakeholders in a given sector with local, decentralised operations. As such it provides a practical framework for planners of agricultural MIS in general.

Unlike other recent works, which enthuse about in modern information technology in MIS, this report has a rare and sobering comment. By all means, make MIS efficient and accessible, but remember: "Farmers can benefit from market information only if they have the means of altering cropping patterns, holding back stock, negotiating with several customers and arranging transport to several destinations. Sadly, many African farmers are unable



to do any of these things". Until MIS strategies are meshed with other efforts to empower farmers, the power of the marketplace will remain a distant illusion.

Review of market information systems in Botswana, Ethiopia, Ghana and Zimbabwe - Study report, P Robbins. CTA. 2000. 83pp. ISBN 92 9081 2303 CTA number 982. 10 credit points

## The future ingredients of our cities

 There is still much ado about urban agriculture (see also p 3 in this issue). Small wonder if in 25 years time, 80% of the world's population will be

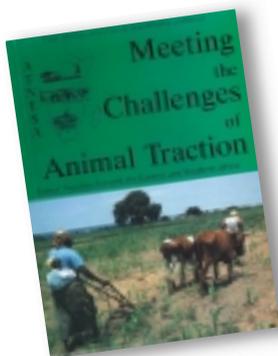
living in urban environments. In developing countries especially, the city's need for highly perishable products (fish, meat, vegetables and dairy products) will be

difficult to meet. A major problem will be the lack of infrastructure to deliver fresh produce quickly and cheaply to town. Intensive urban agricultural production however, will be encouraged by the proximity of a huge consumer market.

What does this mean for spatial planning, waste recycling, hygiene standards, regulatory bodies, local economies and food processing industries? Growing cities, growing food can rightfully be called a reader on this topic, introducing the reader to its breadth and complexity. Section One's more conceptual papers offer definitions, analysis and policy options and considerations. Section Two consists of city case studies from all over the world. The African city studies in the reader concern Harare, Nairobi, Accra, Dakar and Dar es Salaam.

The reader, for a large part, reflects the discussions of an international co-seminar on urban agriculture held in La Havana, Cuba, from 11 - 15 October 1999 (See *Spore* 86, p 8. and *Spore* 81, p 1.). If you have not yet taken a look at urban agriculture, this reader is an excellent place to start.

## A good old push'n'pull



■ One of the most complete overviews of the state-of-the-art of animal traction, *Meeting the challenges of animal traction* is both an excellent introduction and refresher course on the topic. Compiled largely from an encounter of the Animal Traction Network for Eastern and Southern Africa (ATNESA), with support from the British DFID, it places this ages-old technology in a modern light.

Several papers examine how to integrate animal traction with

contemporary participatory approaches in which the users are in control. Similarly, attention is paid to analysing environmental impact and gendering the technology. More 'traditional' issues are not left untouched: design of appropriate equipment, development of low-cost animal carts, and feeding techniques all provide the background for some straight-talking project experiences and hints at policy formulation.

It will take time to work your way through this book, but well worth the effort. The result? Fitter animals, more efficient methods, and more sustainable production and transport.

Meeting the challenges of animal traction. A resource book of ATNESA. ATNESA, 1999, 332 pp. ISBN 1 85339 483 1 GBP 14.95 • € 24.95, Add 40% for airmail delivery outside Europe, 20% inside. IT Publications 103 - 105 Southampton Row London WC1B 4HL, UK Fax: +44 20 7436 2013 Email: orders@itpubs.org.uk

Growing cities, growing food. Urban agriculture on the policy agenda A Reader on Urban Agriculture ACPA, BMZ, CTA, ETC, DSE/ZEL, SIDA, 2000. 543pp, ISBN 3 934068 25 1 CTA number 984. 40 credit points

## The facts of cassava

■ Are you a cassava breeder, trader, processor or researcher? *The world cassava economy*, provides the facts and figures and latest developments regarding cassava: yields per hectare, total production and acreage per country. In addition the book outlines some of the constraints to the sector's expansion and suggests areas for taking action to further develop the world cassava economy.

The World Cassava Economy. Facts, trends and outlook FAO/IFAD, 2000. 66 pp. ISBN 925104399x US\$12 • €13.95 FAO Sales and Marketing Group, Viale delle Terme di Caracalla, 00100 Rome, Italy. Fax: +39 06 57 05 33 60 Email: publications-sales@fao.org

## Conference runs to seed

■ Papers from the 6th International Workshop on Seeds held in Mexico in January 1999 describing the current status of seed biology.

Seed Biology: Advances and Applications Edited by M J Black, King's College, University of London, UK, K J Bradford, University of California, Davis, USA and J Vázquez-Ramos, Universidad Nacional Autónoma de México, México, CABI, April 2000. 528 pp. ISBN 0 85199 404 0 £95 • €155.10 CABI Publishing, Wallingford, Oxfordshire, OX10 8DE, UK. Fax: +44 1491 833508 Email: cabi@cabi.org

## For fertile advice

■ This booklet introduces the role of fertilisation in plants in relation to soil characteristics, with fertiliser recommendations for 16 selected crops, including rice, cassava, onions and tomatoes, and gives practical suggestions on fertiliser use demonstrations.

Fertilizers and their Use. A pocket guide for extension officers IFA / FAO, 2000. 70 pp. ISBN 92 5 104414 7 Free of charge IFA, 28 rue Marbeuf 75008 Paris, France Fax : +33 153 930 545 Email: ifa@fertilizer.org Website: www.fertilizer.org

## The role of smallholder farmers in seed-production systems

 Summary report and recommendations of a CTA study visit, Zimbabwe. 1999. (see *Spore* 86, p. 11)

CTA, 2000. 33pp. ISBN 92 9081 2222 CTA number 986. 5 credit points

**A different approach**

■ A self-conscious set of ideas on how to better base extension approaches on the wishes of the final user. Draws on experiences in Honduras, but is provocative enough for any situation. Taking a New Look. Elements for a new approach to agricultural extension

By T Zellweger, B Bustamante & U Stürzinger.  
INTERCOOPERATION/LBL/PROAS  
EL. 1999. 31 pp.  
ISBN 99926 606 2 7  
£4.95 • € 8.10  
IT Publications  
103-105 Southampton Row,  
London WC1B 4HL, UK  
Fax +44 20 7436 2013  
Email: itpubs@itpubs.org.uk

**Website covers crops**

■ Cover crops are usually nitrogen fixing plants, which have a range of beneficial effects including smothering weeds, reducing pests and improving soil properties, as well as providing food, livestock feed, fuel and soil cover. The Consultative Group on International Agricultural Research (CGIAR) has launched a research network on the Internet on cover crops. In CropNet some 60 researchers and 30 research websites across West Africa are sharing their research work and findings (including a cover crop photo gallery) and are helping to refine and improve the role of cover crops in sustainable agriculture.

Email: g.tarawali@cgiar.org  
Website: www.cgiar.org/spipm/ccropnet/index.htm

**The world in 24 pages**

■ It is a challenge to link four key (climate change, debt, equity and survival), global issues in one title, but this highly readable brochure succeeds in explaining some of the predictions of climate change, the burden of debt for developing countries, and the responsibilities of the North and the South. It succeeds in avoiding 'Northern-bashing' whilst still giving an insight into how policies need to change to allow the South, and its agriculture, to flourish. In talking clearly, this donor organisation makes itself a approachable as a true partner.

Who owes who?  
Christian Aid, London. 1999.  
24 pp.  
£ 3.50 • € 5.40  
Christian Aid  
35 Lower Marsh  
London, SE1 7RL  
UK  
Fax: + 44 20 7620 0719

**Needed: a restorative pick-me-up**



■ With fallow land becoming increasingly rare, the challenge for the ACP farmer is how to continue to cultivate fields without draining the tired soils of nutrients and organic matter.

From the start-off point of feeding nutrients to the soil, through such matter as manure, and helping it to absorb them, *Nutrients on the move* takes you through the chain of soil dynamics. Drawing on case studies of

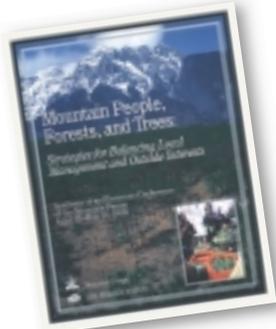
largely indigenous knowledge in Burkina Faso, Ethiopia, Kenya, Mali and Zimbabwe, it examines these down-to-earth topics from the perspectives of changing practise, policy change, rehabilitation and regeneration. The book is the fruit of cooperation between NGOs, universities and national agricultural research centres in six African countries and counterparts in the UK and the Netherlands, all linked through the soil nutrients network known as NutNet.

Nutrients on the move. Soil fertility dynamics in African farming systems.  
Edited by T Hilhorst & F Muchuna,  
IIED, London. 2000. 145 pp.  
ISBN 1 8 99 825 568  
Free to readers in ACP and other developing countries. For readers in OECD countries: GBP 12.50 • €20.85, plus 25% for postage within Europe, 40% outside.  
IIED Drylands Programme  
3 Endsleigh Street, London, WC1H 0DD, UK  
Fax: + 44 20 7388 2826  
Email: drylands@iied.org

**Go tell it on the mountain...**

■ In July 2000, the FAO announced that the year 2002 will be the International Year of the Mountain. Mountains are not just different ecosystems because they are more vertical than others, they are fragile ecosystems which are globally

pate. The major outcomes are compiled and made available on Internet and on paper too. Issues include mountain people, forests and trees, sacred mountains and environmental management, sustainable mountain tourism and mountain laws and peoples. All are brief and clearly written reports, offering a broad range of contributions and illustrations from various parts of the world.



important as the world's water towers, repositories of biological diversity, destinations for recreation and tourism and a home to about one-tenth of humankind. The Mountain Forum, an international web-based network on mountain related issues, is not waiting till 2002 but is operating several electronic forums on the Internet on mountain related issues. Anyone with an interest in these issues is invited to partici-

Mountain Laws and Peoples: Moving Towards Sustainable Development and Recognition of Community-Based Property Rights.  
A General Overview of Mountain Laws and Policies with Insights from the Mountain Forum's Electronic Conference on Mountain Policy and Law.  
By O Lynch & G F Maggio. The Mountain Institute, Center for International Environmental Law, and Mountain Forum, 2000. 48 pp.  
Mountain People, Forests, and Trees: Strategies for Balancing Local Management and Outside Interests. Synthesis of an Electronic Conference, April 12 - May 14, 1999. Edited by N Butt & M F Price. Mountain Forum and The Mountain Institute, 2000. 52 pp.  
ACP countries: US\$5 • €5.80  
Other countries: US\$11 • €12.75  
The Mountain Institute  
245 Newman Avenue  
Harrisonburg, VA 22801 USA  
Fax: +1 540 437 04 94  
Email: info@mtforum.org  
Website: www.mtnforum.org

**Grabbing the plantain market**

■ The market for Caribbean plantain is growing, regionally and further afield in North America and Europe. This practical guide, full of technical specifications, will help producers grow, harvest, pack and ship their crops. Fine enough, but it stops there – despite the title, not a word is written about seducing and sustaining the demand of the market. Something for a future series maybe?



Plantain for export from the Eastern Caribbean: Production and marketing manual  
G C Robin, H C Chamberlain & D N Crucefix. CARDI/CTA. 2000. 26pp. ISBN 976 617 006 1  
CTA number 981. 5 credit points

**Banana resources**



■ A delight for the banana researcher! A comprehensive CD-Rom of publications ranging from books and directories, to technical leaflets and seminar proceedings, plus two databases, one bibliographic on bananas and plantain, the other of *musa* researchers. CTA provided financial support for this publication which is available free from INIBAP.

Musadoc 1999, INIBAP  
ISBN 2 9108 10348  
INIBAP  
Parc scientifique Agropolis 12  
34397 Montpellier Cedex  
France  
Fax: + 33 467 610 334  
Email: inibap@cgiar.org

## Towards a stronger food sector

 Much is happening these days in strengthening the food processing sector in southern Africa and beyond, and this is a timely review of the sector's information needs in three countries.

A study undertaken in 1999 by the Imani Development Trust of South Africa for CTA, in collaboration with regional consultants, highlights the potential contribution of small-scale processing to the agricultural sector and points to several constraints including difficulties in accessing capital, limited technical and managerial skills, lack of information, and restricted markets.

Information is, as ever, crucial to the sector's development and the report recommends strengthening the advisory infrastructure for entrepreneurs through business support centres, and national and regional networks. This is a

## We the women, we the subjects



 "Development will only happen when women are perceived as its subjects, not its objects" was the mantra of the seminar on the economic role of women, co-organised by the Greek Ministry of Agriculture, Austrian Development Cooperation and CTA in October 1999. With detailed highlights of that event, this summary report shows the depth of the issues covered, ranging from the need to expand women's entitlements to land, property and capital; access to technology, finance and decision-making and the associated need to change the legal environment.

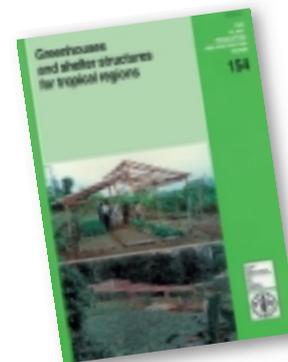
The economic role of women in agricultural and rural development: promoting of income-generating activities. CTA, 2000. 64 pp. ISBN 92 9081 2249 CTA number 994. 10 credit points

## Give your greens a home for life

■ Greenhouses are gaining popularity in developing countries, since damage to crops from storm, heavy rainfall or sunshine can be limited and evaporation and evapotranspiration controlled. Harmful insects can be kept out and useful ones, for biological pest control, kept in. *Greenhouses for tropical regions* provides technical guidelines for the design and construction of simple and low-cost structures. The manual introduces meteorology and climates around the world, and related possibilities and problems in vegetable production. It suggests designs for different constructions for different climates, using glass, plastics, fibre, timber and metal. Its range of detailed technical specifications includes drawings, illustra-

valuable tool for the planners and managers of such services.

Small scale food processing in Mozambique, South Africa and Zambia: Addressing information and communication management needs for sector development – Study Report. K Atkinson et al. CTA, 2000. 60 pp. ISBN 92 9081 2273 CTA number 985, 10 credit points



tions and diagrams of various construction types.

Greenhouses and shelter structures for tropical regions  
FAO Plant Production and Protection Papers no. 154. 1999. 138 pp. ISBN 9251043868 US\$34 • €39.50  
FAO Sales and Marketing Group, Viale delle Terme di Caracalla, 00100 Rome, Italy. Fax: +39 06 57 05 33 60 Email: publications-sales@fao.org

## Experiences in Community-Based Land-Use Management in Sub-Saharan Africa

 Proceedings of a CTA seminar, held in Bamako, Mali, 9 – 14 November 1998. Features texts in English and French.

CTA, 2000. 222 pp. ISBN 92 9081 2133 CTA number 983. 20 credit points

## Modernization of Irrigation System Operations

■ Proceedings of the fifth international Information Techniques for Irrigation Systems (IT IS) network meeting, India, 28 – 30 October 1998.

FAO, IWMI & CEMAGREF, 1999. 262 pp. ISBN 974 85777 9 1 Available at postage rate  
FAO regional office for Asia and the Pacific  
Maliwan Mansion, 39 Phra Athit road Bangkok 10200, Thailand Fax: + 66 2 280 04 45 Email: thiery.facon@fao.org

## Strong meat to digest

■ A collection of specially commissioned reviews clustered around three themes: Absorption and Metabolism of Nutrients, Feed Evaluation Methodologies and Physiological and Metabolic Aspects of Feed Intake and utilisation.

Farm Animal Metabolism and Nutrition  
Edited by J P F D'Mello, The Scottish Agricultural College, CAB International, May 2000. 448 pp. ISBN 0 85199 378 8 £35 • €57.15  
CABI Publishing, Wallingford, Oxfordshire, OX10 8DE, UK. Fax: +44 1491 833508 Email: cabi@cabi.org

## The Veterinary Profession in a Changing Environment

■ Proceedings of the Commonwealth Veterinary Association and Kenya Veterinary Association joint conference for Eastern, Central and Southern Africa, held in April 1999 in Nairobi, Kenya. This publication received financial support from CTA.

Edited by W O Ogara, these proceedings were published as a special issue of *The Kenya Veterinarian*, Volume 24, 2000. 187 pp. ISSN 0256-516  
Subscription details from: The Kenya Veterinary Association P O Box 29089, Nairobi Kenya Fax +254 2 21 82 60

## How to obtain these publications



The green leaf symbol indicates publications that are on CTA's list. Subscribers to the Publications Distribution Service (PDS) can obtain them from CTA. All other publications, indicated by an orange square, are available from the publishers listed, or through commercial outlets, but not from CTA.

Publications on CTA's list are available free-of-charge to PDS

**subscribers.** Subscribers can order publications on CTA's list up to the value of the credit points available to them. Subscribers can only request publications on the order forms provided.

**Non-subscribers** who wish to join the scheme should write to CTA for an application form. Applications will be considered from agricultural and rural development organisations in the ACP (Africa, Caribbean and Pacific) Group of States; individ-

uals resident in ACP countries may also apply.

If you are not eligible for a free subscription to the PDS, or if you need publications beyond your free credit allocation, you may buy publications on CTA's list from our commercial distributor: *Triops*, Hinderburgstrasse 33, D-64295 Darmstadt, Germany, Fax: +49 6151 314 048, Email: triops@triops.de, Website: <http://www.triops.de>

## Zambia and Burkina Faso: new service for subscribers

The pilot partnerships of CTA's Publications Distribution Service (PDS) in Zambia and Burkina Faso (see *Spore* 83) are now operational, and two service centres are distributing the publications on CTA's list – including *Spore*.

As a result, we ask subscribers in these two countries to send all correspondence about distribution to the partners below and not to CTA. This includes new subscriptions, address changes, publications orders forms, and advice on CTA publications.

Subscribers will benefit from quicker service and delivery, cheaper correspondence, customised advice and the chance to browse publications at fixed and touring exhibitions, plus on-the-spot purchasing when credit points have been used up.

Nothing else will change. Subscribers will keep their PDS number, and their allocation of credit points. All correspondence with the editors about the content of *Spore* – articles, news, letters for Mailbox – should continue to come to the addresses in the green 'box' on the right.

✉ PDS service in Zambia: *Insaka Press Co. Ltd.*, PO Box 50708, Lusaka; fax: +260 1 223 948 Email: [insaka@zamnet.zm](mailto:insaka@zamnet.zm)

✉ PDS service in Burkina Faso: *Department of scientific and technical information (DIST), CNRST*, 03 BP 7047, Ouagadougou 03; fax: +226 315 003

## Hundreds more women readers...

Increasing the value of *Spore* to women with agricultural occupations is one highly visible part of our editorial policy. Three years ago, only 7% of our subscribers were women, and measures were taken to increase that share, including extensive contacts with women's organisations through mailings and the recent UN Women's conference 'Beijing +5'.

In the twelve months up to September 2000, almost one in five new subscriptions came from women (163 individuals and 145 women's organisations) so the number of women subscribers is growing faster than men. Good news indeed, but typical of the gender equity struggle, progress is slow. At this rate, it will take for ever and a day. Is it time for readers to take direct action, to share *Spore* more and to encourage more women to subscribe? Easier done than said perhaps, for a change...



Photo Bernard Favre/Louma productions

# Mailbox

Mailbox is now receiving three times more letters than last year, and still we want more! More of your news, views, and ideas. They are welcome on this page and elsewhere in *Spore*.



## Losing our medicinal trees

Ms Theresina Chimombe of Westgate, Zimbabwe, reminds us that "deterioration of the environment is a killer to our health because some precious medicinal bushes are being destroyed. In the past, local folks knew the importance of our local wild bushes for personal health.

In particular I refer to *Mugura menosa*, a tree very common in rural hilly and stony areas. You make a toothbrush out of the stick, and toothpaste from the bark of the tree, by chewing it, or pounding or grinding it. It also helps to reduce the bleeding of gums, and minimises smelly mouths, chest pains and pneumonia."

## Negligence?

Writing from Dessie, South Wollo, Ethiopia, Mitiku Workineh sighs in despair at the alienation of the modern scientist from most people's realities. "Even half a century ago, town boys assumed that milk comes in bottles, eggs from cartons, and bread from baskets. Since then the world has achieved so many scientific and technological changes and improved human needs. But I doubt that most scientists and researchers really have a good understanding of the environments outside the society they live in. One example is how an American company makes textile fibre from maize and other edible products [...], and there are mutual benefits."

## How to preserve brewer's grain?

Godfrey Ssentongo, managing director of *Modern Farming Systems*, PO Box 5013, Jinja, Uganda (fax: +256 43 12 15 60) asks for help in keeping brewer's grain. "This grain, also known as 'brewer's mash' (a by-product from beer factories) is the cheapest and most available supplementary feed for cattle and pigs, and it has more protein than maize bran.

However, farmers cannot keep it for more than one week before it goes bad. If this brewer's grain could be preserved it could be enriched and packed and sold to farmers profitably.

I appeal to any farmer or scientist who has developed the appropriate technology for preserving this feed to get in touch with me."

## Goose and duck share tasks

Imele Benoit, a meat technologist in Bamenda, Cameroon, tells us about his incubating ducks: "I have a small but diversified poultry run, with chickens and cocks, ducks and drakes and geese and ganders, all free-range.



Photo Imele Benoit

Hi mum, that Auntie Duck hatched us well

I have noticed that the geese are bad layers, but they are very productive with their eggs. One goose can lay between 20 to 30 eggs in a clutch, but only about 15% will hatch properly.

My tests were to get the duck to sit on the goose's eggs. During the first test, I replaced the duck's eggs with those of the goose. Of the six eggs hatched by the duck, I got three goslings.

In my second test, I replaced six duck eggs with three goose eggs, and I got two goslings and some ducklings. In the third test, I let the goose sit on the eggs, and I got just one gosling.

My conclusion is that when I want goslings, I let the duck sit on them.

After 28 to 30 days, the young goslings leave their shells and get used to their adoptive mother, for the first month. Then they abandon their 'incubator duck' and go back to their biological parents."

## A school for insecticides

■ **Lamine Sidibé**, head of agricultural promotion in Beyla, Guinea, is involved in research on insecticide plants to protect crops against predators and disease. He asks himself "Why don't we have at least one ACP agricultural research institute specialising in insecticide plants, to better study them and their wide-scale use? This would help to protect the environment in our countries and to save using our scarce foreign exchange for purchases of costly industrial pesticides. We could use the savings to build schools, hospitals ..."

## Back to the land

■ **Adetoyese Adedeji** of Kawo Maduna, Kaduna State, Nigeria, read with "keen interest the true stories of four non-agricultural professionals who turned into experts in *Spore* 84. It serves as an encouragement for me and I am sure many other readers. It is an eye-opener for me that one does not have to be in the agricultural sector before becoming a big-time farmer. If a clergyman and a computer scientist can be, anyone can.

What about you agricultural personnel? Wake up and do something! I know there can be a problem of initial capital, but put down your vision and present it for a loan. What shall we do but try and try again?"

## Invest wisely in young people

■ Responding to the letter from I Thuwein of Tanzania in *Spore* 86 about poverty reduction, **Wale Adeyinka**, of the Federal College of Forestry in Ibadan, Nigeria, refers to his new government's poverty alleviation programme and suggests a link between youth and agriculture. 'Rather than pump huge money into sustainable agricultural programmes, the government is paying about 200,000 jobless youths around € 40 a month to do various jobs. This money could be used more judiciously in investing in sustainable agriculture.'

*The next issue of Spore will feature a dossier on 'Youth and agriculture'.*

*In Spore 88, page 9, we described raised bed cultivation. Our correspondent, Noah Lusaka, has now sent us this vivid picture, explaining it all*



Photo Noah Lusaka

# A meeting and a mandate: CTA is on the move

**R**eaders of *Spore* will no doubt recall that CTA was established almost two decades ago under the second Lomé Convention between the African, Caribbean and Pacific Group of States and the Member States of the European Community. The signing of a new twenty-year ACP-EC Framework Agreement in Cotonou, Benin in June 2000 formalised a new relationship between these two groups of countries, which now number 15 on the European side, and 77 on the ACP side following the addition of six more Pacific nations (1) to the ACP Group.

The new Partnership Agreement strengthens and reinforces the role of CTA in 'ACP institutional capacity development, particularly information management, in order to improve access to technologies for increasing agricultural productivity, commercialisation, food security and rural development.'

CTA's mandate has been clearly cast in the wider setting of the Agreement's overall focus on development and the integration of the ACP States into the world economy. There is, therefore, a need for the Centre to ensure that its operations and services are optimally aligned with the other elements in the complex constellation of actors, players, parties and stakeholders involved in ACP-EC cooperation.

From 5 to 8 September 2000, CTA convened a Consultative Forum of experts at its headquarters under the title "The Way Ahead for CTA". The Forum was invited to assist in fashioning the Centre's Strategic Plan for the period 2001-2005, and to give its opinion on CTA's proposed Work Plan for 2001.

Thirty-two specialists from ACP and EU countries attended the Forum, whose professional backgrounds were in agriculture and related fields, government, research and the non-public and civil society sectors. Most were familiar with the work of the Centre, having been members of the CTA Advisory Committee which operated under the Lomé Convention.

## Policies to make things happen

In his opening remarks to the Forum, the Director of CTA, Carl Greenidge, emphasised how the Centre's existing objectives and information activities were to be continued and reinforced, whilst the Centre would become more proactive, rather than simply being demand-led. The existing activities would also be enhanced by the development of services which would strengthen the capacities of ACP States in the formulation, management and implementation of policies for agriculture and rural development. Outside observers may therefore notice that, by embracing policy concerns, CTA is joining the ranks of those

institutions which seek to reinforce their services to partners by helping them to create the broad enabling environment in which their goals can be achieved more effectively.

Speaking of the need to deepen existing activities, and recognising that agriculture and rural development are part of a wider universe, the Director spoke of the need to work a lot more closely with stakeholders. The Consultative Forum, in addition to helping CTA find its way forward, itself provided one key input for establishing a sound and sustainable institutional governance and an appropriate interpretation of its mandate. Mind you, to use a Dutch proverb appropriate to the damp autumnal days in which the meeting was held, 'you always let your soup cool a bit before eating it'.

*The full text of the new Cotonou agreement can be found on Website ([www.acpsec.org](http://www.acpsec.org))*

*The six new Pacific Member States of the ACP Group are Republic of Nauru, Niue, Cook Islands, Federated States of Micronesia, Republic of Palau and Marshall Islands.*



*Spore* is a bi-monthly publication providing information on agricultural development for ACP countries. *Spore* is available free-of-charge to relevant organisations and individuals in ACP and EU countries. Subscriptions may also be purchased from *Triops* (see page 13).

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Gabriel Rugalema has researched AIDS and rural livelihood for several years. He was a special guest at the special month-long session of the United Nations Security Council on AIDS in January 2000. A Tanzanian, he is currently working at Wageningen University and Research Centre in the Netherlands.

## The AIDS pandemic and agriculture

# The microbe and the macropolicy

**In Africa, AIDS affects everyone in the community.**

**When I was working on HIV/AIDS in Tanzania in 1999, I found myself talking to district administrators and farmers in terms of which households are afflicted, which households are affected and which households are not affected. One farmer kindly told me “Here there is no household that is not affected. Afflicted and affected. Your third category does not exist.”**

**S**ome people claim that AIDS is now more an urban problem than a rural one, but the actual rate of prevalence in any area depends on the local context. In fact, in Africa and other developing countries, you cannot make the urban-rural distinction, because of the constant movement of people. Town people go home to the village at special times of the year, rural people work in towns, and nowadays there is yet more movement because of more funerals and the fact that when people are very ill, they go home. Remember, relatively few people in Africa die in towns. We all want to be buried near to our forefathers - back to the roots.

### Deadening impact on agriculture

The impact of AIDS can be counted in terms of calories per head, and food security is going to be more precarious. Because of AIDS, farming systems suffer labour shortage and bottlenecks; these cause shortages of food both for consumption and for sale. If you don't have labour you cannot grow crops that take a long time to mature, like banana (one year) or coffee (five years). You had better grow cassava or sweet potatoes which takes six months and has quick returns. The overriding need for many families is to fill the stomach, care for relatives and take in orphans. For such families, the level of livelihood has gone down.

In Rwanda, genocide and AIDS mean that there are more than 11,000 households headed by children below the age of 11. The biggest threat is that with so many non-socialised children you cannot expect that wars in Africa are going to stop. Some will drift off to be soldiers, or to the cities to be street children, but even for those who stay in rural areas, life will be precarious. They are not being prepared to be

farmers. At best they will perhaps be quasi-farmers, disconnected from the land, if they have not sold it. There is no handing-down of knowledge and skills. Schools could have played a very useful role, but in north-western Tanzania, for example, school attendance levels have dropped from 100% to 30% because there is no-one to send children to school, to buy books, to pay school fees, and no-one to be the teacher. And when casual labour gives instant earnings, instead of the need to wait for income from farming, which will a young person choose?

### Disease and risk

We have to understand the forces which are driving the epidemic, or rather pandemic now that it is global. Some people present AIDS as a disease in terms of microbes; many people blame its spread on commercial sex workers and loose sex-

commercial sex worker, driven to her work by desperation, and she will say that hunger tonight is a greater risk to her and her children than AIDS, perhaps, after 5 years.

### Less poverty, less disease

As Louis Pasteur said “The microbe is nothing, the terrain is everything”. That Africa is the poorest continent and that Africa is facing the biggest epidemic of AIDS surely tells us something about the relationship between poverty and the disease.

Instead of condemning the alleged promiscuity of our youth, who say their behaviour is only a symptom of the absence of development, we need to make sure that AIDS prevention and poverty alleviation go hand in hand. So yes, more public awareness – even though we know

*“ My son, here AIDS is not about the virus, it is about food ”*

ual behaviour. It's not that simple. There are considerations of family and survival.

Last year, in Mwanza, Tanzania, a farmer told me: “My son, here AIDS is not about the virus, it is about food. This is a very dry area. Rains come three months every year. By April, the place is dry, our harvest is in the stores. By end of August, rice stores have run out and you have families without food. So if I have a teenage girl and she goes out and comes back with a kilo of rice, I will not ask.”

It is also a question of risk. People living in comfort perceive risk in terms of the future, tomorrow, the year after, ten years, twenty years – it's theoretical because you know that you have something to live for. But talk about AIDS to a

that 95% of people in Tanzania today are aware of AIDS. And, yes, let us help our agricultural extension workers to know and explain more about AIDS, as well as early planting. And, yes, give us institutions and policies which admit to the problem and plan their preparedness. To combat AIDS is not only to change behaviour but also to work on food security and issues like land. Without the security of livelihood, we are going to keep the problem.

*The opinions expressed in Viewpoint are those of the authors, and do not necessarily reflect the views of CTA.*