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Website: spore.cta.int



Photo: © FAO

Zoonoses and animal health

Man, bird and beast

Diseases passed from animals to humans cause untold damage to the lives and livelihoods of people living in ACP countries. Livestock producers need more help installing better animal husbandry, veterinary and public health practices, to contain the threat and make the most of their animal resources.

Humans and animals have been living side by side since livestock domestication began nearly 10,000 years ago. But while this symbiosis undoubtedly brings benefits, close contacts between Man and livestock can also cause problems. While animals are a major source of protein, by-products and income for many households, they are also a source of disease, especially when Man and beast live in close proximity, and hygiene and veterinary procedures are inadequate. Most of the world's emerging diseases are of animal origin, and nearly all are zoonoses, the term given, in the definition of the World Health Organization (WHO), to "those diseases which are naturally transmitted between vertebrate animals and man". The highly pathogenic H5N1 strain

of avian influenza, currently sweeping through Asia, Africa and Europe, is perhaps the most dramatic illustration of the potential damage caused by zoonotic diseases. But in many ACP regions, other animal diseases have long taken a heavy toll on humans.

To date, scientists have identified more than 200 zoonoses, the effects of which vary widely, from death or disability in humans to lower production rates in animals. The latter scenario, while clearly less tragic, is nevertheless a serious constraint to food security in many ACP countries. A number of zoonotic diseases are characterised by lower outputs of animal products, manure and traction power. Some zoonoses, such as avian influenza and Bovine Spongiform Encephalopathy (BSE or 'mad cow' disease,

In this issue



The chaos theory holds that the flapping of a butterfly's wings may eventually cause a storm on the other side of the world. But let's forget about chaos and concentrate on interdependence! This issue of Spore shows, once again, the way things on the planet are inter-linked. Like the link between Man and animals — which goes hand in hand with the risk of disease transmission — and the link between countries, for zoonoses know no borders. Then there is the link between markets, a case in point being the cashew nut, which is grown in Africa, processed in India and consumed in Europe and beyond. And what about the energy link? Today it is oil, but tomorrow it could well be biofuel. Used appropriately, as our Viewpoint suggests, ICTs can only increase this kind of interdependence. For better and not for worse!

see *Spore* 94), have an impact on food safety. A secondary but important repercussion is the fear factor on consumers, together with trade barriers, as embargoes are put into force.

A deadly virus

As avian influenza continued what some say is its inexorable march through the world, health officials warned that local livestock-keeping practices in Africa could increase the risk of the virus mutating to become transmissible between humans. In Africa, as in other ACP regions, households often live in close contact with poultry in their homes and backyards. Once the virus has mutated to become transmittable between humans, there can be no going back, and millions of lives could be lost. There is no cure for the disease and no vaccine so far. At the time of going to press, Burkina Faso, Cameroon, Côte d'Ivoire, Egypt, Niger, Nigeria and Sudan had confirmed the H5N1 avian flu strain, with two deaths confirmed in Egypt, but at an emergency meeting held in March in Gabon, one UN official warned that more countries were affected than had admitted. "These are the only countries who dared announce their results," said WHO epidemiologist Andre Ndikuyezze. "Unfortunately, others haven't been so brave." Porous borders, a flourishing informal chicken trade and inadequate veterinary services are acknowledged as key reasons for the spread. "The poultry is everywhere and yet veterinary services are nowhere," said Dr Bonaventure Mtei, of the World Organisation for Animal Health (OIE).

In Nigeria, health workers are spreading the word about the risks, using leaflets, meetings and the media. But not everyone is receptive to the warnings. A major problem facing health and veterinary officials in some ACP countries is that not everyone believes that the threat is real. In several northern states of Nigeria, people are opposing mass culling, claiming it is a western plot. "It's nonsense what people are saying about chickens," laughed Alhaja Sikiratu, in Lagos. "When I was small, I ate chicken infected with cholera, and nothing happened to me!"

FAO and WHO have issued a five-point plan for consumers

1. No birds from flocks with disease should enter the food chain.
2. Do not eat raw poultry parts, including raw blood, or raw eggs.
3. Separate raw meat from cooked or ready-to-eat foods to avoid contamination.
4. Keep clean and wash your hands.
5. Thorough cooking of poultry meat will inactivate the virus. Either ensure that the poultry meat reaches 70°Celsius at the centre of the product ("piping" hot) or that the meat is not pink in any part. Egg yolks should not be runny or liquid.

Sources: FAO and WHO

FAO is urging adequate compensation to encourage early reporting, but Nigerian poultry farmers, who are being paid 1,000 CFA (€1.50) per bird, complain they only receive funds for culled poultry, not for those which have died from the disease. The economic effects have been quick to make themselves felt, as consumers in both North and South shun poultry and egg products. Trade experts have warned that dumping of poultry on ACP countries from Europe could drastically affect prices, as happened with beef after the BSE crisis.

Rapid detection needed...

In the affected areas, initiatives are under way to halt the spread. Member states of the Economic Community of West African States have set up an observation network for the rapid detection of sick poultry. "Out in the field our staff are alerting the public and collecting information", said Dr Mamadou Kané, director of animal health in Mali. In other ACP regions, the Caribbean Community (CARICOM) is mapping a regional strategy to cope with the threat of H5N1, which, it acknowledges, is bound to reach the region sooner or later. In March, the Secretariat of the Pacific Community launched the Pacific Regional

Influenza Pandemic Preparedness Project, to provide animal surveillance and other responses.

But while the spotlight focuses on avian flu, there are a whole host of other zoonoses which have a devastating effect on human health and livelihoods. Experts have warned that urgent action is needed to prevent the spread of a particularly virulent form of sleeping sickness transmitted by *Trypanosoma brucei rhodesiense* that has broken out in eastern Uganda. Infected cattle continue to be transported to outlying markets, raising fears of an epidemic. With Africa's pig population more than doubling over the past 30 years, there are concerns over growing incidences of neurocysticercosis, a parasitic disease of the central nervous system transmitted by pigs. Nearly 50,000 people die of the tape worm disease each year, mainly in rural areas with poor pig management practices and inadequate meat inspection and sanitation.

... and timely intervention

Cost-effective control measures already exist for several zoonotic diseases. But they are not always applied as zoonoses often rank low in terms of funding. As long ago as 1992, the International Task Force for Disease Eradication concluded that cysticercosis could be eradicated. Other problems facing ACP countries include difficulties in collecting accurate data. Often, surveillance systems lack uniformity and local staff may accept endemic diseases as the norm or fail to report potential zoonose outbreaks to avoid livestock trading bans.

When outbreaks of diseases do occur, ACP countries need technical assistance for diagnosis, vaccination and slaughtering programmes. But preventative help is even more crucial. A recent FAO e-conference claimed that public health emergencies such as avian influenza were "failures of prevention". The rise in livestock production seen in much of the South must be accompanied by access to credit, development of infrastructure and animal production and health services. Most important of all, farmers need access to information. FAO has set up four regional networks, offering advice on zoonotic disease, through e-conferences, discussions and newsletters. The International Network for Family Poultry Development encourages higher standards in small-scale poultry production through its electronic newsletter. A project developed by the International Atomic Energy Agency for surveillance of livestock disease in Africa uses ICTs to offer training of trainers, on the Internet and on CDs.

Meanwhile, as states neighbouring Nigeria slapped a ban on poultry imports, the country was counting the cost to its poultry industry. "Before, we always had a good crowd of customers," complained the owner of a Lagos fried chicken eatery. "Look at my restaurant now: it's empty!"

See *Links*, page 10



Photo © FAO

Animals help humans to earn a livelihood

Shell up and ship out

The African cashew nut is at a turning point. New European sanitary standards coupled with high transport costs are encouraging a move towards home-grown shelling operations and helping to build an increasingly solid sector.



Some 3 million small-scale farmers in a dozen African countries grow cashew (*Anacardium occidentale*) for a world market that is constantly expanding (+ 6% per year). Rich in dietetic properties, the fruit of this savannah tree, known as the cashew nut, has long been sought after in industrialised countries, and has more recently become popular in China. International trade, which accounts for barely one-fifth of global output estimated at 2.3 Mt in 2005, is expected to keep on growing.

This rising demand represents an opportunity for African countries, six of which feature in the list of the world's 10 biggest cashew producers (in descending order, Nigeria, Tanzania, Côte d'Ivoire, Guinea Bissau, Mozambique and Benin). But their output is dwarfed by that of India, Brazil and most notably Vietnam, which alone accounts for almost one-third of world production. Close to Europe, with a plentiful supply of cheap labour and a quality of cashew nut that is highly prized by consumers, Africa has some distinct advantages. But so far it has failed to exploit this potential to the full. Africa exports 90% of its cashew nuts unprocessed to India, which shells them before re-exporting them, toasted or processed, to the EU and the United States. As a result, Africa misses out on the lion's share of the added value component.

A new strategy

But this circuit, set in place after the dismantling of state marketing systems, is now undergoing a marked shift. This is partly because the Indians are now more inclined to shell the nuts at the point of production, due to rising costs of oil and transport. Furthermore, new EU sanitary standards

introduced in 2005 force them to pay more attention to the quality of their product to avoid losing clients. European importers do not want the risk of sanctions if a batch turns out to be dangerous to consumer health. Traceability requirements dictate that every link in the chain between the field where the cashew was grown and the very last retailer must, in the event of a problem, be able to identify the exact provenance of the product that he sold, processed or packed. The final responsibility, however, lies with the importer.

The change in strategy adopted by Indian buyers first started 2 years ago. In 2004 and 2005, Olam International, a group which markets a quarter of the world's cashew production, opened processing factories in Côte d'Ivoire and Nigeria. Similar initiatives are being launched in Ghana and Guinea Bissau. In Tanzania, the same group has opened a processing plant in partnership with the US NGO Technoserve. In Mozambique, an agreement stipulates that the Indians will supply finance and technology to rebuild the industry, which ran into problems during the 1990s.

Processing in Africa

Donors and governments are now unanimous in their desire for cashew processing to be carried out in Africa, seeing it as a way of reducing poverty and creating employment. Shelling is generally done by hand, mostly by women. Since 2000, a number of in-depth studies have examined the promising African sector. National programmes offer support to small and medium-scale producers throughout the production chain. For example, Benin, which is looking to the cashew sector as a partial substitute for cotton, is starting to train its farmers. A guarantee fund helps processors obtain loans from microfinance institutions. Six small shelling units have been opened since 2003.

At regional level, Trade Expansion in Cashew Nuts from Africa, a project mainly financed by the International Trade Centre (ITC), aims to build a network of all the players in the sector so as to develop a direct export line of unprocessed and processed

cashew nuts to both industrialised countries and the regional market.

Shelling in Africa does not pose any major technical problems. There are a number of small industrial processing units whose services are relatively affordable. So although it is a delicate process, shelling by hand produces good results, enabling the nut to be released unbroken from its shell, thereby ensuring the quality of the product. The technique also allows the careful collection of the precious cashew nut shell liquid (CNSL), a fluid that irritates the skin but which is used in the paint and lubricant industries.

A sector ripe for investment

Studies show that, if well managed, factories run by associations, local cooperatives and small and medium-scale private business operators can prove viable in Africa, and produce good quality cashew nuts. In the early stages, one major problem is financing stocks during the 2-month harvest period so as to keep the factories working all-year round. Grouping producers together is also vital in order to carry out marketing campaigns and increase bargaining power. New investors face competition from well-established firms which are able to call on solid networks for both supplies and marketing.

Shelling is just the first step in the processing of the cashew nut, which can go on to be toasted, salted or used to make all sorts of conserves. Other parts of the cashew are also of value. Eaten fresh, the pseudo-fruit, known as the cashew apple, is rich in vitamin C and popular with local consumers. It can also be used to make juice, wine and jams. In Ghana, a brandy made from good quality cashew apple has been developed. But so far, none of these products has been promoted on the European or regional markets, even though the latter are thought to hold particular promise.



Photo: J.P. Montoro © IRD



Photo: © DI

Bioethanol and biodiesel

Bioethanol is a fuel mainly obtained by fermenting sugars contained in certain plants and by distilling the starch contained in their roots. It can be mixed with petrol in proportions of between 5 and 85%.

Biodiesel or diester is made from vegetable oil or animal fat (from animal residues) transformed using a chemical process called transesterification. It can be used on its own to power engines, or mixed with petroleum diesel.

Green petroleum? It sounds like a contradiction in terms. Yet biofuels are *bona fide* energy sources — fuel made from biomass, vegetable or animal residues, as well as from plants grown expressly for the purpose. Biofuels have similar properties to petroleum and can be used in either diesel or petrol-powered engines. In theory therefore, they could substitute petroleum altogether, solving the dual problems of high costs and pollution.

The idea has been floated ever since the two oil crises of the 1970s. A number of countries did not wait for the most recent price hike to explore other energy sources. In Brazil, all vehicles run on a mixture using at least 25% ethanol derived from sugarcane. One of the earliest consumers of green fuels, Brazil now produces more than 12 bn l of biofuels per year, close to one-third of the world output, which is estimated at over 35 bn l. Brazilian bioethanol costs US\$25 a barrel, less than half the price of black petroleum.

Green or black gold

In South Africa, industrial processes for producing innovative fuels based on coal, natural gas and especially biomass were developed under apartheid, in response to the oil embargo. Ethanol is currently the main biofuel produced by the Energy Development Corporation, which buys surplus maize from farmers for processing. Three million tonnes of maize produce 1.26 bn l of fuel, the equivalent of 12% of South Africa's energy needs. The country also uses sugarcane and sorghum to make biofuel.

At the other end of the spectrum, a number of African countries have seen their fuel bills soar. Among them are several oil

Biofuels

In search of green gold

Soaring oil prices have rekindled an interest in plant-based biofuels. Sugarcane, cassava, sorghum or jatropha: in ACP countries, testing is forging full speed ahead to find the best source.

producing nations that export crude oil but need to import refined petroleum. A case in point is Nigeria (producing around 2 million barrels of crude oil per day) which relies on sales of hydrocarbons for 90% of its foreign earnings.

The green fuel option seems all the more appealing given the limited quantities of fossil fuels left on the planet. Reserves are estimated at between 140 Gt (giga tonnes or billion tonnes, the equivalent of 1,050 Gb or gigabarrels) according to the *Oil and Gas Journal* and 160 Gt (1,200 Gb) according to the *US Geological Survey*. If current production and consumption rates continue, global oil reserves will be exhausted in less than 65 years, predicts the United Nations Conference on Trade and Development (UNCTAD).

Since 1997, most countries under the terms of the Kyoto Protocol have, in any case, committed to reducing their emissions of greenhouse gases by at least 5% below 1990 levels with a deadline set at between 2008 and 2012. Unlike fossil fuels, which release carbons previously stored underground into the atmosphere, biofuels release carbons derived from the atmosphere, which, once burned, simply return to their place of origin.

One major drawback is that the raw materials used to make biofuels are still very expensive to grow, collect and transform for countries new to the process. Researchers at the French Agricultural Research Centre for International Development (CIRAD) calculate that green petroleum will only be a viable alternative to classic petroleum if prices for the latter remain very high (at least US\$70-80/barrel). Another slight snag — based on 2004 consumption levels, you would need to cultivate six times the Earth's surface in order to have enough biofuel to replace fossil fuels!

An energy opportunity?

The EC has pledged to “ensure that measures for ACP Sugar Protocol countries affected by the EU sugar reform can be used to support the development of bioethanol production”. The EU has announced it will cut by 36% over 4 years the price paid for sugar from ACP countries, previously protected by the Sugar Protocol (see *Spore* 122).



Photos: © Sylla International - Graphics: Intellect DESIGN

Will tropical plants soon be on sale at the pumps?

Aware that change is inevitable, some major sugar-producing ACP countries have already begun diversifying from their time-honoured crop. Mauritius has started converting its sugar industry and moved into ethanol production. The island also has

10 mixed power plants which produce sufficient energy to meet 40% of the electricity requirements using bagasse, a by-product of sugarcane (see *Spore* 116). In Fiji, joint studies carried out by the University of the South Pacific and experts from Mauritius have concluded that this other small ACP island state has similar potential.

In the Caribbean, St Kitts, which closed down its sugar industry in July 2005, is studying proposals from several Norwegian and US companies to process part of its sugarcane output. The initiative should prove viable for areas under sugarcane cultivation of 2,500 ha upwards. Guyana is showing similar interest and signed a partnership deal with Brazil in October 2005. Jamaica is planning to follow the same route. A variety of other initiatives aim to produce extra income for small-scale farmers and diversify energy supplies in the public transport and electricity sectors.

Nigeria has chosen to produce ethanol from cassava (see *Spore* 120). A law introduced this year allows 10% of biofuel to be mixed with petrol, thus reducing the fuel bill and pollution levels in a single stroke. In the first instance, this green oil will be imported by Brazil. Another promising alternative energy source is sorghum, which needs little fertiliser and is resistant to drought. The Dominican Republic will shortly be unveiling a unit for producing sorghum-based ethanol, linked to a 20 MW electrical plant.

Growing interest is also being shown in using

vegetable oils to power diesel engines for agriculture, produce electricity and fuel transport vehicles. In Malawi, farmers are being encouraged to leave tobacco cultivation and turn to growing *Jatropha*, also known as the physic nut (*Jatropha curcas*), a member of the Euphorbiaceae family. It is drought resistant, easy to maintain and shunned by animals due to its unpleasant odour. More than a million of these plants are currently believed to grow in the country.

In Mali, PNVER, a national programme aimed at exploiting the energy potential of *Jatropha*, is planning to use the plant to power rural electrification and transport vehicles. The goal: to provide electricity for 350 villages in the regions of Kayes, Koulikoro, Ségou and Sikasso, between now and 2008. All over the world, trials are being

Mauritius revs up on ethanol

At a time when oil prices are rocketing and sugar prices are plummeting, Mauritius is developing an interesting middle ground. Having launched the production of crude ethanol from sugarcane 3 years ago, Alcodis, the island's premier manufacturer, has begun making dehydrated ethanol. The initiative, worth a total of €10.5 million, has been developed through a partnership between two local companies, Roland Maurel and Mauvilac Ltd, and the Spanish group Tradhol Internacional, a world leader in the distribution of ethanol, and especially active in Africa and the Caribbean.

Dehydrated ethanol is used as a biofuel, as well as in pharmacology, and in the cosmetics and chemical industries. Alcodis is planning to start exporting to the EU by the end of 2006.

carried out on a range of oleaginous plants — jojoba, coconut (see *Spore* 105), oil palm, cotton, sunflower, groundnut, soya, rape, flax — which hold out hope as low-cost suppliers of biofuels.

However, not everyone agrees on the merits of large-scale biofuel production. Critics argue that it could bring more pressure to bear on ecologically sensitive areas, have adverse effects on soil fertility, lead to a drop in the availability and quality of water supplies and a rise in the use of fertilisers and pesticides. And while the combustion of these so-called biofuels generally produces less carbon monoxide, sulphur dioxide and particulates, it also releases greater quantities of other toxic compounds. Assessments of the global energy used to produce these biofuels are equally controversial. A study published in July 2005 by researchers at the University of Berkeley (USA) claimed that producing soya-based biodiesel consumed

27% more energy than producing petroleum.

Competition in ACP countries between energy crops and food crops is also the subject of lively debate. The International Energy Agency (IEA) observes that if production of alternative fuels were to increase significantly, the demand on land would be considerable. Growing consumption levels of green petroleum could modify the way land is used and lead to a dramatic rise in food prices in the South.

Towards clean development

There is a risk of an imbalance developing between countries where biofuels can be produced at low cost and those where the demand is rising the fastest. In any event, it should soon be possible to lower the cost price of biofuels thanks to 'biorefining' (where every part of the plant is used) and by using so-called second generation biofuels based on lignocellulosic material such as straw and timber residue.

In June 2005, UNCTAD launched its Biofuels Initiative. A group of international experts was formed to help developing countries benefit from increased production, use and trade in biofuels. The initiative aims to generate new investments through the Clean Development Mechanism.

The Doha declaration, adopted by the World Trade Organization (WTO) in 2001, takes a similar approach. It encourages negotiations on the "reduction or elimination of tariff and non-tariff barriers to environmental goods and services". Biofuels derived from sustainable agricultural practices could therefore enable low and medium-income ACP countries to create substantial export markets.

It remains to be seen if biofuels will really fuel a fairer distribution of wealth on the planet.

See *Links*, page 10



Photo: © Sylla International

From a distance

■ The Centre Songhai, a Benin-based NGO, has moved into distance training and selling. Its website offers training in sustainable agriculture (farming techniques and business practices). A new "virtual sales outlet" offers a wide range of products including bissap juice, soya milk, palm oil, African gowns, soap and pedal operated threshers. Profits from sales are reinvested in the Centre's training and development programme.

Website: www.songhai.org/HTML/fr/formationdistance.htm

Fighting to save vesi trees

■ Kabara islanders in Fiji are helping in a programme to save the vesi trees, or *Intsia bijuga*, and have already set up the island's first nursery. The majority of the 400 or so Kabara islanders are reliant on income from vesi carving, but of Kabara's remaining forests, only 8% are vesi trees. The programme is teaching villagers new skills in carving so that they can use off-cuts, as well as wood from trees other than vesi.

Regional milk

■ There have been very few African research projects on the dairy sector and its markets, and those that have been carried out have not been followed up as effectively as they might have been. A new French language network, Recherche et échanges sur les politiques laitières (REPOL), seeks to fill this gap. Run by researchers in Central and West Africa, it also aims to encourage cooperation between researchers, producers and decision-makers so that scientific research responds better to development needs.

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Protecting knowledge

■ The Convention for the Safeguarding of the Intangible Cultural Heritage 2003 entered into force in April 2006. The result of years of efforts to obtain official recognition for cultural heritage, the convention enshrines the protection of local knowledge "concerning nature and the universe" as well as knowledge linked to traditional craftsmanship.

Website:
http://portal.unesco.org/unesco/ev.php?URL_ID=17716&URL_DO=DO_TOPIC&URL_SECTION=201&reload=1143791670

Communicating about agri-food processing



Photo: © CTA



Photo: © Syifa International



Photo: © CTA

■ What better than a lively debate to stimulate ideas on "The Role of Information and Communication in the Development of Small and Medium Agri-food Processing Units in Africa"? Between 20 and 24 February 2006, almost 100 participants — half of them women — from around 30 countries exchanged views on the subject in Cotonou, Benin. A number of observations emerged from this seminar, which was organised by CTA: the poor use of certain new tools, notably the internet and management software, the relevance of collective action in commercial strategies and the need for better communication about products — in other words, better packaging to achieve better sales. Thanks to ICTs, small agri-food processing enterprises now have better access to information on markets, business opportunities, regulations, manufacturing processes and equipment. But the cost of both materials and their maintenance is often too high for small-scale operators, and operating ICTs often requires considerable training.

A number of products presented at stands placed outside the conference room caught the eye of participants. In Côte d'Ivoire, Mrs A Cécile Kouassi has devel-

oped and patented a method for stabilising and reconstituting fresh *attiéké* (cassava semolina) that is now being used to provide revenue for about a thousand rural women working in cooperatives.

In Kenya, Palm House Dairies, which supports 350 rural households, has made a selling point from its simple but striking packaging, stamped with the company logo (a cow under a tree). Antoinette Magaral, president of ATOSA, an agri-food processing association in Chad, exhibited sun-dried meat, tomatoes and peppers, packaged in small sachets. The products were well received by guests at the seminar. ATOSA is trying to persuade hotel and restaurant owners in the country's capital to put more specialties from Chad on their menus. This type of direct contact with clients, together with word of mouth and tasting sessions, are key elements when it comes to selling food products, and are part and parcel of the communication strategies so crucial to successful small and medium agri-food processing operations.

For more information on the seminar, visit the CTA website: www.cta.int/ctaseminar2006/index.htm

Internet without wires

■ African communities without access to the internet are being trained to build their own wireless networks, thanks to a project launched by the South-Africa-based NGO, the Association for Progressive Communications (APC).

To date, four regional African workshops run by the The APC's Community Wireless Connectivity project have trained about 100 people and produced training materials in English and French. In most cases, internet access relies on the availability of reliable, fixed telephone lines, which can be hard to find in many parts of rural Africa. Wireless technology, which is based on using radio waves to carry data, can by-pass the fixed-line problem. It is hoped that wireless networking can provide some of the benefits to internet access that mobile phone



Photo: © APC

Making antennas from tin cans

technology gave to telephone access in Africa.

Participants in the workshops learned how to configure access points, climb towers safely, calculate radio links, survey their sites, source appropriate equipment, budget for projects and secure their networks. At the first workshop, held in Mtoni, Zanzibar, trainees were able to build antennas out of recycled tin cans, and later use them to make a wireless connection to Grave island — an atoll 2 km across the sea from the workshop venue.

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Sea turtles and eco-tourism



Photo: A. Vieira

■ Protecting threatened sea turtles with the goal of developing sustainable tourism. The challenge was launched at the First International Conference on Sea Turtles, held in January 2006 in São Tomé and Príncipe. The island already boasts a number of community-based eco-tourism projects. It is also active in spreading awareness about the fragile nature of São Tomé's biodiversity and enforces strict controls on turtle-based products.

Several thousand kilometres away, in the Indian Ocean, the Comoros Island Moheli has also succeeded in combining the protection of sea turtles with

"I like to lay my eggs in the sand on a lovely beach."

eco-tourism. Once mercilessly poached for their shells and meat, these creatures are now seen as a real trump card for islanders, who have grouped themselves into community associations. Activities such as renting out rooms by the sea, and organising sessions to observe egg-laying in the company of an eco-guide are generating revenues which have so far funded the creation of a system to provide fresh drinking water as well as the construction of a number of public buildings. The goal is to increase the influx of tourists fivefold; at present, the annual number of visitors is just 400.

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Wheat rust makes a comeback

■ The telltale reddish brown spores that herald a resurgence of wheat's most deadly pathogen have been spotted on plants in Ethiopia, Kenya and Uganda. The scourge, which is capable of destroying 100% of a crop, has struck fear into the hearts of farmers ever since agricultural records began. Modern breeding, combined with the free international exchange of experimental wheat lines, resulted in the development of wheat varieties able to resist wheat rust, and for several decades the threat seemed to have abated. But now a highly resistant strain of the pathogen has emerged, bringing with it warnings of a global epidemic. Called UG99, the new strain is already destroying harvests in East Africa and is moving fast.

The disease is caused by a highly contagious fungus that spreads its spores on the world's wind currents and can be transported on the clothes and



Photo: S. Raj © CIMMYT

luggage of travellers. The Global Rust Initiative has been mounted in an attempt to head off the disease. This international initiative involves the International Maize and Wheat Improvement Center (CIMMYT), the International Centre for Agricultural Research in the Dry Areas (ICARDA), the Kenyan Agricultural Research Institute (KARI) and the Ethiopian Agricultural Research Organization (EARO). "For once, Africa can help the rest of the world," says Dr Marianne Banzinger, Director of CIMMYT's African Livelihoods Programme. "There is time to make a difference. This is a chance we cannot afford to miss."

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More maize for Ugandan farmers



Photo: © FAO/19329

■ Improved maize varieties are helping to boost yields for farmers in Uganda's Iganga district. Despite high demand, the quantity and quality of maize produced have long been disappointing, partly due to poor farming and post-harvest handling methods. But new maize varieties, introduced by the National Agricultural Advisory Services (NAADS), have produced impressive results. Local farmers have learned how to grow the improved varieties, Longe II and Hybrid B, using modern farming practices. One of them, Rose Kaduyu, observed, "I used to plant 2 acres of local maize and get seven bags, but when I planted Hybrid B, I got 35 bags." Godfrey Magala of Kiringa village, Nawandala sub-county, planted 4 acres of Longe II maize and harvested 67 bags. "I have grown maize for the whole of my life, but I had never got such a bumper harvest," he said.

The scope of the NAADS initiative has been extended beyond the introduction of new varieties and farming methods. Farmers have begun selling their surplus maize, forming groups to bargain for better prices. Said Kaduyu, "NAADS trained us in leadership skills, business and book-keeping. So, we do not have to rely on our husbands for survival." Farmers have also been trained in post-harvest handling, including building drying yards and cribs for maize storage.

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Website: http://www.naads.or.ug/

Organic Uganda

■ The National Organic Agricultural Movement of Uganda (NOGAMU) has helped set up a local certification company, Uganda Organic Standards Ltd (UgoCert) to provide certification services for organic producers. Uganda has the largest number of organic farmers in Africa, according to a report by NGO, Advocates Coalition for Development and Environment, which puts the number at 39,000, a rise of 38% since 2002.

▲ **UgoCert**
PO Box 70071
Kampala
Uganda
Email: UgoCert@utlonline.co.ug

Rural markets for Tanzania

■ A small Tanzanian village has become home to the country's first rural maize market, as part of an initiative to build modern international outlets for agricultural products. The market is in the remote village of Kibaigwa, in Central Tanzania. Kibaigwa Market is part of the Rural Market Development Project involving the Tanzanian government, the French Agency for Development (AFD) and the Tanzania Network of Farmers Groups (MVIWATA). Three other rural markets are planned, as well as roads for better access.

Rewards for innovation

■ A helping hand is available for Mauritian small-scale farmers in the non-sugar sector, who want, for example, to use information technology, to take part in a trade fair or to hire a consultant. The state will reimburse between 25 and 50% of their costs to help them improve production through new technologies and innovative practices. The grants are also available for training in management skills, packaging and marketing of agro-industrial products.

A trainers' network for trees

■ A new network has been launched to boost training in the domestication of fruit trees in Africa. The Trainers Network on Trees Domestication for the African Humid Tropics (TNTD-AHT) currently has members from Benin, Cameroon, the Democratic Republic of the Congo, Ghana and Nigeria. An 8-day training-for-trainers course has already been held in Cameroon on the domestication, propagation, integration and marketing of high-value trees. Three more workshops are planned for the latter half of 2006 on tree domestication and the marketing of agroforestry products.

▲ **Dr Peter Oni**
Executive Director
TNTD-AHT
Email: petidowu2000@yahoo.co.uk

Green light for ethylene

■ Producers of organic fruit, especially pineapple, can breathe a sigh of relief! A new ruling from the EC has given them the official go-ahead to use ethylene to stimulate flower induction in pineapple plants, as well as colouring in bananas, kiwis and persimmons. The ruling means that pineapple producers can once again use this technique to induce out of season flowering, enabling them to consolidate production and better plan their harvests. In 2001, the EU banned the use of ethylene in organic production on the grounds that only the bigger plantations had the means to use this technique, which requires specialised training.

New tropical timber deal

■ The text of a successor treaty to the 1994 International Tropical Timber Agreement (ITTA) has been adopted, with new clauses on promoting sustainability, reforestation, illegal logging and information sharing on voluntary mechanisms such as certification of timber from sustainable forests. Tropical forests continue to disappear at a rate of 15 million ha/year. All 33 producing nations that are members of the agreement are developing countries. Global sales of tropical timber earn these countries a collective average of US\$10 bn (€8.35 bn) per year.

A duet from FAO

■ A new web-based FAO information service, *Ask FAO*, enables users to put questions directly to experts in the organisation and offers a searchable database of answers to frequently asked questions on issues ranging from how to control bird flu to national rates of deforestation. Another new FAO website, *Best Practices*, serves as a one-stop source of technical information on recommended practices and techniques in food production, rural development, natural resource management and other topics.

Ask FAO: www.fao.org/askfao

Best Practices:
www.fao.org/bestpractices

Keeping an eye on cotton

■ You can find the latest news regarding cotton on the website *acp-cotton*, which has a search facility for documents. Visitors who register on this English-French website can also take part in an electronic forum.

Website:
www.acp-cotton.org/

Soil analysis tool helps farmers



Photo: © ICRAF

■ An alliance between two state-of-the-art technologies is helping African farmers improve crop yields. Infrared spectroscopy (IR) soil analysis is being used in tandem with global positioning systems (GPS) and satellite remote sensing to produce large-scale maps that pinpoint exactly where soils have nutritional or erosion problems. From there, it is a short step to advising farmers on what needs to be done and where. Lack of soil fertility — and the inability of extension agents to provide farmers with reliable and cost-effective recommendations about how to improve their soils — is one of the principal factors limiting African food production.

Scientists at the World Agroforestry Centre (ICRAF) in Nairobi

have spent 5 years adapting IR technology to farm conditions in Africa and linking it with GPS for even more effective results. The technology is currently being used in Western Kenya as part of a major project designed to halt land degradation and restore thousands of hectares of degraded farmland to productive use. It has already been used to identify which soil properties were lacking in 2,500 Kenyan farms.

Infrared spectroscopy soil analysis is a simple and easy-to-use technique which reduces the cost of soil analysis by 99%. An infrared light shone onto a soil sample produces a rapid identification of the type and composition of the soil, enabling advisors to assess the type and amount of fertiliser needed to raise its productivity. Researchers associated with the ICRAF project believe that the potential for widespread adoption of IR by public and private sector providers of on-farm advisory services is now considerable. Dr Keith Shepherd, the project's lead scientist, says that with one IR instrument,

laboratories in rural areas will be able to analyse not just soils and crops, but also a wide range of agricultural inputs and products, including manure, fertiliser, animal feed, grain, and milk. "We can tell from a cow's poop whether it is well or poorly fed, or even about its level of tick infestation", he said. Besides Kenya, the technique has also been tested in Madagascar, Malawi, Mali and Uganda.

World Agroforestry Centre (ICRAF)
United Nations Avenue
Gigiri
PO Box 30677-00100 GPO
Nairobi
Kenya
Fax: +254 20 722 4001
Email: ICRAF@cgiar.org
Website: www.worldagroforestry.org

Single market for the Caribbean

■ The Caribbean Community (CARICOM) has become the world's newest trade bloc, with the launch of the CARICOM Single Market (CSM), which aims to expand access for regional goods and services in the global marketplace. Agriculture will be a special focus as this sector continues to represent one of the main pillars of the economies in the region. The single market involves removing trade barriers between members and introducing a common trade tariff for third countries. Benefits are expected to include a louder voice in world trade negotiations and the advantages of economies of scale for small-scale producers. Development of many Caribbean island states has been hampered by their small size and by the limitations that this imposes in terms of production, market access and transport costs.

In 2008, the CSM is due to undergo full integration to become the CARICOM Single Market and Economy (CSME), which will extend union beyond the scope of a free trade area and involve harmonisation of tax and social regimes. The success of economic union will depend, in part, on the ability to upgrade ICTs in the region, to foster better marketing strategies, and an improvement in the speed and efficiency with which goods are moved.

Chinese motorbikes versus bush taxis

■ In Cameroon and the forested areas of Guinea, the advent of cheap Chinese motorbikes is opening up remote villages and stimulating trade. Motorbike taxis are gaining the upper hand over buses and bush taxis — many of them in a sorry state of repair — which usually serve the most isolated regions. Five times cheaper than their European or Japanese counterparts, these two-wheelers are opening up access to remote areas linked only by poorly maintained tracks.

In Guinea, women traders are delighted to be able to reach the weekly markets so much more easily. Before, they often had to wait several hours while 40 or 50-seater buses filled up with passengers and finally set off. "We no longer waste time, and it's much better for business", said one of them.

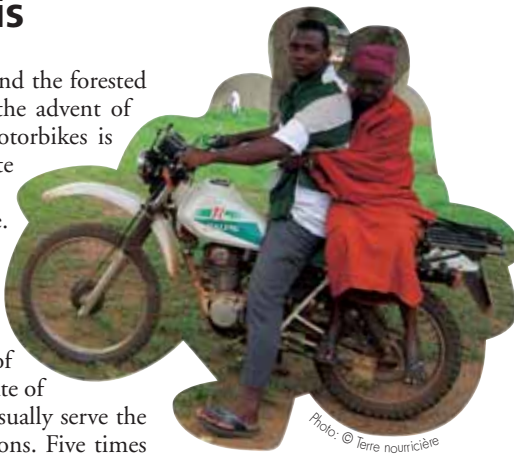


Photo: © Terre nourricière

Similar enthusiasm is being shown in Cameroon, near Fouban (300 km northwest of Douala). About 20 motorbikes make the journey each day between the village of Masset and Fouban, the nearest town. "These days, even during the week you can leave and get back with ease", said a young villager. "Before, during the week, there was just one car which passed from time to time."

Winning ideas from Madagascar



Photo © Bush Proof

■ A project to conserve Madagascar's tapia trees and revive its wild silkworms has won US\$110,000 (€100,000) in the World Bank's 2005 Development Marketplace Competition. Tapia trees (*Uapaca bojeri*), prized for their edible fruit, are home to the wild Malagasy silkworm. But in recent years, the species has almost been wiped out as farmers felled huge numbers of these trees to grow food crops and provide grazing, and communities over-exploited the silkworms to make fabric. Ny Tanintsika ('our land'), a Malagasy NGO working in land management and community development issues, is using the cash to replant 1,000 ha of tapia forest in the Amoron'i Mania region of south-eastern Madagascar. Local communities are also learning to breed wild silkworms and market the silk. Over 14,000 villagers and 150 silk weavers are participating in the programme, and predictions are that their incomes will rise by up to 40%.

Another Malagasy NGO, Bush Proof, has won \$150,000 (€125,000) in the World Bank contest to provide clean water to rural and coastal areas. The low-cost technology, known as well jetting, uses a high-velocity stream of fluid to cut a hole in the ground. A hand pump is used to draw water out of the well. The Bush Proof project expects to provide drinking water to more than 15,000 villagers, with the potential of scaling it up to reach 1 million people. At present, only 14% of the island's population in rural areas has access to drinking water.

The right price for rice

■ In Madagascar and Mali, rice farmers have come up with two different strategies for making sure they get a fairer deal for their crops.

The rise in world rice prices has helped Malagasy farmers realise the real value of their produce, and made them determined not to carry on selling it off cheaply to collectors as soon as it is harvested. To avoid being at the mercy of traders, more and more small-scale producers in isolated areas are banding together under the umbrella of mutual funds to store their rice in village community warehouses. In the region of Mahitsy, some 30 km from the capital, the number of such warehouses managed by the Savings Bank and the mutual agricultural credit fund CECAM more than doubled in the space of a year, rising from 86 in 2004 to 227 in 2005.

It takes just three people to set up a warehouse, enabling them to wait for prices to rise and, above all to borrow money from a mutual fund. Stocks of rice stored here serve as guaranty to

agricultural mutual funds, which lend the equivalent of 75% of the crop's value. Thanks to this system, many rice farmers have been able to diversify their output, moving into poultry keeping or vegetable production.

In Mali, producers working plots of land managed by the Office du Niger, an organisation which manages the country's largest irrigated area, have this year decided not to sell their rice for any less than 200 F CFA a kilo (€0.30). They calculate that if they receive anything less than this, they will not cover their production costs and will be unable to pay the water charges to the State-owned body, which may evict them as a result. The coordinator of the Observatoire du marché agricole (OMA), which monitors commodity prices at markets in Mali, disapproves of this single price system, and instead recommends "setting up a system of credit which allows farmers to meet their most pressing needs without having to sell their crops straight after harvest."



Photo © Syifa International

Nuts about macadamia

■ Producing less, but selling for more. That, in a nutshell, is the new philosophy being embraced by farmers in Burundi, who are launching themselves headlong into diversification. The golden age of coffee, which accounted for 80% of export revenues before the civil war, is now drawing to a close in this small, landlocked country. The fall in world prices, together with climate-related problems have disheartened many farmers, who are now turning to new crops (roses, vetiver, passion fruit) in an effort to penetrate more export-oriented markets. A case in point is a project to grow macadamia nuts

(*Macadamia ternifolia*) launched by ISABU, the agricultural research institute in Burundi.

Served as a snack, the white kernel of this small round nut is increasingly sought after in Western markets. Its extremely fine oil is prized for cosmetic use. The Burundi government has made a US\$250,000 (€206,000) grant to create a nursery containing several thousand macadamia saplings. Each farmer will receive 20 small trees, which, in 2-years' time, should yield between 400 and 800 kg of nuts. The shelled nut currently fetches US\$12 (about €10) a kilo on the international market.

Prices on-line

■ The West African Market Information Network (RESIMAO) groups together nine official market information systems (Benin, Burkina Faso, Côte d'Ivoire, Guinea, Mali, Niger, Nigeria, Senegal and Togo). It offers an on-line database with prices of around 30 products (agricultural, livestock or fertiliser) taken from West African markets. Plans are in hand to extend this tool, which has the support of CTA, to some 600 markets in the 15 countries of the Economic Community of West African States (ECOWAS)

Website:
www.resimao.org

Last judgement

■ A massive vault to hold seeds from every known variety of crop worldwide is to be built on a remote Arctic island in Norway with the aim of protecting the planet's crop resources against a range of calamities, including nuclear war, climate change, earthquakes and acts of terrorism. Officials at the Global Crop Diversity Trust, which is promoting the project, say the doomsday vault would enable the world to reconstruct agriculture 'if the worst came to the worst'.

Following up on WSIS

■ UNESCO has launched an on-line platform to gather the opinion of anyone interested in action lines identified at the World Summit on the Information Society (WSIS). Visitors are invited to comment on a range of themes, including access to information and knowledge, e-learning, e-science, cultural diversity, media and the ethical dimensions of the information society.

Website:
www.unesco.org/webworld/wsisc/consultation

Ethics and labels

■ Consumers in industrialised countries are increasingly willing to pay a higher price for products sold with an organic and/or fair trade label. A recent study on chocolate carried out by INRA, the French agricultural research institute, shows that consumers are not just anxious to protect their own health and the environment, but are also keen to help improving living and working conditions of small-scale producers in the South.

Green fuel for your search engines

There is a wealth of information available on biofuel, but on the Internet it is easier to find facts on rapeseed or sunflower seed than on crops grown in the South suitable for biofuel production.

Before starting, it is important to have a good grasp of the global energy picture and understand where biofuels fit into the wider spectrum of renewable energies. Wikipedia's energy portal is a good place to begin. On the International Energy Agency (IEA) website, you will also find general information about renewable energy, and of particular interest, a study on biofuels and global transport. Also worth a visit is the website of the World Bank, which in March 2006 organised a week on renewable energies. Through its Biofuels Initiative, the United Nations Conference on Trade and Development (UNCTAD) highlights some of the new trade and investment opportunities created by biofuels for developing countries. Its website offers a very interesting study on trade in these products. The report also examines

some of the obstacles, based on the experience of Brazil, a pioneer in ethanol production.

The *EU Strategy for Biofuels* devotes a chapter to their potential in developing countries and takes a closer look at how bioethanol production in ACP countries has been affected by the sugar reforms. A search using the word 'biofuel' will produce a wide range of news and discussion items on the SciDev.Net website.

For more technical information, a good source is the website of the French Agricultural Research Centre for International Development (CIRAD). The quickest way is to go straight to the Biomass and Energy Research Unit. This is an address worth bookmarking, as it enables you to make direct contact with researchers. A database of biomass experts in French-speaking countries is accessible on the website of the Institut de l'énergie et de l'environnement de la francophonie (IEPF).

Of the most promising plants grown in the South, *Jatropha curcas* has the richest coverage on

the web. One site, The *Jatropha System*, is entirely dedicated to this plant and enables you to learn the extent to which it is grown in a given country.

The website of a British biofuels company, D1, offers a similar service, together with details on the state of play and future prospects of the biodiesel market in Europe, Africa, Asia and America.

For further information:

CIRAD

Biomass and Energy Research Unit
Website: www.cirad.fr/en/actualite/communiquer.php?id=417

D1

D1 Oils plc
100 Pall Mall
St James's
London
SW1Y 5HP
UK
Fax: +44 (0)20 7321 3886
Email: webenquiries@d1plc.com
Website: www.d1plc.com

EU

Website:
http://europa.eu.int/comm/agriculture/biomass/biofuel/index_en.htm

IEA

Website:
www.iea.org/index.asp

• Biofuels for Transport - An International Perspective
Downloadable as PDF (1459 kb)
www.iea.org/textbase/nppdf/free/2004/biofuels2004.pdf
International Energy Agency
9, rue de la Fédération
75739 Paris Cedex 15
France
Fax: +33 1 40 57 65 59
Email: books@iea.org

IEPF

Website:
www.iepf.org/ressources/atlas.asp

SciDev Network

Website:
www.scidiv.net

The Jatropha System

Website:
www.jatropha.de

UNCTAD – Biofuels Initiative

Website:
www.unctad.org/Templates/webflyer.asp?docid=5991&intItemID=1634&lang=1
• Biofuels – Advantages and trade barriers
Downloadable as PDF from:
www.unctad.org/en/docs/ditcted20051_en.pdf

Wikipedia

Energy portal
<http://en.wikipedia.org/wiki/Biofuel>

World Bank

Website:
www.worldbank.org/energy/energyweek

Livestock — asset and risk



Photo: © FAO

The *Links* pages relating to the article on animal health in *SpoRE* 94 (p 10. *Surveillance of animal diseases*) remains a valuable source of information, with contact addresses for the main players of the field. Many of these, such as FAO, the World

Health Organization (WHO) and the World Organisation for Animal Health (OIE) have set up special sections on their websites to deal with avian influenza. For this highly topical issue, one of the best places to find the most up-to-date picture is the Science

and Development Network (SciDev.Net), which publishes an excellent weekly bird flu dossier, including a global round-up of all developments over the preceding 7 days.

The International Livestock Research Institute (ILRI) offers plenty of information about zoonotic diseases, including some of the latest research to halt their spread. The EC Animal Health and Welfare department has created a well designed website on avian influenza, with clear information on a number of aspects including diagnosis, vaccination and human health implications. Lastly, for more detailed safety advice on handling poultry and eggs, consult the special avian flu website posted by the International Food Safety Authorities Network (INFOSAN) run by FAO and WHO.

For further information:

EC Animal Health and Welfare

http://europa.eu.int/comm/food/animal/diseases/controlmeasures/avian/index_en.htm#ai_third

ILRI

PO Box 30709
Nairobi 00100
Kenya
Fax: +254-20 422 3001
Email: ILRI-Kenya@cgiar.org
Website: www.ilri.cgiar.org

INFOSAN

Department of Food Safety, Zoonoses and Foodborne Diseases (FOS)
World Health Organization
Avenue Appia 20
1211 Geneva 27
Switzerland
Fax: +41 22 791 4807
Email: infosan@who.int
Website: www.who.int/foodsafety/fs_management/No_07_AI_Nov05_en.pdf

SciDev Network

Website: www.scidiv.net

Publications

Better beef production



Beef production has increased substantially in the North over the past few decades, but the same rise has not been seen in the South, where, with a few exceptions, levels remain predominantly low. This is partly due to the way cattle are reared. In developing countries, there is little intensive production and specialist beef herds are

rare. In many ACP countries, cattle have multiple roles, and providing meat may not always be the prime one. In Southern Africa, more than 80% of small-scale cattle owners cite milk production as a key reason for keeping their livestock. Other important functions include the provision of draught power, and the storage of wealth — a cow gives a far better return on capital than most short-term savings accounts.

Nevertheless, the potential exists for improving beef production, and the latest manual in the Tropical Agriculturalist series sets out to look at the challenges of raising beef cattle in a tropical setting. The author claims that low levels of beef production to date have been fuelled by the failure by development agencies and planners to consider the multi-purpose role of small-scale herds,

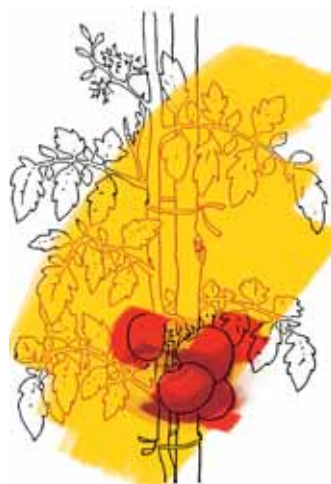
and the specific needs of their owners. This book aims to set that right, by dealing with technical issues facing both commercial producers and small-scale livestock keepers, where beef is only one of the products under consideration. There are sections on climate, parasites and diseases, and specific advice on choosing breeds, nutrition, reproduction, marketing and processing. A useful chapter looks at the effects of drought, and some strategies for surviving these hard times. The underlying message is that development of beef production in the tropics is likely to be achieved by small but important changes, rather than in leaps and bounds.

Beef

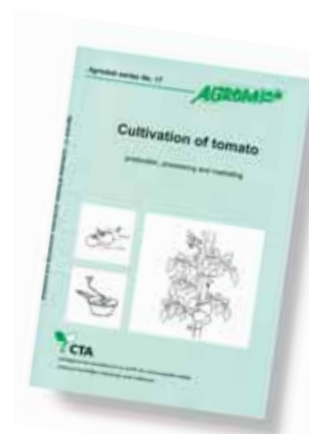
By D Richardson & AJ Smith
CTA/Macmillan
2006. 128 pp.
ISBN 0 333 59833 4
CTA number 1287
10 credit points

Tomato — the farmer's friend

The cultivated tomato was first brought to Europe in the 16th century by the Spanish conquistadors, and gradually spread to other parts of the globe.



Today, the tomato is one of the most widely grown vegetables anywhere in the world, and production levels are rising, as medium and small-scale farmers realise the potential it offers. The



crop has the advantages that it takes a short time to grow and produces a high yield from a relatively small plot. Another plus point is the scope it offers for adding value. Producers can increase revenue by processing the fruit, which lends itself to a number of preservation techniques, including canning and drying, and conversion into purees, juices and ketchup. Whether eaten fresh or processed, the tomato is rich in minerals, vitamins and other important micro-nutrients.

This revised edition from the Agrodok series contains all the information necessary for getting started in tomato growing. There are sections on small-scale cultivation, including useful information on fertilisers, watering, pruning, weed control and pest and disease control. As always, Agrodok titles aim to present a broader picture, and this guide is no exception, with chapters on harvesting and seed production, post harvest handling and marketing.

The manual is written in the usual practical style, with plenty of illustrations, and provides a page of useful addresses for obtaining seeds or further information about organic tomato farming.

Cultivation of tomato

By S Naika, J van Lidt de Jeude, M de Goffau, M Hilmi and B van Dam
Agromisa/CTA
Revised edition
2005. 92 pp.
Agrodok n°17
ISBN CTA 90 8573 039 2
ISBN Agromisa 92 9081 2990
CTA number 1296
5 credit points

Getting ready for climate change

■ A new on-line dossier provides an in-depth look at how vulnerable communities are preparing for the effects of climate change. The resource, which is constantly being updated, is run by Eldis, in partnership with the Linking Climate Adaptation (LCA) Network, a web-based discussion forum with over 600 members. It offers a range of papers on how climate change affects natural resources — from food systems to water supplies — and what can be done to mitigate the impact. The website is searchable by theme and by region, and also offers a list of key organisations working in this field.

Website:

www.eldis.org/climate/adaptation

A pocket guide to MDGs

■ This third volume in the World Bank's mini-atlas series is another triumph in the art of compressing huge amounts of useful information into a clear and concise format. It is an at-a-glance guide to the world's most pressing problems and challenges, from eradicating poverty and reducing child mortality to eliminating HIV/AIDS and promoting environmental sustainability. As always, colourful world maps and graphics help bring the data alive.

Mini Atlas of Millennium

Development Goals: Building a Better World
World Bank, 2005. 65 pp.
ISBN 0 8213 6175 9
US\$7 • €5.75
The World Bank
1818 H Street
NW Washington, DC 20433
USA
Fax: +1 70 661 1501
Email: books@worldbank.org
Website:
<http://publications.worldbank.org/ecommerce>

Getting to grips with the wired world

■ A useful practical guide to the basic theory and practice of electronic networks, this book looks at the issue from a range of perspectives, including the community level. It explains in clear terms how to use email and the internet and offers guidance on building workgroup websites and knowledge sharing.

Electronic Connectivity for

Workgroups: Working in the Wired World
By R W'O Okot-uma & J Onunga
Commonwealth Secretariat, 2006.
200 pp.
ISBN 0 85092 670 X
US\$19.95 • €16.50
Stylus Publishing
PO Box 605
Herndon, VA 20172-0605
USA
Fax: +1 703 661-1501
Email:
StylusMail@PressWarehouse.com
Website: <http://styluspub.com/Books/Features.aspx>

DIY field guide

■ This manual presents a step-by-step process for producing a field guide, setting out key features, options and techniques to take into consideration. With clearly drawn diagrams and illustrations, the book offers all the means necessary for the production of a user-friendly guide, to identify plants for the purposes of conservation, sustainable use, participatory monitoring or greater appreciation of biodiversity. It also provides hints on how to get the final product published.

Plant Identification: Creating User-Friendly Field Guides for Biodiversity and Management
By W Hawthorne & A Lawrence
People and Plants Conservation, 2006. 256 pp.
ISBN: 184 407 079 4
GBP31.50 • €45.50
Earthscan,
8-12 Camden High Street
London NW1 0JH
UK
Fax: +44 (0)20 7387 8998
Email: orders@earthscan.co.uk
Website: www.earthscan.co.uk

Development organisations on-line

■ The 2006 edition of the invaluable on-line *Directory of Development Organizations* is now available. It lists 47,500 development organisations covering a vast range of fields and sectors. You can either search by country, or using key words. A useful new tool allows you to customise your directory, adding comments and information about the organisations that most interest you.

Website: www.devdir.org/index.html

High standards

■ Back in 1999, Nigeria launched a major drive to boost the production and industrial use of cassava. As part of this still vigorous campaign, here is detailed information on the measures, rules and regulations for the processing, preservation, and packaging of Nigerian cassava products for export. The standards outlined in the book conform to world trade requirements, and should help Nigerian producers increase their overseas sales for this growing sector.

Standards for cassava products and guidelines for export
By L Sanni et al.
International Institute of Tropical Agriculture (IITA), 2005. 94 pp.
Ibadan
Nigeria
ISBN: 978 131 248 3
US\$10 • €8
IITA Library
P.M.B 5320, Ibadan
Nigeria
Fax: +234-2-241 2221
Email: k.afolabi@cgiar.org
Website: www.iita.org

All about food



■ This CD-ROM is a real treasure trove of information about producing foods and food products in Africa. Extremely wide ranging, *About Food in Africa* covers agro-food topics from seed to plate — embracing tropical and sub-tropical crops and varying scales of operation. Packed onto this disk are several thousand pages of information on different aspects of farming, processing, equipment, adding value, meeting standards, improving quality and accessing markets.

There are a number of case studies of African food enterprises, and the written text is backed up by a good array of photographs, maps, charts, tables and diagrams.

The guide is easy to use, with a glossary to explain technical terms and search options that can be used at the basic level to find out more about specific aspects of food production, or at a more advanced level, to gain insight into the complexities of agro-food operations. The information is designed to be used as general background or to help design training courses, carry out feasibility studies, identify potential products and enter new markets. An important section covers the increasingly stringent food safety, quality and environmental requirements facing producers in Africa.

About Foods in Africa
STEP Guides, 2005. CD-ROM
GBP30 • €43.25
Step Systems
Tall Trees, St Catherine's Drive
Faversham, Kent ME13 8LQ
UK
Email: sales@StepSystems.co.uk
Website: www.StepSystems.co.uk

A mighty module



■ This learning module on plant genetic resources (PGR), now completely revised and updated, seeks to help managers of genetic resources in developing countries play a more active role in developing national laws and policies concerning the conservation, use and management of PGR. It should also prove a useful tool in helping policy-makers to understand the complex and continuously evolving international policy and legal environment.

The module provides a highly detailed, step-by-step plan, with all the instructions, materials and information needed to organise a 5-day learning workshop, including handouts, practical group exercises and PowerPoint presentations. There is also a complete reading list and related laws and policies with web links.

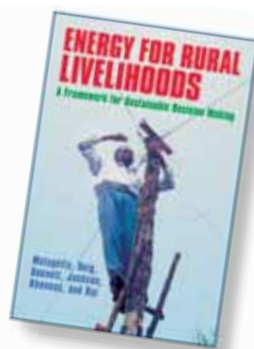
A new feature is the annex, *Review of Regional Policy Instruments, Developments and Trends*, which adds 1 day to the base course, and comes complete with trend analyses, hand-outs, case studies, group exercises and selected laws and policies for four regions.

Law and Policy of Relevance to the Management of Plant Genetic Resources:
Learning Module with Review of Regional Policy Instruments, Developments and Trends
2nd edition
Edited by S Bragdon, C Fowler, Z França & E Goldberg
CTA/GTZ/IFPRI/IGRI/SGRP
2005. 2nd edition, CD-ROM
ISBN 92 9043 669 7
CTA number 1284
20 credit points

The energy challenge

■ Balancing the need for development with that of protecting the environment is one of the most serious issues facing society today, and energy plays a key role in the debate. Nowhere is this challenge more daunting than in the rural communities of the South. Of the world's 6 billion people, an estimated 1.6 billion still have no access to electricity and 2.4 billion depend on wood, dung and charcoal for cooking and heating. The scale of the task ahead for some countries is overwhelming. Mozambique, for example, has one of the lowest rates of rural electrification in sub-Saharan Africa at just 1%. There are a number of tried and tested technological alternatives to grid generation. Among them are solar home systems, micro-hydro schemes, wind turbines — often in combination with conventional diesel generation backup. But as experience has shown all too often in the past, such technologies will only work if they are accompanied by appropriate forms of financing and institutional arrangements. And they will only be taken on board by communities if they fit in with their real needs and financial capabilities.

Energy For Rural Livelihoods aims to offer solutions for energy development practices in rural areas of the South, taking into



account the social, environmental and cultural requirements of communities. Written in the form of an illustrated manual, it presents a range of analytical techniques to help make decisions about energy interventions at the local level. Using case studies from a number of countries, including Ethiopia and Zimbabwe, this useful guide examines errors made in the past and solutions which can really make a difference to the future.

Energy For Rural Livelihoods: A framework for sustainable decision making
By A Doig, S Dunnett, T Jackson & S Khennas
ITDG Publishing, 2005. 192 pp.
ISBN 185 33 948 74
GBP12.95 • €18.50
ITDG Publishing
Bourton Hall
Bourton-on-Dunsmore
Rugby, Warwickshire CV23 9QZ
UK
Fax: +44 1926 634502
Email: info@itpubs.org.uk
Website: www.itdgpublishing.org.uk

Going the extra mile



■ This booklet is a summary of the findings of a project to investigate the use of ICTs for sharing information with people at grass-roots level. The initiative, conducted by the Intermediate Technology Development Group (ITDG) and the Cranfield School of Management, both in the UK, set out to understand some of the reasons for the poor success rate in many of the pilot projects being launched by development agencies involving ICTs. The aim of such projects is to provide people with improved access to up-to-date information,

equip them with new skills or connect them to an international market. But plenty of evidence suggests that all too often, such programmes fall short of their targets.

Connecting the First Mile outlines some of the main challenges involved in introducing people to ICTs when they have little experience of such technology, low literacy levels, poor financial resources and specific language requirements. But such hurdles are by no means insuperable, and the booklet offers a functional best practice framework — who should do what, and when — for the many applications of ICTs, including agriculture. It also provides a review of the available literature and includes suggestions for further research.

Connecting the First Mile: Investigating Best Practices for ICTs and Information Sharing for Development
By DJ Grimshaw, L Lowe & S Talyarkhan
ITDG, 2005. 48 pp.
ISBN 185 3396 12 5
GBP14.95 • €21.50
For ITDG's address, see page 12

Hedging your bets

■ A steady rise in the incidence of crop-damaging weather events in recent years has helped drive a growth in the demand for crop insurance. One insurer quoted in this new booklet estimates that the costs associated with crop-damaging weather events are doubling each decade. Predictably, the lion's share of annual agricultural and forestry insurance premiums are concentrated in developed countries, where farming is conducted on a more commercial scale. But although just 13% of global premiums are paid in countries of the South, the situation is changing there too, with varying degrees of success.

This publication begins by defining the boundaries for crop and forestry insurance products. Crop insurance is not the universal solution to the uncertainties that are part and parcel of farming. But it can help spread and manage the risk. Insurance can be bought for a whole range of events, including crop damage or lower yields caused by extreme weather, fire and even disease, and the manual outlines how to proceed for these classic types of crop insurance. It also presents



two relatively new insurance products: the first based on insuring a level of crop revenue, and the second where insurable damage is determined on the basis of an index derived from data external to the insured farm. There are case studies of two relatively successful crop insurance schemes, in Mauritius and the Windward Islands.

Insurance of crops in developing countries
By RAJ Roberts
FAO, 2005. 52 pp.
ISBN 92 5 105299 9
US\$22 • €18
FAO Sales and Marketing Group
Viale delle Terme di Caracalla
00100 Rome
Italy
Fax: +39 6 5705 3360
Email: publications-sales@fao.org

Dung but not out



■ In Africa as in some other ACP regions, rising populations are putting growing pressure on the land. One of the main casualties is soil fertility, since time-honoured mechanisms for resting and regenerating the land are increasingly being abandoned in an effort to feed more mouths. Unless new ways are found to re-fertilise the soil, the battle to feed those extra mouths will in any case be lost, as yields sink lower and lower.

A study carried out by the Kenya Agricultural Research Institute (KARI) in Machakos, eastern Kenya, showed that land used to grow maize without any use of fertiliser will yield just 1 t/ha of maize, compared with 4 t on land where fertiliser is moderately applied. Organic fertiliser represents the cheapest and most sustainable option for ACP producers, and animal manure offers an affordable and readily available solution to many soil fertility problems.

In this short, well illustrated guide, farmers will find helpful information on how to turn cattle, sheep, poultry, goat and pig droppings into valuable natural fertiliser that will improve the soil's physical and biological properties and help producers on the potentially lucrative path to tapping the growing market for organic produce. There are clear instructions on how to make, store and apply animal manure, as well as advice on cheap and simple techniques for upgrading animal manure, and making the benefits even more effective.

How to Make and Use Enhanced Animal Manure
By M Parkolwa & M Shihemi
CTA/Acacia Publishers
2005. 46 pp.
ISBN 9966 917 40 3
CTA number 1279
5 credit points

Pasture profiles

■ A handy CD-ROM containing a country-by-country breakdown of pasture and forage resources, with particular focus on livestock production. The information is organised by region, and the text is accompanied by a good selection of figures, tables and photographs.

Country Pasture Profiles: Detailed description of pasture and forage resources by country
FAO, 2005
CD-ROM
ISBN 92 5 105331 6
US\$20 • €16.50
For FAO's address, see below

Mainstreaming ICTs

■ This book sets out to bridge the policy-practice divide within ICTs, and offers 10 case studies showing innovative and creative ways that ICTs have been used to promote people-centred development in Sub-Saharan Africa. The collection also features five toolkits, which offer useful resources for civil society groups wanting to use ICTs for developmental initiatives. The toolkits centre on technology planning, open source migration, information security and privacy, gender evaluation methodology, and community wireless networking.

Mainstreaming ICTs: Africa Lives the Information Society
By N Primo
WomensNet-OSISA
2005. 1114 pp.
ISBN 0 620 35 399 6
Free on request
WomensNet
PO Box 62577
Marshalltown 2107
South Africa
Fax: +271 183 898 71
Email:
natasha@womensnet.org.za

Comments on commodities

■ This biennial publication from FAO offers an in-depth analysis of issues relating to agricultural commodity market developments. Among topics discussed is the insistence of several countries on exempting some so-called sensitive and special agricultural products from rules to be agreed upon in the Doha Round trade talks. The publication examines the impact such pressure is likely to have on the outcome of the Doha negotiations, including continued delays. Other articles deal with individual commodities, among them rice, sugar, tea, coffee and dairy.

Commodity Market Review 2005-2006
FAO
2005. 130 pp.
ISBN 92 5 105437 1
US\$26 • €20
For FAO's address, see opposite

Disasters and development

For many, 2005 may well be remembered globally as the year of catastrophes, beginning with the tsunami and ending with the spectre of avian influenza. But 2005 was also a year of progress in many areas. The EU pledged to make significant increases to its development budget. The UN Millennium Goals, derided by some as unachievable, were enthusiastically endorsed at the 2005 World Summit, with a commitment to make an additional US\$50 billion (€41 bn) available by 2015 and to cancel the official debt of the poorest countries. In December, at the World Trade Organization (WTO) conference in Hong Kong, it was

agreed to eliminate all forms of agricultural export subsidies by 2013.

The *CTA Annual Report 2005* considers some of the repercussions of these events from an ACP perspective. It examines the threats posed by climate change and dependence on fossil fuels and it digests the implications of some of the key economic developments of 2005, especially in the field of trade. For while ACP countries undoubtedly need to make contingency plans for events such as drought, global warming and livestock pandemics, they also need to be ready to face the challenges posed by globalisation and preference erosion for bananas and sugar.


It was against this backdrop that our new director, Dr Hansjörg Neun, took the helm in May 2005. One of his first tasks was to take a hard look at CTA's own strengths and weaknesses. At a time when development organisations everywhere are being encouraged to engage in self-criticism, we underwent two audits and an external evaluation of our 5-year Strategic Plan. The verdict was, in the words of Dr Neun, that "while CTA is doing the right thing, it is not always doing things right". Specifically, the evaluation praised CTA's experience, expertise and networking capacities, and especially the work done with its many partners. But it indicated there was room for improvement in terms of efficiency and in "increasing the impact and sustainability of CTA's activities".

In response, we have already introduced a number of changes, and have resolved to work even harder to strengthen ACP countries' capacity to produce and disseminate information in the area of agriculture and rural development. The next 5-year Strategic Plan will focus on redefining priorities that better match CTA's limited capacities, identifying ways of further strengthening



information and communication management and ICT interventions and forging even stronger ties with other development organisations. The major constraint, for all these projects, will be cash. As the Annual Report 2005 records, our budget has remained static for the past 5-year period, with no allowance for growth or inflation.

But the report, which is again available on CD-ROM this year, is by no means all doom and gloom. It outlines the busy portfolio of CTA activities undertaken during 2005, with a rich programme of seminars, workshops, training, media and publishing initiatives. For reasons of space, many of these never make it to the pages of *Spore*, so now is the time to discover just what CTA really does. Looking ahead, there is a strong determination to make sure this momentum is stepped up even further in the future. In the words of the report: "To help our countries get up to speed, develop their capacity and turn themselves around, it is crucial that we improve the quality of and access to the information that they need."

 CTA Annual Report 2005
CTA, 2006
ISBN 92 9081 314 8
CTA number 1299
0 credit points.
Downloadable in sections or in full from
www.cta.int



Spore magazine



Spore is the bi-monthly flagship publication of the Technical Centre for Agricultural and Rural Cooperation (CTA) – ACP-EU. CTA operates under the Cotonou Agreement between

the countries of the Africa, Caribbean and Pacific (ACP) Group and the European Union.

© CTA 2006 – ISSN 1011 0054

Publisher:

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Layout : Intactile DESIGN, France

Design: B Favre

Printer : Imprimerie Publice, France

**Strengthening
information
and
communication
management**



Photo : © terre nouicière

What is really needed

If we are to sustainably improve the delivery of agricultural information, we must have a clear understanding of the needs of those who will benefit. One useful tool is the needs assessment process which, in a nutshell, involves examining the most pressing requirements for the Centre's products and services, and identifying ways in which they might be supplied. Since the six ACP regions have different information needs, the process was organised on a regional basis, beginning in 2003 in the Pacific, followed in 2004 by the Caribbean and extended in 2005 to six post-conflict countries in Africa, namely Angola, Eritrea, Guinea Bissau, Mozambique, Rwanda and Sierra Leone.

It has been a complex and time-consuming exercise, but one that has already produced valuable results. In spite of regional diversity, common requests have emerged, including the need for CTA to work with more partners, make itself better known and conduct more information and

communication management (ICM) training, targeting agricultural and rural development institutions. The Centre has also been urged to organise seminars and produce publications on a wider variety of themes.

Given its limited resources, CTA will not be able to meet all the requirements identified. But it does intend to find ways of working with some new partner organisations identified in various country studies. The Centre will also be compiling a database on information and communication technologies (ICTs) and ICM to improve the monitoring of its activities. And it will investigate ways in which complementary initiatives may be mounted with key regional, international and multilateral institutions active in the area of information on agriculture and rural development. In short, CTA has plenty of food for thought as it makes plans for the next 5 years!

The needs assessment reports are available on the Anancy website: www.anancy.net

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- All other publications, indicated by an orange square, are available from the publishers listed, or through commercial booksellers.

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SMI (Distribution Services) Ltd
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Gunnels Wood Park
Gunnels Wood Road
Stevenage
Hertfordshire SG1 4TP
United Kingdom.
Fax + 44 1438 748844
Email: Darren@earthprint.co.uk

Mailbox

This edition's postbag brought one letter from a reader who is enthusiastic about Spore's 'grass roots' coverage, and another who says we don't do nearly enough. We leave it up to you to decide...

A florid future for ACP farmers

In response to our recent article on floriculture (Spore 119), **Samuel Zeleke** writes from Ethiopia to urge greater support for small-scale farmers wanting to enter this flourishing sector. "In most ACP states, the largest share is controlled by a few private domestic or foreign investors, who have huge amounts of capital, technology and know-how," he says. "Little share is left for small-scale farmers, who lack the necessary inputs."

Samuel would like to see more efforts to encourage independent producers to reap the potentially rich pickings. His recipe for success includes better financial and technical support, more farmer training in flower cultivation, and strengthening national agricultural research centres so they can supply suitable planting material.

Preserving local breeds

Writing from Malawi, **Dan Kaunda's** interest was piqued by the feature on disappearing



ing livestock breeds in Spore 117. As coordinator of the Mzimba Rural Livestock Production and Marketing Association, he is keen to share some of the measures his organisation has taken to preserve local breeds, though he says it needs outside help to improve its record keeping.

The initiatives include conducting awareness meetings with villagers on the importance of local breeds, as well as on good housing, feeding and medication. As a footnote, Dan praises Spore for its "down-to-earth articles on problems that affect us at the grass roots... We want to be part of the solutions."



Bridges.org is a non-profit organisation based in South Africa, Uganda and USA, which promotes the use of ICTs in the developing world. Its chief executive officer, Ugandan Vincent Waiswa Bagiire, has been involved in ICT-based development for the past 8 years and is an active voice and champion for its use in rural development, healthcare, and youth initiatives.

ICTs

Bridging the digital divide

Information and communication technologies (ICTs) offer real hope for improving the lives of communities in ACP countries, producing practical solutions to a whole range of problems. But more research and groundwork are needed if the full potential of these new technologies is to be realised.

Here at Bridges.org, we have developed a model that seeks to assure the success of ICTs in bearing upon the problems of inequity in the world. We believe ICTs can reward those who use them well, with increased income, a better quality of life, and a number of cultural and political advantages. Those who do not use them find themselves being left behind, and ICT disparities exacerbate existing inequities. Often, however, ICTs fail to deliver on this potential. That is because many initiatives lack any real grounding in ICT and fail to integrate and use it effectively.

In Africa, basic communication services like telephone lines are lacking for the majority of rural folk. Yet all the indications are that access to basic technologies such as the radio and telephone, not to mention the internet, have the potential to transform the lives of rural dwellers in a wide range of areas — agriculture, health, education, and many others.

But development initiatives have often failed to provide sustainable, replicable models for community ICT use, and often blunder with top-down approaches that are not based on the needs, interests, and active direction or even participation of local residents. A realistic model is needed therefore, to overcome the key obstacles to delivering ICT-enabled development at ground level.

What really works

At Bridges.org, we have examined what works, and what does not work — and why. We have built on our own experience and the thinking of a number of other organisations to design our Real Access/Real Impact (RA/RI) strategy.

This framework sets out the determining factors in deciding whether or not there is real access to ICT — access that goes beyond computers and connections so that use of technology makes a real impact on socio-economic development. It is important to use technology in the appropriate way. For instance, one of our projects, Collecting and

Exchange of Local Agricultural Content (CELAC) has established community knowledge brokers who receive a short messaging service (SMS) every Monday on 'how to' guides in their local languages. These guides range from how to plant maize and prepare fertilisation beds to breeding birds or animals. The system works because a good number of people in rural areas have mobile phones. But it would not work using email, because rural dwellers tend not to use the internet, due to various barriers such as training and maintenance costs.

High-tech for farmers

We have already used this framework in a number of contexts at various levels, from the grassroots to high-level policy deliberations. For example, we used it to evaluate a

radio, DVDs and radio cassettes, newsletters, brochures and the internet. Ownership of the project has largely been placed in the hands of the beneficiaries, and the technologies and the information are tailored according to the realities in the rural areas.

Weighing up the pros and cons

We are also collaborating with the Broadband Applications Networking Group (BANG) — a group of students pursuing Master's and PhD studies in computer science at the University of the Western Cape and the University of Cape Town (South Africa) — to connect computer science research in Africa with real community needs and ICT policy-making processes.

Our work is shaped by our *12 Habits of Highly Effective ICT-Enabled Development Initiatives*. These are guidelines which help get ICT initiatives off to a good start by doing some homework, looking at what has worked and what has not worked, and then building on what has been learnt.

For example, if an initiative seeks to implement short-range wireless Internet connection for healthcare in a rural community in South Africa and this has not been done before, then we suggest that the project leaders start by studying the implementation of wireless fidelity (WiFi) in another African country, or in any rural setting beyond Africa, as well as looking at projects that are using a different technology for healthcare in rural South Africa. That way, they can see what the options are, as well as some of the potential pitfalls, before plunging in with their own ICT venture.

And the chances of it succeeding will therefore be far greater.

Email: vincent@bridges.org

“ICTs can reward those who use them well”

pilot project to test the use of personal digital assistants (PDAs) in healthcare environments in three African countries — Ghana, Kenya and Uganda. The initiative put PDAs in the hands of physicians, medical officers and medical students in order to demonstrate their viability and usefulness in collection of health data and dissemination of medical information.

In Uganda, the methodology has been used in a project, which collects and disseminates local information among farmers in rural areas. The farmers are able to take part in generating and sharing information using a mix of methods, including knowledge sharing forums and fairs, mobile phones,

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