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IN BRIEF

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Website: spore.cta.int

In this issue
Adaptation: that is the watchword for this edition. Unavoidable adaptation in the case of sugar and banana producers in ACP countries, who are taking the full brunt of the trade reforms with Europe. Desirable adaptation in the case of tea planters, for whom new opportunities created by the niche market for high quality teas offer a chance to defend themselves against tumbling world prices. Unable to adapt to climate change, Man is trying to change the climate itself, seeding clouds to make rain fall. As for researchers, they are working flat out on all fronts to shape tomorrow’s world. This issue’s thought provoking Viewpoint urges researchers in the South to change their old ways and to go boldly forth towards new horizons. The floor is open for debate.

Trade reforms
Diversify or die

EU trade preferences have long been crucial to ACP countries operating on the margins of the world economy. But recent changes in trading rules now threaten the banana and sugar industries, and the small-scale producers who rely on them. Can they find new openings to fill the gap?

The writing has been on the wall for some time now, but that does not make it any easier to accept. The erosion of ACP preferential margins for the EU’s sugar and banana markets is now a certainty, and with it will come tougher times for many producers. Sugar and banana farmers in the Caribbean and Pacific are expected to be the hardest hit, their problems compounded by the small size of their markets and the vulnerability of their export sectors. Diversification offers the best hope for ACP farmers affected by the changes. But finding new products — and new markets — is no easy task, and time is not on their side.

Under agreements dating back more than 40 years, Sugar and Banana Protocols guaranteed protected export markets to the EU for these two key ACP commodities. Now, under pressure from competitors, those preferences are being drastically cut back. In November 2005, the EU announced that it would slash by 36% over 4 years the price it pays for sugar from ACP regions. Meanwhile, at the 6th World Trade Organization (WTO) Ministerial Conference in Hong Kong in December 2005, the EU confirmed its decision to apply a new import tariff on bananas from January 2006. This tariff of €176/t for Latin America is considered by ACP exporters to be too low to safeguard their own trade position on the EU market. It is the latest round in a 5-year dispute which began when Latin American producers complained that the EU’s banana regime was unfair. But will this new tariff regime maintain the benefits of ACP banana producers?

Trade preference mechanisms have proved the mainstay of many ACP sugar and banana producing countries over the past 4 decades, creating a dependence which will be painful to sever. For Barbados, Belize, Fiji, Guyana and Swaziland the current
has pledged an aid package worth €100 million may be available to support restructuring and diversification up until 2013. Breaking the dependence upon traditional primary commodities is not easy. But with the right help and support, it can be done, as some ACP producers are already proving with new high value products such as ginger, garlic and chilli peppers, added value items such as sauces and chutneys, and organic and fair trade products. Also of interest is the small but growing niche market for exotic tropical fruits, such as passion fruit, lychees and durian.

Who stands to lose

According to the Overseas Development Institute (ODI), the heaviest losses will be to Dominica and St. Vincent for bananas, Guyana for sugar, and Belize for both bananas and sugar. But the repercussions will be felt far and wide. Sugar generates 24% of the GDP in Swaziland. In Fiji, 42% of the value of agriculture and 30% of processing comes from sugarcane production. The ACP Sugar Group has estimated that price cuts will lead to annual losses of €400 million, as well as “massive unemployment, rural instability and urban migration.” One estimate predicts that banana sector employment in the four banana-producing countries of the Organisation of Eastern Caribbean States (OECS) will fall by 84%.

Sensing that change was inevitable, some ACP countries have already begun to distance themselves from their time-honoured crops. St. Kitts shut its state-owned sugar industry in July 2005 and the sugar railway now carries tourists. Trinidad closed its state-owned sugar company in 2003. But a gulf divides the two groups of ACP countries affected by the new trade rules — those, like Mauritius, which have a stable and sound development base, and others, like Dominica, who put all their hopes in a single commodity. The European Commission has pledged an aid package worth €40 million for 2006, and its draft Action Plan of June 2005 indicated that an annual income transfer from the Sugar Protocol is equivalent to over US$50 (€42) per capita. For Mauritius, the figure is US$150 (€126).

A number of ACP countries, family-run banana farms have traditionally been the backbone of the economy.

Sugaring the pill

Sugar-related products also offer potential for ACP producers planning to continue sugar production. A study commissioned by the Dutch government on bio-ethanol made from sugar cane found that this could prove an export option for producers hit by falling prices. Other studies noted that co-generation of electricity from bagasse is a viable prospect for Guyana and Swaziland. In addition to a well-established sugarcane-by-product sector, Mauritius already has a co-generation sector with 10 power plants producing more than 40% of the island’s energy. Said Hans van Klink at the Dutch Sustainable Development Group, “When you look to the sugar chain there is much more to optimise than just sugar: you can use material for energy production and extract other useful products, creating added value.”

Many small-scale Caribbean banana producers have already left the export market. In Jamaica, farmers are producing fruit for the tourist market and for banana chips. In St. Lucia, an Agricultural Diversification Programme is expanding the non-traditional crop sector, with good growth seen in mango, hot pepper and avocado production. Many producers are moving into supplying fresh vegetables and flowers for hotels and cruise ships. Mauritius enjoys healthier prospects than most as it has used sugar revenues to fund diversification into textiles, tourism and finance. It is helped by a well-developed infrastructure and a dynamic private sector. Diversification into non-sugar agricultural sectors has been less successful, with constraints including limited fertile land resources and planting material, though biotechnology is helping to counter this handicap. In Kenya, farmers helped by the Community Rehabilitation and Environmental Programme (CREP) are finding it more profitable to abandon sugarcane production and grow food. Fiji has moved into the production of flowers and exotic fruits and farmers are exporting traditional food crops to the Indo-Fijian communities in Australia and New Zealand. Products targeted for diversification include breadfruit, jack fruit, okra, indigenous nuts, industrial hemp and stevia. In Papua New Guinea, Ramu Sugar Ltd is successfully diversifying into beef cattle, oil palm and peanuts.

The use of technology can also provide a competitive edge. Erica’s Country-Style in St. Vincent uses the internet to sell pepper sauces and food snacks to US markets. Innovative technologies for in vitro micro-propagation of ginger are helping Jamaican producers develop a range of products including essential oils, pesticidal and medicinal preparations. Forest product exports offer some potential, especially for Papua New Guinea and the Solomon Islands. To what extent these new products can help maintain the broader economic and social benefits traditionally derived from the sugar sector remains to be seen.

Agriculture and beyond

There is also scope for diversification outside agriculture. A World Bank report on the Caribbean suggests new product areas such as adventure tourism and the creation of upscale resorts. Other potential growth sectors include health services, information and communication technology and offshore education.

Producers will need technical support as well as funding if they are to make the transition. In many ACP countries, domestic markets are small, but servicing the larger regional markets involves improved methods of preservation and packaging. Regional organisations could do much to help by promoting diversification where there are economies of scale, through regional research programmes and marketing organisations. There is no time to be lost. “Diversification must begin before a shift in prices occurs,” urges the Commonwealth Secretariat, which has put forward proposals for a Special Fund for Diversification. Easier said than done. Noting the notorious delays involved in accessing EU funds, the European Research Office observes that ACP negotiators would do well to push for “the early, timely and effective delivery of assistance to national restructuring and/or diversification programmes.”

See Linkx, page 10
Quality pays dividends

It is hard for tea producers to reverse the decline in world prices. But improving quality and highlighting the marketing appeal of locally grown teas could help the best varieties to stand out from the rest.

A ll the analysts agree on one issue. The price of tea is not about to go up at any time in the near future. According to the World Bank, prices fell by 44% in real terms between 1970 and 2000. As for producers, after taking inflation into account, they are now earning less than half what they did 30 years ago.

It is true that, in 2004, the precious leaves of Camellia sinensis enjoyed a 2% price rise on the total global output of 3.2 Mt. And tea, whether it be black or green, continues to be the most popular drink on the planet after water. The West, which has traditionally consumed black tea, is drinking more and more green tea, attracted by its health-giving properties. But the price of tea, which depends to a large extent on the quality and quantity demanded by consumers, is suffering as a result of growing competition from other beverages. Forecasts from FAO put global production at 3.68 Mt for 2014, whilst consumption is expected to be no higher than 2.67 Mt. ACP countries account for about 14% of global output, and some 30% of exports, with Kenya as the world’s leading exporter (294,000 t).

Exacerbating the situation is the fact that tea remains the only commodity to be sold at auction. This system does little to benefit small-scale producers, who have no control over the prices they receive. In 2004, the Kenya National Chamber of Commerce and Industry called for these tea exchanges to be shut down, not least because collusion between brokers is all too common. Complaints of price-fixing are regularly made at Mombasa (Kenya), home to the biggest outlet for tea in ACP countries, the other main auction centre being in Limbe (Malawi).

Auction sales

A few years ago, some producers, especially in ACP regions, decided to try using the internet to short circuit the middle men. Electronic markets should, in theory, lower the cost of transactions, as well as cut both payment and delivery times. At present, these virtual markets are most commonly found in India. But they tend to rule out small- and medium-scale producers who do not have access to information and communication technologies (ICTs). In the absence of on-line exchanges, there are, however, a number of cyber-shops for tea. Some of these even specialise in electronic sales of fair trade tea, both wholesale and retail.

For the time being, however, the bulk of the market is dominated by a handful of multinationals, and it is left to the producers themselves to invent new strategies. Here too, Kenya is proving a driving force by planning to take advantage of the opportunities offered by Geographical Indications (GI), which have been recognised by the WTO since 1994 (see Spore 116). Tea is one of the products that Kenya intends to add to the list of GIs, which is currently restricted to wines and spirits.

Label of origin teas

The initiative aims to protect teas marketed according to their place of origin, from unscrupulous practices by intermediaries, such as mixing them with lower quality teas or making fraudulent use of existing labels. To take one example, the Gathuthi factory in Kenya produces about 2,500 t of tea per year, but an estimated 5,000 t per year is sold using this brand name. Agnes Nyaga, a representative of the Kenya Tea Board and vice president for Africa of OriGIn, an organisation which protects GIs, believes that African planters will be the first to benefit from GIs. Their advent will help tea producers make their business more profitable, and in so doing increase their real income.

To read more of the CTA publication on tea, visit: http://agritea.cta.int/tealexecutive_brief.htm

Main ACP tea producing and exporting countries

<table>
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<tr>
<th>Production (in tonnes) in 2004</th>
<th>Exports (in tonnes) in 2003</th>
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<tbody>
<tr>
<td>Kenya</td>
<td>290,000</td>
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<tr>
<td>Malawi</td>
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<tr>
<td>Tanzania</td>
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<td>Rwanda</td>
<td>15,484</td>
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<tr>
<td>Zimbabwe</td>
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Source : FAO
Weather modification

Let it rain!

In many ACP countries with growing populations, water scarcity is a major obstacle to agricultural development. For decades, scientists have grappled with the challenge of producing rain by artificial means, and new technology has brought them closer to their goal. But does it really work?

By the year 2025, two-thirds of the world’s population will have to cope with water stresses, according to the United Nations Environment Programme (UNEP). Increasing demands for fresh water due to rapid population growth, coupled with recent periods of severe drought, have focused the spotlight on Africa. Some 66% of the continent is now classed as desert or drylands and 3% of agricultural GDP is lost annually to soil and nutrient loss in sub-Saharan Africa. But the picture in parts of the Caribbean and Pacific is hardly more encouraging. In the International Year of Deserts and Desertification, the challenge of developing new water sources for large areas of the South has become a matter of great urgency.

Some scientists believe that modern technology may have the answer. What is needed, they say, is to make more rain. In order to coax precious water out of the skies, experts have developed techniques which involve showering clouds with chemical particles, releasing rain to irrigate crops or replenish aquifers. Interest in rainmaking was spurred by the Sahelian drought crisis of 1968–1974, but weather modification — to give it its official name — has been around since the late 1940s. Cloud seeding dates back to the late 1940s when two US scientists accidentally discovered that supercooled water droplets could be converted to ice crystals using either dry ice or silver iodide. Trials in the atmosphere soon followed, and operational cloud seeding programmes began in about 1950. In more recent times, improvements in observational facilities and modelling capabilities have allowed more detailed examination of precipitation processes and offered new opportunities. The development of new equipment — such as aircraft platforms with microphysical and air-motion measuring systems, radar, satellites and automated rain gauge networks — has brought rainmaking closer to reality.

Too good to be true?

According to the World Meteorological Organization (WMO), cloud seeding projects are now being conducted in more than 40 countries, including Australia, China, India, Russia and the US. In the ACP region, South Africa leads the field, with Burkina Faso emerging as a more recent player. Senegal has started on a rain enhancement programme and in Zimbabwe, cloud seeding has been regularly used to help agriculture during inadequate natural rainfall periods.

On the face of it, the advantages of cloud seeding are clear. According to the WMO, analyses have shown that the technology can produce significant economic benefits. A South African team which has conducted a long-term study of cloud seeding claims the technique can increase the mass of water droplets in a cloud by up to 60%. The team carried out experimental seeding programmes in the drought-stricken Limpopo province and a cost-benefit analysis concluded that the benefits of cloud seeding outweighed the costs by a ratio of 1:7, with sizeable increases in rain-fed agricultural yields, such as maize, pasture and timber.

But in spite of its apparent potential, cloud seeding remains a controversial practice, and in some scientific circles, there is scepticism that such methods can offer a viable means of increasing water resources. Many experts agree that fundamental questions need to be answered to provide a sound scientific basis for the technology. The Kenya government attempted cloud seeding back in the 1960s, but abandoned it after achieving disappointing results.

One factor hampering widespread use of cloud seeding in the South is the high
start-up cost. The technology requires sophisticated equipment, monitoring procedures and materials, including at least three airplanes for each operation, as well as meteorological radar and air sounding equipment — a computer system and data analysis software, a rain gauge network and automatic weather stations. In Zimbabwe, where aircraft were mainly supplied by the farming community, a major problem has been a lack of sufficient planes.

**No clouds, no rain**

But in order to make rain, you also need suitable cloud formations. Cloud seeding cannot be carried out on just any old cloud. And most areas that are short of rain are also short of clouds. No clouds, no seeding, and therefore no rain. According to Italian agrometeorologist Pasquale Steduto, “in order to have rain, you need a cloud in an incipient condition. This technique has not taken off because in arid and semi-arid conditions clouds are lacking, and therefore the seeding does not help.”

### Seeding the skies in South Africa

Among ACP countries, South Africa has played a key role in developing operational techniques for cloud seeding, and has produced some of the most encouraging results. The National Precipitation Research Programme (NPRP), formed in the 1990s, developed the hygroscopic flares for seeding convective storms, which suck in humid air from close to the Earth’s surface. It also developed radar technology for cloud seeding, now being used in more than 20 projects in six other countries.

Experiments conducted between 1991 and 1997 found that seeded storms translated into an average increase of between 20% and 48% in the average annual runoff in 13 different catchments over the eastern Highveld and escarpment. The model also showed average increases of 22% in timber yields due to cloud seeding.

**Seeding the skies in South Africa**

Now known as the South African Rainfall Enhancement Programme (SAREP), the South African team is setting up a network of weather radars to provide the final link in the chain of proof — the evidence that rain from seeded clouds actually falls on the ground where it is needed.

Cloud seeding also requires a considerable degree of fine tuning. The idea is to increase the number of water droplets in a cloud, but quantity alone is not enough — only clouds with droplets of varying sizes will actually produce rain. And precipitation mechanisms can differ dramatically from one location to another. A report from the May 2005 meeting of the WMO’s working group on weather modification warned: “Cloud structure can vary widely from region to region. Seeding results obtained in one geographic area cannot be automatically assumed to apply to another area.”

One of the main drawbacks of the technique is lack of control over where the rain will fall, a fundamental consideration, especially for small island states. What is the point of generating extra rain if it is going to fall into the sea? Scientist Roelof Bruintjes of the National Center for Atmospheric Research (NCAR) says “Increasing the rainfall is just one aspect. We also have to consider what the impact would be.”

The US-based NCAR has been in the forefront of weather modification research in Mexico and South Africa. The centre has refined a technique to increase the size of particles in clouds and promote the coalescence of water droplets. Called hygroscopic seeding, this technique uses flares mounted on aircraft to seed clouds with small salt particles which, however, do not affect the quality of the resulting rainwater. In the air, water droplets bond to the particles and grow large enough to fall out of the cloud as rain.

### Every cloud has a silver lining

The government of Burkina Faso has estimated that cash earnings from agriculture have increased by 10 to 15% since it began its cloud seeding programme in 1998. The additional rainfall created has helped to fill reservoirs, allowing irrigated cultivation to continue during the dry season. As a result, imports, particularly of cereals, have dropped and in some parts of the country fresh tomatoes are now available all year round.

With technical assistance from the National Center for Atmospheric Research (NCAR), Burkina Faso has set up software systems to support cloud seeding efforts. The software is used to display and analyse radar data about cloud systems and precipitation, thereby guiding cloud seeding operations and helping scientists evaluate the results.

Burkina Faso’s cloud seeding programme has proved so successful, that the Inter State Committee Against Drought in the Sahel (CILSS) is hoping to find backing for a US$50 million (€50 million) programme to extend cloud seeding to its other eight member countries.

### More research

Evaluation of results remains a major challenge. Scientists need to be able to provide proof of cause and effect — that it really is cloud seeding which has produced a specific downfall of rain. Some have their doubts, among them Rene Gommes, Senior Agrometeorology Officer at FAO. “The problem is, no one knows whether it really works or not. Unless you carry out extensive testing in exactly the same place for, say, 20 years, you will never be able to say that it would not have rained anyway.”

While giving a cautious welcome to weather modification initiatives, the WMO wants to see far more research and scientific evaluation. “It is crucial to recognise that the current technology is immature”, it warns. It also calls for greater cooperation between countries to spread the burden of funding costly technologies. Economic, social and legal aspects must also be taken into account, and international guidelines will be needed, especially when cloud seeding operations are taking place close to borders. If a cloud is seeded in one country, the rain may fall in another.

There is still unresolved debate over whether producing rainfall by artificial means in one region will rob another of its natural share. The practice recently caused friction between neighbouring states in China, and, on one occasion, prompted drought-ridden Mali to accuse Niger of stealing its rain.

See Links, page 10
WTO Conference in Hong Kong: Just the bare bones

The Sixth WTO Ministerial Conference in Hong Kong, held in December 2005, was reported as a modest but significant step in the current trade negotiation process. To be sure, establishing detailed modalities, especially in agriculture, by the end of April 2006 remains a major challenge for WTO members. Although some progress has been made, much remains to be done in the three key areas of agricultural negotiations: market access (trade tariffs), domestic support (production subsidies) and export competition (export subsidies) before the deadline.

For ACP countries, three positive factors emerged from the conference. The first concerns the commitment to remove all forms of agricultural export subsidies by 2013. The second is the decision by member states to offer more flexibility to countries of the South so that they can protect their markets (special products, deemed to be of strategic importance, especially for national food security, special safeguard clauses and mechanisms designed to protect markets against sudden waves of imports). Finally, all developed and advanced developing countries agreed to remove quotas and trade tariffs for imports from least developed countries (LDC) for 97% of all tariff lines (tariffs defined for each product category).

However, achievement of the objectives of the Doha Development Agenda will mainly depend on the willingness of the so-called G-4 — the group which includes the EU, Brazil, India and the USA — to take into account the needs of the poorest countries. Preference erosion is probably the main concern for ACP countries, and these, together with the LDC and the African Union member countries of the G90, will have to continue pushing their own trade agenda and reinforcing the link with the current Economic Partnership Agreement (EPA) negotiations with the EU.

For more information on the conference and its implications, see the Agritrade website (http://agritrade.cta.int) for daily reports on the conference issued by CTA and the Research and Technological Exchange Group (GRET).

Anyone wishing to take part in the electronic forum to prepare ACP countries for the post-Hong Kong negotiations should consult this website: www.dgroups.org/group/ctawto/hong-kong.

A minimum weight for octopus

At the end of 2005, the EU Fisheries Council fixed a minimum weight of 450 g (after gutting) for octopus caught in European waters or European imports of octopus fished in the waters of the Eastern Atlantic (Mauritania, Morocco, Senegal). The aim is to protect stocks of young octopus and give them a chance to breed before they are fished. According to the EC, Mauritania and Morocco have already introduced this minimum weight into their legislation. The issue is still to be discussed with Senegal as part of negotiations to renew fisheries agreements.

From now on, it is forbidden for octopus under the minimum weight to be on board, transshipped, landed, transported, stored or sold. Scientists estimate that the 450 g minimum weight rule will cut the size of catches by one-quarter for adult females and one half for adult males. But the measure will only prove effective if tight controls are enforced, especially at Spanish landing ports.

In Mauritania, octopus caught by small-scale fishers and industrial trawlers account for about 10% of total catches. Before oil drilling began last February, it represented the country’s chief source of export revenue. In Senegal, where fishing is also the main source of foreign exchange earnings, octopus fishing accounts for a smaller share of revenue. The most profitable markets for these products are in Asia.

Spicing up hot peppers

The Caribbean Agricultural Research and Development Institute (CARDI) has released a new variety of hot pepper, which it hopes will help boost export earnings for local farmers. Called Caribbean CARDI Green, the new variety is part of a 3-year project for the improvement of the Caribbean’s hot pepper industry, which aims to meet market demands and compete internationally. The project, which began in March 2005, involves stabilising indigenous landraces and offering new and improved varieties, which are being made available as seed material to Caribbean farmers. The region has established a reputation for producing some of the hottest peppers on the world market. Recent market studies indicate that consumers prefer a dark green mature hot pepper, which ripens to either a red or yellow.

A charter for bananas

Small-scale farmers from the Tambacounda region in southeastern Senegal have been successfully growing bananas for 20 years. Now they have taken another important step by moving into organic banana production. With 1,200 members, the Senegalese producers’ association APROVAG, which markets an annual 5,000 t of bananas, has pledged to respect a charter for high-quality production.

In brief

• Small-scale farmers in Zambia are finding new markets with the help of United States Agency for International Development (USAID)-funded local NGO, the Zambia Agribusiness Technical Assistance Center (ZATAC). In one initiative, about 30 coffee farmers are selling their produce to the Coffee Growers Association of Zambia and are being helped to bridge the income gap by intercropping coffee with cash crops such as paprika, fresh vegetables and sun-hemp. Another project is helping 900 smallholder farmers obtain loans to buy new irrigation equipment so they can grow export-quality fresh vegetables all year round. The farmers, who are assisted with marketing, are now collectively exporting an annual 400 t of fresh vegetables, mainly snow peas, baby corn, mange-tout and fine beans. A farmer with 1 ha under cultivation can earn up to US$2,800 (€2,350) per year.

• Spicing up hot peppers

• A minimum weight for octopus

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In brief •

Market links for Zambian farmers

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Preparation for the worst

As bird flu continues to claim more human lives, the international community began taking concrete steps to head off what is now openly talked of as a possible pandemic. Donor pledges of US$1.9 billion (€1.6 billion) were made at an international conference in Beijing in January 2006, a measure of how seriously the threat is now being taken. A large share of the funds will support integrated national response strategies in developing countries, whose own systems are inadequate to deal with the scale of the emergency. According to the United Nations (UN), a massive internationally coordinated effort is needed if the pandemic is to be avoided, or its impact at least cushioned. Key strategies include upgrading veterinary systems, launching vaccination drives and encouraging change in the ways small-scale producers coexist with animals, say UN officials. Improved surveillance and detection is needed to enable farmers and veterinary services to intervene quickly and apply the internationally recommended set of actions, such as culling, biosecurity measures and vaccination.

FAO has warned of the potentially disastrous consequences of the spread of the avian influenza virus to Africa. “If it were to become rooted in the African countryside, the consequences for a continent already devastated by hunger and poverty could be truly catastrophic”, said FAO Deputy Director-General David Harcharik. Risky farming practices such as mixing poultry species in farms or in live markets, should be changed as quickly as possible, he warned. “Funding will be needed for compensation schemes for farmers to encourage their participation in control campaigns”, Harcharik added. Early signs of the economic damage likely to be caused by the virus are already emerging. At the time of going to press, on March 21, six countries had reported outbreaks of avian influenza in humans caused by the H5N1 virus, but a number of others had reported cases of the virus in poultry, including Nigeria. Confirmations of the H5N1 strain in migratory birds were also causing alarm in several European countries. Worldwide, about 200 million chickens have been slaughtered, causing massive economic hardship to poultry farmers. FAO has expressed concern about preemptive bans on poultry imports adopted in response to avian influenza. Consumer responses to potential bird flu outbreaks are already having a disruptive impact in Europe and beyond. In Italy alone, poultry consumption is down by 50%.

Some ACP states are now taking steps to design bird flu control programmes, but most need more help. The Caribbean Invasive Species Working Group (CISWG) has recommended that states under its umbrella immediately strengthen their surveillance and tackle issues of quarantine, legislation, diagnosis and emergency response systems.

Farming turn to film-making

An innovative scheme in Ghana is helping cocoa farmers learn how to make videos. The farmers, who have been through the Grenada Chocolate company has issued a special edition Hurricane Ivan Bar to help rebuild the island after the devastation wrought by the storm. The bars are made from chocolate that was being made when the hurricane hit in September 2004 and interrupted production for several months. In keeping with the name, this batch is very strong because its processing was cut short. This batch is very strong because its processing was cut short.
In brief •

A bigger share of the benefits

■ A World Bank report has identified 38 medicinal plants which could produce revenues for farmers, as well as improving soils. A separate report, published by the Edmonds Institute (USA) and the African Centre for Biosafety (South Africa), echoes the claim. It condemns the biopiracy practised by some companies in the North and the small profits made by communities in the South from industrial use of plants belonging to their traditional pharmacopoeia. The market for traditional remedies is worth a total of US$65 billion (almost €55 billion) per year, of which an estimated 1% could be earned by countries of the South.

Website:

Gene bank for pandanus

■ The islanders of Nui have agreed for an EU-funded Secretariat of the Pacific Community project to establish a gene bank for pandanus trees. Nui is the island in Tuvalu with the largest number of pandanus varieties and is developing Sustainable Agriculture in the Pacific project aims to ensure that all of them feature in the nursery. Pandanus is a valuable crop because it can be made into a shell stable cake which can then be used as a base for puddings and baby foods as the glycinic index is very low. It also extrudes into fat and can then be used as a base for puddings and baby foods as the glycinic index is very low. It also extrudes into fat and can be processed in the normal way, with no adverse impact on either the look or the quality of the fibre.

The stakes are high for African cotton growers, who are affected to varying degrees by sticky cotton, depending on the year. Too high a level of sticky cotton can seriously damage a country’s image and bar it from the international market.

Growing sorghum to make clear beer

■ Zambian Breweries (ZB) has developed a clear beer made from locally grown sorghum. Until now, sorghum was used mainly in opaque beer brewing, and clear beer was made mainly from imported malt, making it expensive for the average Zambian. The Eagle clear beer offers an entirely new market for a large number of subsistence farmers who for the first time have access to a sustainable commercial market for their produce. Sorghum is Zambia’s third most important cereal crop after maize and finger millet.

The Cooperative League of the United States of America - Smallholder Enterprise and Marketing Programme (CLUSA-SHEMP), a USAID/IFAD-funded project, helped farmers produce a crop that would meet standards required by ZB. Over 4,000 small-scale farmers are benefiting, selling their sorghum direct to ZB, CLUSA-SHEMP is providing them with loans to procure inputs and implements, and is giving professional and technical advice on sorghum growing and how the harvested crop could meet quality standards. A total of 247 ha were planted for the 2004/2005 farming season. Expected to yield between 170 and 300 t of grain, the total revenue for the season for local farmers is around ZMK216 million (about US$43,200 or €36,250).

Less sticky cotton

■ Sticky cotton is a nightmare for producers, as it is for the entire cotton sector. Now, a new bacteria-based biological process has been developed and patented, offering hope against this scourge. The technology is already being used in Cameroon and is expected to be extended to the cotton-growing areas of West Africa.

Cotton stickiness is caused by the sugary excretion of insects onto cotton flowers. This honey-dew, which clogs and damages machinery, also causes fibres to snap, rendering them useless for production. Manufacturers refuse to accept such poor quality cotton, leading to significant losses for producer countries. The new process, the result of a joint initiative between the EC and European manufacturers, involves exploiting the sugar-consuming capacities of certain lactic bacteria. At the ginning stage, before the bales are pressed, the sticky cotton is treated with a solution containing these bacteria. Within 5 to 20 days, the cotton loses its stickiness and can be sun’s ultra-violet rays into infra-red. The beans are spread out to dry beneath the plastic after workers have rubber them over sieves to remove any dust or mould. The polythene sheeting produces temperatures of 50 to 60°C, which dries the cocoa to perfection.

Units based on the new technology cost €70/m² including the aluminium frames to support them. The average small-scale producer would need a capacity of between 10 and 15 m², and costs can be offset by using the driers for other crops, including coffee, vanilla, chillies and maize, off season. The company is helping small-scale producers find loans and is providing know-how, as well as guaranteeing the purchase of what it says is a superior product. According to the managing director, “the savings depend on the amount of sun otherwise available, and on other variables. But the strong point is that it produces consistently good quality. Producers may see an increase in 10-15% in terms of quantity and 20-30% in terms of quality.”

Small seeds, big demand

■ Fonio (Digitaria exilis) is an increasingly sought after cereal. It has long been grown in West Africa, where it is a popular product, but its tiny seeds, which are hard to hull, have hampered its expansion further afield. With this obstacle overcome, and its nutritional value gaining greater recognition, fonio is now enjoying a surge in interest. It now has its own website. Jointly developed by research institutes in Burkina Faso, Guinea and Senegal and the FAO, it offers information, including videos, about the plant itself, as well as growing and post-harvest techniques and current research initiatives.

Website: http://fonio.cirad.fr/en/index.html

Bigger profits for sun-dried cocoa

A new technique is helping cocoa farmers in Uganda earn better prices for their crop — up to 25% more in some cases. Cocoa is a major earner of foreign exchange in Uganda, but to fetch the best price, quality is essential and for this the cocoa must be dried until its water content is about 7% of its weight. Too much moisture affects the cocoa’s scent and flavour and can encourage the growth of mould.

The traditional method of drying in the open leaves the beans vulnerable to rain, wind or cloudy days that slow the process. At Uganda’s Luzira cocoa processing plant, an Italian chocolate company has introduced a simple but highly effective new technology, based on a special type of plastic sheeting that converts the
**Pacific farmers enjoy nut boom**

Farmers in Vanuatu are cashing in on demand for a nut that can be eaten by sufferers of nut allergy. Allergies to peanuts and tree nuts are among the most common food allergies, affecting about 1% of the population in developed countries. Sales of organically grown *Canarium indicum* nuts (known locally as *nangai*), to both overseas and domestic markets are booming. Exports have risen sharply over the past 5 years from a few dozen kilos to a current rate of more than 300 t. Principal destinations include Australia, Japan, Hawaii, New Zealand and the USA, where *nangai* nuts are eaten raw or roasted, and the oil used as an emollient in hair care, bath and sunscreen products. More recently, *nangai* nut oil has been selling in export markets as a topical treatment for arthritis. On the island of Pentecost, coconut-frond baskets of *nangai* nuts are loaded into the hold of the passenger aircraft that calls in three times a week, to be flown south to the capital Port Vila. Larger quantities are sent down on the inter-island trading ships.

Domestic demand has also increased following promotion of the nuts in local hotels and shops — so much so that farmers are working flat out to supply it. The boom comes as the value of other agricultural exports — copra, coffee and cocoa — has crashed. Not only are *nangai* nuts economically attractive but growing them makes ecological sense too. *Canarium indicum* is one of the oldest domesticated species in Melanesia and is a fast-growing forest tree. It does well beneath a natural canopy or in a typical food garden clearing, where the sapling can get established while bananas, climbing yams and more are tended all around.

**Anti-malarial hope for Africa**

Since 2002, the World Health Organization (WHO) has been encouraging African countries to use artemisinin-based drugs to treat malaria. The substance is derived from *Artemisia annua*, a medicinal shrub used as an infusion by the Chinese to treat malarial attacks. Demand for this plant has soared since 2005, when an anti-malarial drug based on the shrub went on sale. Coartem’s main advantage is that it may be advisable to test it there and to expand cultivation of *Artemisia* rather than importing the plant from Asia. Programmes are under way in a number of countries to produce large quantities of the plant at lower cost. *Artemisia* cultivation is being developed in Kenya, Mozambique, Nigeria, Tanzania and Uganda. Efforts are also being made in Cameroon and Madagascar. *Artemisia annua* is an annual variety which thrives in warm, temperate climates (mountainous zones), is adapted to various types of soil and is quite resistant to pests and diseases. Using seed supplied by Action for Natural Medicine (ANAMED), the World Agroforestry Centre (ICRAF) has developed a hybrid, dubbed A3, which can grow to a height of 3 m and produces 20 times more artemisinin than wild varieties. In northwestern Mozambique, ICRAF is working together with a medical organisation, Médecins sans frontières (MSF), ANAMED and the Ministry of Agriculture and Rural Development to train farmers on how to grow the shrub from cuttings, and to harvest and dry the leaves to make artemisia tea.

Cultivation of this crop may well prove a valuable niche market for Africa, given the strong demand for the plant from pharmaceutical laboratories.

**In brief**

**Duruka proves a hit overseas**

Duruka (*Saccharum edule*), a crop grown in parts of the Pacific Islands, is gaining popularity overseas, according to the manager of a Fiji food canning company. “Last year the company exported 2,000 cartons of canned duruka.” The plant, known as *pitpit* in Papua New Guinea, is actually the flower of wild sugarcane. The Fiji company packs duruka into brine-filled 400 g cans and exports them to Australia, New Zealand and the USA. An asparagus-like delicacy which is creamy in colour, duruka is normally cooked in coconut cream and served as a vegetable, often with fish. In 2004, farmers in Fiji supplied 7,548 bundles of duruka valued at $15,096 (€12,750). The main season for duruka is from April to June. It takes about 6 to 8 months for the plant to mature after planting.

**Sweet potato problems**

A new Internet-based interactive diagnostic key to sweet potato problems has been launched by the Australian Centre for International Agricultural Research (ACIAR). The tool, dubbed Sweetpotato DiagNotes, offers on-line fact sheets on insect and mite, diseases, nematodes and nutrient disorders, with plenty of clear illustrations to help with the diagnosis.

**Clean cocoa**

Côte d’Ivoire has launched plans to certify its cocoa sector. The system, which will be in place by July 2008, will include monitoring mechanisms to guarantee that production satisfies quality standards and does not exploit child labour. If it fails to take such steps, Côte d’Ivoire could see its cocoa barred from the US market. Results of a pilot project to monitor child labour are currently available on-line.

**Website:** [www.cacao-ci.org](http://www.cacao-ci.org)
I t is surprisingly hard to find clear and reliable information on weather modification. A search on the World Meteorological Organization (WMO) website will produce many reports on the subject, so prepare to sift. The website of the South African Weather Service has a good section on weather modification, which explains the challenges posed by water scarcity which faces many countries of the South and outlines the progress made to date in developing rain enhancement programmes.

Weather Modification Inc is a U.S. based company offering cloud seeding and involved in operations in a number of overseas countries, including Burkina Faso. Its website gives details about its global activities, as well as information on training facilities and programmes.

Still in the US, the Utah Division of Water Resources has a website on cloud seeding which is worth a look for the animated graphics alone, which show the concept more succinctly than in the book. The study focuses on trends in international trade for potentially interesting products, the trade and import policies of major buyers and prospects for developing niche markets for organic and fair trade NTAEs.

Finally, for an uplifting view of what is being done at the local level, take a look at Jamaica’s Scientific Research Council (SRC), which is doing interesting work to develop and market new value added products for export. In the Pacific, the Secretariat of the Pacific Community (SPC) website has information on initiatives in agricultural and forestry diversification, with details on new high value crops and efforts to enhance the post-harvesting processing of timber.
For a long time it was thought that increasing the yield of major food crops would act as a magic bullet to reduce hunger in the world. Now, there is a growing understanding that the issue of food security is far more complex than simply boosting output. Access to food is also an important part of the equation, as is poverty alleviation. In the light of this, international crop breeding programmes, together with their national partners, have been obliged to rethink their objectives and strategies. In many cases, this has meant targeting programmes so that they answer the specific needs of poor farmers and other user groups. It has also involved a change in approach from macro-scale breeding programmes to more local initiatives.

The importance of conserving agricultural biodiversity is increasingly understood and with it, the need for more decentralised breeding programmes, based on local crop germplasm and seed distribution systems. This handbook offers practical advice to plant breeders, NGOs, extension workers and traders on approaches for planning and implementing participatory plant breeding (PPB) and seed system development activities. It sets out from the premise that assessing farmers’ needs will be key to the success of any plant breeding programme.

The potential benefits of PPB are many. They include better use of research funds, improved yields in marginal environments and, perhaps most important of all, a higher take-up by user groups such as poor or women farmers, who feel that the programmes are designed with their real needs in mind.

The CD-ROM is the result of a global project to help users develop seed systems with farmers. It has also involved a major educational effort to train plant breeders and other professionals, mainly in the developing world, in PPB. The CD-ROM was preceded by a print edition, which was published in 1990, as a result of substantial new research, records and results obtained since the first version was published in 1990, as well as a wealth of colour photographs and plates, to help the reader identify the pest in question.

In response to continuing demand for the popular original version of Plant parasitic nematodes in subtropical and tropical agriculture — now out of print — the editors have produced a completely revised edition. Like its predecessor, the book offers a detailed guide to the main nematode parasites that cause yield loss in the most important crops grown in the tropics and sub-tropics. But this revised version also contains substantial new research, records and results obtained since the first edition was published in 1990, as well as a wealth of colour photographs and plates, to help the reader identify the pest in question.

Setting breeding objectives and developing seed systems with farmers

Edited by A Christinck, V Hoffmann & E Weltzien

ISBN 3 8236 1449 5
CTA number 1258
20 credit points

A knock-out for nematodes

In response to continuing demand for the popular original version of Plant parasitic nematodes in subtropical and tropical agriculture — now out of print — the editors have produced a completely revised edition. Like its predecessor, the book offers a detailed guide to the main nematode parasites that cause yield loss in the most important crops grown in the tropics and sub-tropics. But this revised version also contains substantial new research, records and results obtained since the first edition was published in 1990, as well as a wealth of colour photographs and plates, to help the reader identify the pest in question.

Of course, knowing how to deal with the problem is as important as pinpointing it, and the authors offer detailed advice on management techniques for controlling nematodes and limiting the damage. The book is written in an approachable style, with entries on each crop broken down into easily digestible chunks, with sub-headings such as symptoms, diagnosis and economic importance. A new section looks at parasitic nematodes affecting medicinal plants.

Plant parasitic nematodes in subtropical and tropical agriculture: Second edition

Edited by J Bridge, M Luc & R A Sikora

ISBN 0 85199 727 9
CTA number 1270
40 credit points

Pests with a liking for legumes

As a small-scale farmer knows, one of the hardest aspects of growing legumes is keeping the pests at bay. The caterpillars of a wide variety of species of moths and butterflies cause untold damage to the pods of legumes (Fabaceae) by feeding on the seeds inside. Crops commonly attacked by pod borers include Cajanus cajan (pigeonpea), Cicera arietinum (chickpea), Glycine max (soy bean), Lens culinaris (lentil) and Vigna unguiculata (cowpea). Among the pests devouring these and other key crops are a number of species that are not exclusively pod borers, such as Helicoverpa armigera and Spodoptera species.

The starting point for controlling these pests is learning to recognise them, and this CD-ROM sets out to help in the task by offering descriptions and photographs of the main pod borers found in the tropics. Each species is amply illustrated in the various stages of development, while a fact sheet provides details of taxonomy, host plants, distribution and other biological information. Where known, details of natural enemies and control methods are also provided.

The CD-ROM is the result of 4 years intense field work, rearing pod borers from their host plants in a number of ACP and other countries. A glossary is helpful for those unfamiliar with some of the scientific terms and an email address is provided for anyone with feedback or questions about their own problems with pod borers.

Tropical pod boring Lepidoptera

By D Agassiz, G Kibby & A Polaszek

CABI/CTA, 2005. CD-ROM
CTA number 1278
20 credit points

A powerful package

The Tropical Forages website offers an array of information on the adaptation, use, and management of some 185 tropical and subtropical forage species, cultivars, and elite accessions. The information is presented in the form of fact sheets, well illustrated with colour photographs and maps and completed by a glossary and a comprehensive database of scientific references. A useful interactive feature enables visitors to select forages for specific climates, soils, production systems, and management practices.

Website: www.tropicalforages.info/index.htm

Women want ICTs

Women are far more likely than men to experience discrimination in the information society. But this collection of case studies from the South shows that far from sitting back and waiting for policy makers to bridge the digital divide, many women are making their own opportunities to access information sources and communication processes. One paper describes radio listening group projects in post-war Sierra Leone, while another examines the role of information and communication technologies (ICTs) in the small island states of the Caribbean and their economic impact on women.

Gender and ICTs for development: A global sourcebook

Edited by S Cummings, M Valk & H van Dam

ISBN 90 6832 7283
CTA number 1270
40 credit points

Training on-line

The international IMARK distance learning initiative has launched a new module, Investing in Information for Development, which aims to help decision-makers define their strategies and policies for information management. The module has been developed by FAO, together with CTA and the German development agency GTZ. Another module, Management of Electronic Documents, is also available on-line in English, French and Spanish. The modules are available free on CD-ROM.

IMARK Enquiries

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Website: www.imarkgroup.org/index_en.asp
As easy as an Agrodok

Simple and inexpensive techniques which require little in the way of inputs — it sounds like a farmer’s dream, and thanks to the Agrodok Series, it is now a reality.

Three manuals have recently been revised and updated and two new ones have been published: the first revised guide deals with the propagation and planting of trees for agroforestry purposes. After reading the hundred or so pages of text and looking at the diagrams, farmers and extension agents will be able to choose the species of trees that are best suited to their needs and environment. And since a book can never wholly take the place of first-hand information, the author wisely and modestly advises readers to seek out local knowledge on trees and to combine it with the content of these pages.

The second Agrodok describes various preservation techniques for fish and meat on a household or community scale: salting, drying, smoking, canning, fish fermentation, chilling and freezing. This new edition contains highly practical drawings and diagrams, including a tent solar dryer. The manual will prove useful to anyone wanting to preserve surplus produce for household consumption or wishing to earn income by selling their small-scale production on the market.

Beekeeping in the tropics, a popular Agrodok title, has been completely revised and updated to coincide with the publication of a completely new title on bee products. Even the most experienced beekeepers may have difficulties when it comes to selling the fruits of their labours. The key is in producing consistently high quality products, free of impurities and additives, which also look appealing. This manual offers a step-by-step guide to harvesting and processing bee products, with chapters on honey, pollen, bee bread, royal jelly, beeswax and the increasingly sought after propolis. Finally, another new guide offers advice on cultivating oyster, shitake and wood ear mushrooms, a profitable activity for small-scale farmers since mushroom rooms are easy to grow, full of protein, vitamin and minerals, and have a very short span between spawning and harvesting. Mushroom cultivation is ideally suited to producers seeking sustainable farming methods. It uses agricultural waste products and makes good use of limited surface areas. And after picking, the spent substrate can be recycled as a valuable soil conditioner.

Propagating and planting trees
By E Verheij
Agromisa/CTA
Agrodok n°19
ISBN 90 77073 99 X
CTA number 1228
5 credit points

Preservation of fish and meat
By B Maas-van Berkel, B van den Boogaard & C Heijnen
Agromisa/CTA
Agrodok n°12
ISBN 90 77073 01 9
CTA number 1227
5 credit points

Small-scale mushroom cultivation
By P Dei & B van Nieuwhuizen
Agromisa/CTA
Agrodok n°40
ISBN 90 90813 03 2
CTA number 1291
5 credit points

Forestry in perspective

Humans have been using forests since the time of the hunter gatherers, and this book charts the history of this not always happy relationship. It also looks at other aspects, including the development of forests themselves, factors determining their distribution and the value and benefits of forests and forest-related products. Other issues that come under the spotlight in this wide-ranging volume include sustainable forest management, current patterns of deforestation and future challenges for conservation and marketing.

Forestry in a global context
By R Sands
ISBN 0 85199 0894
GBP22 • €32.50
CABI Publishing UK
Nosworthy Way
Wallingford
Oxfordshire OX10 8DE
UK
Fax: +44 (0) 1491-833508
Email: publishing@cabi.org
Website: www.cabi-publishing.org

Unwanted guests

A new website on forest invasive species in Africa should help countries to share information on outbreaks and ways to tackle them. It was created by African specialists at the Forest Invasive Species Network for Africa (FISNA), and is hosted by FAO. Features include information on new outbreaks of invasive pests and woody species. It also provides references, publications and other links.
Website: www.fao.org/forestry/site/26065/en

Quality not quantity

Communication is crucial in development. But all too often the emphasis is on increasing the amount of information supplied, when it would be better to cut down on content and focus more on presentation. This handbook from the Overseas Development Institute (ODI) aims to help people involved in development get their message across more effectively. Aptly enough, it is written in a clear, concise style and presents 23 tools, with plenty of boxes and diagrams to help keep the communication channels flowing.

Successful communication: A toolkit for researchers and civil society organisations
By I Hovland
ISBN 0 85003 776 X
GBP8 • €
ISBN 0 85003 776 X
GBP8 • €

Trees of hope

The annual rate of forest loss in Africa has now reached 0.7%. The consumption of fuel wood doubled in the last 30 years of the 20th century and continues to rise at an annual rate of 0.5%. Against the backdrop of these alarming trends, this delightful little book offers 70 stories of hope. Each entry tells a tale in which a tree is the main player. All of them illustrate successful strategies used by local communities in countries affected by desertification, and many home in on initiatives mounted by women and young people to recover degraded land in rural areas. The style is simple and refreshing and most of the stories are told by the people themselves. One of the most memorable is that of the old farmer from Rwanda who planted 22 orange pipes as a young man and saw them grow into trees whose fruits paid for his children’s education. Another tells how a Togo farmer learned to use the leaves of the leucaena tree as feed for his chickens and a soil nutrient for his land. But perhaps the most captivating of all the stories is an account of a group of Tubu women in Niger who coyly told their interviewer that they prized the stems of the ziziphus tree. At first reluctant to explain why, they finally revealed that they cut the tender shoots into small pieces and put them in a charcoal burner. “After a bath, we cover ourselves up with our dressing cloth above the burner”, they explained. “That way, our whole body is covered with the smoke and oil from the ziziphus wood. This oil smooths our skin and keeps us young.”

Seventy tree stories from Africa
Edited by J Clavreul
ISBN 92 13326 30 X
CTA number 1257
5 credit points

Publications •
The paradox referred to in the title of this new book is a cruel one indeed. For while coffee is booming as a consumer product, with speciality, fair trade and other coffees being sold in trendy coffee bars and stores throughout the North, international coffee prices have plummeted and returns for producers are the lowest in decades.

Around the world, some 2.25 billion cups of coffee are drunk every day and coffee consumption patterns have changed dramatically over the past 25 years. But the profits of these changes are almost exclusively going to the roasters and retail outlets, rather than to the producers.

The price of pesticides

In parts of Africa, pesticide expenditure now accounts for as much as 60% of production costs. This reliance on chemicals is frequently encouraged by development agencies, governments and commodity chains, who provide subsidised pesticides, often to untrained and illiterate farmers.

Worldwide, agricultural output has increased by one-third since the 1960s, but this collection of chapters, written by an impressive array of international experts, warns that the price of applying the huge quantities of pesticide that have helped make this growth possible is likely to prove too high — and not just in financial terms. Research on pesticide use in Benin, Ethiopia, Ghana and Senegal quoted in the book shows that the application of chemicals is rising in many cases, in spite of growing costs. Not surprisingly, it also finds that pesticide use is having adverse effects on human health.

The value lies not so much in the product itself as in the service aspects of coffee consumption, and especially in the marketing. The rise of high street coffee chains is more about ambience and packaging than good coffee. A key issue addressed in this intriguing book is how to make sure that coffee farmers also benefit from the new trends. The authors take an in-depth look at the market dynamics of this commodity, which is produced in more than 50 developing countries worldwide. And they argue that the coffee boom in consuming countries and the coffee crisis in producing countries will continue to co-exist until such time as coffee farmers and their organisations learn to take more notice of the hidden attributes of coffee. Coffee growers need to understand the other factors that help generate higher value-added gains. Only then will they be able to share in the rich pickings that Northern players in the coffee chain are enjoying.

The coffee paradox: Towards a more sustainable agriculture

Edited by J. Pretty
ISBN 1 84407 142 1
CITA number 1281
40 credit points

The rise of high street coffee

The social, political and environmental dimensions of urban agriculture

Edited by L J A Mougeot
ISBN 1 84 4072 320
£22.95 = 34
For Earthscan’s address, see opposite

Winners and losers

Between 2001 and 2002, farmers in northern Ghana averaged 15 workdays lost each season due to acute poisonings. The same study reveals that the greater use of poor quality pesticides may actually be increasing crop damage from pests.

The pesticide detox: Towards a more sustainable agriculture

Edited by J. Pretty
ISBN 1844071421
GBP20.66 = £30.50
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8-12 Camden High Street
London NW1 0HJ
UK
Fax: +44 (0)20 7387 8988
Email: earthinfo@earthscan.co.uk
Website: www.earthscan.co.uk

Nevertheless, some farmers in communities around the world have reduced their use of harmful pesticides and developed cheaper and safer alternatives. Integrated pest management (IPM), which favours natural methods of pest control such as the use of predator species, features strongly in the pages of this book, but there is widespread concern over the fact that this approach is still poorly understood. The authors urge the development of more farmer-centred IPM and an increase in research and training that uses both indigenous and scientific knowledge. Only when farmers have really grasped the ‘whys’ as well as the ‘hows’ of IPM techniques will they be persuaded to embrace this safer and cheaper — but undeniably slower — approach.

The pesticide detox: Towards a more sustainable agriculture

Edited by J. Pretty
ISBN 1844071421
GBP20.66 = £30.50
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Website: www.earthscan.co.uk

Sharing knowledge

The KM4D Journal is an open access, peer-reviewed publication focusing on knowledge management in development. Now in its second edition, the on-line journal encourages submissions from authors who do not have experience in writing for mainstream publications. Visitors can view and download all papers, and can register to sign up for an email alert offering a brief synopsis of each issue. The journal is published every 4 months.

Website: www.km4dev.org/journal/index.php/km4d

City farming

There is a growing awareness of the huge contribution made to food security by urban agriculture and an understanding that such systems could help feed even more people, if developed in a sustainable manner. This book presents the first findings of original field research projects funded by the International Development Research Centre (IDRC) in Côte d’Ivoire, Namibia, Togo and Zimbabwe, amongst others.

The social, political and environmental dimensions of urban agriculture

Edited by L J A Mougeot
ISBN 1 84 4072 320
£22.95 = 34
For Earthscan’s address, see opposite

Who’s using biotech?

FAO has created an on-line inventory of biotechnology products and techniques in use or in the pipeline in developing countries. This useful tool comes in the form of a searchable database which stores, updates and disseminates the latest information on crop biotechnology products and techniques. At present, the site has about 2000 entries from 70 countries.

FAO-BioDeC (FAO Biotechnology in Developing Countries)
Website: www.fao.org/biotech/inventory_admin/deplindex.asp

Erratum

In ‘Bananas brimful of benefits’, Spore 120 page 12, we mentioned Lois Engberber and Adelino Lorenz. The booklet entitled Pohnpeian Bananas, as affiliated to the Secretariat of the Pacific Community. Our mistake: Lois and Adelino are affiliated with the Island Food Community of Pohnpei, a local NGO. You can contact them at the address below.

Island Food Community of Pohnpei
PO Box 2299
Kolonia, Pohnpei 96941 FM
Federated States of Micronesia
Website: www.islandfood.org
Stronger market signals

Market information systems (MIS) and agricultural commodity exchange (ACE) hold strong potential for facilitating agricultural trade. But their effectiveness depends on several conditions. No matter how sophisticated these instruments may be, neither MIS nor ACE will deliver the expected results unless they respond to the real needs of stakeholders and users, are financially sustainable and created within a proper policy environment and a sound legal and financial framework. That was one of the key messages to emerge from the CTA conference in Amsterdam in November 2005 on ‘MIS and ACE: Strengthening market signals and institutions’.

Over the past 10 years, CTA has been actively involved in the promotion and pilot testing of MIS at local, national and regional levels in ACP countries. The 2005 meeting was called to review CTAs support and pinpoint the most successful systems, as well as the reasons for success. It also aimed to examine how MIS are being used by farmers’ organisations, traders and other development partners, with a view to identifying new opportunities for strengthening market signals — all those conditions that allow the market to function properly — in order to help smallholder farmers.

Participants were encouraged to raise issues and put forward ideas via an electronic consultation prior to the meeting. The e-forum proved a huge success, attracting more than 200 messages in just 3 weeks. The e-discussion and the conference itself highlighted several major issues.

Different clients — small, medium and large-scale farmers — need different types of marketing information and support. MIS in ACP countries seems to have moved from government-controlled systems focusing on price data for use by government and larger institutions to a second generation of MIS services. These services are generally run by non-government agencies, may include market intelligence and are usually more client oriented and flexible than their predecessors. The new breed of MIS uses various forms of communication. But though mobile phones are proving more client oriented and flexible than the real needs of stakeholders and users, are financially sustainable and created within a proper policy environment and a sound legal and financial framework. That was one of the key messages to emerge from the CTA conference in Amsterdam in November 2005 on ‘MIS and ACE: Strengthening market signals and institutions’.

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The meeting sounded one note of caution. The adoption of more sophisticated marketing institutions such as auctions, commodity price information brokering, commodity exchanges and warehouse receipts is no panacea. This latter mechanism works on the basis that a third party stores goods on behalf of a producer, paying part of the price then and there, and the balance once he or she has sold the goods and taken a profit. The advantages lie in the fact that the producer has some sort of guarantee as to the price he or she will receive, obtains some cash immediately and a receipt that may be used as collateral for short-term borrowing.

The key to successful market interventions is making sure mechanisms are introduced in the right order. There is no point in setting up a commodity exchange — the most sophisticated tool of all — if there is not a good legal and financial framework on which to base it. The next step should be making available relatively simple price information and transparent market information mechanisms. Unless steps are taken to ensure that such mechanisms operate in a sustainable way, there is a strong risk that the benefits may not trickle down to all users.
IICA and CTA sign agreement

In order to further its work in the Caribbean region, CTA recently reviewed a Memorandum of Understanding with the Inter-American Institute for Cooperation on Agriculture (IICA), which is mandated to encourage and support the efforts of its member states to foster agricultural development and rural well-being in their territories. In the photo (L-R), Dr Hansjörg Neun, CTA Director, Dr Arlington Chesney, Director of Operation (Caribbean region) and Mrs Diana Francis, Officer in charge of regional Trade and Policies, IICA.

Mailbox

In this edition of Mailbox, one reader, now a well known figure in agricultural development in the Caribbean, writes to tell us how Spore has helped him in his work, while another, in Uganda, asks for more coverage of a problem which is threatening the livelihoods of small-scale farmers in a number of ACP countries — desertification.

Old friends

Wendel Parham, Executive Director of the Caribbean Agricultural Research and Development Institute (CARDI), has been a reader of Spore ever since his student days. In this letter, he reminisces about his childhood on a small farm in Belize, and his early encounters with Spore while studying the economics of sustainable agricultural development. “My interest in sustainable agriculture was sparked as an agricultural policy analyst in Belize observing the growing conflict between the local environmentalists calling for preserving the environment, and the need to clear lands and replace the forests to plant bananas and other crops for income generation and foreign exchange earnings”, he recalls.

“I began to think about the possibility of developing an economic model to integrate all the complex issues which were being discussed, so that farming could still be profitable while maintaining the integrity of the environment, which in turn is important for sustained agricultural and tourism activities.”

“Spore proved to be a great information resource which assisted me in defining the concept of sustainability, through the use of a range of articles covering topics such as managing or halting the disappearance of the rainforests and integrating fish farming, cultivation of trees and livestock farming into tropical agricultural systems. What I particularly liked about Spore, and still do in fact, is the presentation of several sides of the argument.”

Pushing back the desert

Justine Mutesasira Mwanje writes from the Ministry of Water, Lands and Environment in Uganda to explain how desertification affects local farmers. “Some parts of my country, especially the north and northeast, are threatened by desertification”, she says. “Desertification has to be combated through the adoption and/or scaling up of integrated land use systems such as agro-forestry. Farmers will benefit from the products and services of such systems, and agricultural productivity will be improved. My suggestion is that Spore gives additional coverage to such land uses”.

You may be pleased to hear that to mark the Year of Deserts and Desertification, Spore is planning a front page article on this topic in October 2006, no. 125.

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Agricultural research

Time for action

If they are to remain autonomous and adapt to local needs, national agricultural research institutes in the South must be able to count on political will and on dynamic researchers. Today, that is far from the case. Malagasy-born François Rasolo calls for a radical change.

There is a risk that national agricultural research will simply wither away, unless it undergoes a complete overhaul. This critical state of affairs is due to some major sticking points. The first is that, for all the grandiose declarations of governments, they rarely see research as a priority. Politicians take little interest in it, partly due to inadequate information and partly because they often have preconceived ideas on the matter. They do not believe that researchers bring any immediate contribution to everyday problems and see them as living in ivory towers!

For them, the idea of investing in research, sometimes for as long as 10 years, makes no sense at all. They have more pressing problems to deal with. The same is true of donors, who focus on education, health and AIDS. But failure to invest can lead to serious consequences. Just one example: a few years ago when the price of vanilla reached US$400 (€336) a kilo in Madagascar, everyone started growing it willy nilly, without any kind of criteria. That was when it would have been sensible to continue research into the quality and grade of vanilla to meet the growing competition from Indonesia head on. No one did anything. Today, vanilla sells for US$30 (€25) a kilo.

These days, research has no place in the development plans of politicians. That is why in the Poverty Reduction Strategy Papers, in Madagascar or the Republic of the Congo, you will find little mention of it, if any at all. Only a few countries like Kenya have grasped its importance. So it’s hardly surprising that research centres lack resources. The lack of interest on the part of governments is also a reason for donors not to make resources available “since the leaders don’t know what they want”. As a result, initiatives to support research tend to come mainly from the North, and not from the countries themselves.

Off the beaten track

The researchers themselves are not without blame—few of them show much initiative. All too often, they are very conventional in their choice of research field, rarely deviating from the ‘classic’ areas of varieties and resistance to disease. They take no account of globalisation, even though this is now an unavoidable reality, and one which brings with it the need for sweeping changes when it comes to research options.

In Madagascar, does it really make sense to struggle to get farmers producing as much rice as possible so they can feed the people in the name of the much-vaunted idea of food self-sufficiency, even though it may not always be profitable for the farmers to do so? Let’s just think about it! Would it not be better to produce higher-priced niche varieties of rice for export to Europe and the Common Market for Eastern and Southern Africa (COMESA) and import cheap rice from Vietnam or Thailand for domestic consumption? Bio-fuels are becoming an interesting market — we need to look ahead.

Researchers are reluctant to stray from the beaten track. Working in familiar areas gives them a greater sense of security. Especially as the ranks of researchers are getting older. In Madagascar, one-third of them are over 50, and 10% are past retirement age. Often, they lack an open mind as well as general knowledge. Shut off within the confines of their own discipline, they pay little heed to what others are doing. So the coffee selector takes no interest in what is going on at the WTO summit in Hong Kong, even though it is the international market which will determine the future of this crop. Surfing on the internet still does not come naturally to everyone. That is a serious problem, for they no longer receive printed documents and are completely cut off.

Research techniques are often outmoded, and inadequate resources are not entirely to blame. For example, biotechnologies are under-utilised. With the exception of a few countries, the South lags way behind. But if the North has the technologies, the South has the genes. On the issue of genetically-modified organisms (GMOs), many are content to reproduce the debates going on in the North. But it is very important that people be informed on this subject, that they understand how it works and become familiar with the rules so they can guard against the negative impacts when they reach our own countries.

Political will is crucial

There is an urgent need to rethink these attitudes and practices if we want to stay in the game and maintain a bit of initiative. Lack of government support and daring on the part of researchers have serious consequences for the independence of national research systems. These days, research is increasingly financed by private funds. For instance, in Madagascar, the Americans — with the Millennium Challenge Account — put US$100 million (€84 million) on the table to fund agricultural development projects focused on applied research that specifically targets certain sectors, because they had an interest in those areas. So researchers had no choice but to redirect their programmes to fit in with their wishes.

Today, the priority is for ‘competitive’ research funds. Donors choose from various projects put forward by researchers in response to the needs expressed by farmers’ organisations. That is a good thing, for it encourages researchers to be innovative. They are used to receiving regular funding, but not to having to struggle to present solid and original proposals within a strict timeframe. The same is true for European tenders, which they rarely know how to apply for. That is one area where they really do need some training.

If we don’t want to reach the stage where our national research bodies are stripped of all autonomy, it will take a real act of political will. As a starting point, we need to see a declaration in principle from our governments, asserting that this research is essential. We need them to say where they want to go, and what they want to do and can do for research, as part of their agricultural development plans.

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

An agronomist and economist, François Rasolo worked as a researcher between 1973 and 1989, before serving as Director-General of FOFIFA, Madagascar’s research institute for rural development, from 1990 to 2005. He is currently an FAO representative in Brazzaville, Republic of the Congo.