

SPORE

The magazine
for agricultural and
rural development
in ACP countries

<http://spore.cta.int>

INTERVIEW

Jean Philbert Nsengimana,
Rwanda's Minister
of Youth and ICTs

N°179

DECEMBER 2015-JANUARY 2016

ADVOCATING FOR CHANGE

Farmers' organisations coming of age?

MILLETS

Back to the future

AGRICULTURAL INCUBATION

A springboard for women and youth



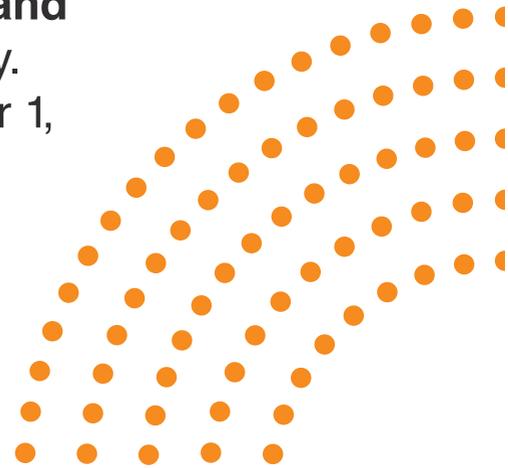


techsoup

Supporting organizations like yours since 1987.

TechSoup has helped more than **600,000 NGOs and libraries** around the world get and use technology. We're excited to announce that beginning October 1, we'll be able to serve you, too.

Learn more at www.techsoup.global.



ADVOCATING FOR CHANGE



Farmers' organisations coming of age?

4

TRENDS

JEAN PHILBERT NSENGIMANA



Rwanda's path to ICT innovation and transformation

6

INTERVIEW

Editorial

Boosting innovation in agriculture

In 2010, Norman Borlaug, father of the Green Revolution, stated that, "In the next 50 years we're going to have to produce more food than we have in the last 10,000 years." That is not going to happen with 'business as usual'.



Feeding more than 9 billion is only possible with major innovations in agriculture.

But there is every reason to be optimistic because we now stand on the cusp of a new era, one in which science, technology and innovation will help small-scale farmers dramatically improve their productivity, raise their incomes and create new markets for their produce. ICTs – mobile phones and the like – have enormous potential to support this agricultural revolution. These days, you do not think twice if you see a farmer – most probably a woman – in a remote village, perhaps one without electricity or running water, accessing information about market prices, the weather, how to tackle pests and diseases and much more through a mobile phone.

Other technologies are also set to help transform ACP agriculture. GMOs are still controversial in many parts of the world, but spin-off technologies like genome sequencing and marker-assisted breeding are helping breeders tailor plants and livestock to local needs and to respond rapidly to climate change and nutrient deficiencies. Tools that were once available only to large-scale farmers – precision agriculture, targeted irrigation – are becoming accessible and affordable to small-scale farmers. Drones are being used to inspect crops, monitor pests and diseases, and assess irrigation needs.

The role of the private sector in promoting innovation is critical. Often there is no platform for private and public sector innovators to come together and share their experiences. This is where events like the recent Global Forum for Innovations in Agriculture Africa, in Durban, South Africa – supported by CTA – come to the fore, providing excellent platforms that bring together stakeholders along the value chain to share innovations and promote investments in agriculture.

Michael Hailu
Director – CTA



AGRICULTURAL INCUBATION

A springboard for women and youth

13

DOSSIER

- 4 | Trends
- 6 | Interview
- 8 | Agricultural production
- 9 | Trade
- 10 | Blue economy
- 11 | Nutrition and health
- 12 | Research

13 | Dossier

Agribusiness incubation: A springboard for women and youth

'Agricultural incubation' is an effective way to modernise agriculture in ACP countries, combining innovation and entrepreneurship.

17 | Viewpoint

Alex Ariho: Agribusiness – a fast track to job creation

The UniBRAIN programme supports the development of incubation and innovation centres.

18 | Reportage

Mali: From incubator to network

Agricultural incubation is useful for training and enables networking.

20 | Value chain

Millet: Back to the future

- 21 | Publications
- 25 | Get on board

SPORE is the bi-monthly magazine of the Technical Centre for Agricultural and Rural Cooperation (CTA). CTA operates under the Cotonou Agreement between the countries of the Africa, Caribbean and Pacific (ACP) group and the European Union and is financed by the EU. • CTA • Postbus 380 • 6700 AJ Wageningen, The Netherlands • Tel: +31 317 467 100 • Fax: +31 317 460 067 • Email: cta@cta.int • Website: www.cta.int • PUBLISHER: Michael Hailu • CHAIRMAN OF THE EDITORIAL BOARD: Stéphane Gambier • COORDINATION OF THE EDITORIAL BOARD: Anne Legroscolard • EDITORIAL BOARD: Krishan Bheenick, Isolina Boto, Juan Cheaz, Thierry Doudet, Vincent Fautrel, Philippe Lhoste, Andrew Shepherd • MARKETING: Thérèse Burke • EDITORIAL STAFF: Co-Executive editors: Anne Perrin and Ottavia Spaggiari, Vita Società Editoriale S.p.A., Via Marco d'Agate 43, 20139 Milan, Italy • Editor of English version: Susanna Cartmell-Thorp, WRENmedia Ltd, Fressingfield, Eye, Suffolk, IP21 5SA, UK • Editor of French version: Anne Perrin s/c Librancrage, 3 rue Maguelone, 34000 Montpellier, France • Editor of Portuguese version: Ricardo Bordalo, Tapada da Carvalha, Cabanões, São João de Lourosa, 3500 – 885 Viseu, Portugal • CORRESPONDENTS: The following contributed to this issue: O Alawode (Nigeria), B Bafana (Zimbabwe), B H Carreon (Palau), A Carvalho Santos (Cabo Verde), S Diarra (Mali), G Kamadi (Kenya), J Karuga (Kenya), M A Konte (Senegal), M Makoni (South Africa), C Mkoka (Malawi), N Mutumweno (Zambia), S Norte (Guinea Bissau), E Ntungwe (Cameroon), R Vaz da Silva (São Tomé and Príncipe and Cabo Verde) • OTHER CONTRIBUTORS: ISO Translation & Publishing, B Addom, D Juchault, K Lohento, D Manley, A Perrin, M Protz, M Reinert, J Summers, Tradcatts, Y Zewdie • DESIGN: Intactile DESIGN, France • LAYOUT: Vita, Italy • PRINTER: Latimer Trend & Company, UK • © CTA 2015 – ISSN 1011-0054

Farmers' organisations coming of age?

With strong leadership, effective capacity and a commitment to change, farmers' organisations are successfully changing agricultural policy to benefit farmers at national, regional, and global levels.

Agricultural policy matters as it determines how farmers engage in the production process, benefit from their participation in markets and earn a reasonable living. But decision-making is often biased towards consumer or agribusiness interests; groups better able to articulate their demands and reconcile interests in political arenas. However, farmers' voices are rising; national and regional organisations have strengthened and are increasingly effective in influencing legislation.

The opportunities and constraints for change

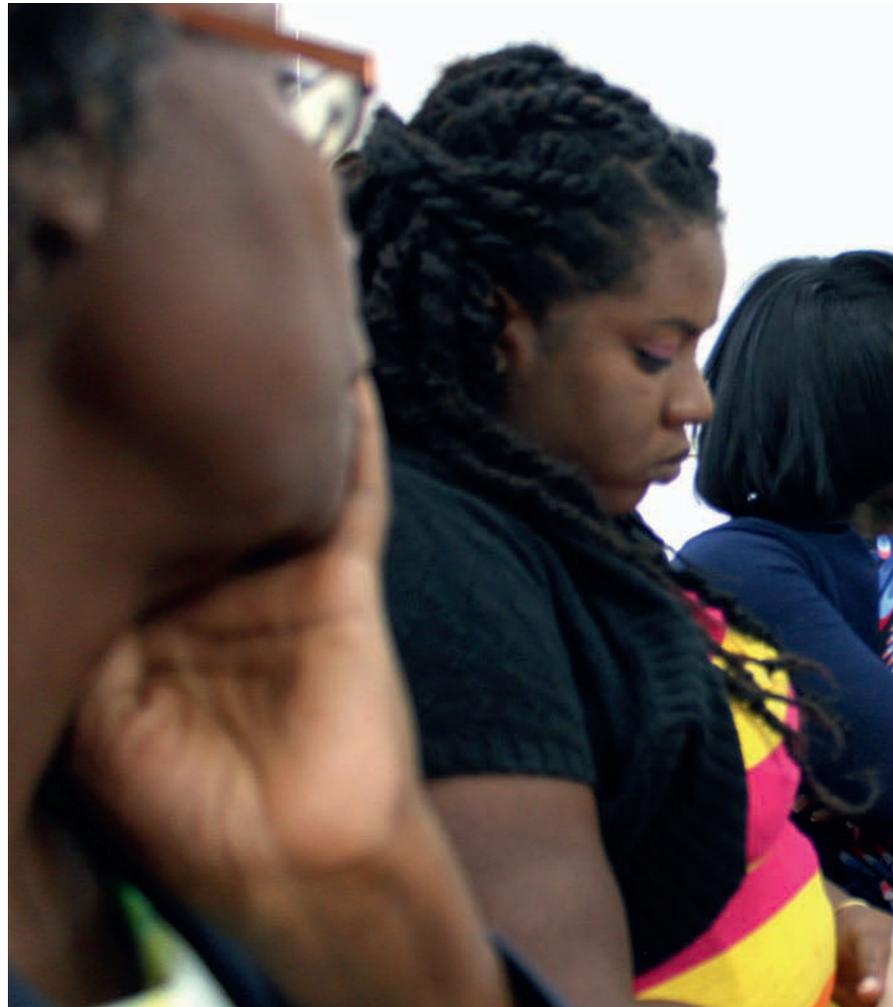
In Uganda, the power of collective action was outstandingly observed at the Third Uganda National Coffee Farmers Convention in 2008, where farmers demanded the formulation of a national coffee policy to enable the implementation of a nationwide farmer ownership model. Five years later – in December 2013 – the Ministry of Agriculture launched the National Coffee Policy, the first of its kind in the country to be driven by farmers and unanimously supported by coffee sector stakeholders.

The model, led by the National Union of Coffee Agribusiness and Farm Enterprises (NUCAFE), organises farmers in at least 10 village groups of 25-35 members, joining together to form an association; over 700,000 farmers are now involved in 175 associations. Through this network, farmers can access key services, including bulking and initial processing. NUCAFE provides further benefits, such as secondary processing, training and marketing services.

Since 2013, NUCAFE and other coffee stakeholders have been pushing for full implementation of the National Coffee Policy to empower over 1 million Ugandan coffee farmers over the next decade. They are also advocating for investment in processing infrastructure, which would also increase Uganda's domestic coffee consumption and reduce its dependence on export markets. NUCAFE's pioneering approach is also inspiring change in other commodity sectors and is the reason it was selected and supported as a CTA Top 20 Innovation in 2014.

Despite the notable successes of NUCAFE at national

level, constraints often limit farmers' organisations ability to represent members and bring about change. These include: inability to be an independent and authentic farmers' voice (tendency of governments to influence agendas); limited institutional capacity to access relevant information and evidence; and weak links between research and farmers organisations'



needs. In addition a lack of resources, particularly to develop strong communication strategies to effectively advocate to the right audience, remains a challenge. Nevertheless, regional and continental organisations, donors and other development agencies increasingly recognise that providing farmers' organisations with support enables them to more effectively champion policy processes.

Leading qualities

Regionally, CTA works with ACP farmers' organisations to strengthen their capacity with training and skills development: for instance, by ensuring regional African organisations are involved in policy processes which affect their members, such as the Comprehensive Africa Agriculture Development Programme. These efforts also enable leaders of regional farmers' organisations to become more active in influencing key legislation. For example, PROPAC, the sub-regional farmer's organisation for Central Africa, organised in March 2015, a regional consultation between farmers' organisations in Central Africa and the Pan-African parliamentary groups in Cameroon's National Assembly on issues relating to land, water and security to enhance sustainable agriculture. As a result of PROPAC's advocacy on land issues, government

agencies committed to take the viewpoints of small producers into account in the land reform processes.

A particularly significant achievement for the East Africa Farmers Federation (EAFF), for instance, was its involvement in the East African Community Co-operative Societies Act, 2014, which was passed by the East African Legislative Assembly in January 2015. After shaping the policy at discussion stage, EAFF also helped to steer it through the legislative process through a private member bill. Once it comes into force, the Act is expected to lead to the formation of a Regional Co-operative Union, as well as the East African Co-operative Agency, whose first task will be to develop a set of rules and regulations for the management, regulation and transparency of cooperatives in the region.

In the Pacific, governments' heavy involvement in agricultural extension, research and commodity marketing had traditionally stifled the development of effective farmer organisations and their role has been more service- rather than policy-orientated. However, a shift is occurring; the umbrella organisation – the Pacific Island Farmer Organisation Network (PIFON) made up of 18 farmers' organisations across six countries – is, for instance, supporting members to write and submit policy priorities to government using well-constructed, evidence-based arguments.

One of PIFON's most active advocacy members is Samoa's Women in Business Development Inc (WIBDI), which has been especially influential in national policy for organic agriculture. Besides supporting the formation of the National Organic Steering Committee and being a member of the Organic Certification Committee, set up to regulate the Samoan certification process, WIBDI also helped develop the regional Pacific Organic standard, which at the time, was only the third in the world.

Another example is the Caribbean Network of Rural Women Producers (CANROP), whose role is to advocate for women's empowerment in the region. Recently at the annual Caribbean Week of Agriculture, although CANROP had a 'place at the table', their message was failing to have an impact among ministers and other regional stakeholders. After training workshops in 2014, organised with support from CTA and the Inter-American Institute for Cooperation on Agriculture, the network identified a need to communicate more effectively with government partners. Following the training, CANROP's approach shifted significantly from 'asking' for assistance to 'telling the stories' of enterprising CANROP women producers. Stories included the success of regularly providing produce to a supermarket in Antigua after an initial sale of just US\$18 (€16) and producers in Jamaica succeeding despite gang-related intimidation. As a consequence, ministers became more engaged and sought ways to collaborate and support CANROP's work; an approach worth emulating as other farmer organisations continue to strengthen their capacity and communicate farmers' voices more effectively. ■

Communication training organised by the Caribbean Network of Rural Women Producers, who support the advancement of women's empowerment in the region



© CANROP

Susanna Cartmell-Thorp

JEAN PHILBERT NSENGIMANA

Rwanda's path to ICT innovation and transformation

Rwanda's Minister of Youth and ICTs, H.E. Jean Philbert Nsengimana, has extensive experience in managing and developing award-winning ICT solutions, including in health and agriculture.

Briefly summarise how Rwanda is fulfilling its vision for becoming an information-rich and knowledge-based economy and society?

Rwanda has come a long way over the last 15 years since the beginning of its ICTs for development journey. This has involved three consecutive national information and communication infrastructure (NICI) plans, which included: creating a conducive legal and regulatory framework (NICI 1); establishing infrastructure (NICI 2) - including laying over 7,000 km of fibre optic cables, the highest density in Africa; and service delivery (NICI 3).

Over the last 3 years, the number of active mobile phone subscriptions has increased from 44.4% in September 2012 to 75.5% in September 2015. Our latest strategy, the Smart Rwanda Master Plan (SRMP) is about connecting, innovating and transforming Rwanda into a knowledge society. Its pillars range from service-oriented, modern, accountable, real-time (SMART) agriculture, finance, trade and industry, health, education, government, and women and youth empowerment in technology. It is crucial that the government drives job creation and Rwanda's global competitiveness, based on an open and innovative smart economy with a favourable business climate that attracts large-scale investments and rewards entrepreneurs; enabling growth and exports.

How will Rwanda become an ICT hub in the region? What are the key steps needed to achieve this?

Our vision is for our people to have access to the relevant technologies, opportunities and solutions they need as we become an ICT hub. There are a number of steps which we are taking that suggest Rwanda is on the right path. Firstly, the President

attracting the best talent to centres of excellence like Carnegie Mellon University and other innovation hubs. Initiatives in digital literacy, which is vital to our vision, are underway to train and certify government employees, teachers, students and the general population. To assist in these efforts, 95% of Rwandans should have access to 4G LTE broadband by 2017.

“It is crucial that the government drives job creation and Rwanda's global competitiveness, based on an open and innovative smart economy with a favourable business climate that attracts large-scale investments and rewards entrepreneurs; enabling growth and exports.”

and relevant ministries' leadership has been critical as this has defined a vision for the nation and made ICTs central to socio-economic development. As a result, citizens are mobilised and local/international private investors also support this vision. The second factor is that Rwanda is promoting innovation through putting in place funding mechanisms for local and international innovators,

As we use ICTs to create the necessary momentum for growth, we continue to build on our strengths in enabling business, competitiveness and security.

How do government officials make use of social media to deliver better services to local communities?

Rwandan political leaders have embraced the power of social media,



H.E. Jean Philbert Nsengimana

such as Twitter for example, to converse directly with local communities. President Paul Kagame is an avid user and with 1.2 million Twitter followers, this demonstrates how our President is keen to exchange, debate and discuss issues with his people on a daily basis. Most government agency websites also make use of Flickr, podcasts and blogging. The government also uses social media to welcome and answer questions from the population as part of its annual national dialogue with Rwandan citizens. Through this dialogue, the President, his cabinet, local government, as well as other officials, are being held accountable for their policies and actions.

In the past, CTA has extensively supported capacity building on Web 2.0 and social media in Rwanda. What could and should be done in future so that rural communities derive maximum benefits from these tools?

CTA has done great work when it brought Web 2.0 training in Rwanda in 2012, which was a starting point for beneficiaries - mainly government officials and NGO representatives - to cope with the era of fast-evolving social media. We considered the CTA training as a beginning for organisations to create more

impact with people living in remote areas, especially farmers. We would encourage NGOs, like the Rwanda Telecentre Network (which was a key partner in CTA's capacity building activities), to be part of the government's efforts in its digital literacy and awareness campaigns. It is also important to encourage and engage with rural communities in local content development. By coming together with our stakeholders and development partners, we are making progress in transforming the lives of our people. ■

Susanna Cartmell-Thorp

AGRICULTURAL PRODUCTION

CLIMATE SMART

A new development for push-pull

Climate-smart push-pull technology, which uses the drought-tolerant *Greenleaf desmodium* as a push intercrop, instead of *Silverleaf desmodium*, has been adopted by 42,000 farmers in arid western Kenya, eastern Uganda, Lake Victoria Basin and northern Ethiopia. Maize yields have increased by 2.5 times compared to before the technology was adopted.

GREENHOUSES

Prolific tomato yields

In Nigeria, annual yields of tomatoes grown in greenhouses have dramatically increased to 264 t per ha compared to 7 t per ha for tomatoes grown in open fields, an increase of 3,800%. Significantly, previous periods of scarcity due to erratic rainfall are now met by the increased yields from the greenhouse-grown tomatoes, also helping to keep prices and imports down.

ORGANIC AGRICULTURE

Restoring Senegalese ecosystems

The National Federation for Organic Agriculture in Senegal, which seeks to restore soil fertility and balanced ecosystems, is working to prevent climate change and declining biodiversity. This Senegalese federation aims to safeguard the health of people, animals and plants.

COFFEE

Production takes off

The production of organic coffee on São Tomé and Príncipe has risen 180% in four years. From 2011 to 2014, with the help of the International Fund for Agricultural Development, a local cooperative increased production from 5 to 14 t. With rising incomes, farmers were also able to invest in fruit and vegetable production for consumption and for sale.



Small ruminants are an integral part of Caribbean agriculture

LOCAL RUMINANTS

Reducing reliance on imports

Although the 15 Caribbean Community and Common Market (CARICOM) countries consume over 11 million kg of goat and sheep meat annually, only about 30% is produced locally. Sustainable breeding techniques, strengthening value chains and appropriate livestock policies are all necessary to increase the Caribbean ruminant sector.

By 2050, CARICOM's population will reach 22 million, which will undoubtedly impact food production and demand. Small ruminants, such as goat and sheep, are an integral part of Caribbean agriculture. Well-suited to the region, they require relatively low capital investment and little land space, meaning they are accessible for resource-poor farmers. There are approximately 2.6 million sheep and 3.5 million goats in CARICOM countries, the majority of which are found on small family farms which use a mixed, integrated crop-livestock farming system.

In light of the small ruminant industry's year-round potential, FAO is playing an active role in improving the productivity of the sector through the provision of practical training workshops on small ruminant breeding technologies, for

example artificial inseminations (AI) in goats. Currently, production of small ruminant's milk and meat has not kept up with demand. As a result, imports from extra-regional sources and products from Australia and New Zealand account for more than 75% of supply. Obtaining high quality breeding animals is also a challenge for livestock farmers.

To address constraints, FAO is training livestock technicians and farmers in AI skills, techniques and best practices. This has enabled farmers in 10 Caribbean countries to import and utilise frozen semen to improve the genetic stock and diversity of their goat and sheep herds, increasing both production capacity and productivity. In Jamaica and Trinidad, in addition to AI, embryo transfer is also being explored as a breeding tool to rapidly improve the genetic composition of goat and sheep herds.

The initiative is also emphasising better management of small ruminant farms, as well as feeding, nutrition and marketing to expand and increase sustainability of the small ruminant sector, reducing CARICOM countries' reliance on imports. For example, the indigenous Barbados Blackbelly sheep is uniquely positioned to be developed as a premium meat. Low in fat and cholesterol but high in protein, Blackbelly meat is prized for its lean, mild flavour, which has been compared to venison. Like venison, Blackbelly meat can be successfully marketed to restaurants, the tourism sector, and can be developed for export as a gourmet product. ■

Jessica Summers



Buying fair trade certified coffee does not necessarily guarantee additional earnings for producers

ETHICAL CONSUMPTION

No longer the fairest of them all?

Fairtrade and other ethical benchmarks boomed as businesses transferred their own ethical responsibilities onto consumers. Is it time ACP countries transferred some of that responsibility back to the private sector?

After two decades of Fairtrade, questions about its efficacy are being raised.

Research on how Fairtrade-affiliated farms in Ethiopia and Uganda for example, reveals how they have failed to deliver on the goal of improving living standards for the lowest paid workers. “Wages in other comparable areas and among comparable employers producing the same crops, but where there was no Fairtrade certification, were usually higher and working conditions better,” states Christopher Cramer, an economics professor at SOAS, University of London (formally known as the School of Oriental and African Studies) an author of the telling 2014 report, ‘Fairtrade, Employment and Poverty Reduction in Ethiopia and Uganda.’

Critics of fair trade initiatives also argue that relying on consumers to pay a relative premium for ‘ethical’ products does not have a genuine impact on

curtailing emissions, improving global labour standards or promoting sustainable business practices. The market is too small to make a significant dent in emission or wage labour statistics and is already dwindling (for instance, sales are declining as consumers opt for budget brands). There’s also the question of how Fairtrade (and other) certification effectively shut out certain global regions; the *Guardian* newspaper reports that “Latin America accounts for 56% of effective certification demand against 29% for Africa, 14% for Asia and 1% for Oceania.”

Can re-orientating the focus to ACP business, rather than wealthier non-ACP consumers, be the sustainable answer to fairer trade in ACP countries? For its shortcomings, the principles that Fairtrade promotes are honourable; to ensure smallholders and agribusinesses alike can benefit from the work they do, through trade rather than aid. However in its current form, Fairtrade is misguided; in part because “the proliferation of labels and organisations that make a living from certification and licensing use of the labels... has blurred the definition of what qualifies as fair trade,” argues *The Economist*.

Rather than products reaching a certain benchmark or standard, ACP governments should incentivise businesses who trade fairly, for example through trade and public procurement policies, to improve ethical, sustainable production and as a result consumption. ■

Jessica Summers

IMPORTS

Vulnerable food markets

Many ACP countries are dependent on food imports. However new research published in Proceedings of the National Academy of Sciences, which analysed trade and food production data from 140 countries from 1986-2010, suggests that reliance on international trade can exacerbate already vulnerable food systems, as countries experience food shortages caused by market fluctuations.

COMMUNITY SUPPORT

From farm to fork

The French system of AMAP community-supported agriculture, where consumers pay producers to deliver products year-round, is expanding in Africa. This system encourages small-scale farmers to compete with industrial farming operations. The initiative, based on organic agriculture, is particularly successful in Benin and Mali.

EXPORTS

Coffee from Fogo reaches Starbucks

Organic coffee from the island of Fogo, Cape Verde, can now be drunk at global coffee chain, Starbucks, and purchased in the Harrods store in London. The company ‘Fogo Coffee Spirit’ is the first Cape Verde grower to export to the US market. Seven tonnes of organic beans were sold to Starbucks in 2015 produced from the northeast Mosteiros region.

SENEGALESE WINE

A new venture

Wine production has been introduced by two French partners to the coast of Senegal, 60 km south of Dakar. Currently, only one out of the ten hectares available is being used and 500 bottles have been produced using drip irrigation. The winemakers’ ambition is produce a high-quality Senegalese wine selling for 7,000 CFA (€11).

CORAL REEFS

Keeping up with sea-level rise

A recent study by the Palau International Coral Reef Centre has shown that Palau's coral reefs can keep up with projected sea-level rise if ocean temperatures do not rise too quickly, reefs are locally maintained, and atmospheric CO₂ levels stay below 670 ppm (currently over 400 ppm). Beyond 670 ppm, even healthy reefs will not be able to keep up with sea-level rise.

CONSERVATION

Community-managed reserves

Research from the UK-based University of St Andrews shows that community-managed reserves are respected and increase the sizes and quantities of fish, improving livelihoods of fishing communities. Vamizi Island Marine Sanctuary in Mozambique has more than 180 different species of coral and about 400 species of reef fish recorded, a huge increase since it has become community managed.

BLUE PLANET

Ocean health in decline

The WWF's Living Blue Planet Report tracking 5,829 populations of 1,234 animals has found: overfishing; destruction of marine habitats; and climate change, have led to fish critical to human food suffering the greatest population declines up to 50%. Tuna and mackerel have declined 74% during the 40-year period 1970-2010.

MARINE AQUACULTURE

Preserving precious ecosystems

2015 has been disastrous for coral reef health, particularly in the Pacific, where dying corals are impacting fish and shellfish numbers. Project Coral is using coral sexual reproduction to develop viable techniques for sustainable aquaculture using collected coral tissue; the first project of its kind to purposefully induce coral spawning in captivity for conservation.



Traditional village in the Natural Park Tarrafes do Rio Cacheu, Guinea-Bissau

TOURISM

Environmental conservation ensures food security

The *Nô matu i nô firkidja* (Our land, our livelihood, in Creole) project has successfully combined ecotourism and agritourism to achieve greater food security for the people of Cacheu, Guinea-Bissau.

Against the backdrop of the sustainable management of forestry resources of the Cacheu Mangroves Natural Park (PNTC) in northwestern Guinea-Bissau, this project has successfully promoted and developed ecotourism and agritourism, paving the way for improved economic and social conditions within local communities.

The project's main objective is to secure income in villages through locally provided and locally supported tourist services such as walking routes, cycling routes, sea excursions, accommodation and sales of handicrafts, with the main attraction being the unique fauna and flora, natural landscapes and the culture of the communities living within the protected area. Tourism and food security are complementary activities. One of the aspects with the greatest impact in this project is the reclamation of the *bolanhas*, the traditional rice paddy fields which use flooding for production. Rice is the most important staple food in the region

and these fields are also an attraction for visitors.

Food security for local communities is often threatened by a lack of capital for investment in farm machinery. Ecotourism is a source of income that allows investment in the *bolanhas*, through irrigation equipment and acquisition of appropriate seed varieties.

To support the production and marketing of non-wood forest products, the project has five key aims: preserving the Manjaco people's weaving tradition which uses natural dyes, sea salt, mangrove honey, palm oil and natural soaps. Support for the sale of these products also involves developing marketing channels linked with ecotourism activities.

To ensure sustainability and profitability of these services, and to avoid possible imbalances that such services may bring, a three-way management model was created between the community, the ecotourism department of the Institute of Biodiversity and Protected Areas of Guinea-Bissau (IBAP), and private companies interested in using the service.

The management model aims to raise income for the local population, through a community-private partnership, with IBAP acting as a regulator. In this set-up, communities use the structures built by private concerns, which provide accommodation and local jobs through quotas predefined in the agreement. IBAP's role is to regulate the tourism generated, ensuring that local people genuinely benefit from the economic activity. The community actively participates in shaping this model through its own elected representatives. ■

Sílvia Norte

VITAMINS & MINERALS

Food fortification against hidden hunger

Food fortification, the process of adding essential vitamins and minerals to staple foods, is a safe, effective way to improve public health and combat hidden hunger in ACP countries. An international summit in Tanzania has reinvigorated interest, awareness and investment in food fortification for preventing malnutrition.

In ACP countries, many people do not get the essential vitamins and minerals they need to lead healthy and productive lives. In Tanzania, for example, almost 1 in 3 of the 46 million population live in poverty and around 2.4 million children are malnourished. About one third of children are deficient in iron and vitamin A. Vitamin A deficiency contributes to 1 in 10 child deaths, while anaemia (in part, caused by a lack of iron in diets) contributes to 1 in 5 deaths of mothers during pregnancy and a lack of iodine adversely affects healthy brain development. Together, micronutrient deficiencies or 'hidden hunger' worldwide result in losses of an estimated 2% of GDP in vulnerable countries each year.

One of the most cost-effective solutions to help address hidden hunger is the fortification of staple foods like maize, rice and milk, and condiments like salt or cooking oil. For example Ethiopian company, ASTCO, has begun producing fortified wheat flours to combat malnutrition, the first in Eastern Africa, as a result of a public-private partnership known as the African Alliance for Improved Food Processing (AAIFP). AAIFP, which is supported by USAID, provides customised technical assistance to 20 medium and large-scale wheat processors, as well as industry-wide training to more than 165 food processors in Ethiopia. In Côte d'Ivoire, local company Protein Kissèe-La, is producing fortified cereal containing high levels of vitamins and minerals, which is helping to ensure valuable nutrients are being incorporated into people's daily diet.

The Future Fortified Summit which took place in September 2015 in Arusha, Tanzania further highlighted the positive role fortified foods have and continue to play in reducing nutrition deficiencies. The summit was organised by the Global Alliance for Improved Nutrition and its final statement recommended: "Food fortification should become a critical pillar of national food and nutrition security plans. Unless we can rapidly scale up the availability and consumption of fortified foods in countries, the achievement of some Sustainable Development Goals will be impossible." ■

Jessica Summers

SUPPORT

Groups for vulnerable farmers improves nutrition in Malawi

Cancer and HIV-affected farmers have been helped by NGO, Tuesday Trust, and the Malawian palliative care centre, Ndi Moyo, to produce more nutritious and fast-maturing, pest-resistant crops such as sweet potatoes and cassava. All patients have reported increased yields after taking part in the organised support groups.

SULPHUR-FREE

Woody wine

A South African winery is using indigenous Honeybush (*Aspalathus linearis*) and Rooibos (*Cyclopia genstoides*) chips as a healthier option to using sulphur preservative. After harvest, the grapes are placed in contact with the Rooibos or Honeybush wood chips instead of oak, which impart unique flavours and antioxidants into the wine. The method is being patented in 80 countries.

URBAN GARDENS

Fresh products at acceptable prices

To ensure a constant supply of fresh vegetables, essential for the nutritional needs of the population at acceptable prices, Praia, the capital of Cape Verde, has a series of urban and peri-urban vegetable gardens promoted by the government and the FAO. This project will be implemented in other major cities in the archipelago.

SEEDS

New varieties enhance food security

The Institute of Agricultural Research for Development has introduced drought-tolerant varieties of maize, sorghum and millet in Cameroon's far north. Millet production increased from 265 t to 800 t and sorghum increased from 400 t to 720 t.



One tool in the fight against hunger is to fortify staple foods such as maize, rice and milk

PASSION FRUIT

Drought-tolerant varieties

The Kenya Agricultural and Livestock Research Organisation (KALRO) has developed three new drought-tolerant passion fruit varieties KPF 4, KPF 11 and KPF 12, which can increase farmers' yields to 3 t per ha. KALRO is working with community nurseries to multiply the new varieties and transfer the technology to farmers.

COTTON

Mixing crops to improve resilience

Growing cotton that has been genetically modified (GM) to produce insecticides results in insects becoming resistant. To limit this development, seed manufacturers suggest mixing GM and non-GM crops. However, according to a study conducted by CIRAD and Arizona University, these 'shelter' plants in the field actually increase resistance.

AGROFORESTRY

Controlling cocoa attacks

Cocoa agroforestry systems are similar to natural ecosystems. However, the complexity of how vegetation is spatially planted is a decisive factor in controlling pests that attack cocoa trees, according to a study conducted by the French research agency, CIRAD, and its partners in Cameroon and Costa Rica. The results are significant for using ecological systems to help manage crops.

"THANK YOU" POTATO

Improving yields year-round

In sub-Saharan Africa, potatoes are an important staple. New and improved varieties—Asante ('thank you' in Swahili), Shangii and Obama – the result of a research project led by the International Potato Centre (CIP), are enabling smallholders to plant potatoes year-round and significantly increasing yields.

Lushoto district in the Usambara highlands of Tanzania is a densely-populated traditional potato-growing area, with an annual production of around 100,000 t, more than the total production of Burundi, Democratic Republic of Congo and Mozambique. However, farmers can traditionally only plant once a year, because the local variety - Kidinya - is sensitive to potato late blight disease and heat.

Three new varieties – Asante, Shangii and Obama, which significantly outperform the local variety, have been developed by a pioneering action-research

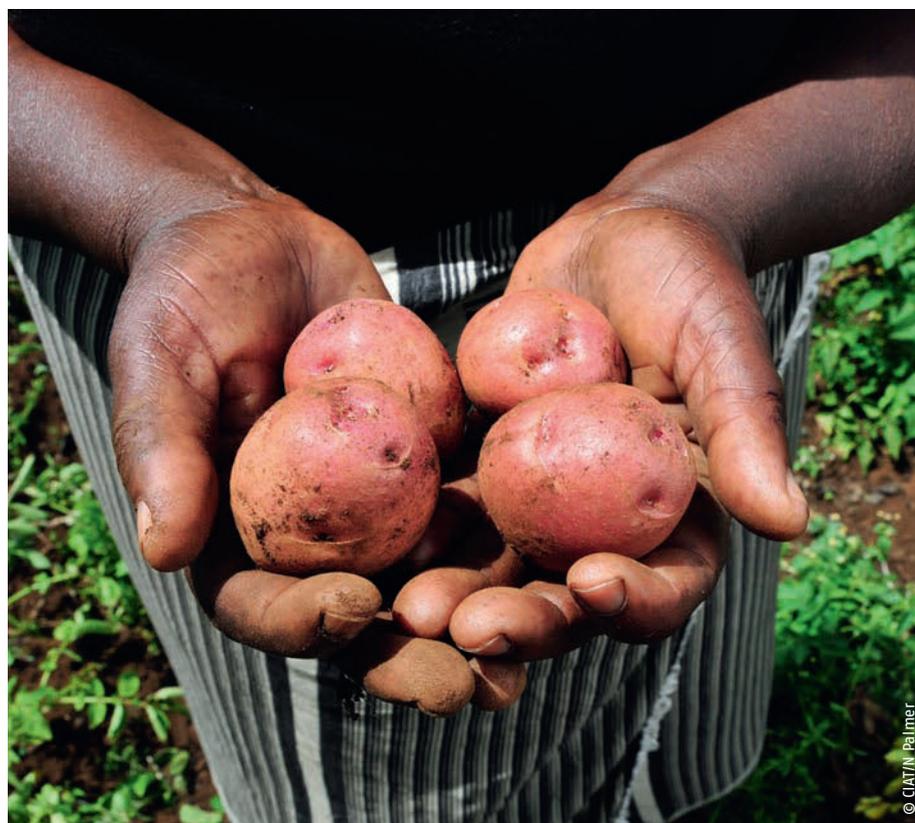
study. Supported by the CGIAR Research Programme on Climate Change, Agriculture and Food Security, East Africa, the study was led by CIP.

Potato farmers in Lushoto, Tanzania can now expect to harvest 10 times the usual potato yield despite climate-related challenges, such as high temperatures, erratic rainfall and pests. With resistance also to late blight, the disease is no longer a serious threat to farmers in the research areas; late blight is common in the region's long rainy season due to the low temperatures and high relative humidity.

"The most important way of controlling late blight is to prevent its onset in the field – its control being very costly and thus less accessible to small-scale farmers when symptoms are already visible. Coming up with resistant potato varieties for use in the region is therefore a game changer," says Dieudonné Harahagazwe of CIP.

Thanks to the improved varieties and good agronomic practices, farmers are assured of a bumper harvest irrespective of prevailing conditions. In the May 2015 planting season, 500 farmers used the improved Asante potato variety, bought from several decentralised seed suppliers operating in the Lushoto district. ■

Geoffrey Kamadi



In Lushoto district, the annual output of potato is 100,000 t

These seven pages were produced with contributions from:

O Alawode (Nigeria), B Bafana (Zimbabwe), B H Carreon (Palau), A Carvalho Santos (Cabo Verde), S Diarra (Mali), G Kamadi (Kenya), J Karuga (Kenya), M A Konte (Senegal), M Makoni (South Africa), C Mkoka (Malawi), N Mutumweno (Zambia), S Norte (Guinea Bissau), E Ntungwe (Cameroon), R Vaz da Silva (São Tomé and Príncipe and Cabo Verde).

Agricultural incubation is an established approach. Yet in the wake of the start-ups, it benefits from a new impetus. An update on agricultural incubation – including advice, technical approaches and financing – with a particular focus on women and youth.

AGRIBUSINESS INCUBATION

A springboard for women and youth



17 | VIEWPOINT
Agribusiness: a fast track to job creation

18 | FIELD REPORT FROM MALI
From incubator to network

Small agribusiness incubators are effectively modernising agriculture in ACP countries. By supporting the creation and development of innovative activities, or the professionalisation of informal activities, they provide a key link in the improvement of agricultural value chains. A broad range of agricultural activities are incubated from seed production, product processing, to the development of mobile phone applications designed to give stakeholders access to consulting and credit services – strategic activities in the development of agricultural commodity chains.

Contrary to other forms of entrepreneurship support, incubation generally refers to the innovative aspects of an activity in the sector. According to Rémi Kahane of the French research institute CIRAD, “Incubation is currently part of a wider movement in the development of public-private partnerships.” This involves setting up multi-stakeholder environments to boost innovation, entrepreneurship and make effective use of public research results through partnerships with the private sector by fostering the creation of enterprises dedicated to applying research results.

Besides innovation, one driver of incubation is job creation in the agricultural sector, which provides employment for over half of the workforce in many ACP countries. Small and medium enterprises (SMEs) provide more jobs than large industries. The development of a SME network through incubation in the agricultural sector supports better distribution of resources, while also playing a role in import substitution.

Incubator categories

The incubator system is designed to address the fact that enterprises are more likely to go bankrupt in the first few years after start-up than once they are established: guidance and strategic support is therefore beneficial during this difficult period. However, incubators also help start-ups access information and services, which



can be challenging for developing countries where resources are limited, whether in infrastructure, advisory services, networking or financing.

Incubators offer easy access to a range of services, including premises, equipment, technology, customer and supplier contacts, financial services, technical and strategic consulting, and professional networks. The incubation community also allows a good flow of information between ‘incubated’ stakeholders. In a nutshell, the support offered by incubators depends on the type of enterprises that are targeted. Given the diversity of practices, incubators could be classified in the following - but not mutually exclusive - categories: technological, backed by universities and/or research centres, specialised in the agricultural sector or value chain, or a mix of these.

Some incubators, such as AgroPME in Cameroon,

Incubation enables a good flow of information between people and organisations involved in the process

Kati Farms Uganda, beneficiary and benefactor

The objectives of Kati Farms, a Ugandan fish product processing company, are clearcut: to create a rewarding market for fish farmers, jobs for unemployed youth – particularly women – and generate income. The company’s director, Lovin Kobusingye, is a woman of note. Kobusingye won the first prize of the EMRC–Rabobank project incubator, which promotes innovation and entrepreneurship in Africa. With

this prize, and the €15,000 that came with it, she was able to build her own fish processing plant in Kampala.

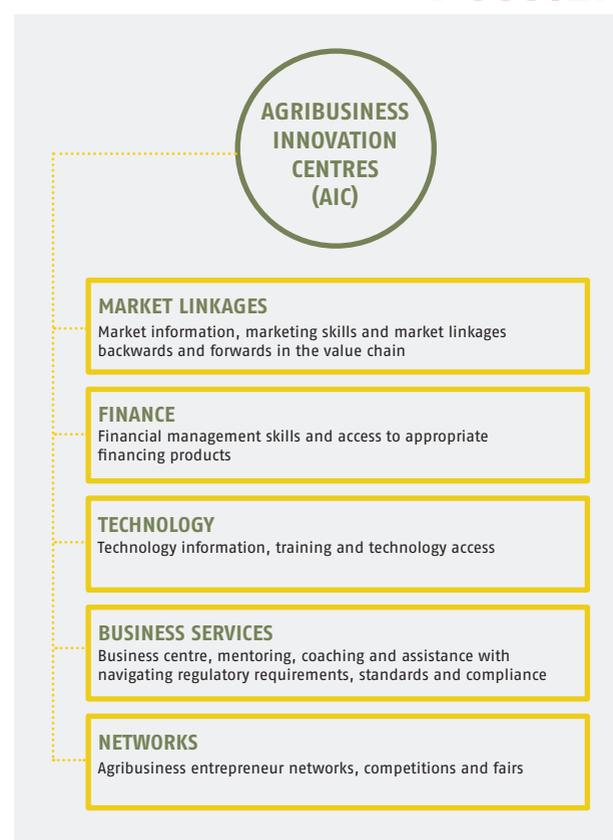
She also set up a unit to support her suppliers, providing them with technical assistance, quality control and financial support. So Kobusingye is a beneficiary of incubation support and, in turn, she contributes to developing the sector.



© Nailab

cover all agricultural activities in order to contribute to the economic development of the entire sector. Others have opted to specialise in different agricultural sectors. For instance, each incubation centre of the Universities, Business and Research in Agricultural Innovation initiative (UniBRAIN, see Viewpoint) is focused on a key commodity, namely: livestock in Ghana, sorghum as foodstuff and raw material in Kenya, non-timber forest products in Mali, banana and coffee in Uganda, and fruit and vegetables in Zambia. Sector-oriented specialisation ensures that there is a good overall understanding of the economic and regulatory environment because one of the challenges is inclusion in the national or regional economy. “By focusing on a single product, an incubator can capitalise on enterprise creation opportunities throughout the sector without too much spreading of invested resources,” says Mary Njeri, communications manager at UniBRAIN.

Many incubators are backed - and sometimes even hosted directly - by research organisations or universities. The aim is to bridge the gap between applied research and commercial use of the deliverables. For example, six incubators have been set up by the Forum for Agricultural Research in Africa (FARA)’s UniBRAIN initiative through the creation of consortia that bring together research centres and the private sector. These gateways have led to the commercialisation of some 50 technologies in five countries (Ghana, Kenya, Mali, Uganda and Zambia), especially in seed production. FARA states that, “Partnerships equally benefit universities, the research sector and agribusiness, while enhancing agribusiness teaching in order to train future graduate entrepreneurs to be immediately



operational.” The challenge for universities is to also better professionalise their students, with incubators acting as catalysts for the workforce.

Agriculture-oriented ICTs

Like incubators that have emerged in the wake of the World Bank InfoDev programme, many business incubation centres are specifically oriented towards emerging technology enterprises. “We work in any area as long as the activities are related to new technologies,” stresses Richard Zulu of Outbox, an incubator devoted to new technologies in Uganda. Outbox has counterparts in all ACP countries, for example Buni in Tanzania and TMIL in the Caribbean. Some incubators and networks, such as AgriProFocus in Kenya, combine ICT and agriculture to upgrade the sector and attract youth. This network shares its members’ contacts, which includes 1,000 professionals in the agriculture sector. Immersed in the information society, networking is often a major focus of ICT incubators that offer thematic meetings and online platforms.

ICTs for agriculture also enable the development of agricultural management applications. Regional CTA AgriHack hackathon initiatives have rewarded several flagship projects for developing new technologies of interest for the agriculture sector. With the CropGuard app, for example, farmers can search databases to diagnose crop pest issues themselves, or send photos to agricultural advisors to obtain fast and targeted technical assistance. “We are setting up a real-time communication channel,” says Troy Weekes who, along with Mortimer Seale, both from Barbados, ►

DOSSIER

► developed this award-winning app at the regional AgriHack Talent Caribbean contest in October 2014.

Another winner of a regional hackathon held in Rwanda in 2013 is the Mobile Banking and Information Software (MOBIS) app, which enables smallholder farmers with a mobile phone to manage their savings, apply for and repay a loan, and monitor their transactions. The app is used in collaboration with savings and credit cooperatives. MOBIS (formerly called Ensibuuko) benefited from an incubation at Outbox, while being one of its most promising members that has fulfilled its potential.

Supporting women

Young graduates – drivers of innovation – are often closely involved in incubation initiatives. But employment opportunities are also an issue as over 60% of young people are unemployed in many ACP countries. Moreover, women are a focus of development support initiatives and are given priority in some incubation projects, especially in the

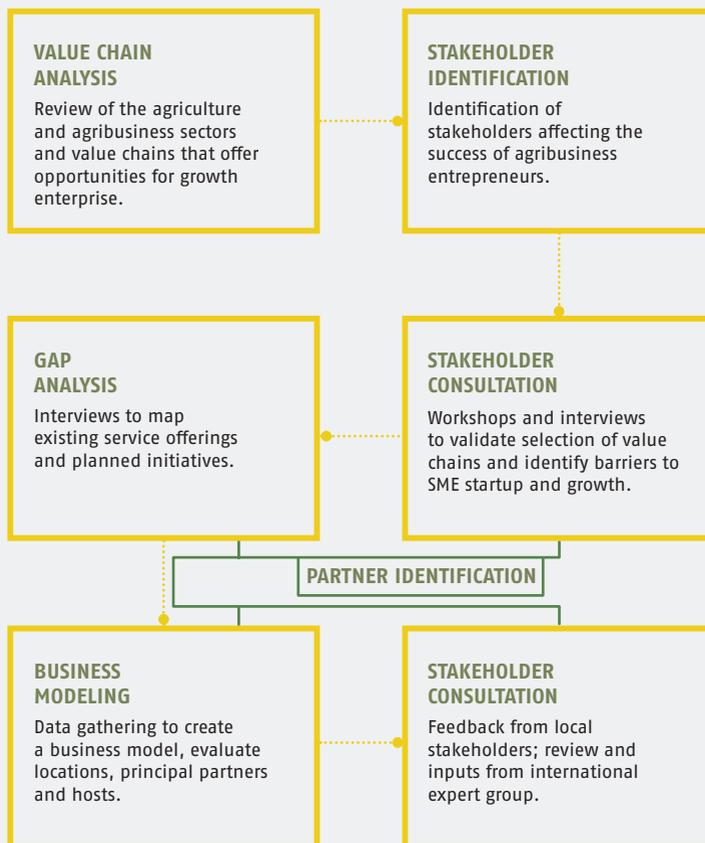
professionalisation of informal activities. Many women manage their own enterprises in rural areas, but their often informal and small-scale activities are poorly acknowledged and they face many barriers in raising the profile of their role, particularly in the absence of land access rights or representation in decision-making bodies. Incubators can facilitate their integration in new markets and help them build their businesses.

In Mauritius, the Food and Agricultural Research and Extension Institute serves as an incubator for small farm product processing businesses founded by women and young people. The incubation initiatives include 6 months of training on agripreneurship and starting a business. “Public support to help get through the early business years is also a good investment for the local economy,” says Rodolphe Carlier, economist at GRET, a French development NGO.

Economic viability, an obstacle

There are still too few national- or regional-scale studies to fully understand incubation. A

AGRICULTURAL INCUBATION STEPS



MARKET RISKS

RISK	DESCRIPTION	POTENTIAL MITIGATION
FINANCE	Ability to leverage market investors	<ul style="list-style-type: none"> • Include investors on board and investment committees • Continue to engage financial stakeholders
MARKET SUPPLY	Ecosystem of investable companies	Services respond to market gaps and affiliates should aid the identification of potential investments. Ability to offer financing in a market where it is lacking should be a major draw for the centre
MARKET DEMAND	Demand for products and services provided by companies in centre	Investment decisions will be based on clear demonstration of market demand and adapted as necessary
IMPROVING REGULATORY/ POLICY ENVIRONMENT	Business environment	The centre aims to play an active role in providing evidence and advocating the development of agribusiness regulations and policies
COMPETITION FROM OTHER INNOVATION CENTRES/ INITIATIVES	<ul style="list-style-type: none"> • Overlap with other initiatives • Change of focus of donor/ government spending • Additional innovation centres 	<ul style="list-style-type: none"> • Close coordination with existing initiatives and focus on centre visibility • Demonstrable support from stakeholders and local government

Viewpoint

study carried out under the InfoDev programme however, highlighted that incubators - despite their great diversity - have to overcome similar obstacles, especially in terms of economic viability. Customers, governmental organisations and donors are the main financial contributors: few incubators receive funding from private investors.

While some struggle to secure their income by favouring creditworthy projects, others approach foundations, universities or other public institutions for funding support, or to obtain free office space or expertise.

Nevertheless, international organisations' growing interest in public-private partnerships is promoting incubation, explains CIRAD's Rémi Kahane, who is also deputy manager of the Platform for Africa-Europe Partnership in Agricultural Research for Development which, amongst others, supports, via calls to consortia, the emergence of incubators. ■

Magali Reinert

Alex Ariho is coordinator of the Universities, Business and Research in Agricultural Innovation (UniBRAIN) facility. Launched in 2010, the UniBRAIN programme supports the setup of innovation centres in a joint undertaking between universities, research institutions and the private sector. UniBRAIN's first activity is the development of innovation and incubation centres.



Agribusiness: a fast track to job creation

Why do women and youth need specific agribusiness incubation?

In order to be able to grow and develop agricultural businesses, youth need to be trained in entrepreneurship, access to finance, and appropriate technologies and innovations. They also need an 'enabling ecosystem', which means an environment where private sector, research, government and universities operate as a true network. The majority of African women in agriculture work in basic production, which is less profitable than if they are able to access credit to acquire assets and equipment for value addition. Incubation's role is to engage women in the upper part of the value chain and help them organise in groups to enable access to finance and insurance. UniBRAIN incubation helps these 'clusters' access finance and some are now considered SMEs as a result of incubation programmes. For instance, Ghanaian farmer Brown, a participant in the CCLEAR livestock incubator dealing with grasscutters, has started a bulking service and buys grasscutters from 34 other fellow 'incubatees' to supply supermarkets.

Describe the main characteristics of successful incubation?

There are three important for success: firstly, proposed services must be demand-driven; the incubators must be self-sustaining; and finally, a successful business relies on passion. Initially, we wanted to work with agriculture graduates but 'incubatees' trained in ICTs can also have successful agricultural projects. Interest and passion is often more important than expertise.

What were the main outcomes of the African agribusiness incubation conference?

The conference gathered 450 participants from 38 African countries and 18 countries worldwide. A declaration was produced with four key points: asking governments to increase financing to harness jobs; to bridge the gap between African universities, research and the private sector; for the African private sector to develop financing and influence the research agenda; and, highlighting the priority to provide employment and support for youth, who are drivers of transformation.

www.africaain.org

STAFFING REQUIREMENTS

Establishing an agricultural incubation centre requires specific human resources that evolve over time as needed

POST	ROLE	YEAR 0	YEAR 1	YEAR 2	YEAR 3
CHIEF EXECUTIVE OFFICER	Overall management of the AIC. Front and back end oversight	1	1	1	1
FINANCIAL MANAGER	Oversee financial management of AIC and supports client decisions. Conduct due diligence on investments	1	1	1	1
ASSISTANT	Work with staff to support operations		1	1	1
TECHNICAL MANAGER	Manage all technical support and is a production specialist	1	1	1	1
TECHNICAL MANAGER (DIVERSE)	Manage all technical support; a production/ packaging specialist			1	1
BUSINESS ADVISORY MANAGER X 2	Provide business support to clients. Coach and mentor incubatees	1	1	2	2
SALES/DEAL MANAGER	Put deals together on behalf of clients. Strong sales experience and ability		1	1	1
	TOTAL:	(4)	(6)	(8)	(8)

Source: infographics on pages 15-17 are from the report, The Agribusiness Innovation Center of Tanzania Scaling Value Adding, Post-Harvest Processing Agribusinesses. 2012. InfoDev, Finance and Private Sector Development Department. Washington, DC: World Bank. For more information, please see www.infodev.org



From incubator to network

The Baguinéda agricultural training centre in Mali has one main ambition – to help youths start their own farming businesses. Over 5 years, the centre has trained dozens of farmers who have formed a dynamic network of agro-entrepreneurs.

In the Malian village of Sincoro-Coura, 48 km east of the capital Bamako, stands the Baguinéda agribusiness training centre (CFEAB) on 11 ha of land, distinguished from the typical mud brick houses of the region. The centre – founded in 2010 by AJA Mali, a local NGO devoted to youth training and support – works with young people wishing to set up their own farming businesses. Students benefit from 3 to 8 month theoretical and practical agricultural training courses, which include a common core curriculum (cross-disciplinary training on management, accounting, business plans and negotiating with banks) and a practical phase (baseline techniques for running different types of farms). After training, these young entrepreneurs join the network of small agricultural enterprises specialised in production, processing, marketing and equipment that has formed over the years.

Training for all

The CFEAB centre has become an alternative to the failing Malian educational system, according to Abdoulaye Ouattara, head of the incubator component of the agricultural value chain at AJA Mali. “There are many young people with a university education who are unable to find work in their field of study. We can offer them a short agricultural training course to help them start up their own businesses,” says Ouattara.

Prospective students have several training options available to them, focused on various specialisations, such as poultry farming, fish farming, market gardening, manufacturing agricultural products, processing and machinery. Most trainees are hosted at the centre during their course, which is subsidised by AJA Mali. Local villagers also benefit from training sessions for rural farmers, which are held periodically

and publicised through local radio stations.

CFEAB offers a second opportunity for unemployed university graduates, but also for many illiterate youths with little education. Since the centre was founded, villages in the rural district of Baguinéda – where the trainees gain practical experience – are regularly called on by Bréhima Traoré, head of CFEAB. “The aim is to get the villages to send us uneducated 18 to 40 year-olds in order to train them on agricultural entrepreneurship,” says Traoré.

Financing and market access

Most youths seeking the centre’s assistance have ideas but no funding. “We analyse candidates’ project ideas before recruiting them. Then, after 40 days to 9 months of training, depending on the selected field, we help them set up in that market,” says Ouattara. The centre can sometimes provide funding for projects, although financial resources are limited. AJA Mali, which manages the centre, receives support from the Department of International Cooperation of the Principality of Monaco, the NGO Crossroads International, and the Malian vocational training directorate.

To meet the financing needs of businesses it helps set up, AJA Mali negotiates with banks and microfinance institutions. Loan application files are drawn up by the NGO’s staff, who closely supervise young entrepreneurs until they have repaid the loan that has enabled them to launch their business.

As the centre is close to Mali’s capital, poultry farming, fish farming and market gardening are the most popular training courses. “I started with one hen house, but now I have more because of high market demand,” says Seydou Samaké, 38 years old, who has become completely self-sufficient since completing his training



The Baguinéda agricultural training centre provides trainees with agricultural equipment

at the centre 3 years ago. He says he does not regret changing direction after his law studies at a public university, which he feels was wasted time in retrospect. Samaké estimates that his current monthly income is over FCFA250,000 (€384), which he thinks would be unachievable with an office job in the current market.

One network, multiple benefits

CFEAB offers training in complementary fields so that start-up businesses can co-operate in a mutually-beneficial network environment. One of the advantages of a network is to overcome banks' unwillingness to lend to agricultural enterprises. Traditional lenders, like banks, consider agricultural start-ups risky investments as much of the Malian agricultural sector is dependent on unpredictable weather conditions. Ouattara adds, "Thanks to the complementarity and

solidarity of network members, these companies can help fund each other's activities by providing in-kind contributions."

The network now includes over 200 small agricultural and craft businesses that communicate regularly. Oumou Diallo, a market gardener, says that entrepreneurs remain in touch with AJA Mali, whose headquarters periodically serve as a meeting place for entrepreneurs to discuss potential service exchanges. Diallo has already fertilised her crops with livestock waste obtained from other network members, thus avoiding the need to purchase commercial fertiliser. "Other members have also used my products on credit, especially restaurant entrepreneurs. They have always paid me afterwards without problem," she says. ■

Soumaila Diarra

Back to the future

A nutritious and essential food crop in semi-arid regions of Africa, millets have been overlooked by the agri-business sector. However, some interesting initiatives are beginning to emerge.

Grown since prehistoric times, pearl millet (*Pennisetum glaucum*) is a key hardy, drought-resilient and valued staple across southern Africa and the Sahel. Many farmers rely on basic hand tools to process the crop into edible flour. This is laborious and time consuming, particularly for women bearing the brunt of other household tasks. Nevertheless, pearl millet is highly valued for its essential minerals (including magnesium, potassium and zinc) and nutrient content (including B complex vitamins, folic acid and the amino acid, methionine). Pearl millet is the most widely grown of all millets; others grown in Africa include finger, proso and foxtail millet. To produce high-quality pearl millet flour in Senegal, Compatible Technology International (CTI) has been working to design and produce manually-operated threshers and grinders for use in over 1,000 farming communities and cooperatives, involving nearly 14,000 women farmers. The thresher allows 1 kg of grain to be processed in 3 minutes, less than half the time taken manually. Food waste is also significantly reduced as 90% of the grain is retained. Significantly, CTI has used women's feedback in focus groups to redevelop the thresher, combining three parts into a single unit to better meet women's needs. CTI is collaborating with Senegalese manufacturer, SISMAR, to reach more farmers regionally; manufacturing the equipment in West Africa would reduce the price by up to 35% and provide local employment.



Millet returns to centre stage after being overlooked by the food industry

Market potential

In Namibia, pearl millet is the staple predominantly grown in the northern arid regions. Known as “mahangu”, the crop is made into porridge or fermented for a drink. Whilst there is a promising developing market for pearl millet in Namibia, the local value chain is constrained by farmers preferring to sell their crop only after a year, in case the subsequent crop fails. There are other issues; for instance the urban preference for fermented pearl millet is not cost-effective for many millers due to the additional drying required, explains Christof Brock, CEO of the Namibian Agronomic Board.

Around 600 subsistence farmers produce 1,000 t of pearl millet each year to sell to micro-millers. One larger (although still relatively small-scale) miller, Namib Mills Ltd., produces its own brand of pearl millet products in local supermarkets and operates collection centres for farmers to deliver their crop.

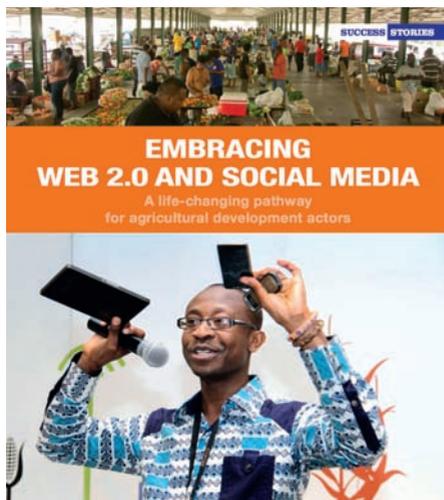
However, despite these developments, Brock states that 3,000 t of pearl millet has to be imported annually to meet national demand for millet products. In Tanzania,

finger millet is used to make traditional beer as well as in livestock feed, industrial brewing and in a variety of processed food products, particularly for urban populations. A privately owned milling company, Nyirefami Ltd., has become the market leader for industrially processed millet flour, working with at least 400 smallholder farmers.

Traditionally, farmers save seed from their own harvest. And, whilst some farmers have bought threshing equipment and can get paid a higher price for their crop, others cannot afford the machines and so receive a reduced price due to the lower quality from manual threshing. To guarantee consistent high-quality supply, Nyirefami tried a contract farming approach where it supplied millet seeds and threshing equipment to farmers. Although this initiative failed, due to farmers selling to other buyers, the threshing machine is now operated by an agent. Farmers pay a commission for their millet to be threshed and receive a guaranteed higher price from the processing company. ■

Susanna Cartmell-Thorp

Transforming lives



Embracing Web 2.0 and Social Media: A Life-Changing Pathway for Agricultural Development Actors

By C Pedrick
CTA, 2015; 68 pp.
ISSN 2212-6333
CTA no. **1816**
2 credit points

<http://publications.cta.int/en/publications/publication/1816/>

of the fruits of those efforts, presenting clear, impactful examples of how Web 2.0 and social media have contributed to a number of areas: improved policy dialogue and advocacy; value chain development; and the provision of information services. One highlight is how, in the Pacific Island State of Samoa, an NGO is using social media to make visible the valuable work of traditional women weavers of ceremonial mats. Another example features a Madagascan agronomist who is using social media and Web 2.0 to develop knowledge about apiculture – which has resulted in international exchanges and a Fairtrade beekeeping association promising to develop local honey value chains. What is clear is that ICTs have allowed development actors to link better with their peers and stakeholders, strengthen networks, access valuable information, produce and publish their own content and share other's content. This report is strong evidence for promoting ICTs in rural areas of ACP countries and is motivating reading for those involved throughout agricultural development.

 A booklet of inspiring testimonies from ACP countries on how ICTs have transformed people in agriculture's lives. As this report states, "It would be hard to exaggerate the speed at which technological innovation is moving." For example, farmers are promoting their products on Facebook; extension services are using social media to reach out to clients; and NGOs are using social media tools to launch successful advocacy campaigns. Over the period 2010-2014, in partnership with selected institutions, CTA has supported more than 120 face-to-face training events in Web 2.0 and social media in 37 ACP countries, training over 3,500 individuals. This booklet captures some

Agrifood systems



Agricultural Growth in West Africa: Market and Policy Drivers

Edited by F Hollinger & J M Staatz
FAO and AfDB, 2015; 407 pp.
ISBN 978-92-5-108700-8
Downloadable as a pdf file from: <http://tinyurl.com/np75nbb>

West African agriculture is at a turning point, thanks to a combination of population growth, urbanisation, dietary diversification and higher output prices in the region. This comprehensive study presents a strong empirical foundation to inform ongoing policy reforms and investment choices nationally and regionally. Importantly, it argues for taking into consideration diversity, ensuring differentiated sets of policies are developed from farming to agro-processing to retailing. Structured in four parts, research is presented on the drivers and trends of transforming agrifood systems; demand and consumption trends; agrifood systems' market responses; and policies for agrifood systems development in West Africa. The report argues that three things are needed to achieve sustainable agricultural growth in West Africa: an improved policy environment; critical public-sector investments in infrastructure, extension and research; and strengthened policy implementation. This is essential reading for practitioners and policymakers interested in West African agriculture, as well as farmers, scientists and other actors involved in this growing sector.

▼ Women

This vital report highlights major constraints to women's full inclusion in the agricultural economy: time limitations due to domestic roles; lack of access to assets and financing; limited training; and lack of gender inclusion in government policies. Reviewing women's participation in cassava, cocoa, coffee and cotton value chains, the opportunities for women to enhance their skills and play more significant roles alongside men provides encouraging reading.

Economic Empowerment of Women through Equitable Participation in Agricultural Value Chains

By AfDB
AFDB; 2015; 148 pp.
Downloadable as a PDF file from: <http://tinyurl.com/odgjbux>

▼ Labour-saving

Based on a broad literature review, this paper – like the AfDB report (see left) – also highlights the constraints to women's agricultural productivity with regards to time and access to technologies, services and infrastructure. However, it also details available labour-saving technologies, practices and services that can support women to better address the demands on women's time and improve their well-being.

Running Out of Time: The Reduction of Women's Work Burden in Agricultural Production

By FAO
FAO; 2015; 46 pp.
ISBN 978-92-5-108810-4
Downloadable as a PDF file from: <http://tinyurl.com/od5dywh>

▼ Water

Ensuring food security under scarce water resources given increasing competition for water is a serious challenge. This policy-oriented report from the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security presents a synthesis of available evidence on the multiple relations between water, food security and nutrition from global to household levels.

Water for Food Security and Nutrition: A Report by the High Level Panel of Experts on Food Security and Nutrition

By HPLE
HPLE; 2015; 128 pp.
Downloadable as a PDF file from: <http://tinyurl.com/obdtr7v>

Global relations



Trade in the Service of Sustainable Development: Linking Trade to Labour Rights and Environmental Standards

By O de Schutter
Hart Publishing, 2015; 224 pp.
ISBN 978-1-78225-715-8
£45 • €63
Hart Publishing Ltd
16C Worcester Place
Oxford, OX1 2JW
<http://tinyurl.com/qcna8ce>

■ International trade has boomed over recent decades allowing developing economies to ‘catch up’ with richer countries, largely because of strong-export led growth. However, discussions on trade policy commonly refer only to economic objectives without considering other factors such as inflation or taxes. Whilst expansion in trade volumes might be considered ‘successful’ (in relation to GNP per capital), in terms of sustainable development, these figures do not capture the whole context or inequalities within countries. The book interestingly questions the relationship between trade and labour rights, environmental standards, sanctions, the fragmentation of ‘global’ trade initiatives and border tax adjustments, amongst other interrelated issues. A compelling call to initiate a ‘race to the top’ whereby trade policy targets companies, rather than countries. This means considering how developing and developed economies have to face social, environmental and tax dumping created by the strategies of location of transnational corporations, motivated by short-term financial profits.

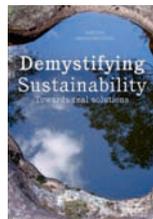
▼ Plant health

This working paper is the end result of a series of workshops and studies to examine the Plantwise approach which was established in Uganda in 2011. Opinions on the approach are provided by plant doctors, local government staff, local partners and farmers to identify successes, build on strengths and discuss the challenges that remain in providing relevant plant health advice to farmers.

Listening to the Silent Patient: Uganda's Journey Towards Institutionalizing Inclusive Plant Health Services

By R Mur et al.
CABI, 2015; 224 pp.
Downloadable as a PDF file from:
<http://tinyurl.com/odepyo4>

Sustainable development



Demystifying sustainability: towards real solutions

By H Washington
Routledge, 2015; 222 pp.
ISBN 978-1-138-812-69-7
£31.99 • €45
Routledge
2 Park Square
Milton Park
Abingdon, Oxon
OX14 4RN
www.routledge.com

■ This accessible and engaging read breaks down academic jargon to clearly explain what sustainability is; and how the key issues, questions and values involved in ‘sustainable development’ can be thought about and understood. An interesting social critique of how society’s worldview and ethics drive unsustainability, the author argues that human denial of very real environmental problems prevents change: “Denial and sustainability are mutually exclusive, if you have one then you don’t have the other.” The book places emphasis on the role of technology in a truly sustainable future, in particular renewable energies such as wind power and solar. The nine solutions of where to start – such as “Reuse and recycle products. If possible, grow your own food. Argue against rampant consumerism, concentrate on well-being rather than more ‘stuff’. Consume less, shop less and live more!” are idealistic but nevertheless achievable starting points. Essential reading for contextualising the social science of ‘sustainability.’

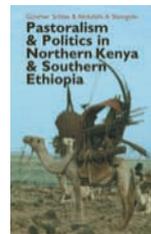
▼ Ethical responses

As the most significant moral and environmental issue of modern times, this report seeks to help deepen ethical reflection on national responses to climate change by developing a publicly available record on national compliance with ethical obligations for climate change. This is a timely publication in light of the 2015 Paris climate negotiations which, once again, has drawn attention to the actions and inactions of states worldwide.

Ethics and Climate Change: a Study of National Commitment

Edited by D Brown & P Taylor
IUCN, 2015; 117 pp.
ISBN 978-2-8317-1709-8
Downloadable as a PDF file from:
<http://tinyurl.com/p9979yd>

Inclusive policies



Pastoralism and Politics in Northern Kenya and Southern Ethiopia

James Currey, 2015; 191 pp.
ISBN 978-1-84701-036-0
£17.99 • €24.40
James Currey (and imprint of Boydell & Brewer Ltd)
PO Box 9, Woodbridge, Suffolk
IP12 3DF
www.jamescurrey.com

■ This in-depth study, based on field research over 34 years, focuses on pastoralism, politics, policies and development in northern Kenya and southern Ethiopia. The authors present a detailed view of recent events of ethnic violence in Kenya and analyse how local patterns of conflict among pastoralists were influenced by both national and regional politics, which have encouraged an increased tendency of territorialised ethnicity. The authors argue that mainstream media and development often misrepresents pastoralists as backwards and primitive, which has a detrimental, marginalising and impoverishing impact. The book therefore proposes ways of escaping the ‘ethnic trap’ and revitalising a mobile livestock economy in a region where other forms of land use are impossible, or much less effective. Amidst climatic risks and land restrictions, pastoralist production will face increasing difficulties in the future, not least immobility. However, inclusion of pastoralists in shaping policy and debate could enable pastoralists to lead productive lives for their own benefits and the overall economy.

▼ Fisheries

Barriers and drivers to certification for small-scale developing world fisheries, as well as the environmental and socio-economic impacts of marine stewardship certification (MSC) are highlighted in this report. Future research needed to understand what factors will allow more fisheries to overcome the challenges of achieving MSC certification is also presented.

What's the Catch? Lessons from and Prospects for Marine Stewardship Council (MSC) Certification in Developing Countries

By E Blackmore et al.
IIED, 2015; 112 pp.
ISBN 978-1-78431-200-8
Downloadable as a PDF file from:
<http://tinyurl.com/q88xbk>

Soil degradation



Land-Use Change Impacts on Soil Processes: Tropical and Savannah Ecosystems
 Edited by F Q Brearley & A D Thomas
 CABI, 2015; pp.
 ISBN 978-1-78064-210-9
 £67.50 • €90.00
 CABI
 Nosworthy Way
 Wallingford
 Oxfordshire
 OX10 8DE
[Http://cabi.org](http://cabi.org)

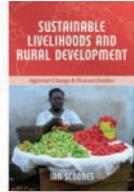
■ “Soils are the thinnest, outermost layer of the Earth’s land surface... upon which humans are wholly dependent. It takes thousands of years to develop fertile, healthy soil, but poor management can lead to rapid and serious degradation,” acknowledge Brearley and Thomas, the editors of this comprehensive book. Soils’ importance to human well-being – and the effect that humans have on soil health - is hard to ignore with the broad range of case studies from across the tropics presenting stark evidence. By examining the effects of land-use changes on soil processes in savannah and tropical environments, contributors shed light on key topics, which can be grouped into the following themes: the effects of land-use change on soil microbial populations; urban soils, agriculture and soil contamination; and land use effects on soil carbon and soil organic matter. This book helps to raise awareness of soils as a key component of the environment and suggests future research directions to galvanise action in support of preserving this vital resource.

▼ Global agriculture

The latest Agricultural Outlook jointly produced by the Organisation for Economic Co-operation and Development (OECD) and FAO provides annual assessments for the coming decade for major agricultural commodities, biofuel and fish. An overview of global agriculture and its prospects are included in the report along with some of the challenges facing the sector. An in-depth analysis on Brazilian agriculture is also featured.

OECD-FAO Agricultural Outlook 2015-2024
 By OECD/FAO
 OECD/FAO; 2015; 148 pp.
 ISBN 978-92-64-23190-0
 Downloadable as a PDF file from:
<http://tinyurl.com/q2ggp6e>

Accessing resources



Sustainable Livelihoods and Rural Development
 By I Scoones
 Practical Action, 2015; pp.
 ISBN 978-1-85339-875-9
 £10.40 • €15
 Practical Action Publishing Ltd
 The Schumacher Centre
 Rugby, Warwickshire
 CV23 9QZ
<http://developmentbookshop.com>

■ A unique and analytical look at the relationships between sustainability and livelihoods. As Scoones cites, according to researchers Chambers and Conway, “A livelihood is sustainable when it can cope with and recover from shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base.” This book emphasises the role of social institutions (such as family and religion) and how policy is made, as well as issues of identity and gender in sustainable livelihoods approaches. An overview of recent debates is provided, analysed within a wider political economy of environmental and agrarian change. Scoones looks at poverty and wellbeing as a central concern of analysis, and also how institutions control access to livelihood resources, for example how marriage and customary inheritance affect who has access to land. Together, chapters suggest new ways of conceptualising rural and agricultural issues.

▼ PPPPs

Four case studies on public-private-producer partnerships (PPPPs) in agricultural value chains, including Ghana (maize), Indonesia (cocoa), Rwanda (tea) and Uganda (oil palm) are reviewed in this report. Lessons learned from the research are highlighted in order to understand how PPPPs can be better designed and implemented to achieve sustainable increases in income for smallholder farmers.

Brokering Development: Enabling Factors for Public-Private-Producer Partnerships in Agricultural Value Chains
 By J Thorpe & M Maestre
 IFAD/IDS; 2015; 56 pp.
 Downloadable as a PDF file from:
<http://tinyurl.com/nuythrz>
 ISBN 978-1-78431-200-8
 Downloadable as a PDF file from:
<http://tinyurl.com/q88xxbk>

Climate change



Politics of Green Transformations
 Edited by I Scoones, M Leach & P Newell
 Routledge, 2015; 220 pp.
 ISBN 978-1-138-79290-6
 £25.49 - €35.85
 For Routledge’s address, see p22
www.routledge.com

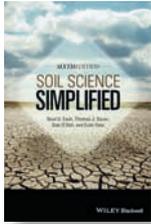
■ This book couldn’t have been published at a better time: ‘Green transformations’ are taking centre stage in the wake of the SDGs and COP21 global negotiations. Simply put, climate change refers to the fact that each of the last three decades on Earth has been successively warmer: “A continuation of this trend would make human life very difficult in many parts of our planet.” Chapters shed light on the concept of ‘green transformations’ and the various politics surrounding it, questioning what is green and what constitutes a green transformation? Scoones argues that interventions must be both ‘top-down’, involving elite alliances between states and businesses, but also bottom-up, pushed by grassroots innovators and entrepreneurs, part of wider mobilisations among civil society. Examples such as whether invoking science in sustainability debates is a help or a hindrance demonstrate how context matters in shaping much-needed pathways to sustainability.

▼ Research development

This paper investigates the impact of increased investment in agricultural R&D by comparing a baseline scenario of business as usual with three alternative increased streams of public investment aimed at achieving a 2% annual growth in global agricultural productivity by 2030. Indicators include: yields, crop area, and production of major crop and livestock commodities. Whilst costs and benefits vary across the scenarios, the authors conclude that gradual 2% growth is the more achievable investment strategy.

Impact of Investment in Agricultural Research and Development and Agricultural Productivity
 By N Perez & M Rosegrant
 IFPRI; 2015; 40 pp.
 Downloadable as a PDF file from:
<http://tinyurl.com/ogb0t3j>

Beginners guide



Soil Science Simplified, Sixth Edition
 Edited by N S Eash, T J Sauer, D O'Dell and E Odoi
 Wiley-Blackwell, 2015; 272 pp.
 ISBN 978-1-118-54069-5
 £36.99 • €49.99
 Wiley-Blackwell
 The Atrium, Southern Gate
 Chichester
 PO19 8SQ
<http://eu.wiley.com>

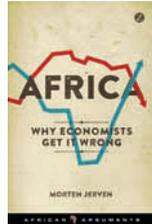
■ Soil has recently been in the spotlight, in part because of the UN-declared International Year of Soils 2015. This user-friendly and straight-forward introductory resource book provides useful insights into the many aspects of soil science, including: conservation; the carbon cycle; decomposition; irrigation and runoff; how plants obtain water from soils; and, soil fertility – of concern in many rural regions of ACP countries. To date, soil science has been largely directed toward agricultural production: farming remains at the forefront of food production and is, more than ever, concerned with soil and its properties. This textbook begins with explaining what soil is and how it differs worldwide, why it's important, the many ways soils are used, and the biological processes it is a necessary part of. Throughout, clear illustrations build on the well-defined chapters making it ideal for teaching or self-learning. A must-read for students, professionals and anyone wishing to learn more about just how critical soil is to life and the environment.

▼ Bottom-up finance

The authors of this succinct brief state that poor households need to be empowered to engage in climate finance discussions and to shift the existing debate which has traditionally been top-down focusing mainly on international climate finance. The reason is that the largest source of climate-related expenditure on dealing and adapting to climate change comes from poor households; those who need climate finance the most need to be at the centre of future discussions and initiatives.

Climate Finance for Those Who Need it Most
 By N Rai, P Steele & N Kaur
 IIED; 2015; 6 pp.
 Downloadable as a PDF file from:
<http://tinyurl.com/pqmykzp>

Cyclical growth



Africa: Why Economists Get It Wrong
 By M Jerven
 Zed Books, 2015; 176 pp.
 ISBN 978-1-78360-132-5
 £14.99 • €20
 Zed Books Ltd
 7 Cynthia Street
 London
 N1 9JF, UK
<http://zedbooks.co.uk>

■ Economists continue to get Africa wrong; how and why is the topic of this readable book. Africa's rising potential is now widely talked about; a contrast to negative stereotypes of 'hopelessness' rampant in the mainstream media a few years ago. Why? According to Jerven, this is because African economic data is either bad quality or largely misunderstood, misread and misrepresented. Instead, African growth should be understood as cyclical or episodic as opposed to 'failed'. Opposing international political narratives, for example whether policy should liberalise trade or whether it should advocate for state intervention, have also effected how data has been collected and used. The book is a refreshing and provocative challenge to mainstream accounts of African economic history since the 1950s. Further analysis on prevailing inequality and hunger statistics would strengthen Jerven's points on the need to critically re-examine historically misread African economic data. Still, the author asks necessary questions which challenge questionable statistics rather than just citing them.

▼ Data revolution

The advent of so-called 'big data' offers huge potential – but so far, it is almost untapped. According to estimates, nearly one-quarter of all data in the digital universe might be useful. However, just 0.5% of this potentially useful data is analysed. These 10 simple infographics reveal the gaps and the opportunities for the data revolution to impact on development.

10 Things to Know About Development and the Data Revolution
 By E Samman
 ODI; 2015; 13 pp.
 Downloadable as a PDF file from:
<http://tinyurl.com/nfl26jj>

TO OBTAIN PUBLICATIONS

Publications marked @ may be downloaded from the following website:
<http://publications.cta.int>

Titles marked with the logo can be obtained as follows:

If you are a subscriber to CTA publications:
 Use one of these options.

- If you have an account with <http://publications.cta.int>, go on-line and select your books depending on the credit points you have, then click on 'Add to shopping cart' and 'Proceed to checkout'.
- If you do not have Internet access, you can continue using the order form supplied by CTA.

If you are an ACP organisation involved in agriculture but are not yet a subscriber to CTA publications, you can:

Request a subscription online at <http://publications.cta.int>, by email to pdsorders@cta.int or by mail to CTA - PDS, PO Box 173, 6700 AD Wageningen, the Netherlands.

Organisations that subscribe in 2016 will receive 200 credit points. Those already subscribed will receive 200 credit points plus half of the amount of credit points spent in 2015, i.e. a maximum of 400 credit points.

If you are not an ACP organisation involved in agriculture:

You can either buy the publications from the publisher or in a book shop. Alternatively you can download certain titles on the website <http://publications.cta.int>.

More than half of our publications are downloadable free of charge.

Titles marked with the symbol ■ can be purchased from the publishers cited or from bookstores.

CTA's strategic vision: for greater impact and results in African Caribbean and Pacific (ACP) countries

As all international organisations, CTA assesses its strategies on a regular basis and redirects its activities, taking into account the needs of its partners and beneficiaries. Michael Hailu, CTA director, describes how the Centre has made a difference over the past 5 years and what new strategic options have been chosen for the next 5 years.



1 *What have been CTA's main achievements over the last 5 years?*

Over the last 5 years, CTA has undergone a major organisational change, building its competencies in its priority strategic areas – policy, value chain development and knowledge management. By doing so, CTA has changed from being an organisation that was largely seen as a publisher and distributor of books to a technically-competent convenor, facilitator and capacity builder in these areas. We have thoroughly revamped our internal processes and systems to improve the efficiency and effectiveness of our services and our support to beneficiaries. CTA has also enhanced the quality and depth of its partnerships with key institutions in ACP countries, including regional policy organs such as the African Union Commission,

farmers' organisations, government agencies, private sector groups and research bodies. Its programmes targeting youth and women have been successful in opening opportunities for these groups and building their capacity. For instance, CTA has trained more than 3,000 people, mostly young professionals, in Web 2.0 and social media. Many organisations across the ACP are now organising their own Web 2.0 and social media training courses using CTA's methodology and training kits.

Over the last 3-4 years, CTA has substantially increased its support to producer organisations, helping them to raise their profile, to reach out to their members and to open opportunities in new markets. CTA has also initiated new programmes in areas such as value chain finance, regional trade, climate-smart agriculture and agro-tourism which are already bearing fruit. In all its work, CTA has been able to create space for its key constituencies – farmers' organisations, youth, women, local communities and policymakers – to share their experiences and perspectives in addressing common problems. CTA has made significant strides over the last 5 years that position it as an important player in transforming agriculture in ACP countries as an engine for inclusive growth.

2 *The centre is about to implement its 2016–2020 Strategic Plan. Are there new areas CTA is going to concentrate on? If so, could you explain why and how?*

Yes indeed, CTA is in the process of finalising its 2016–2020 Strategic Plan. We are not planning a major shift from our current strategic plan because the path we defined 5 years ago still remains valid and resonates well with our stakeholders.

However, the new strategy will take into account internal and external environment developments and lessons we have learned over the last 5 years. Primarily, the strategy will focus more on results and impact. It will also give greater priority to working with the private sector, through support to agribusiness development that will open market opportunities for smallholder producers and small and medium-sized enterprises in ACP countries. We will also increase our work in areas such as climate-smart agriculture and nutrition-sensitive agriculture. These are in response to greater challenges the ACP regions are facing in the form of climate change and malnutrition – both micronutrient deficiency and obesity. In all our work, we will leverage our partnership with a range of institutions working on similar issues.

3 *How do you see CTA's future 5 years from now?*

The external environment is changing rapidly. New, unexpected events with profound socio-political impact are manifesting themselves more frequently than in the past. We cannot take anything for granted anymore. Such uncertainty will force organisations to become more adaptive and prepare themselves for perpetual change.

While the 2016–2020 strategy will set the broad parameters for CTA's work in the next 5 years, we know that we will have to adapt it continually to remain relevant and responsive to the needs of our stakeholders. CTA is well positioned to play a more proactive role in the ACP-EU partnership to advance sustainable agriculture, agribusiness development, youth employment and inclusive growth. In the next 5 years, CTA will work for greater impact, with more effective partnerships and diversified sources of funding.

Reader services

Write to *Spore*

CTA - *Spore* redaction
PO Box 380
6700 AJ Wageningen
The Netherlands
Fax: +31 317 460067
Email: spore@cta.int

Subscribe to *Spore*

SUBSCRIPTIONS FOR THE PRINTED VERSION ARE:

- Free for organisations and individuals involved in rural development and residing in an ACP country (African, Caribbean and Pacific):

- via <http://publications.cta.int> by clicking on 'Apply for a free subscription'

- by post (PO Box 173, 6700 AD Wageningen, the Netherlands) or send an email to spore@cta.int

- for other individuals and organisations:

€36 annually (6 issues) from:
Earthprint Ltd
Cavendish Road
Cavendish House
Stevenage, Hertfordshire
SG1 2EQ
United Kingdom
E-mail: CTA@earthprint.co.uk

SUBSCRIBE TO *SPORE* E-NOUANCEMENT

Subscribe to the free *Spore* email summary (90 Kb) at:

<http://spore.cta.int>

or send a blank email to

join-spore-en@lists.cta.int

For text-only:

join-spore-text-en@lists.cta.int

Further information

available from: spore@cta.int

READ *SPORE* ON-LINE

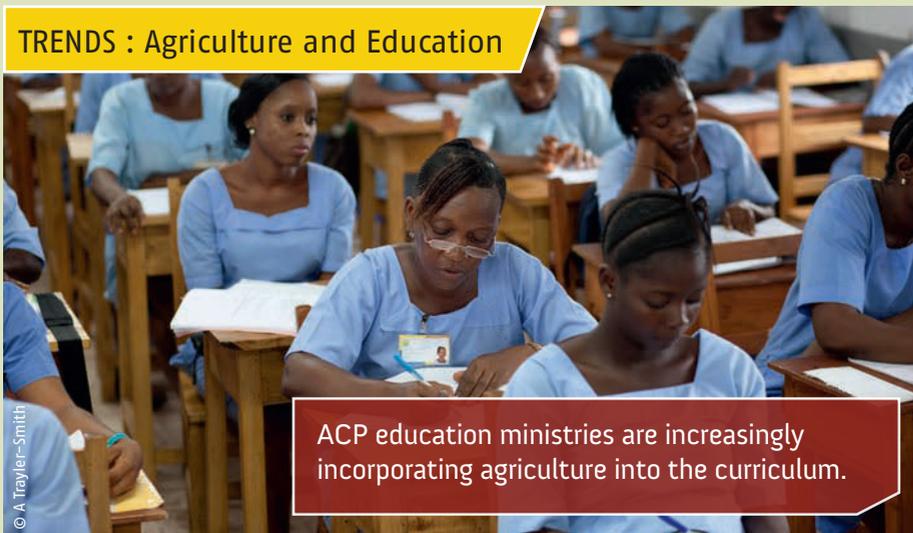
- Internet: see spore.cta.int

Reproduce *Spore*

- Articles in *Spore* can be freely reproduced for non-commercial use, if credited as coming from *Spore*. Please send a copy to the editors.

- Reproduction for commercial use requires prior permission.

TRENDS : Agriculture and Education



© A Traylor-Smith

ACP education ministries are increasingly incorporating agriculture into the curriculum.

DOSSIER : Connected Farmers



© R Burgler

Establishing the required connections for agribusiness.

VALUE CHAINS : Inclusion



© N Palmer

Creating an enabling environment for small-scale producers.



RURAL DEVELOPMENT FOR A BETTER WORLD



Brussels Development Briefings

Sensitising the development community
on current and emerging ACP-EU policy
relating to rural development issues

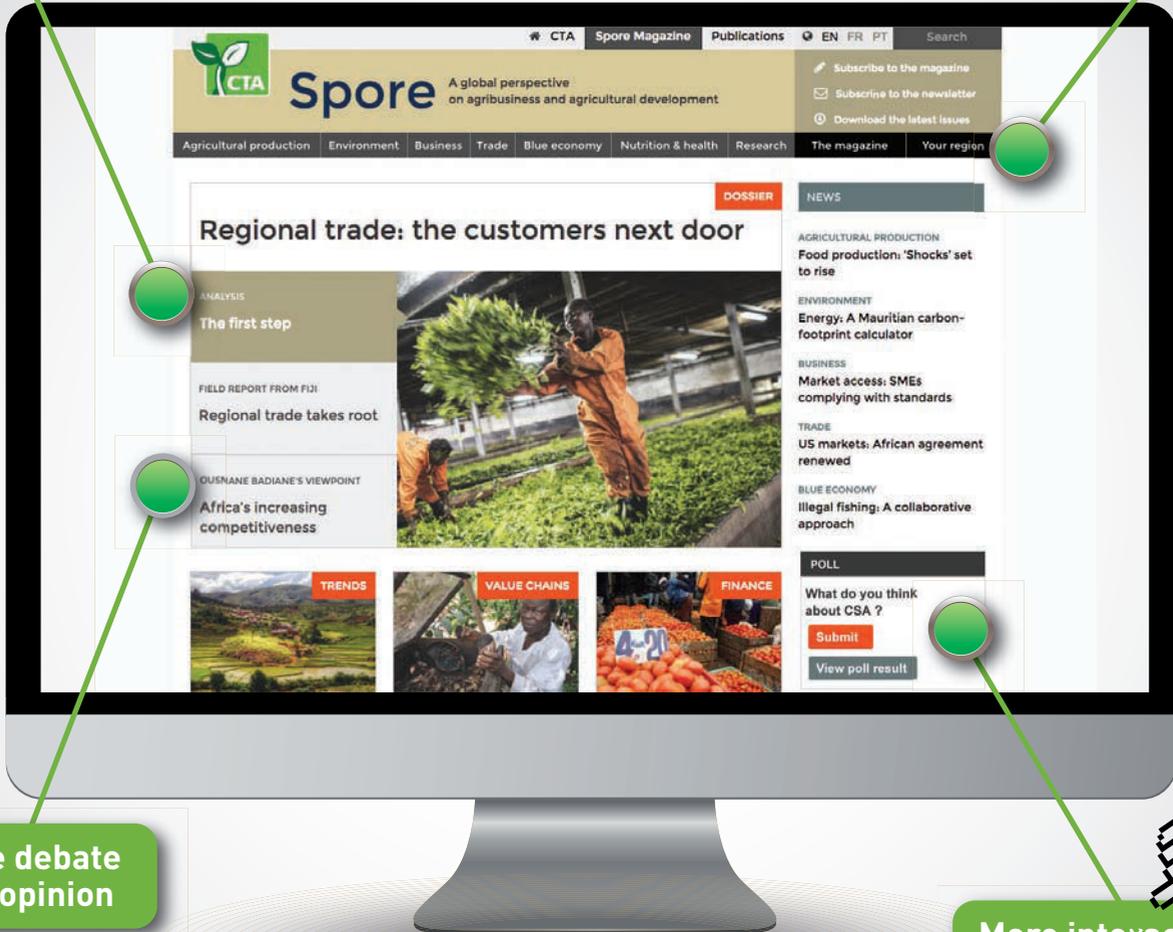
www.brusselsbriefings.net



DISCOVER THE NEW SPORE

More expert analysis

More on
your region



More debate
and opinion

More interactivity

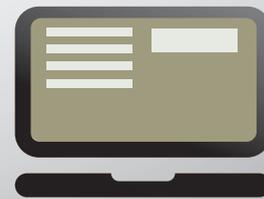
Get the latest on agricultural development with just one click



SMARTPHONE



TABLET



COMPUTER



www.spore.cta.int