



HORIZONS

THE MAGAZINE OF COLEACP AND ITS PIP AND EDES PROGRAMMES - NO. 4 MARCH 2015

Research & Development:

Focus on sustainability

PAGES 2-13

Training

COLEACP transfers
its know-how

PAGES 16-19

Organic

A commercial asset

PAGES 22-25



COLEACP

As green as possible



Agriculture in ACP countries is developing against an ever-changing backdrop. First, with regard to land: the African population will double between now and 2050, which means that increased productivity will be needed to forestall food safety problems. Second, in relation to the sky: climate change means that adjustments are needed to deal with weather patterns that are much more severe than in temperate parts of the world, including less well marked dry and wet seasons.

To cope with these changes, ACP countries need to rethink their agricultural practices, increase yields, overcome climate uncertainties, increase resistance to diseases and pests, improve the nutritional value of produce, and optimise farming income. Many experts are calling for a new green revolution and advocating sustainable intensification.

Thus agricultural systems must develop intensification practices that are ecological, such as polyculture, green fertilisation and agro-forestry. These practices boost the performance of ecological agricultural systems and consequently reduce the consumption of chemical fertilisers, water, pesticides and energy. Such systems prove more sustainable and effective in the long term than the conventional intensification models, which have the disadvantage of a loss of biodiversity and poor ecosystem fertility.

COLEACP believes that confidence must be placed in farmers and their skills by supporting them in combining their agricultural traditions with ecological agricultural practices and new technologies.

In other words – a grandparent's know-how combined with his grandchildren's skills with a smartphone.

COLEACP's Research and Development Department is working towards this end by providing ACP rural communities with both agronomic and technological solutions, enabling them to establish an agricultural model that conserves resources and supports the three pillars of sustainable development – planet, people and profit.

COLEACP's ultimate objective is to contribute to evolution towards an agriculture that is more attractive for young people, so that they can see a decent future on their family farms, with an agriculture system that helps them to keep pace with progress; to move from the informal sector to the formal economy; and to feed their families, build their homes and send their children to school.

A handwritten signature in black ink, appearing to read 'Guy Stinglhamber'. The signature is stylized and fluid.

Guy Stinglhamber
Delegate General of COLEACP
Director of the PIP and EDES programmes

SUMMARY



FEATURE RESEARCH AND DEVELOPMENT PAGES 2-3

Research: back to the future

FEATURE RESEARCH AND DEVELOPMENT PAGES 4-13

Watching over the ACP agricultural sectors



NEWS PAGES 14-15

Neven Mimica, the new Commissioner for Development

SECTOR FOCUS PAGES 16-19

Training: sharing to ensure sustainability

SECTOR FOCUS: IN BRIEF PAGE 20

Fruit flies: avoiding the export ban

Caribbean and Pacific: development of activities for the benefit of SIDS

EVENTS PAGE 21



MARKET FOCUS: ORGANIC PAGES 22-25

Organic products: a commercial asset, but a narrow market



PORTRAIT: KARAMOKO DIARRA PAGES 26-27

Karamoko Diarra: scientific research and natural resilience

WORDS PAGES 28-29

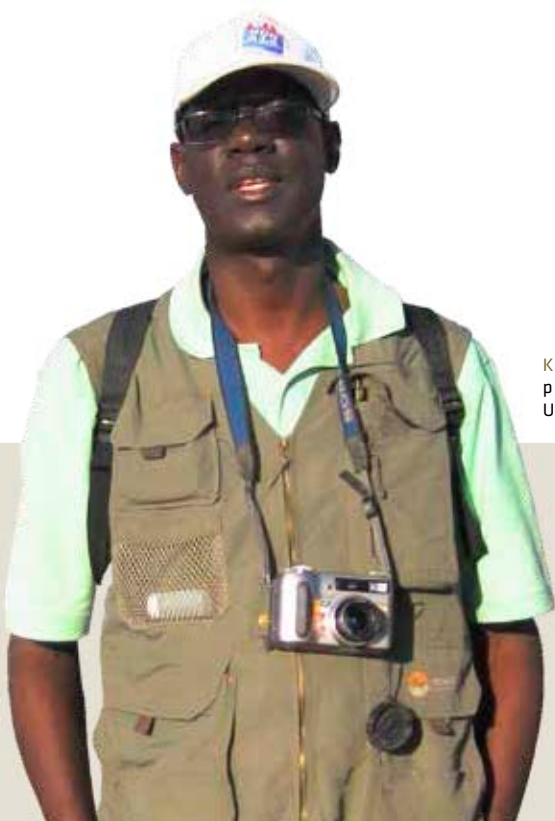


KARAMOKO DIARRA, professor at Cheikh Anta Diop University in Dakar

COLEACP is a non-profit interprofessional association that works for the development of sustainable agriculture. At the request of the Group of ACP States, COLEACP manages the PIP and EDES cooperation programmes. PIP and EDES are funded by the European Union. This publication was created with the help of the EU. The contents of this publication are the sole responsibility of PIP, EDES and COLEACP and can in no way be taken to reflect the views of the European Union. Photos: © COLEACP, © Aurélien Chauvaud, © Chris Saunders, © iStockphoto, © Fotolia, © Reporters, © Vincent Duterne



This document is printed on 100% recycled paper with environmentally friendly ink.





Research: back to the future

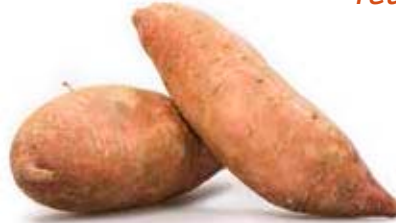
COLEACP's research and development strategy aims to make advances in agronomy available to farmers and agricultural businesses in ACP countries. This strategy is constantly expanding to meet the challenges of sustainable intensification on a human scale.

Most of COLEACP's R&D projects aim to identify means to fight against pests and diseases while respecting good agricultural practices. They strive to prevent damage with a minimum impact on the environment and without compromising the health of either workers or consumers.





Sustainable intensification is an approach that leads to 'producing more with less' by improving the use of inputs, saving land and water resources, reducing environmental impact, minimising greenhouse gas emissions and enhancing food resilience.



Research and development (R&D) is an essential part of COLEACP's activity. Its mission is primarily to find solutions to cultivation problems identified by farmers in developing countries. So far, this support has mainly involved food safety, in line with the commitment made at the launch of the PIP2 programme to support *'all measures technically and economically accessible to ACP producers to provide fruits and vegetables free of pesticide residue'*.

Most of COLEACP's R&D projects aim to identify means of fighting pests and diseases while respecting good agricultural practices. They strive to prevent damage, with a minimum impact on the environment and without compromising the health of either workers or consumers.

'Food security will remain an important part of our R&D work', explains COLEACP Delegate General Guy Stinglhamber, 'but we will expand our areas of action. Agriculture must become greener. As part of our new programmes, we expect to focus our research projects on support for practices that respect the environment, fostering natural intensification in production structures on a human scale.'

Sustainable intensification

COLEACP echoes the conclusions of the Montpellier Panel, a group of international experts that spent three years developing guidelines for European support for agriculture and food security in Africa.

Its final report¹ recommended the wide-spread of sustainable intensification and included specific supporting examples. This approach leads to 'producing more with less' by improving the use of inputs, saving land and water resources, reducing environmental impact, minimising greenhouse gas emissions and enhancing food resilience.

Sustainable intensification implies innovation. The resulting practices include ecological methods such as crop associations, conservation farming, integrated pest management and organic farming. They also entail improving the gene pool of plants to develop productivity, nutritional value, and resistance to pests and climate conditions.

'We need both more agro-ecology and more technical expertise', Stinglhamber says. 'We should rely more on traditional and ancestral agricultural methods, enriched by agricultural progress and linked to the optimal use of modern technologies. Small hi-tech planters will be able to use their know-how in a farm on a human scale and use their smartphone, for example, to diagnose a disease and get information on how to fight it. This is the direction in which our R&D support is heading.'

COLEACP's agricultural research is conducted in direct relation to farmers' socio-economic needs and communities' own agricultural traditions. All this is done with a single goal in mind: to improve the quality, yield and income gained from agricultural production in order to enable small-scale producers to move seamlessly from the informal sector to the formal economy.

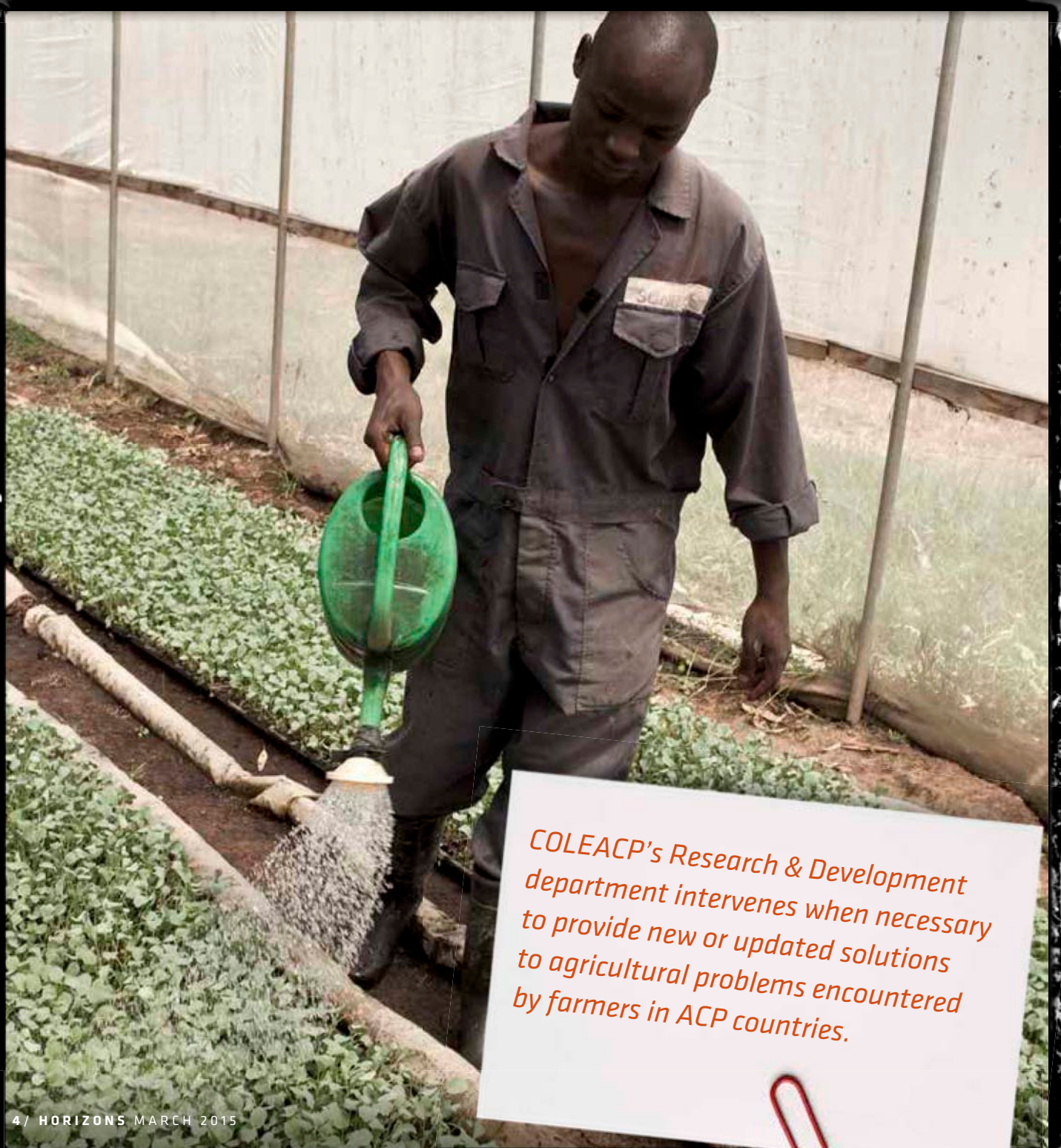
1. Montpellier Panel (2013) *Sustainable Intensification: A New Paradigm for African Agriculture*. London: Agriculture for Impact. <http://ag4impact.org/publications/montpellier-panel-report2013/>



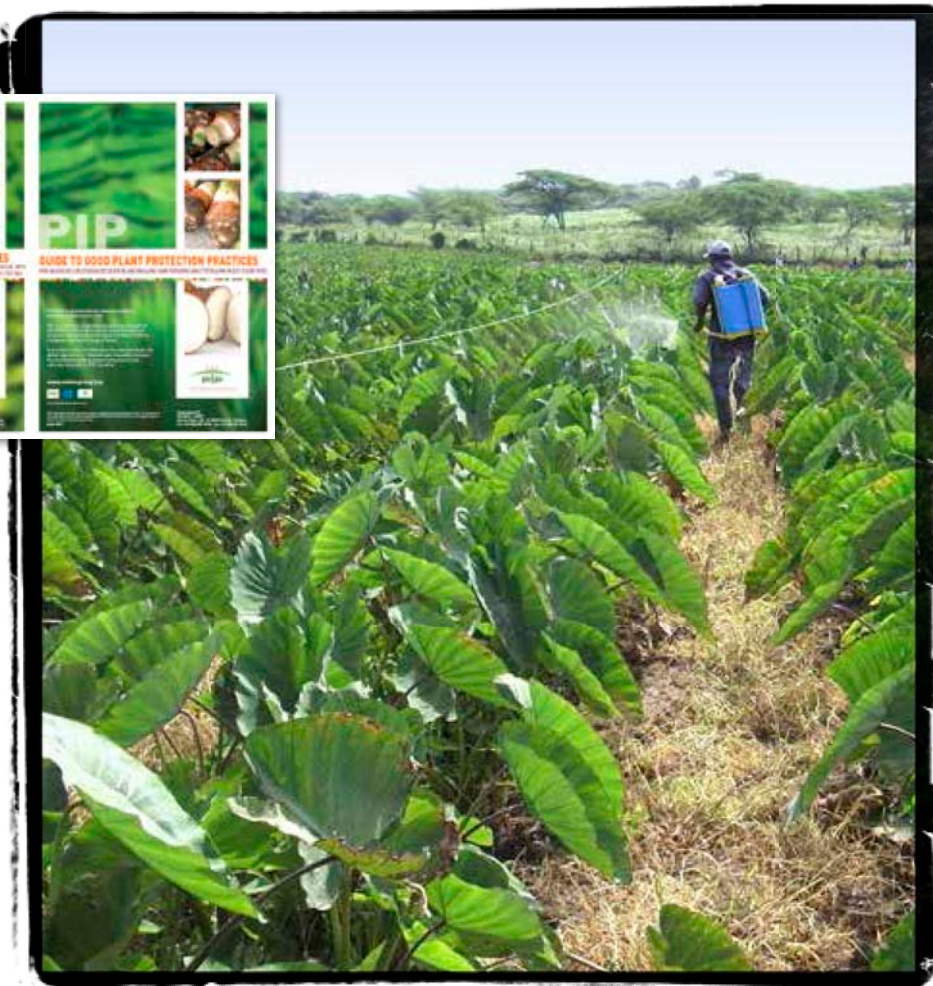


Watching over the ACP agricultural sectors

R&D lies at the heart of COLEACP's efforts to strengthen agricultural sectors in developing countries. The organisation's field trials and research projects are constant sources for the agricultural support and training it provides.



COLEACP's Research & Development department intervenes when necessary to provide new or updated solutions to agricultural problems encountered by farmers in ACP countries.



Piloto, Dominican Republic, October 2008

The three 5-acre plots that the Hermanos Peña plantation has made available to COLEACP are ready for their experimental treatment. This consists of a test for plant protection products on taro crops. The first two plots will be treated with combinations of different products. The third is the control plot, which will not be treated.

The objective is to measure pesticide residue levels on the taro leaves and roots at harvest time. Based on these measurements, researchers will determine the doses, spray frequencies and intervals before harvest - good agricultural practices - that keep these levels below the authorised maximum residue limits (MRLs).

Up to mid-2012, COLEACP's R&D department conducted several series of tests, including the one described above, on four vegetable plantations in the Dominican Republic: two in the province of Valverde on taro crops, and two in La Vega province on eggplant and bitter gourd crops.

These field tests were carried out in an atmosphere of crisis. In the previous months, several batches of fruits and vegetables exported to the European Union (EU) had been intercepted at border control. The reason: too much pesticide residue. A statement confirmed in June 2008 by a mission of the EU's Food and Veterinary Office² recommended that the Dominican Republic improve its regulation of pesticide usage and tackle the problem of exceeding MRLs.

2. DG(SANCO) 2008-7848

In response, COLEACP undertook this research under the PIP programme. Eight pesticides were tested on taro, 15 on eggplant and 16 on bitter gourd to determine good practice for treated vegetables that are exportable to the EU. [...]



A useful database

Whenever tests generate new results, COLEACP updates its production guides, dose references, frequencies of use, pre-harvest intervals, etc. To offset the inconvenience of publishing delays, the R&D department recently created an online database that can be updated more quickly. Once a test triggers the modification of a good agricultural practice, a warning system alerts users to refer to the information in the database rather than the guide.

Address: <http://pip.coleacp.org/en> - heading 'Support to beneficiaries' - subheading 'Research & development/crop protection'



COLEACP's research increasingly emphasises protection methods that reduce the risks associated with the use of toxic substances, such as integrated pest management and the use of biological agents and products.

Requesting import tolerances

European regulations on pesticides are designed for areas with a temperate or Mediterranean climate. Sometimes their requirements are too stringent considering the stresses of tropical agriculture, which occasionally must deal with highly virulent pests and diseases, and would find it difficult to forego certain active substances. When the MRL of one of these substances falls too low or is eliminated, thereby prohibiting its use, farmers in ACP countries may find themselves unable to market their products in Europe for want of an alternative solution. In this case, the European Commission may tolerate the import of this indispensable substance as long as certain conditions are met. Through its contacts in the plant protection sector, COLEACP's R&D department facilitates import tolerance procedures by gathering the necessary information from the manufacturers and producers concerned. This is a temporary measure to give agricultural research the time to identify more sustainable control solutions.



COLEACP has entrusted monitoring of the study to a local company, ProComAs, owned by independent expert Pedro Jorge, who summarised the test results. In June 2013 he reported on his work in Spanish before an audience of members of the Dominican horticultural industry gathered in La Vega.

The agronomists of COLEACP's R&D department then used these results to update the *Guide to Good Crop Protection Practices* for taro (dasheen), eggplant and cucumber (and other cucurbitaceae with edible peel). All three guides may be downloaded from the publications section of the PIP website.

Over 120 combinations

Research projects by COLEACP's R&D department have covered over 120 pesticide/crop combinations since the PIP programme was launched in 2001. Composed of three experienced agronomists, the department intervenes when necessary to provide new or updated solutions to agricultural problems encountered by farmers in ACP countries.

Most of these projects aim to find the best way to protect a crop against a pest or disease. This involves identifying a solution that is effective against the threat, safe for people and the environment, and with no consequence for the subsequent marketing of products. [...]



Sahel: facilitating certification at the regional level

COLEACP began collaborating with the Sahelian Pesticide Committee (CSP) in the first few years of the PIP programme, in 2004. The CSP is an inter-state institution responsible for implementing common phytosanitary regulations in nine countries in the Sahel region: Burkina Faso, Cape Verde, The Gambia, Guinée-Bissau, Mali, Mauritania, Niger, Senegal and Chad. It is the body in charge of certifying plant protection products and authorising their use throughout the region.

sale of a group of indispensable pesticides. With fewer tests over a shorter period, this procedure was also cheaper for the manufacturers, who funded 70% of it. The remaining costs were borne by COLEACP, which wanted to obtain certification for crops such as okra and mangoes that are less interesting for the phytosanitary industry.

In 2008, the testing programme led to the temporary certification of 11 products and 18 uses. For most of these products, the authorisation of sale was renewed after three



'The manufacturers are usually the ones who fund preliminary tests for certification requests', explains Gilles Delhove. 'Generally this is not a problem, as it is an essential step for marketing their products in the country or countries concerned. But from their standpoint, the fruits and vegetables market of the Sahel region is too small compared to the costs of the certification procedure.'

Consequently, there were not enough different authorised pesticides to cover the fruit and vegetable producers' needs. The problem was acute for the export sector, as private standards certify only foods treated with products certified in the country of origin.

In 2005, COLEACP asked the CSP to use a so-called 'arranged' interim procedure to give temporary authorisation for the

years for a second equivalent period, meaning until 2014. Although this initiative has attracted the interest of some companies that have obtained new certifications, the plant protection options available to the horticultural sector in the region remain insufficient.

'It is hard for us to fight against purely commercial decisions', says Gilles Delhove. 'In fact, the CSP is concerned about the situation and we are cooperating with it to urge manufacturers to get their products certified for fruit and vegetable crops.'

To remedy this shortcoming, COLEACP has obtained a new arranged interim procedure for a testing programme that will start in 2015. This time, it should be fully funded by the manufacturers.

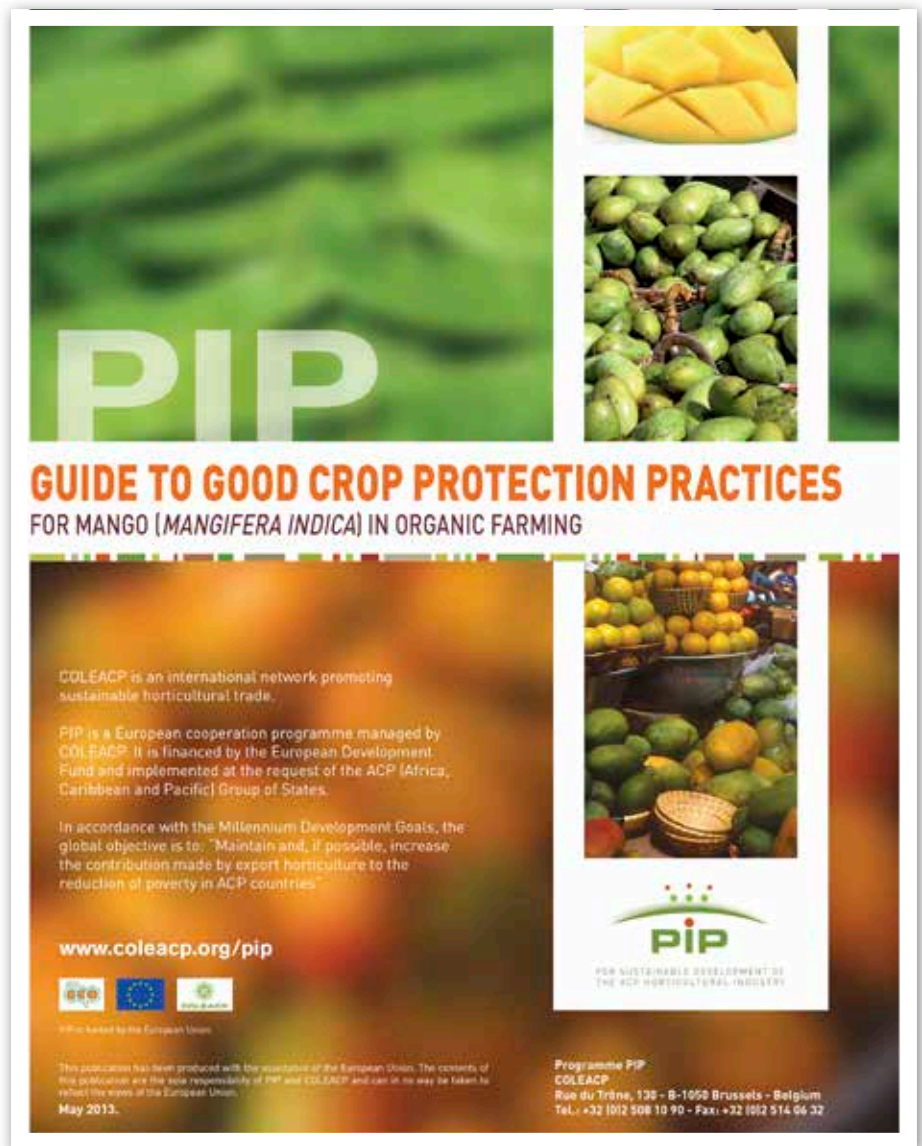


COLEACP's R D department has published more than forty production guides and technical brochures devoted to the most important crops of ACP countries. All are available for download on the PIP website (pip.coleacp.org).

[...] The researchers generally conduct a series of field trials to determine the effectiveness and instructions for use of different pesticides, and recommend the ones that best fit the needs of ACP producers.

However, it is not easy for a farmer faced with ever more virulent tropical pests to control all the risks associated with the use of conventional products. For this reason, COLEACP's research increasingly emphasises protection methods that reduce the risks associated with the use of toxic substances, such as integrated pest management and the use of biological agents and products.

Since 2012 COLEACP has contacted 40 manufacturers of biopesticides to learn about their potential and consider their use in ACP agricultural sectors. The R&D department includes them systematically in its field trials



in order to compare their performance with conventional active substances. To date, more than 100 uses of these products have been tested on 17 commercial crops and in the context of urban horticulture (see sidebar: 'Micro-gardens').

Biocontrol products have passed muster against pests such as fruit flies, cochineal insects, cotton bollworms, false codling moths, spider mites, aphids and other phloem-feeding insects. They also prove effective in shielding passion fruit from alternariosis and mangoes from post-harvest diseases.

In addition to biopesticides, in the future, R&D will be interested in biostimulants, biofertilisers and composts, which may be useful for enhancing plant resistance to certain pests and diseases. Its role will also include encouraging the manufacturers of these products to integrate ACP countries into their trade channels.

These non-conventional products are compatible with the principles of corporate social responsibility, providing pest management solutions that are more environmentally friendly, safer for farmers and for their families, and often less harmful in case of misuse. [...]



Protecting micro-gardens in Dakar

In 2012, the city of Dakar, Senegal enlisted the help of PIP as part of its micro-garden programme. A micro-garden is a raised garden bed of about 1.5 m² that can be placed on the terrace of an apartment, on a rooftop or in a courtyard. If well managed, it can ensure the daily vegetable needs of a family and even produce a marketable surplus.

Due to their contribution to food security, the use of micro-gardens has been at the heart of the development programme run by the city and supported by the United Nations Food and Agriculture Organization since 1999. It currently has 7000 beneficiary families supervised by 12 training centres spread across the greater metropolitan area.

Like all gardens, these micro-gardens need to be treated regularly against pests and diseases. The problem is that it is unthinkable to spray toxic substances in such densely populated areas. Therefore the promoters of the micro-garden programme asked COLEACP to conduct a series of tests on low-risk biocontrol products and recommend the most appropriate ones.

The tests were carried out between September 2012 and July 2013, and were monitored by Karamoko Diarra, professor at Cheikh Anta Diop University in Dakar (see pp. 26-27). They were held in three training centres (Grand-Dakar, Derklé and HLM). Seven active substances were tested on several crops according to three production seasons: cucumber, cabbage and sweet pepper in the wet season; cabbage, cucumber and tomato in the cool dry season; and cabbage, chilli pepper and African eggplant in the hot dry season.

The tests revealed the effectiveness of some products that COLEACP recommended to the promoters of the programme. These substances must now be certified before they can be made available to urban gardeners. The programme also offers prospects for extrapolation to other forms of horticulture, as it helps to identify alternative substances to conventional plant protection products. But to certify them for professional vegetable gardening, it is necessary to conduct experiments on a larger scale.



For further information:
paepard.org

PAEPARD

Research partnerships

COLEACP rarely works alone on agricultural research.

As seen throughout this issue, it often leads its projects and tests in cooperation with experts from international research centres. It also collaborates with local experts, who have the advantage of knowing the terrain, local agricultural issues and the working language.

Another partnership is with the Platform for African-European Partnership on Agricultural Research for Development (PAEPARD), a programme mainly funded by the EU that was renewed for three years in 2014.

Its aim is to stimulate scientific and technical cooperation on agricultural research between Africa and Europe. COLEACP is one of eight partners in the consortium driving the programme.

What is distinctive about PAEPARD is that it has worked according to a 'user-led process' (ULP) since 2011. The research projects are initiated by African farmers organisations that are members of the programme. After they have been discussed and documented, the problem is formulated in a concept paper, which is the basis for establishing a research partnership. COLEACP has participated in the creation of several concept papers in this way. It also contributes to the programme's workshops.

Centralising problems in the R&D department enables COLEACP to devise comprehensive solutions that may not have been identified at the company or national level. This is the principle of sharing problems and means.

[...] Dissemination

Once a solution has been identified, it is crucial not to let it be buried in a scientific report. Another important task of the R&D department is to publicise the findings of its tests and research, making them available to ACP sectors.

Even if the tests are conducted on a local scale, the agricultural practices following from them may serve as recommendations for all sectors facing the same problems. The principle of sharing issues and means is one that COLEACP holds dear. Thanks to economies of scale, the centralisation of problems at the R&D level lets it devise comprehensive solutions that would not have been identified at the company or national level due to limited means.

The findings are used in production guides and technical brochures available on PIP's website. Publications are often produced in cooperation with other institutions, including the Agricultural Research Centre for International Development (CIRAD), the faculty of Gembloux Agro-Bio Tech and the Natural Resources Institute (NRI). Publications are regularly updated, based on advances in scientific knowledge and changes in pesticide regulations and MRLs (see p5: A useful database).

New information also finds its way into COLEACP's training programme, and is presented in layman's terms in the supporting educational materials. It therefore reaches plantation workers and small-scale producers through companies and supervisors as intermediaries. [...]



Fighting fruit flies

Fruit flies have been keeping COLEACP's R&D department busy for many years. These small flies of the Tephritidae family are a real scourge for the mango sector in West Africa. They have the unfortunate habit of laying eggs in the fruit, where their fruit-eating larvae develop. The European Union has banned the import of infested fruit: if plant protection services discover any at border control, they seize and destroy the entire batch, to the detriment of the exporter.

We speak of fruit flies in the plural because around a dozen African species of Tephritidae exhibit this destructive behaviour at various degrees of virulence. A newcomer is also



Since the workshop, several producers and competent authorities have appealed to the PIP programme so that other protection products may be subject to testing. In this context, COLEACP obtained from the CSP an 'arranged' procedure targeting fruit flies in order to speed up the certification of new products.

'We have focused these tests on biocontrol products that pose no residue problem', says Gilles Delhove. 'Specifically, these are repellents and "attract-and-kill" products, so called because they attract the flies to an insecticide in a container. We carried out several series of tests between 2012 and 2014 in Senegal, Gambia, Burkina Faso and Mali. This has allowed us to identify several effective products that could be certified as soon as the manufacturers decide to submit their documents and conduct further testing.'

The fight against fruit flies has recently taken on a new dimension. COLEACP is part of the consortium selected to support the fight against these parasites in the 15 countries of the Economic Community of West African States (ECOWAS). This five-year project³ is funded by the European Union and the French Development Agency, and aims to bolster the regional pest control plan launched by ECOWAS in 2010. The new programme targets fruit and vegetables producers (mainly of mangoes) with a view to curbing the loss of revenue due to fruit infestations. This will require developing effective control measures and organising their equally effective distribution to farmers.

3. Project to support the regional plan to fight and control fruit flies in West Africa.



causing problems: *Bactrocera dorsalis*, an invasive species native to Sri Lanka that has infested the orchards of West Africa for 10 years.

COLEACP began to fight these flies in 2005, during the PIP programme's involvement when the CSP certified 11 plant protection products (see page 7). A product protecting against fruit flies had obtained provisional authorisation for sale in Sahelian countries. At the time, two brochures and two posters were published that described the use of the product and various trapping techniques. All are still available on the PIP website.

Alongside its research work, COLEACP has designed and organised several training sessions on protecting mango orchards. It has also participated in different exchanges of experience and research, to keep abreast of scientific progress in the field.

In this vein, it co-organised an important regional workshop in February 2012 in Ouagadougou, Burkina Faso, to develop the fight against fruit flies, with particular attention paid to small-scale mango producers. By indicating the need to develop approaches to integrated pest management, this workshop provided an opportunity for different stakeholders to lament the lack of diversity of the active substances available.



The aim of COLEACP's intervention in certification procedures for plant protection products is to ensure they are available to farmers and can be used legally.



Pineapples: making floral induction available to small-scale producers

One feature of the pineapple is the random nature of its flowering. It can happen at anytime of the year. Farmers must therefore resort to flower induction, applying a substance that triggers flowering 'on demand' and simultaneously in all plants on the plot.

For organic farming, European regulations authorised only a single inducing substance, ethylene gas. But until 2005, this requirement was a major economic disadvantage that excluded the small-scale producers of the organic pineapple sector.

'Activated charcoal must be enriched with ethylene, then applied to the pineapple plant to cause flowering', explains Gilles Delhove. 'Prior to the intervention of the PIP, this

application could only be done with large automatic mixers and sprayers, which are too heavy, too sophisticated and too expensive for small-scale producers. A Cameroonian producer and exporter asked us to overcome this obstacle and devise a method accessible to small-scale producers.'

This research was conducted in 2005 by a consortium formed by COLEACP, the faculty of Gembloux Agro-Bio Tech and CIRAD. Professor Frédéric Lebeau of Gembloux Agro-Bio Tech discovered the solution. He has developed a new method for enriching active charcoal with ethylene that has the advantage of being simple and inexpensive.

The equipment can be placed on a small workbench, and consists of a few accessories that are easy to find: a vacuum pump, a bottle of ethylene with a regulator, a pressure gauge, a sealed container and some tubing. The enriched charcoal may be applied with a knapsack sprayer or with a measuring cup.

The tests were successfully completed in 2005-06 in Cameroon, Togo and Ghana on plots provided to COLEACP by three producers. To make the method available to all, COLEACP has described it in a highly detailed and richly illustrated technical brochure available on the PIP website (publications section).

The method has spread and is still used in some plantations, especially in the Antilles and French Guiana. However, since some organic certification bodies tolerate induction with calcium carbide, many producers now prefer this procedure as it is easier to implement.



[...] 'We wanted to go further in terms of visibility', says Gilles Delhove, head of the R&D department. 'We decided to put summaries of all tests conducted since 2009 online. Even if the tested products are not yet certified or available in some countries, the information may be useful for farmers, manufacturers and distributors alike. That way, someone might decide to request certification for a product whose performance has aroused their interest.'

Certification

Certification is another important part of COLEACP's R&D activities. The aim is to ensure that protection products necessary for farmers are available and can be used legally.

A plant protection product must be certified by a public authority before it may be sold and used in a country. Certification involves quality control and verification of the 'instructions for use' provided by the manufacturer. This is done through a rigorous process during which a series of tests are carried out (see sidebar: 'Certification tests').

It is essential to use only registered pesticides when treating a field of produce for export. This is because private standards such as GLOBAL.G.A.P., the quality system most used for retail, only certifies food treated with pesticides duly authorised in the country of origin.

Therefore the R&D department ensures that the list of protection products authorised in a country does not leave out indispensable substances. If an invasive pest appears in a region where pesticides that can eliminate it are unauthorised, the department may intervene in different ways. For instance, it can begin discussions with the relevant authority, convincing it to adapt the certification procedure to the urgency of the situation. Thanks to its knowledge of the phytosanitary issues and producers concerned, it can organise and support the tests prescribed by the procedure. And by taking advantage of its contacts in the plant protection sector, it can also assist manufacturers in submitting their applications (see boxes, 'Sahel' and 'Fruit flies').

Constant attention

At the foundation of this vital work, constant attention is paid to advances in agricultural knowledge and the context in which the sectors are changing. The work of COLEACP's R&D department focuses on several key areas: anticipating the emergence of pests and diseases in production areas; monitoring changes in food and phytosanitary regulations in EU and ACP countries; and keeping abreast of modifications to private standards, maintaining contact with research centres around the world to stay informed about the latest advances in agricultural science, maintaining relations with the plant protection industry to stay up on the latest products, and all the while bearing in mind the lists of certified substances in the different ACP countries.

Thanks to its updated scientific and regulatory information, COLEACP can propose solutions to problems in ACP agricultural sectors that are always appropriate and follow their development smoothly.



Certification tests

The purpose of a certification test is to verify the efficacy of a plant protection product in local application conditions. The manufacturer has previously tested the product and has already determined the doses depending on the climate, crop type, pest virulence, etc. For local authorities, it is mainly to ensure that the recommended dose is the right dose and does not affect the treated product. To this end, three doses are tested on different plots: the dose indicated by the manufacturer, that same dose increased by half, and the same dose reduced by a quarter.

These tests are usually conducted in research stations under an agricultural institution, but this is not always possible. For example, these stations do not always have mango orchards. In this case, they have to go into the field among producers who are willing to allow testing on some of their plots. Participating farmers then receive financial compensation equivalent to what they would have earned by selling the produce of the cultivated area.

Neven Mimica, the new Commissioner for Development

A new Commission and a new Commissioner. Latvian Andris Piebalgs has handed over the development portfolio to Croatian Neven Mimica. A new post-2015 strategic framework is being prepared that focuses on small farmers.



'Large-scale investments in land should not jeopardise secure land tenure and land user rights.'



Commission européenne
European Commission



The new Commission will strengthen the cohesion of European Union External Action by combining, according to one and the same logic, foreign policy, neighbourhood policy and trade policy, participation in international financial institutions and development aid.

Since 1 November 2014, a new College of Commissioners has been at the helm of the European Commission, under the presidency of the Luxembourger Jean-Claude Juncker. Its composition was approved on 22 October by the European Parliament, after hearing from all the Commissioners and a presentation of the work programme for the next five years.

In this programme,⁴ Jean-Claude Juncker does not set out the precise direction of development policy. He briefly evokes the need for greater cohesion of European Union External Action by combining, according to one and the same logic, foreign policy, neighbourhood policy and trade policy, participation in international financial institutions and development aid.

Since 2011 the EU's development policy has formed part of the strategic framework established by the Agenda for Change.⁵ That strategy, adopted by the Barroso II Commission, was committed to the goal of eradicating poverty through the organisation of effective and targeted aid with a view to sustainable and inclusive development.

Croatian Neven Mimica (age 61) is the Commissioner for International Cooperation and Development. He is an economist by trade. A social democrat, he was twice in charge of European integration in his country when his party was in power. On 1 July 2013, with the accession of Croatia to the

EU, he joined the previous Commission, where he was in charge of consumer policy.

Post-2015

At his hearing before the European Parliament on 29 September, Neven Mimica set out the priorities for European development policy. The first is to draw up a new post-2015 strategic framework.

This framework will pursue the same objectives of eradicating poverty and sustainable and inclusive development, but emphasis is also placed on financial and tax fairness. *'We need to help our partners to increase their national resources – including through good governance, better financial management, fighting tax evasion and fair and effective taxation systems.'*

For him, land policy is an integral part of equitable governance and must be leveraged

for agricultural development to ensure that small farmers have access to land.

He indicated in his response that *'large-scale investments in land should not jeopardise secure land tenure and land user rights, which are prerequisites for food security and the agricultural sector's sustainability, and crucial in reducing poverty, especially for women and indigenous groups. If confirmed, I would carry out actions that secure these rights, in the context of local customs and traditions.'*

It is in pursuit of this logic that he wants to strengthen support for small farmers since, in his view, this is an investment that has already proved its effectiveness in alleviating poverty and strengthening food safety. He therefore intends to prioritise actions and projects that increase the income of small farmers and add to the resilience of rural communities.



4. Jean-Claude Juncker, *A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change, Political Guidelines for the next European Commission, Strasbourg, 2014.*
5. COM 637/2011, *Increasing the Impact of EU Development Policy: an Agenda for Change.*



Training: sharing to ensure sustainability

To ensure that its support is sustainable, COLEACP has transferred some of its know-how to certain ACP farmers' organisations, for example in Ethiopia and Cameroon.





With the development of value chains, many professional associations and organisations are building up experience and diversifying the services they offer to their members, in particular training and the popularisation of improved agronomic practices.

COLEACP needs to take this development into account. Firstly, to make sure it does not find itself in the position of competing, despite its best intentions, by offering support that these organisations already provide to companies. Secondly, because, unlike aid programmes such as the PIP (Pesticides Initiative Programme) and EDES, these farming organisations were created for posterity and could be precious allies in ensuring the sustainability of future support for supply chains.

Ethiopia: delegation of basic training

With this in mind, COLEACP is working with the Ethiopian Horticulture Producer Exporters Association (EHPEA). This association groups together 85 horticultural businesses representing 70% of fresh produce production in that country. It was created in 2002 to support flower exports, which were then booming. On its crea-



tion, the EHPEA drew up a code of conduct establishing minimum standards of good practices for agriculture and environmental protection, and for working conditions, to satisfy the demands of international buyers and even to anticipate those demands.

To help farmers to apply this code, the EHPEA set up a training department, with Dutch cooperation. The 11 trainers in this department provide support to member and non-member companies to ensure they know about safe pesticide use, quality control, first aid and environmental protection, among other issues. Those courses were originally tailored to flower growing.

With the global economic crisis, there was a drop in demand for flowers. Ethiopian

'When we are dealing with a strong association that is professional, representative of its sector and which has expressed its wish to develop a training system for its members, and, to top it all, that has a realistic idea of the funding involved, we have an obligation, in my opinion, to examine the situation and to undertake such transfers of know-how.'

Yessie Meyer, PIP Country Manager



The sustainability of capacity building is one of COLEACP's key objectives. Transfer of skills to other organisations meeting the same quality criteria as those referred to above is therefore highly desirable.

horticultural companies diversified into market gardening, primarily fresh herbs such as chives, dill, basil and tarragon. The EHPEA therefore expanded its range of training courses to provide support to the 'vegetable, herbs and fruits' sub-sector, and also to develop corporate social responsibility.

With a view to this expansion, the EHPEA asked for support from the PIP programme. After meticulous examination of the needs of the department and the sector, COLEACP drew up an ambitious action plan in September 2013, to share with the EHPEA some of the know-how and teaching tools developed by PIP over the past 13 years.



Composting and transfer of skills

Growing chives generates a lot of waste. When a stem has defects – for example, if it is not entirely hollow – it is rejected. Ethiopian producers such as Jordan River Herbs and Joytech Fresh generate a total of some 200 tonnes of chive waste per year. The waste cannot be used as fodder, as cattle dislike this strongly flavoured herb, and the only solution for the moment is to leave it to rot down.



To provide a more responsible solution, COLEACP is organising with the EHPEA a collective training session on composting organic waste for the Association's members. COLEACP drew up the training course; the EHPEA, for its part, piloted the organisation and selection of 15 participants.

In addition, two of the Association's trainers have taken part in the training in order to be able to monitor the test phase in participating plantations. COLEACP is committed to supporting them and helping them incorporate the technical and teaching aspects of this area. The EHPEA will therefore be able to give this training to other Ethiopian farmers facing the same problem, in the country that provides a large part of the herbs found in European supermarkets.

Phase 1: capacity building for the training department. Two agents received training-for-trainers in Kenya and in Zambia so that they could train their other nine colleagues. The subjects taught were part of the PIP basic training programmes in safe pesticide use, traceability, ethical farming, etc. One of the trainers followed a 'training for train-the-trainers' course at the Gembloux Agro-Bio Tech Faculty (Belgium), thereby becoming the linchpin for Ethiopia's cascade training model. Finally, the entire team was trained in training needs assessment, so that they could assess the needs of a company and draw up a training programme.

Phase 2: coaching the department. This involved building on the teaching tools provided during the previous stage. A long-standing and critical expert followed the first few training sessions provided by the EHPEA with the aim of enhancing their quality. In addition, two Ethiopian trainers were trained as coaches and can now take over this improvement work.

'If we are to ensure that it continues in the long term, COLEACP must pass the torch to a local organisation that can assume responsibility for managing, maintaining and financing the top-down training system we have put in place'.



Phase 3: creating a knowledge hub. The EHPEA already had a resource centre where agricultural documents and training materials could be found. The action plan sought to add to the centre's resources by giving it online access to other documents and databases. COLEACP has also provided its own technical brochures and teaching manuals for duplication and dissemination by the EHPEA. The Centre also has a priority link with the PIP remote training platform.

Yessie Meyer, PIP Country Manager for Ethiopia explains the context: *'When we are dealing with a strong association that is professional, representative of its sector and which has expressed its wish to develop a training system for its members, and, to top it all, that has a realistic idea of the funding involved, we have an obligation, in my opinion, to examine the situation and to undertake transfers of know-how. In such cases, COLEACP must provide its basic training courses to the association*

and provide support for trainers to enhance the quality of the training service provided.'

Cameroon: reaching 600 000 small-scale cocoa and coffee bean farmers

Cameroon has also been the theatre for a major transfer of skills to a farmers' association, the Interprofessional Coffee and Cocoa Council (CICC). This large federation is the umbrella group for all the country's cooperatives and associations for cocoa and coffee bean farmers, buyers, exporters and processors.

The CICC has been supported by the EDES programme since July 2013, with the objective of improving the quantity, growth and sanitary quality of cocoa bean production in Cameroon. The difficulty is that this production is provided by 400 000 small-scale cocoa bean farmers, spread across the entire country, so there is a need for a whole series of training programmes that are sufficiently effective to reach all these farmers.

The first step was to provide each of the country's seven cocoa bean farming areas with advisers capable of providing technical guidance to small-scale farmers. Seven two-week train-the-trainers sessions made it possible to train 77 leaders, preselected by the CICC and by COLEACP. In addition to a sound technical background, these leaders learned to use the teaching materials designed by EDES on cocoa bean farming and processing. Fourteen of them, who had displayed special teaching skills, received supplementary coaching training so that they could provide support to the others.

'But that is not enough', explains Hilary Barry, Training Manager for EDES. 'Ag-

ricultural practices change, as do market requirements. To remain ahead of the game, continuous training is needed over the long term. And if we are to ensure that it continues in the long term, COLEACP must pass the torch to a local organisation that can assume responsibility for managing, maintaining and financing the top-down training system we have put in place.'

COLEACP has therefore helped the CICC to set up a training department. The choice of the CICC was crucial, as this association meets all the criteria relating to representativeness, professionalism, motivation and financing.

'We started from scratch', Hilary Barry continues. 'We analysed the needs and skills required, and we adapted the way the EDES Training Department operates to the CICC structure. There was a genuine transfer of skills. We drew up job descriptions for the department - the director of operations, the training assistants, the coaches and the trainers. And we have put in place all the administrative, logistical and teaching support required for training activities: planning, monitoring, reporting, management of materials, human resources, etc.'

Since October 2014, COLEACP has been monitoring the CICC's pilot phase, involving the training of 400 small-scale farmers in the Nyanon and Ndom regions. Following successive adjustments during this first phase, continued support will be provided in the form of advice on request for about a year.

And elsewhere?

The sustainability of capacity building is one of COLEACP's key objectives. Transfer of skills to other organisations meeting the same quality criteria as those referred to above is therefore highly conceivable.

The PIP intends to take this step by focusing on associations that have their own training department. EDES, for its part, is working on similar projects in other cocoa distribution chains: the Cocoa Research Institute of Nigeria (CRIN), the SPS Cocoa Africa Nigeria and the Federation of Agricultural Commodity Associations of Nigeria; and the Ghana Cocoa Board (Cocobod). It is also developing the same thing for the Cameroon coffee sector as was provided for the cocoa sector, again through the CICC.



The sharing shared

Alongside the Fruit Logistica international fruit fair, COLEACP organised an event in Berlin devoted to sharing know-how, during which it will present its projects for skills transfers to ACP farmers' organisations.

Fruit Logistica - Berlin, Germany - 04-06/02/2014 - www.fruitlogistica.de



Fruit flies: avoiding the export ban



COLEACP is working to avoid certain ACP countries having to stop their fruit and vegetable exports to the European Union. This is due to the EU EUROPHYT legislation, aimed at protecting European vegetation from invasive harmful organisms spread through imports. If, during border checks, Member State plant health authorities uncover goods infested by harmful organisms, the consignments concerned are intercepted and notified through the EUROPHYT system. If the number of interceptions goes above the specified ceiling, the European Commission (EC) informs the importing State, which must put in place an action plan to resolve the problem identified. If no measures are adopted, or if the measures do not put an end to the interceptions, the EC may ban or reduce imports of the offending goods. Currently, five ACP States have received notifications from the EC: Ivory Coast, Uganda, Kenya, Ghana and the Dominican Republic, because of various harmful organism, particularly fruit flies. The resources of the PIP and EDES programmes are set in motion to support the public services and private sector in these States, and in particular to assist with drawing up and implementing action plans. The aim is to avoid the extreme scenario that would impose a huge burden on the fruit and vegetable sectors in these countries.

Caribbean and Pacific: development of activities for the benefit of SIDS

COLEACP is increasing its activities in small island developing states (SIDS). In quick succession, it has concluded cooperation agreements with the Organization of Eastern Caribbean States (17 November 2014) and Vanuatu (8 December 2014). The objective on both sides is to support modernisation of the agricultural sector by developing local regional and international distribution chains. The two agreements involve exchange of information on the needs of the sector, and the development of relationships with local agricultural stakeholders (public and private sector). They also put in place a cooperation structure. In addition, COLEACP looks for solutions, in conjunction with those States, to address the recurring problems for cooperation with SIDS.

The isolation and the small size of these countries incur greater costs and hamper the effectiveness of technical assistance, the implementation of which may be rendered all the more difficult by budgetary and logistical constraints. Among the solutions envisaged, COLEACP recommends those it has tried and tested over many years in the support it provides to developing countries: remote apprenticeship, cascade training, building a set of local experts, and the creation of regional information networks to facilitate online exchanges between stakeholders. An event recently took place in Fiji, in November 2014, under the umbrella of the EDES programme, with the organisation of a vast regional training programme on official checks and risk management relating to food safety. This training session brought together officials of the 11 Pacific SIDS. It gave them the opportunity to establish contacts with peers and to lay the foundations for a regional network for exchanges on food safety issues.





Fruit Logistica 2015: where farming organisations meet face to face

The leading global trade fair for the fresh fruit and vegetables sector, Fruit Logistica, takes place in Berlin at the beginning of February each year. Producers and exporters from around the world are there to propose their products and services to the principal European distributors, retailers and transformers. Like last year, COLEACP did not miss this event, where it can meet its members and beneficiaries and explain its initiatives to bolster the sustainable development of ACP agricultural systems. This year, alongside the trade fair, COLEACP launched a round table discussion bringing together a dozen ACP farmers so that they could get to know each other, present their projects, explain the difficulties they face and set out the type of support they require.

*Fruit Logistica 2015
Berlin (Germany)
4-6 February 2015
www.fruitlogistica.de/en/About*



ACP 'doors open' day: meetings and presentation

Every year, COLEACP takes part in the 'doors open' organised in Brussels by the Department of Economic Development and Trade of the Secretariat of the ACP States. The objective of this day is, above all, informative. The representatives of ACP embassies, missions and regional organisations attend to meet stakeholders in the various cooperation programmes financed by the European Development Fund. This allows them to keep up to date with developments and with the status of these programmes. COLEACP had a stand there, presented the results of its PIP and EDES programmes, and set out its projects post-2015.

*Fifth Secretariat of the ACP States
'doors open' day
Brussels (Belgium)
29 October 2014
www.acp.int*



EDD2015

Organised by the European Commission, European Development Days (EDD) is Europe's leading forum on development and international cooperation. The forum builds on a core belief: cooperation is the cornerstone of a fairer world. An essential aim is thus to facilitate networking and inspire the desire to work together even more closely in a spirit of true partnership. EDD is an incubator of new ideas to inform our shared aim of a poverty-free, sustainable and fair world where everyone has a chance at a decent life. Over 15 000 experts have taken part in European Development Days since its inception. From Heads of State to community service officers, Nobel laureates to project managers, everyone has a voice at European Development Days. At every level, participants, moderators and panellists from all corners of the world can put forward ideas and examine creative solutions to shared problems. In 2013 (latest edition of the EDD), COLEACP placed the private sector at the heart of debates. In 2015, the thread is the European Year for Development and EDD15 will be its flagship event. COLEACP together with key partners will still be present from private public partnership (PPP) perspective. PPP serving a sustainable and inclusive growth of the ACP agricultural industry.

*European Development Days
Brussels (Belgium)
3-4 June 2015
www.eudevdays.eu*



Organic products: a commercial asset, but a narrow market

Organic agriculture is developing in ACP countries, primarily in East Africa and for export. Although the international organic food market is steadily increasing, it is still a small segment.



Farmers' first priority is to ensure the market is profitable enough to cover the cost of certification.

In 2012, the European organic food market amounted to €22.8 billion, 6% more than the previous year, and twice the 2004 total.



Organic agriculture has existed for a very long time. But its large-scale commercial development in Europe dates only from the past ten years. Prior to that, organic food was a niche market for consumers who were generally committed to this area and who viewed it primarily as an ecological choice.

Organic agriculture emerged in the 1920s and 1930s. Its founders were opposed to the way in which agrochemistry was changing farming methods. With regard to vegetable crops, they were opposed to what they referred to as the 'instrumentalisation' of land, favouring respect for natural rhythms and rejecting chemical inputs.

Since the end of the 20th century, after food scandals such as bovine spongiform encephalopathy (BSE, 'mad cow disease') and dioxin-contaminated chicken, organic food has attracted a more general public, who have less faith in conventional farming practices and are motivated by health concerns. In the wake of this broader awareness, organic products have gained greater visibility in large-scale retail outlets.

The European Union then strengthened its 1991 regulations on organic farming to align the criteria across the Member States. These new provisions⁶ came into force in 2009. The basic principles are no genetically modified seeds; no chemical fertilisers; and no synthetic pesticides. To protect their crops, farmers must turn to a list of authorised substances that are more



protective than curative – for example, solutions based on sulphur or copper, or on plant extracts such as pyrethrum.

To be able to label the produce they ship to Europe as organic, ACP farmers must comply with this Regulation, which is currently under review within the European institutions.

A narrow market segment

The European organic food market has continued to gain ground since the beginning of the century.⁷ In 2012, it amounted to €22.8 billion, 6% more than the previous year and double the figure for 2004. The highest rises between 2011 and 2012 were seen in Finland (+24%), Norway (+17%), the Netherlands (+14%) and Italy (+9.6%). On the other hand, the British market lost ground (-1.5%) for four consecutive years.

Despite this ongoing rise, organic food continues to be a small market segment. In most European countries, organic food products represent no more than 3% of retail sales. In 2012, this ceiling was exceeded in just four countries: Denmark (7.6%), Austria (6.5%), Switzerland (6.3%) and Germany (3.7%).

The principal reason for this narrow market is the price tag. Organic produce is more expensive than conventional foods. Consequently, organic products are purchased by a limited section of consumers belonging to the middle to upper social classes. This is an advantage: the purchasing power of these social classes has fallen less during the economic recession, explaining why the European organics market is continuing to develop. There are two exceptions to this trend: the United Kingdom and Greece.

Certification

COLEACP developed its support for organic farming during the second phase of the PIP (Pesticides Initiative Programme), launched in 2009. PIP 2 focused on sustainability and organic farming as an effective and compelling way to consolidate the environmental pillar of this objective.

However, with regard to sustainable development, the strength of the economic pillar must also be considered: the farmer needs to consider a certain number of market parameters before moving into the organic food niche market.

Organic farming may be an advantage for positioning on the international market. But the narrowness of this segment means it cannot support an infinite number of suppliers.

6. Regulation (EC) No. 834/2007 on organic production and labelling of organic products.

7. FIBL and IFOAM, *The World of Organic Agriculture, Statistics and Emerging Trends 2014*.



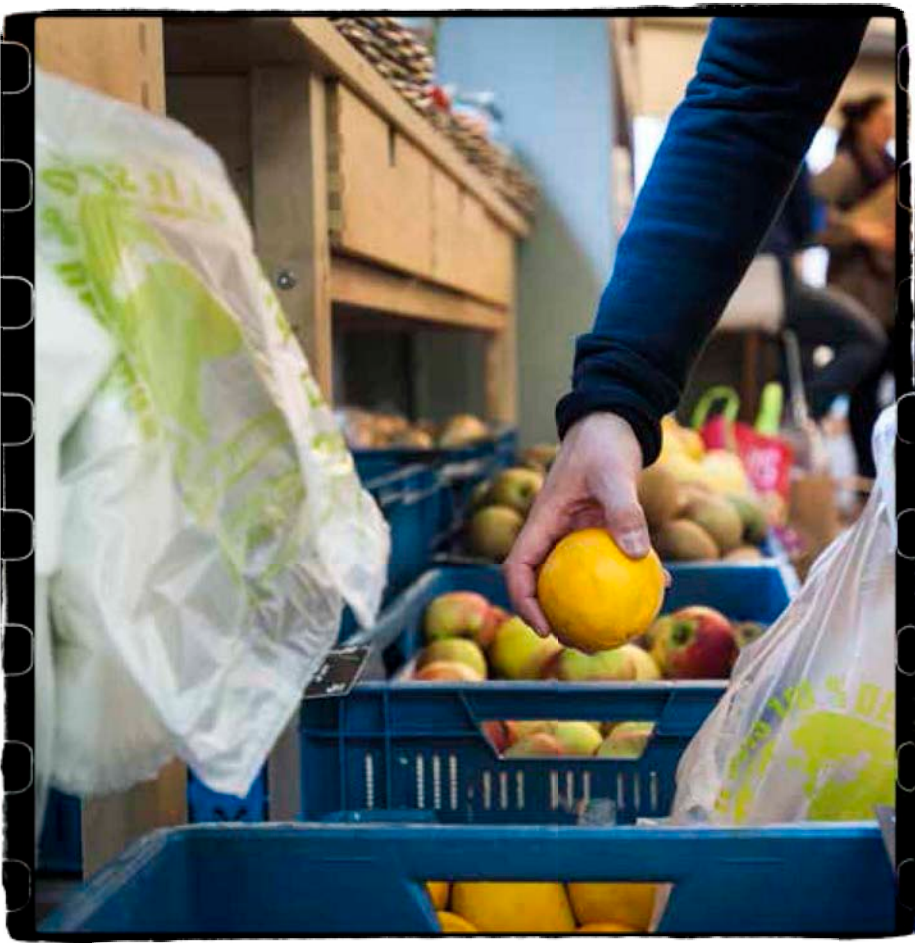
Integrated pest management strategies: an alternative solution

IPM strategies have advantages in terms of environmental protection, and make it possible to limit the risks inherent in the use of pesticides. IPM is currently the subject of many of COLEACP's support projects conducted under the PIP programme.

With IPM, the farmer creates the conditions for not using pesticides: crop rotation, resistant varieties, natural preventive treatments, insect population monitoring systems, biological agents (such as introducing predators), etc. If, despite these preventive measures, farmers have to deal with a disease or pest, they can treat it chemically, but with targeted pesticides so that the biological agents are not eliminated.

IPM therefore has the same basis as organic farming, but permits certain treatments as a last resort. Being based on an analysis conducted by farmers themselves, it is hard to tie IPM to objective certification criteria so that a label can be obtained.

But, even if it does not have the benefit of added status at the commercial level due to the absence of a label, IPM is financially advantageous as it reduces problems linked to pesticide residues and cuts expenditure on chemical inputs. This explains its growing success, both in Europe and in ACP countries.



Organic food is a narrow market segment. In most European countries, organic food products represent no more than 3% of retail sales.



COLEACP takes this into account in supporting farming networks: it supports conversion to organic farming only where the farms already have a potential outlet, for example, when a customer has asked for it.

This support starts with an evaluation of the needs of the business or the grouping of small farmers. The frameworks are then drawn up based on the legislation, regulations, certification system and the production structure to be put in place. This is followed by technical training to create a group of leaders responsible for communicating the organic requirements to plantation workers and/or small farmers, and to check that they are properly applied.

'In general, we support group certifications,' explains Yessie Meyer, COLEACP Country Manager. 'This means putting in place an internal control system through which the group itself organises inspections of its members. The role of the external certification body is then to ensure that the internal inspection is properly



Figures: organic farming in Africa

- > Surface area: 1.1 million hectares, 0.1% of the agricultural surface of the continent.
- > Principal food crops: coffee (194 000 hectares), oilseed (59 000 hectares), aromatic and medicinal plants (19 000 hectares).
- > Farmers: 580 000.
- > Principal countries: Uganda (231 000 hectares, 189 000 farmers), Tanzania (186 000 hectares, 148 000 farmers), Ethiopia (164 000 hectares, 134 000 farmers).

Source: FIBL-IFOAM survey 2014.

are available in ACP countries. Manufacturers are reluctant to incur the costs of an authorisation procedure in developing countries with a limited potential market. This is a drawback for which COLEACP is constantly seeking solutions with both manufacturers and the competent authorities (see the feature in this magazine).

Local market

The other problem with organic farming in ACP countries is the difficulty in increasing the status of the products on the local market. Organic certification covers the entire parcel of land, which means that all crops on a parcel must be grown in accordance with the legislation and regulations on organic farming, even if they are destined for the local market, such as rotation crops or crops which a farmer grows between trees in an orchard. This then raises a question about the profitability of such 'local' crops.

'A farmer will obtain a higher price for organic products on the export market,' Yessie Meyer continues. 'This justifies the cost of certification, the lower yields and certain losses arising from the ban on treatment. But if the farmer sells any surplus or other crops on the land to the local market, they will find it much more difficult to obtain a price that is any higher than that for conventional products.'

Local outlets for organic crops are currently being developed, including certain distribution chains and tourist areas in East Africa and the Caribbean. But, at present, an ACP farmer still has few ways of taking advantage of a switch to organic farming on local market segments. It is a market factor that must be taken into account before making the move to organic farming.

conducted. This system makes it possible to reduce the costs of certification, since if an inspector were to inspect all the farms in the group, this would take time and [...] money. Despite this, the average annual cost of certification is still around €3000 per grouping.'

The priority for a farmer is to ensure the market will make it possible to cover this cost. The higher price for labelled products means that it can generally be assumed that certification will return a profit.

Losses

Likewise, by excluding chemical inputs, the move to organic farming eliminates an expensive production cost. In this sense, organic farming is a production method particularly well suited to small farmers, as it requires less investment and relies more on farmers' know-how.

However, other priorities come into play. Some crops are easier to grow organically than others. Sometimes, production is *de facto* organic, for example for certain forms of arboriculture. In this case, conversion does not pose economic problems. On the other hand, some crops are difficult to produce organically in a tropical climate as they are prone to disease and pest infestations, in particular tomatoes and beans.

Most protection products authorised under the legislation and regulations are preventive rather than curative. In the event of an unexpected infestation, farmers often have no choice but to limit the damage and accept the losses. If they decide to use conventional pesticides to preserve the crop, they must abandon their certified status and will need to go through a two-year conversion procedure in order to recover that status. Such potential losses must be taken into account.

The organic pesticides currently being developed may sometimes provide curative treatments. But their cost is generally higher than that of conventional substances. It also needs to be checked whether they





PORTRAIT: KARAMOKO DIARRA

Karamoko Diarra: scientific research and natural resilience

The Senegalese entomologist Karamoko Diarra devotes his research to agro-ecological practices for crop protection. His experience has led him to cooperate closely with COLEACP.

'I don't like routine. The theses and assignments I ask my students to do are problems I have encountered along the way and which I turn into research subjects.'





'In a resilient natural environment, there is a degree of automatic control and that large quantities of pesticides are not required.'

use pesticides recklessly, not only are there problems with environmental pollution, there's also an impact on useful fauna, such as trout. What's more, pests develop resistances to chemical pesticides and then you no longer have any tools to fight them. You then have what is called a resurgence problem, with an explosion in the pest populations. It's a vicious circle.'

Karamoko Diarra lives in Dakar (Senegal), where he was born and where he went to school and university. At the age of 54, he became a full professor with the Faculty of Science and Techniques at the Cheikh Anta Diop University (CADU). It is also his alma mater, where he obtained two PhD degrees, in animal biology in 1990 and in natural sciences in 1999. He is an entomologist, focused on his area and his students.

'I was made for teaching and research,' he explains. 'As far back as I can remember, I have always enjoyed studying and working. I am happy when I find the solution to a scientific problem. And I don't like routine. The theses and assignments I ask my students to do are problems I have encountered along the way and which I turn into research subjects.'

His speciality is integrated management of agro-ecosystems, a subject on which he set up a Master's course at the CADU. He decided on this area as a result of the research he conducted for his theses, which aimed at identifying local strains of the different microbes affecting mosquitoes

and freshwater invertebrates so that they could be used as biological insecticides.

'Following this, I felt the need to refocus my activities on development,' he continues. 'I've targeted my research on crop pests but extended it to the agro-ecological area. I have worked on the relationships between crop plants, their pests and useful fauna that control these pests. This is what we refer to as tritrophic relationships.'

Natural resilience

His research led him think deeply about the use of agro-ecological practices that restore natural biodiversity and the rural countryside to its key role in farming methods.

'When you work in this area, you realise that in a resilient natural environment, there is a degree of automatic control and that large quantities of pesticides are not required. But as soon as you are in an environment where farmers

To put a stop to these vicious circles, Professor Diarra is working on developing alternatives to chemical inputs – both pesticides and fertilisers. He and his students are exploring the possibilities of using the natural equilibrium of agro-ecosystems, biological control products, natural pesticides and organic amendments. All with a single aim: to contribute to sustainable and naturally resilient farming.

His work has led him to cooperate with COLEACP, notably in 2012–13 with regard to the Dakar micro-gardens project (see the feature article in this magazine). This involved testing the efficacy of different biological pesticides for use in urban and semi-urban areas.

'Some of these products proved to be highly effective,' he recalls. 'Afterwards, representatives of different firms came to see me to talk about our work and to promote these products. In addition, they are coming into widespread use at local level as alternatives to chemical pesticides.'



Neven Mimica, European Commissioner for International Cooperation & Development

Brussels (Belgium), 29 September 2014, European Parliament

'Development policy aims for partnership based on mutual interests. When fragile States collapse or when terrorism expands in Africa, it is a direct threat to Europe. When trade flows increase and business environments improve, it is an opportunity for Europe as well.'

'Property and land rights have a critical role to play in the post-2015 agenda. They empower people, giving them the means to work and produce food, earn their living, and move a significant part of informal labour into the formal market. In so doing, they can also contribute to increasing domestic revenue mobilisation.'

'I believe that property rights within effective national land policies are essential, requiring governments' commitment to take priority action. In this sense, I will boost the European Union's participation in international initiatives defining frameworks on responsible investments in farmland, so as to ensure that they are sustainable and respect human rights and livelihood, such as the Voluntary Guidelines on the Responsible Governance of Tenure, endorsed in 2012 by the Committee on World Food Security, and the on-going process to develop voluntary principles for responsible agricultural investment.'



Ban Ki-moon, Secretary General of the United Nations
New York (USA), 23 September 2014, 2014 Climate Summit

'Climate change is the defining issue of our age. It is defining our present. Our response will define our future. To ride this storm we need all hands on deck. That is why we are here today. We need a clear vision. The human, environmental and financial cost of climate change is fast becoming unbearable. We have never faced such a challenge. Nor have we encountered such great opportunity.'

Copenhagen (Denmark), 27 October 2014, presentation of the Assessment Report of the Intergovernmental Panel on Climate Change

'Action on climate change can contribute to economic prosperity, better health, and more liveable cities, while reducing the risks of further environmental degradation. Economic growth and climate action can be mutually reinforcing. There is a myth, shared unscientifically and uneconomically, that climate action will cost heavily, but I am telling you that inaction on the climate will cost much, much more. Climate action and economic growth are two sides of just one coin.'

Dave Boselie, Senior Manager Learning & Innovation, IDH/The Sustainable Trade Initiative

Geneva (Switzerland), 2 October 2014, Trade for Sustainable Development Forum

'The benchmarking mechanisms that we have in place [to scrutinise the sustainability standard offer] now allow for local and regional standards. We must acknowledge that local and domestic standards could very well be more appropriate than a few international standards.'





Arancha González,
Executive Director
of the International Trade Centre

Geneva (Switzerland), 1st October 2014,
Trade for Sustainable Development Forum

'These sustainability initiatives [such as the implementation of a sustainability standard] can provide new trade opportunities, improve product quality, mitigate environmental degradation, improve compliance to social and labour standards, and boost the overall competitiveness of SME exporters. For that, we need serious investment of financial and technical resources to meet those standards.'

Guy Stinglhamber,
General Delegate of COLEACP

Geneva (Switzerland), 2nd October 2014,
Trade for Sustainable Development Forum

For the session devoted to the implementation of sustainability standards, which focused on the need to make those standards accessible to all the stakeholders in the supply chains, from small farmers to major corporations: 'These standards can be summed up in three Ps: Profit - Population - Planet. Profit is the short-term vision; people are a medium-term vision; and the planet is the long term - and all three are important.'

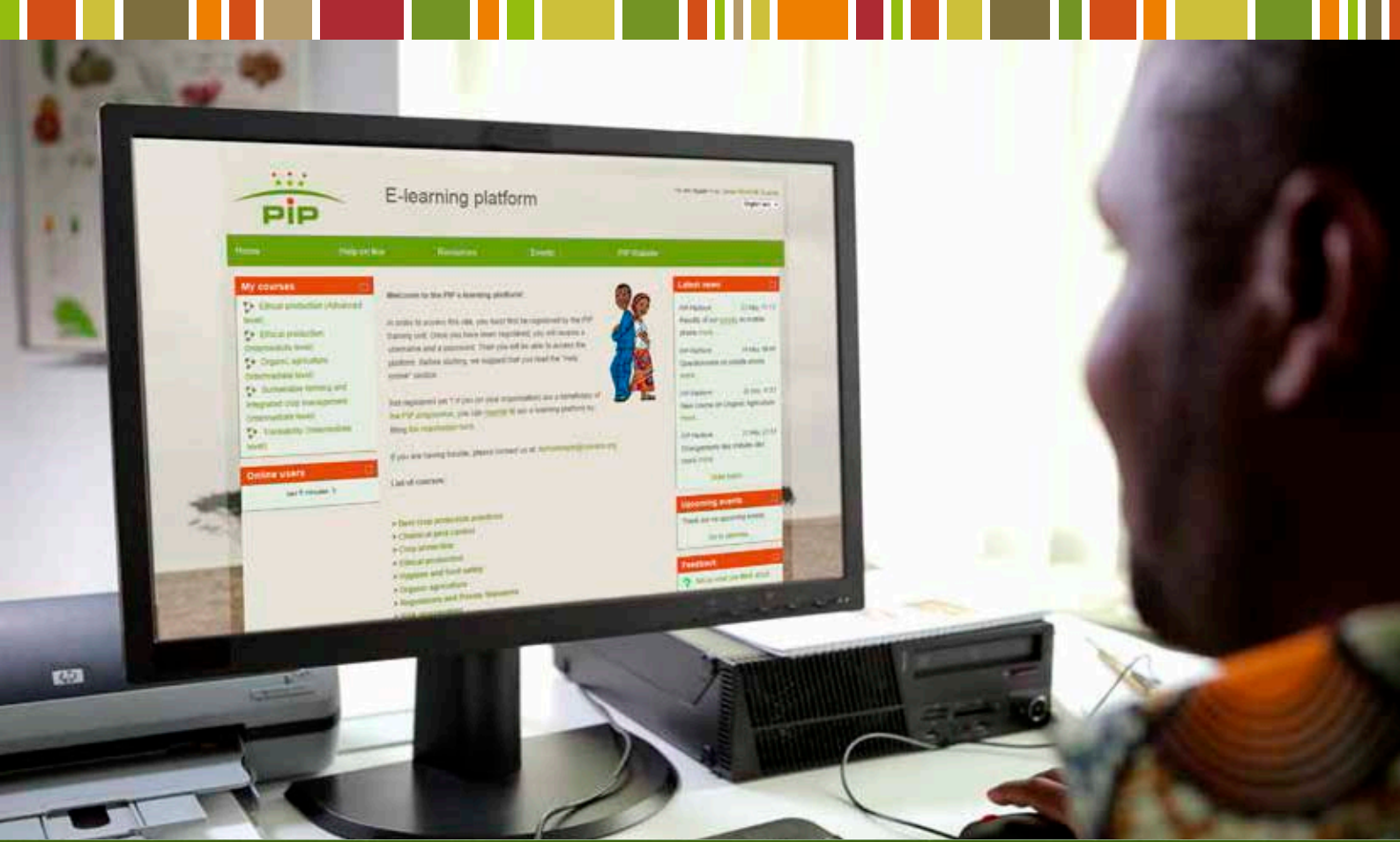


Achim Steiner, Executive Director of the United Nations
Environment Programme

Nairobi (Kenya), 12 August 2014, presentation of the report
'Keeping Track of Adaptation Actions in Africa'



'With 94 per cent of agriculture dependent on rainfall, the future impacts of climate change - including increased droughts, flooding, and sea-level rise - may reduce crop yields in some parts of Africa by 15-20%. Such a scenario, if unaddressed, could have grave implications for Africa's most vulnerable States [...] Using projects implemented in various countries in sub-Saharan Africa, the KTAA report clearly demonstrates how investment in adaptation actions can provide, not just low-cost solutions to climate change challenges, but can actually stimulate local economies through more efficient use of natural capital, job creation and increased household incomes. [...] By integrating climate change adaptation strategies in national development policies, governments can provide transitional pathways to green growth and protect and improve the livelihoods of hundreds of millions of Africans.'



COLEACP E-Learning platform



**A training system for professionals involved
in the ACP agricultural industry !**

<http://training.coleacp.org>

ETHICAL
FOOD SAFETY
SUSTAINABILITY

FOOD SAFETY

TRACEABILITY

ORGANIC