

THE PIP TRAINING PROGRAMME: BUILDING OF ACP EXPERTS CAPACITIES IN CROP PROTECTION AND FOOD SAFETY TO SUPPORT LOCAL COMPANIES TO COMPLY WITH EU REGULATIONS ON PESTICIDES RESIDUES

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SUMMARY

Regulatory requirements, and in particular phytosanitary quality standards change rapidly. As ACP producers/exporters race to become more competitive, to keep their market share and to satisfy their customers' commercial demands (e.g. EUREP-GAP certification), the need for competent staff who are aware of the company's quality objectives and trained to follow instructions is crucial. Mastering sanitary quality is only possible if matched with a programme to build the skills of companies' human resources. The Pesticide Initiative Programme (PIP), mindful of the importance of making operators autonomous and of training them to monitor EU food safety regulations and technology on their own, has successfully developed a training programme while building a quality network of local/ACP service providers. By building the capacities of ACP experts and then securing their services as trainers, PIP also guarantees companies' access to expertise and the sustainability of their efforts to comply with new EU regulations. The training strategy developed by PIP rests on two pillars : instructor training and collective training. Instructor training consists in reinforcing the technical knowledge of local experts (agronomists, hygienists, etc.) by providing them with active teaching methods. Once the ACP experts have gained enough technical knowledge of the key areas of crop protection - mainly pesticides management - and food safety, and have demonstrated their capacity to train the technical staff of local companies, the PIP has carried out a collective training programme in 2004, 2005 and 2006. To date, more than 130 consultants covering about 15 ACP countries have received instructor training, and more than 700 people have participated in collective and in-company training sessions.

1. HOW THE PROCESS OF HARMONIZING REGULATIONS ON PESTICIDE RESIDUES IN EU CAN AFFECT CROP PROTOCOLS IN ACP COUNTRIES?

Some 480,000 tonnes of fresh fruit and vegetables are exported yearly to the European Union (excluding bananas and South Africa), with import value of around €900 million. It is estimated that the sector provides a living, directly or indirectly, for 7 million people. In ACP countries (mainly West and East Africa), the sector of fresh fruit and vegetable exports is faced with serious difficulties:

- the growing demand of European distributors in terms of - quality and safety of - products they sell (vegetables, exotic fruits),
- the harmonization of European regulations on pesticide residues currently under way (Maximum Residue Limits -MRL- harmonization in EU). As the existence in the European Union of national MRLs can be a source of trade problems for ACP exporters and importers from third countries, - the European Commission came forward with a proposal to harmonise all MRLs at European level and prevent Member States from setting MRLs unilaterally; the regulation (396/2005) is currently being adopted and is slated to enter into force in 2006.
- a large number of active substances used today in ACP Crop Protocols are no more used or have been withdrawn in EU; it has been decided that default MRLs as well as MRLs of European withdrawn products will be established at 0.01mg/kg (LOQ) ! If pesticides MRLs in fresh produce are exceeded, the importer introducing the product onto the European market will be held liable and severely penalised ("Due Diligence" principle).

To avoid incurring such a serious risk, importers will rely on ACP suppliers that can prove that they are MRL compliant; exporting fruits and vegetables on the European market without respecting MRLs is not possible anymore. Therefore it is imperative that ACP countries fresh fruit and vegetable producers and exporters comply with these regulatory and commercial requirements as soon as possible. If they fail to do so, they are in danger of losing their market shares in the EU, which would threaten not only an important source of earnings for the ACP countries but also jobs of a large number of smallholders employed in the sector. It is now critical for ACP producers to amend their Crop Protocols, with well known maximum pesticide doses they may use and PHI allowed on their crops, in order to achieve optimum residue levels and to demonstrate as quickly as possible that their fresh produce conforms with food safety requirements. Companies able to offer such guarantees will have strong commercial advantage and increase importers' confidence.

2. OBJECTIVES OF THE PESTICIDES INITIATIVE PROGRAMME (PIP)

The Pesticides Initiative Programme (PIP) was set up by EU at the request of the ACP Group of States (Africa-Caribbean-Pacific) in order respond to applications from private companies exporting fresh fruits and vegetables on the European market confronted with new regulations and buyers' requirements in terms of food safety (pesticide residues) and traceability. The PIP works to help them to revise their practices and to implement in companies food safety management in the production and marketing processes. PIP responds to requests from companies, including:

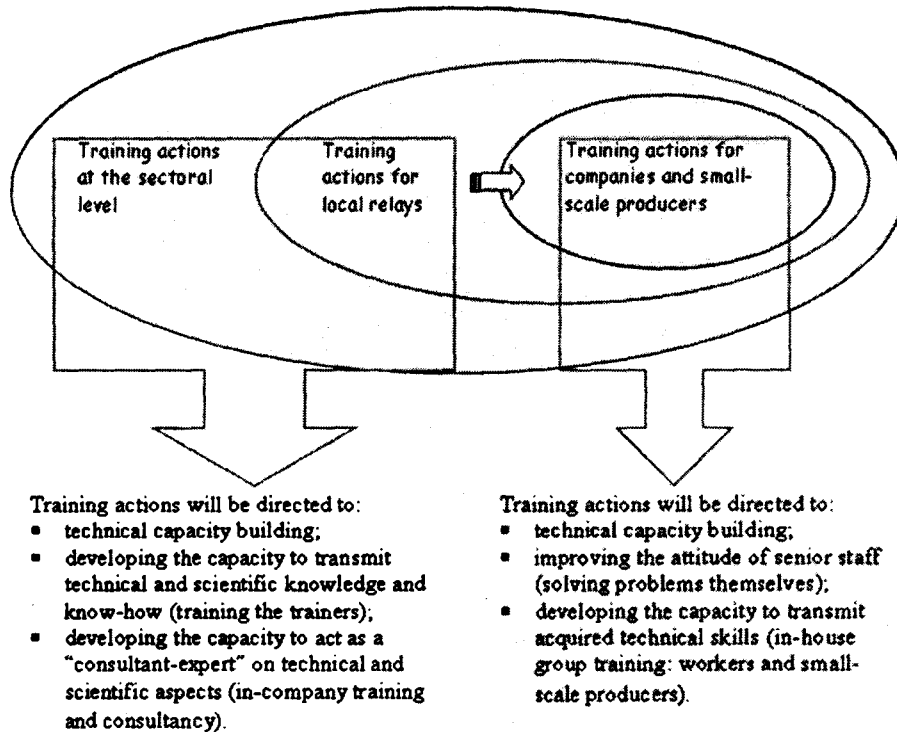
- the training of staff (middle managers and workers) in food safety issues (good practices);
 - the adjustment of crop protocols in line with Integrated Pest Management (IPM) principles and adoption of non-chemical alternatives for crop protection;
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- the introduction of product traceability systems allowing the tracking of the agronomic history of production and exports (producer, plot, pesticide applications, harvesting, etc.).

The implementation of PIP has been entrusted to an inter-professional organisation of the ACP-EU horticultural trade (COLEACP). Today, the PIP works with companies from around 20 ACP countries and covers a variety of crops, including pineapple, green beans, mango, avocado, okra, cherry tomato, melon, passion fruit, papaya, lychee, yam, chilli peppers and others (cumulative volume amounts to $\pm 400,000$ tonnes/year or $\pm 80\%$ of exported products besides banana). The PIP works on an ongoing basis with EU regulatory authorities, particularly the European Commission's DG Health and Consumer Protection. For over three years, the PIP has been conducting with local service providers a large-scale programme of residue trials in a number of African countries (Senegal, Ivory Coast, Ghana, Kenya) on the main crops exported by ACP countries to the EU (french beans, pineapples, papaya, okra, mango and cherry tomato). The aim is to draw up new "Crop Protocols" recommending the use of EU authorised crop protection products and respecting MRLs and food safety norms, thus complying with the European Union regulations requirements (mainly Regulations (CE) 178/2002, 852/2004 & 396/2005). More generally, the PIP aims to contribute to the development of safe and sustainable trade between responsible partners.

3. THE PIP TRAINING PROGRAMME: SOWING THE SEEDS OF FOOD SAFETY

To control quality to the required level (product safety and conformity), there are several basic conditions, the first one being competent, trained staff who know the objectives, and who follow instructions and the appropriate, accurately described *good practices*. Therefore to reconcile their production methods with increasingly stringent European food safety and traceability regulations, ACP growers must proceed with reinforcing the capacity of their middle managers, farm workers and the small growers they work with.



An analysis of companies' requests for PIP interventions, e.g. for the assistance of crop experts and other experts carrying out in-company interventions for PIP, have confirmed the importance of providing the training needed to make exports compliant with EU regulation and European distributors' requirements, e.g. EUREP-GAP certification. Following ACP companies demands, the PIP has initiated several training types: sensitization workshops, training the trainers sessions, collective trainings, in-company trainings, individual trainings, ...in order to respond to the need of competent managers, highly conversant with the issues involved as regulatory requirements, and in particular phytosanitary quality standards change rapidly. For the sector's long-term sustainability, the PIP provides also support for building the local capacity of the intermediary structures (professional organisations, local consultants and experts, laboratories, etc.).

The overall objective of the training programme is to work on "*capacity-building*" for essentially the three following groups:

- *The companies:* in order to improve the in-company expertise required to establishing food safety and traceability management systems. The capacity-building involves every level in the company: managers, middle managers, supervisors, workers and outgrowers.
- *The local service providers:* to meet the need to provide companies with high quality local expertise that is readily available and financially affordable. In most countries, certain expertise is not available at the

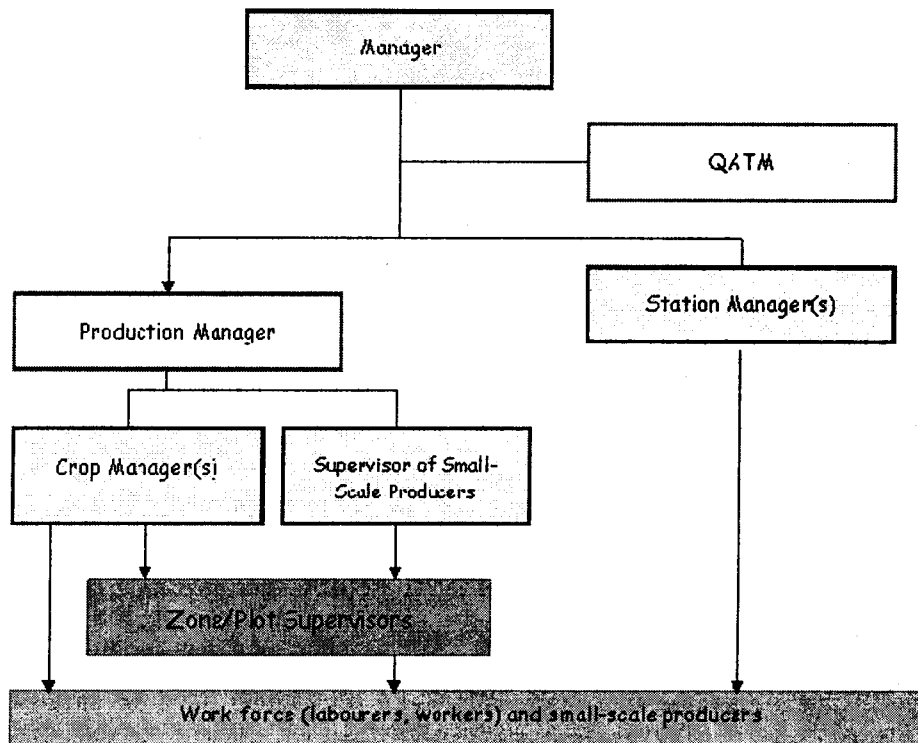
local level and the number of good, independent ACP experts is still insufficient given the needs of the sector.

- For all of the key players in the sector (extension officers, laboratories, administrations).

4. BUILDING CAPACITY AT MULTIPLE LEVELS

4.1. Capacity building at the company level

At the company level, senior management staff, and mainly the “Quality Assurance and Traceability Manager” (QATM) serve as first relays and are considered as the best channel for transferring skills within the exporting companies. It is natural to rely on them because they are often responsible for ongoing in-company trainings. Furthermore, they are the most qualified in companies to fulfil the need to monitor European regulations.



4.2. Capacity building for ACP service providers

To guarantee the long-term viability of the programme, the PIP contributes to building the capacity of local *service providers* so that in due course they may take over most of the PIP's activities, and in particular collective trainings. Service providers may be public or private organisations as long as they contribute to more local expertise local being made available to horticultural

companies in ACP countries. Ten "training the trainers" sessions have been realized in East and West African countries since 2004. These training sessions aimed not only to improve the technical background of the local service providers (crop protection experts, hygienists, etc.) but also to teach them "teaching methods". Therefore the training courses are practically oriented (exercises, field visits) and the content is equally focus on *teaching methods* and *technical aspects*. The training methods programme was based upon established *adult learning principles* and the progressive structuring of the training and learning process. The programme's training methods sessions and topics were closely interlinked with the technical sessions. All examples used in the training methods programme were taken from the relevant technical topics, providing opportunities to combine the training and technical skills. Training methods used in the technical sessions also demonstrated the application of the participatory training practices being developed by the training method inputs.

The 10 "training the trainers" sessions have enabled the local service providers to teach middle managers, growers and other operators how to produce fruit and vegetables in compliance with food safety regulations and the other commercial requirements of importers. PIP can now rely on a network of around 130 ACP trainers and these service providers can carry out its daily activities (e.g. to conduct collective or in-company training sessions). While Kenya and Ivory Coast were in the past by far both best endowed with qualified service providers, other ACP countries like Senegal, Ghana, Uganda and Burkina are today not so far behind. An international network of ACP experts who play a part in supporting agro-food companies, known as *Africonforme*, was created in Dakar (Senegal) in July 2005.

5. PIP TEACHING MATERIAL AND SUPPORTS

5.1. Thematic Modules

The Training Unit has developed a set of teaching material that includes: 8 thematic Modules, booklets, slide shows, leaflets, photos, educational videos on specific subjects related to hygiene, the proper use of pesticides and similar issues. The 8 Modules cover a *range of topics related to food safety*, comprising themes such as food safety procedures management, EU regulations, the safe use of pesticides, hygiene, traceability and production management tools, pest recognition and crop protection, teaching methods and access to information. They are the basic content presented during the collective workshops organised for food safety managers and field supervisors to prepare them in setting up control systems and ensure the continuity of the system.

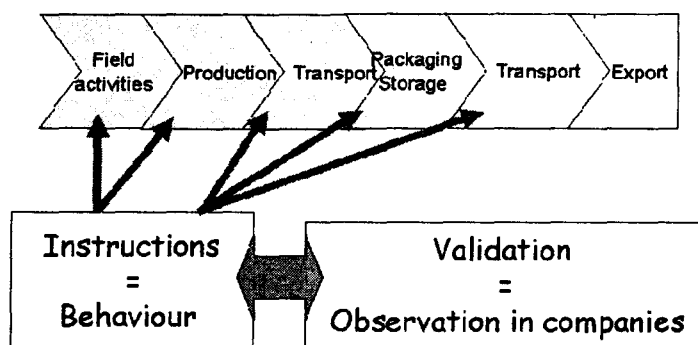
5.2. The PIP Tool Box

The collective training programme is evolving towards a *self-learning system* thanks to a new tool developed by PIP (the "Toolbox" CD-ROMs). To help ACP companies improve their quality management and have access to up-to-date information at all times, PIP has prepared the Toolbox made up of 2 CD-ROMs, easy to install and requires no special computer skills. The Tool-

box is not only to *an interactive training area* for self-training and self-evaluation in the main subject areas of sanitary quality and traceability, but also a virtual library designed to solve the problem of access to information by minimizing the Internet connection difficulties. The Toolbox gives access to different sources of information: a pesticides data base, developed from European regulations on active substances, national regulations and pesticide registrations in the ACP States; reference crop protocols for the main ACP export crops; a glossary; a video library; a photo library; and the frequently asked questions. The Toolbox training will be used as much to update export companies middle managers knowledge, as to develop and improve food safety and traceability practices in the entire sector.

5.3. The PIP field workshops

After having focused on strengthening technical capacities for most of 2004 and 2005, PIP now turns towards developing teaching skills abilities so that middle managers can start spreading key messages to field technicians, outgrowers, assistants, etc... About 15 "*field workshops*" are under construction and will be proposed this year to the middle managers in the aim of providing effective and easy to use tools to pass on key messages. These practical teaching tools will be used for in-company collective trainings but in teaching skills seminars inspired from sensitization actions for outgrowers. An deep investigation on the good and bad practices in the companies, analyzing the whole process, has been done before the release of these field workshops to verify their usefulness and to control if the operational enunciated objectives correspond to the behaviour requirements awaited (observation of local practices were made in the fields, transport and packaging units).



It has been confirmed today that the field workshops foreseen by the PIP are considered as pertinent by the managers who underline the importance of such training tools. The field workshops proposed by the Training Unit (TU) cover the bulk of the needs (important messages):

Theme 1	Safe use of pesticides	10
Theme 2	Crop protection	3
Theme 3	Hygiene (harvest, station, application)	6
Theme 4	Traceability	3
Total number of planned field workshops (TU)		22

Specific needs still exist regarding the identification of pests and diseases. If in most cases, the scouting is reserved to specialized and skilled people, it seems nevertheless necessary to improve again their skill level, as well as it is considered by the managers helpful to spread a part of this expertise to the small farmers themselves.

6. ORGANISING COLLECTIVE WORKSHOPS

The training represents virtually half of most companies' intervention requests in their application with the PIP. Answering their call for staff training, the PIP has set aside substantial funds for reinforcing the capacity of ACP producers and contributes towards various types of trainings, mainly collective training workshops and in-company training sessions.

6.1. The collective workshops

The thematic training modules prepared by PIP in 2004 serve as a framework for the collective training sessions and are adapted to the different target groups and the agricultural context. Around 50 workshops have been organised since 2004 in the ACP countries. The PIP organises the entire training sessions, including logistics and agenda. The content of each workshop depends on the target, the level of the participants. The trainings cover a range of topics related to food safety, comprising themes such as food safety procedures management, EU regulations, the safe use of pesticides, hygiene, traceability and production management tools, pest recognition and crop protection, and access to information.

The 15 to 35 participants usually come from a particular country or from a group of countries sharing linguistic and/or geographical proximity to a workshop; the number of participants remains limited to allow discussions and experience sharing to take place during the course of the workshop. The contents of these collective workshops are highly technical, it is therefore important *for food safety managers and field supervisors* to have a chance to discuss and apply them within a controlled environment. After each workshop, the participating trainees evaluate the training session and the teaching material for quality and relevance. Although still working on strengthening their technical abilities, it is to note that the main focus for 2006 is to develop *teaching skills abilities of the middle managers* so that they can

start spreading food safety key messages and good practices to various actors of the sector such as field technicians, spray operators, outgrowers, assistants, workers, pickers, etc...

6.2. The in-companies customised trainings

Once food safety managers have had some training it is hoped that they will use the tools they have acquired to put in place comprehensive training programmes for their own farm workers and the small growers they work with. *Small growers and farm workers* are a difficult category to train because they tend to be diverse and scattered but they play a key role for the PIP since its success depends largely on their good practices in the field. Conducting in-company training sessions is therefore important if a company is to properly implement lasting food safety and traceability systems.

The PIP actively supports these in-company training sessions and, for companies which request it, PIP experts will help them organise and implement a customised training programme designed to reflect the companies' working conditions and progress in improving or implementing control systems. The training is usually conducted on the companies' premises. When appropriate, training sessions may be organised for several companies located within the same geographical area with a view to benefiting from economies of scale and fostering exchange of practices.

6.3. The Golden Bean operations

PIP is also developing a strategy to reach *small producers who are not part of a company*. In recent months, PIP has stepped up its collaboration with intermediary structures (in West and East Africa and in Jamaica) which serve as relays on the ground with the aim of raising awareness and training outgrowers in new European food safety standards. These relay structures organise training sessions on traceability and the safe use of pesticides. As many companies are supplied by smallholders, it is essential that these growers observe hygiene and quality instructions in order to stay in the export market. Therefore PIP launched a pilot action (in Senegal in February 2006) called "Operation Golden Bean" in order to make small fruit and vegetable producers aware of sanitary quality and good agricultural practices. To reach the majority of small producers, PIP decided to go out and meet them on the ground, with activities using techniques borrowed from theatre and experimentation. In Senegal, PIP teamed up with ANCAR (*Agence Nationale de Conseil Agricole et Rural*) to bring the operation to more than 1,000 farmers. The companies and associations that work with small producers of green beans were invited by PIP and ANCAR to become partners in the operation. Senegalese field workers, whose names were submitted by the partners, were selected and trained by the PIP experts. Some 15 days of activities were organised into the Dakar and Thies regions to present to small growers field workshops and to create real awareness of the importance of sanitary quality and to answer participants' questions.

7. CONCLUSIONS

The training strategy developed by PIP rests on *two pillars*: instructor trainings, reinforcing the technical knowledge of local agronomists or hygienists by providing them with teaching methods, and collective trainings for middle managers. ACP trainers have been prepared to train the technical staff working in companies.

Having appraised the general managers of the issues at hand (111 companies in 23 ACP countries), PIP comes first to those that are more directly involved in the implementation and the day-to-day management of food safety systems: (a) the *middle managers* who deal directly with these matters, such as production, traceability and quality managers, who are in fact the highest ranked technical managers in a company; (b) *other managers* who are responsible for the quality and traceability of a specific crop or particular stage of the production chain, such as crop and pack house managers (around 700 managers). In that sense, the PIP Training Unit will continue strengthening their capacities, by working in priority on updating their technical knowledge and developing their teaching skills.

But the PIP is now more concerned with *extending "good practices"*, sensitizing and training not only to the small-scale growers (around 75,000 small growers), already working with companies that have agreements with the PIP, but also to all others who are likely to continue to produce fruit and vegetables for export. To reach both groups it was **not only necessary** to identify and train the local relays to ensure that transferred knowledge takes root, but also to design specific teaching materials, the *"field workshops"* used in group trainings for small-scale growers, farm and pack house workers, etc.

More information about the training programme and PIP objectives and facts is available on the Website: <http://www.coleacp.org/pip>, or by mail at formationpip@fsagx.ac.be, or through the "PIP MAGAZINE" and the electronic newsletter "INFO-PIP".
