

Guest Editorial

Plant protection at a crossroads in ACP countries

1. The impact of trade changes in traditional agricultural practices

In Africa, and many other countries in the southern hemisphere (ACP - African, Caribbean and Pacific states), small farmers still practice subsistence farming, and the vast majority of producers of fruits and vegetables cultivate their crops over small plots of land, often for just a few weeks or a few months of the year. Despite the climatic conditions, often unfavorable for plant growth but conducive to pest and disease proliferation (heat and humidity), they have developed partially effective production systems and learned how to make the most of their environment using the natural resources available to them (botanical insecticides, plants that act as beneficial insect refuges, and various minerals) to manage the pests and diseases that affect their crops. The adapted local varieties and the considerable natural biodiversity of their environment combined with non-intensive cultivation methods (minimal cultivation, cover crops and crop rotation) have enabled them to reduce both disease- and pest-related pressures. The situation is entirely different in the case of horticultural cash crops, which are an important agricultural activity for rural communities as well as for urban and peri-urban populations in ACP countries. Although export production represents only a small portion of small-scale horticultural production in ACP states, as the international trade in food produce

expanded enormously over the last decades, it is nevertheless strategic because it represents an important income source for many family businesses. Europe is by far the main export outlet for ACP fresh fruit and vegetable networks. Fresh and processed fruits and vegetables account now for more than 50% of the total agricultural exports in some countries.

Therefore, ACP producers have abandoned their traditional varieties and relinquished their protection methods and have today integrated the use of fertilizers and pesticides into their usual practices, in order to protect their crops, increase the production, improve the quality of their produce and boost their income. Most of these producers unfortunately resort to the routine use of pesticides, comprising complex mixtures of various pesticides, without knowing anything about their properties. Furthermore, recommended equipment and products are often not sold locally or else are difficult to obtain, product presentation (e.g.: no labels or labels in an incomprehensible language, defective packaging), poor quality of the formulations, unsuitable pack sizes and the lack of protective equipment, training and information make the use of pesticides a random, costly procedure fraught with health and environmental hazards. As vegetables are short-cycle crops, which are consumed fresh or after minor transformation, the risks of exposure to pesticides residues in

harvested produce at concentrations that are harmful to consumer health (above the permitted residue levels - MRL) are real. Many other side effects can also be observed at the farm level such as contamination of ground and surface waters, destruction of beneficial organisms and loss of biodiversity, adverse effect on the health of operators, development of pests and/or diseases resistance,...

2. Chemical control in plant protection is clearly challenged by a proliferation of SPS standards

In ACP countries exporters are faced with the growing demand of European distributors in terms of quality and safety of products they sell. To avoid incurring a serious risk to exceed MRLs, importers will rely on ACP suppliers that can prove through a Food Safety Management System that they are MRL compliant. Exporting fruits and vegetables on the European market without respecting MRLs and other sanitary requirements is not possible anymore and it is critical for ACP producers to amend their crop protocols in order to achieve optimum residue levels and to demonstrate that their produce conforms regarding food safety.

A proliferation of "Food safety and agricultural health standards" (SPS – sanitary and phytosanitary standards), issued by governments and/or by the private retailers, have been developed during the last decade to address various risks including not only those associated with pesticides residues, but also with microbial pathogens, environmental contaminants (e.g.: nitrates or heavy metals), mycotoxins or the spreading of plant pests and diseases. Although "food safety" should remain a cooperative and

non-competitive issue, some competition in this matter may be present in Europe within producers/retailers trying to present their produce as "safer". In Germany, some retailers require pesticide residues levels in fruits and vegetables substantially lower than the corresponding EU or Codex MRL levels. Today, faced with rising European demands in terms of quality of a healthier plant protection coupled with the increasing commercial standards requirements, ACP producers have no choice but to correct their practices in order to supply compliant products (e.g.: compliance with MRLs and other standards) and safeguard, if not expand their market share.

Moreover, consideration of only the "health"-related aspects of their production methods will no longer suffice because the market is gradually imposing criteria focusing on environmentally friendly approaches, the protection of biodiversity and the adoption of ethical production methods: the role of solely using chemical control in crop production routes is clearly challenged. Plant protection currently stands now at a crossroads in ACP countries that includes the following options:

- ▶ Promoting the chemical control, with the respect of "Good Agricultural Practices" using new and more environmentally friendly pesticides (and biopesticides) ;
- ▶ Developing the transgenic route (e.g.: incorporation of the "Bt" gene) as a long-term alternative to chemical control) ;
- ▶ Others stress the merits of preventive and integrated measures to reduce the risk of parasite proliferation within the framework of strategies taking the environment, cultivation

practices and local social-economic constraints into account, calling on, where applicable and in hierarchical fashion, various techniques for managing the risk posed by diseases and pests (IPM, integrated pest management);

- ▶ *Promoting the biological control of pests and diseases and organic farming in ACP countries as the only issues to solve the health and environmental problems.*

3. What impact do SPS standards could have on the agricultural practices in ACP countries?

To access to developed countries' markets products must now meet not only the importing country regulations, but also "standards" set by major importers and big retailers which are often more complex and stringent. Health and quality public and private standards may represent a form of non-tariff trade barrier for ACP countries: stricter regulations on food imports standards could exclude their smallholders and farmers who lack the capacities to comply (lack of finance, technical knowledge, regulatory framework, etc). There is therefore a general perception that compliance with these sanitary standards costs excessively compared to the benefits for small scale producers. Complaints of producers include the increasing number of private standards to be met, their overlap and costs, their obstacles to trade, an additional burden on the official competent authorities.

On the contrary, we can observe many positive consequences for ACP producers who are compliant today with the main SPS standards (such as productivity gains, reduced wastage, worker safety, environmental benefits, regularity of demand, closer relations

with buyers, etc.). Rather than consider these changes in a disruptive and negative light for the ACP horticultural sector, which provides a living for millions of people in rural settings, these regulations and market requirements can offer new interesting opportunities. Strict standards can create the incentive for ACP producers to invest in modernizing their production processes and can also help exporters which are able to comply with the standards to maintain or improve their market access into developed countries and reinforce their competitiveness in niche markets (e.g.: organic produce). Producers should also rekindle interest in their traditional control techniques, question chemical control and place their production methods and plant protection practices within the sustainable farming framework. Integrated Crop Management and biological control will open up real market opportunities for ACP producers in the near future.

4. Conclusions

Technical, regulatory and economic considerations all argue in favor of plant protection geared towards a more ecological approach such as Integrated Pest Management and biological control. The main questions lie in whether farmers of ACP countries will benefit or suffer from stricter SPS standards, how smallholders in these countries could comply to new regulations in order to continue to supply the European markets and how local governments and private bodies can help producers and contribute to harmonize those standards internationally.

Selected references

- European Commission, 2009. Draft Summary report of the Working Group of

the Advisory Group on the Food Chain and Animal and Plant Health. On Public and Private Partnerships: a contribution to food safety, Held in Brussels on 17 June 2009, 4 pages.

- <http://siteresources.worldbank.org/EXT/BNPP/Resources/TF051844RegionGlobalstandardschallengessynthesisreport.pdf>

- Isolina Boto and Camilla La Peccerella, 2009. Resources on food safety and

agricultural health standards. Briefing session n° 11 - Meeting food safety standards: implications for ACP agricultural exports, Brussels, 11 May 2009, CTA - A reader, 31 pages.

- World Bank, 2005. Food Safety and Agricultural Health Standards: Challenges and Opportunities for Developing Country Exports.

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