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WORLD BANANA FORUM GOOD PRACTICES COLLECTION

GOOD AGRICULTURAL PRACTICES FOR BANANAS

Good Agricultural Practices (GAP) are "practices that address environmental, economic and social sustainability for on-farm processes, and result in safe and quality food and non-food agricultural products". GAP are particularly important in the banana industry, not only for sustainability of production and minimization of environmental impact, but also to ensure that harvesting, packaging and transport activities are conducted in hygienic conditions in order to deliver safe and good quality fruit to consumers. Moreover, certain activities performed in the sector carry important risks for workers and these need to be addressed to ensure safe and efficient banana production.

The four pillars of GAP are:

- ↪ economic viability
- ↪ environmental sustainability
- ↪ social acceptability
- ↪ food safety and quality

If correctly implemented, GAP can limit the following risks:

- ↪ microbiological contamination of water and tools;
- ↪ unsuitable or contaminated soils;
- ↪ inappropriate tool or machinery handling;
- ↪ dangerous product storage and chemical contamination;
- ↪ contamination of the fruit due to inappropriate chemicals doses;
- ↪ introduction of new pests, pathogens or diseases into the production area;
- ↪ health risks for workers related to pesticide use;
- ↪ low fruit quality;
- ↪ low production.



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Many GAP guidelines and standards have been created at the international, national and local levels by international organizations, industry groups, companies and civil society organizations.

An example of GAP guidelines by an intergovernmental organization: FAO

FAO GAP principles have been defined to serve as a reference for voluntary sustainability standards on GAP. These technical recommendations are not compulsory:

Soil management and fertilization	<ul style="list-style-type: none"> ✓ Implement crop rotation and other land use practices to conserve soil organic matter. ✓ Cover crop to prevent erosion. Establish permanent cover crop where possible. ✓ Define appropriate timing, amount and application method for organic and mineral fertilizers.
Water stewardship	<ul style="list-style-type: none"> ✓ Manage ground and soil water by adjusting drainage and infiltration. ✓ Improve soil structure and increase soil organic matter. ✓ Avoid contamination of water resources with organic or inorganic production inputs. ✓ Monitor crop and soil water status and schedule irrigation accordingly. ✓ Adopt water saving and recycling practices.
Crop production	<ul style="list-style-type: none"> ✓ Select cultivars and varieties according to production and nutritional factors, as well as their response to fertilizers and pesticides. ✓ Apply organic and inorganic fertilizers, using appropriate handling, equipment and intervals to replace the nutrients lost during harvesting or production. ✓ Recycle crop and organic residues to stabilize soil nutrients. ✓ Adhere to safety regulations and standards regarding equipment and machinery.
Crop protection	<ul style="list-style-type: none"> ✓ Conduct regular surveys and implement forecasting techniques and early warning systems where possible. ✓ Prepare contingency plans, improve preparedness and implement rapid response and containment procedures in case of pest and disease outbreaks. ✓ Use pest and disease resistant varieties where possible and use pest and disease free planting materials. ✓ Use as preference pest, disease and weed control methods using biological agents or products, or mechanical options. ✓ Promote integrated pest management (IPM) practices, evaluating the effects of pesticides on farm productivity, health and the environment. ✓ Ensure pesticides are only applied, handled and stored by trained staff and according to legal requirements. ✓ Use only pesticides registered in the country for the specific crop. Avoid use of Highly Hazardous Pesticides, Persistent Organic Pollutants (POPs), WHO Class Ia and Ib and Class II pesticides, and pesticides listed in Rotterdam Convention Annex 3 and Stockholm convention. ✓ Ensure that staff use locally appropriate Personal Protective Equipment when spraying and handling pesticides. ✓ Compliance of the equipment used for the handling and application of pesticides with safety and maintenance standards. ✓ Record the use of pesticides.
	

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Harvest and on-farm processing and storage	<ul style="list-style-type: none"> ✓ Respect pre-harvest intervals. ✓ Provide clean and safe conditions for the processing of products. ✓ Use recommended detergents and clean water for washing. ✓ Store products under hygienic and appropriate environmental conditions. ✓ Pack the products in clean and appropriate containers.
Energy and waste management	<ul style="list-style-type: none"> ✓ Ensure efficient use and safe disposal of energy, nutrients, and empty pesticide tanks and containers. ✓ Record energy consumption. ✓ Implement energy-saving practices in building design, machinery size, maintenance, and use. ✓ Explore alternative energy sources to fossil fuels (wind, solar, biofuels). ✓ Minimize non-recyclable waste and recycle organic and inorganic materials. ✓ Securely store fertilizers and pesticides in accordance with legislation and good practices from the international code of conduct on pesticides. ✓ Establish emergency procedures to limit the risk of pollution in case of accidents.
Human welfare and health and safety	<ul style="list-style-type: none"> ✓ Provide decent wages and household income. ✓ Establish acceptable working hours and breaks. ✓ Train workers in safe and efficient use of tools and machinery.



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An example of GAP certification scheme by a private sector organization: GLOBALG.A.P.



GLOBALG.A.P.
The Global Partnership for Safe and Sustainable Agriculture

The Global Partnership for Good Agricultural Practices was founded in 1997. Today, more than 400 member organizations such as producers, retailers, industry and service providers support this initiative.

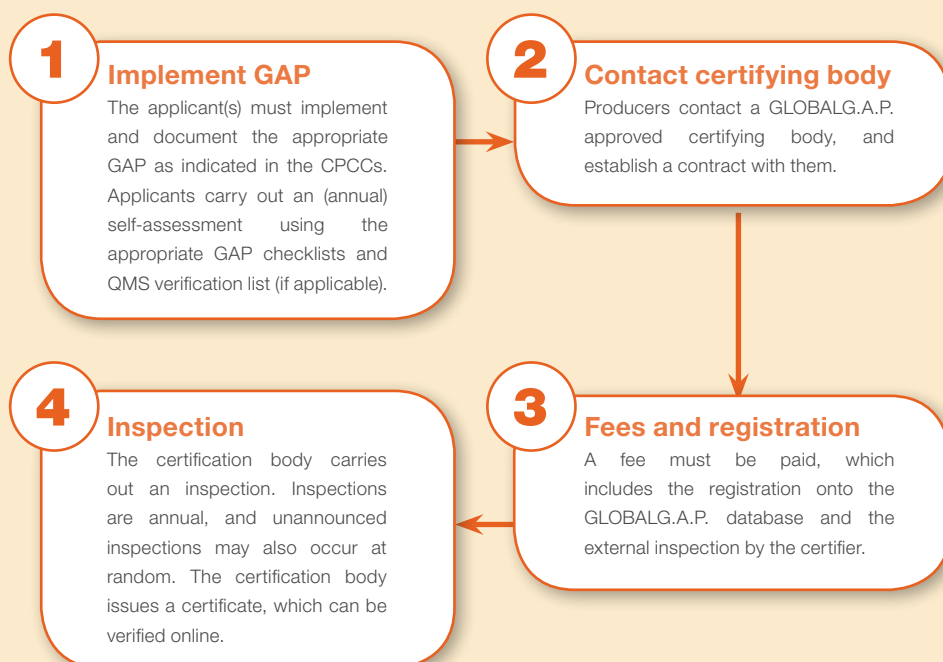
Certification requirements

To be GLOBALG.A.P. certified, banana producers must comply with the Control Points and Compliance Criteria (CPCCs) for fruits and vegetables. This covers all stages of production, including pre-harvest, soil management and applications of plant protection products, as well as the post-harvest processes, produce handling and storage on farm.

There are two certification options:

- **Individual certification:** a single producer applies for the certification and holds the certificate. Producers with multiple production units can apply for individual certification with or without a quality management system (QMS).
- **Group certification:** a group of producers request certification and the group, as a legal entity, is the certificate holder. In this case, the implementation of a QMS is required.

Certification process



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Facts on GLOBALG.A.P certification (as of 2016)

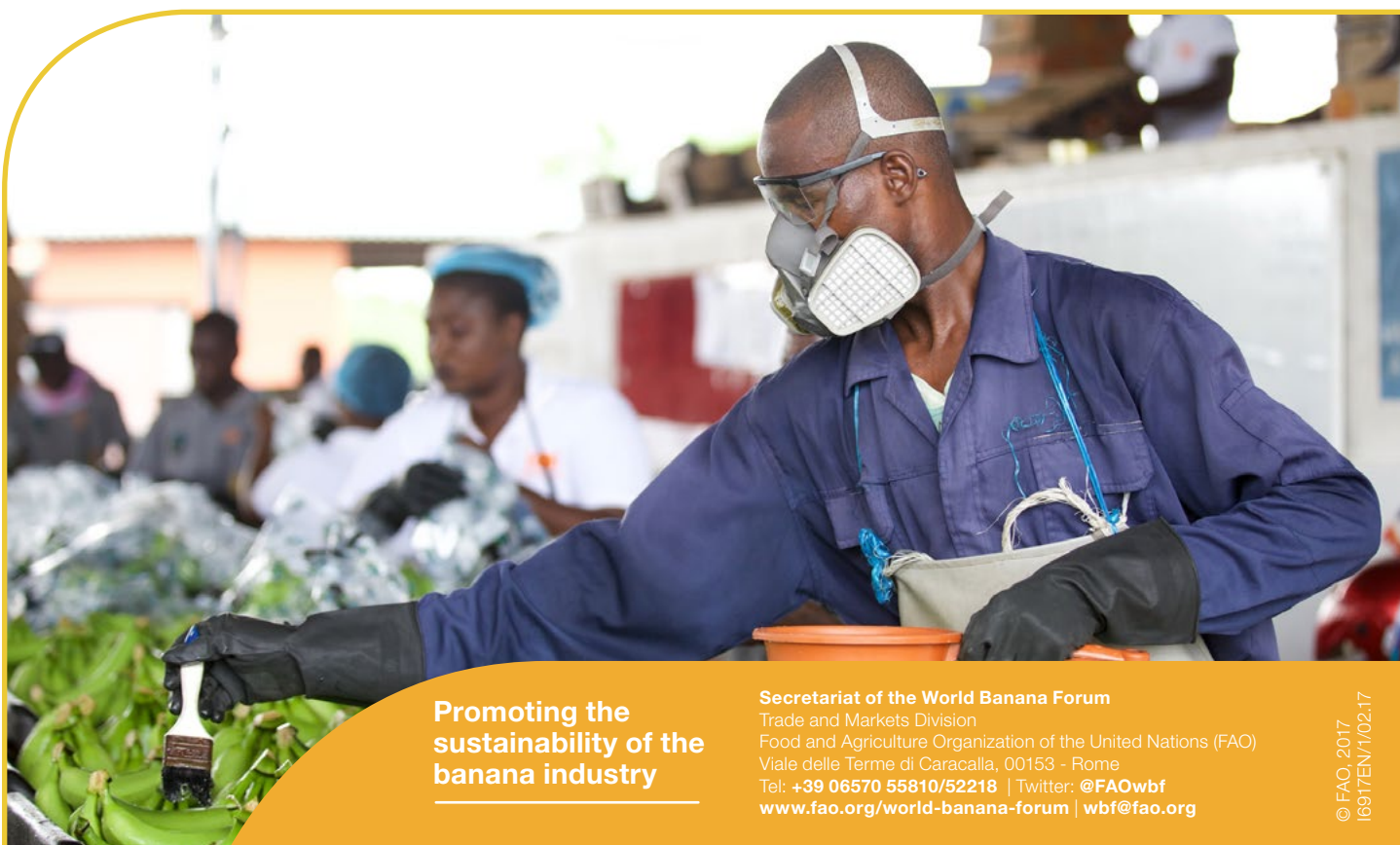
- The countries with the largest area of GlobalG.A.P.-certified bananas are Ecuador (71 800), Colombia (42 500), Guatemala (29 000), Costa Rica (26 600) and the Dominican Republic (14 600), representing approximately 70% of the total surface of GLOBALG.A.P.-certified bananas (ITC, 2016).
- GLOBALG.A.P. has certified 272 000 hectares of bananas in 32 different countries.
- 83% of the certified area is in the Americas, 10% in Asia, 6% in Africa and 1% in other regions.

GAP Benefits for producers

- ✓ Acceptance by retailers.
- ✓ Possible improvements to quality of bananas.
- ✓ Possible higher yields.
- ✓ Compliance with national and international regulations, standards and guidelines (in particular the Codex Alimentarius Commission, International Code of Conduct on Pesticide Management, International Code of Conduct for Distribution and Use of Pesticides, World Organization for Animal Health (OIE) and the International Plant Protection Convention (IPPC) regarding pest management procedures and permitted pesticides, maximum residue levels of pesticides in products, as well as other chemical, microbiological and physical contamination hazards.
- ✓ Value added to the products, facilitating access to markets.

Challenges

- ➡ Need for harmonization between the different GAP guidelines and certifications to avoid confusion, duplication and additional certification costs for farmers and exporters.
- ➡ Risk of diversion of GAP into a competitive advantage in supply chains.
- ➡ Need for funds for public support, information and technical preparation of smallholders to meet GAP requirements.
- ➡ Compliance with GAP standards is not a guarantee of environmental and social benefits.
- ➡ Need for awareness raising on “win-win” practices which lead to improvements in terms of yield and production efficiencies such as Integrated Production and Pest Management (IPPM) as well as environment and health and safety of workers.



Promoting the sustainability of the banana industry

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