



Understanding the Concept and Relevance of Good Agricultural Practices (GAP) in International Food Trade

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Abstract

Good Agricultural Practices are a collection of principles to apply for on-farm production and post-production processes, resulting in safe and healthy food and non-food agricultural products, while taking into account economic, social and environmental sustainability. Many international organizations are posting new codes, rules and guides for farmers, producers, traders and consumers to follow and adhere to. Such a compliance will ensure food safety, quality and nutritious food, better environment, efficient use of natural resources, social wellbeing and ultimately sustainable development.

Keywords: Good Agricultural Practices, GAP, FAO, Sustainability

Introduction

With opening of national markets to world trade and food imports and exports, and with nations signing world trade agreements (WTA), a new era in international food trade and commerce began. With introduction of LPG reforms – Liberalization, Privatization Globalization reforms, international food trade and commerce has changed so much that warranted Food and Agriculture Organization (FAO) to step in to declare what constitutes Good Agricultural Practices (GAP) actually is and why they are so important and relevant today. In fact, due to competition among Multi-National Companies (MNCs) operating in food and agriculture export trade. Modern technologies emerged in mass production in agro-industries leading to questions of food contamination, food safety, pesticide residues, environmental protection, and other serious concerns affecting human health.

The modern world is more concerned about what it consumes, how it affects its health and the quality and safety of its consumed products. The concern is also raised for workers' well-being which eventually affects the quality and safety of food for the population (Singh, 2018).

So, many new regulations have been passed on to remove maladies and mal practices and unethical & unsafe practices in food production, packaging, trading and distribution. More violations led to more regulations and food safety standards.

Hence, the major challenge today is the plurality of Codes and rules. A multiplicity of Good Agricultural Practices (GAP) codes, standards and regulations have been developed in recent years by the food industry and producers' organizations but also governments and NGOs, aiming to codify agricultural practices at farm level for a range of commodities. Their purpose varies from fulfilment of trade and government regulatory requirements (in particular with regard to food safety and quality), to more specific requirements of specialty or niche markets. Companies get engaged in bitter fights in food exports trading to capture a big chunk of market share for their company products. Consumers and NGOs raise their concerns

for food safety standards, transparency in production and manufacturing processes and right to informed choice.

An attempt is made in this article to understand the meaning and definition of good agricultural practices (GAP), their need and relevance, benefits of such codes for all stakeholders and challenges in implementing the adherence to food safety standards.

Concept of GAP

The concept of Good Agricultural Practices (GAP) has evolved in recent years in the context of a rapidly changing and globalizing food economy and as a result of the concerns and commitments of a wide range of stakeholders about food production and security, food safety and quality, and the environmental sustainability of agriculture. GAP applies recommendations and available knowledge to addressing environmental, economic and social sustainability for on-farm production and post-production processes resulting in safe and healthy food and non-food agricultural products.

Definition of Good Agricultural Practices

Good Agricultural Practices 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" (FAO COAG 2004)

GAPs may be applied to a wide range of farming systems and at different scales. They are applied through sustainable agricultural methods, such as integrated pest management, integrated fertilizer management and conservation agriculture. They rely on four principles:

- Economically and efficiently produce sufficient food (food security) safe food (food safety) and nutritious food (food quality)
- Sustain and enhance natural resources;
- Maintain viable farming enterprises and contribute to sustainable livelihoods; and
- Meet cultural and social demands of society.

The concept of GAPs has changed in recent years because of a rapidly changing agriculture, globalization of world trade, food crisis (mad cow disease), nitrate pollution of water, appearance of pesticide resistance, soil erosion.

For each agricultural production system, they aim at allowing a comprehensive management strategy, providing for the capability for tactical adjustments in response to changes.

The implementation of such a management strategy requires knowing, understanding, planning, measuring, monitoring, and record-keeping at each step of the production process. Adoption of GAPs may result in higher production, transformation and marketing costs, hence finally higher costs for the consumer. To minimize production costs and maintain the quality of agrifood, following GAP is essential for sustainable agriculture.

GAPs require maintaining a common database on integrated production techniques for each of the major agro-ecological area, thus to collect, analyze and disseminate information of good practices in relevant geographical contexts.

Relevance and Importance of GAP

Good Agricultural Practices is important because it reinforces responsible farming methods from site selection and land preparation to harvesting and handling.

According to the Food and Agriculture Organization of the United Nations (FAO), GAP applies available knowledge to address environmental, economic, and social sustainability for on-farm production and post-production processes, resulting in safe and healthy agricultural products. Implementing Good Agricultural Practices can improve the livelihood of producers and the local economy as a whole, contributing to fulfill national development objectives or sustainable development goals

Following Good Agricultural Practices makes it easier for producers to supply products with the quality retailers demand and consumers want.

Objectives

1. Ensuring safety and quality of produce in the food chain
2. Capturing new market advantages by modifying supply chain governance
3. Improving natural resources use, worker's health and working conditions, Creating new market opportunities for farmers and exporters in developing countries.

Key elements included in GAP:

- Risk assessment
- Preventing problems before they occur
- Food safety commitment at all levels
- Mandatory educational training for operational employees
- Chain-wide communication
- Integrated pest management
- Field and equipment sanitation
- Third-party audits for verification
- Oversight and enforcement

Potential benefits of GAP

- Appropriate adoption and monitoring of GAP helps improve the safety and quality of food and other agricultural products.
- It may help reduce the risk of non-compliance with national and international regulations, standards and guidelines (in particular of the Codex Alimentarius Commission, World Organisation for Animal Health (OIE) and the International Plant Protection Convention IPPC regarding permitted pesticides, maximum levels of contaminants (including pesticides, veterinary drugs, radionuclide and mycotoxins) in food and non-food agricultural products, as well as other chemical, microbiological and physical contamination hazards.
- Adoption of GAP helps promotes sustainable agriculture and contributes to meeting national and international environment and social development objectives.

Challenges related to GAP

- In some cases, GAP implementation and especially record keeping and certification will increase production costs. In this respect, lack of harmonization between existing GAP-related schemes and availability of affordable certification systems has often led to increased confusion and certification costs for farmers and exporters.
- Standards of GAP can be used to serve competing interests of specific stakeholders in agri-food supply chains by modifying supplier-buyer relations.
- There is a high risk that small scale farmers will not be able to seize export market opportunities unless they are adequately informed, technically prepared and organized to meet this new challenge with governments and public agencies playing a facilitating role.
- Compliance with GAP standards does not always foster all the environmental and social benefits, which are claimed.
- Awareness rising is needed of 'win-win' practices which lead to improvements in terms of yield and production efficiencies as well as environment and health and safety of workers. One such approach is Integrated Production and Pest Management (IPPM).

Conclusion

Good Agricultural Practices (GAP) is a set of standards for the safe and sustainable production of crops and livestock. It aims to help farm owners maximize yields and optimize business operations while also minimizing production costs and environmental impact.

A broadly accepted approach using GAP principles, generic indicators and practices will help guide debate on national policies and actions and on the preparation of strategies to ensure that all stakeholders participate in and benefit from the application of GAP in the food chain. The implementation of GAP should therefore contribute to Sustainable Agriculture and Rural Development (SARD).

GAPs applications are being developed by governments, NGOs and private sector to meet farmers and transformers needs and specific requirements. However, many think these applications are only rarely made in a holistic or coordinated way. They provide the opportunity to assess and decide on which farming practices to follow at each step in the production process.

References

1. FAO (2004) Good Agricultural Practices – a working concept, Rome, Italy, Available at <https://www.fao.org/3/ag856e/ag856e00.pdf>
2. Singh, Anjali (2018) Good Agricultural Practices (GAP): Definition and Importance available at: <https://www.plantcelltechnology.com/blog/good-agricultural-practices-gap-definition-and-importance/>
3. TNAU (2014) Good Agricultural Practice (GAP) Available at: https://agritech.tnau.ac.in/gap_gmp_glp/gap_about.ht4