

# The importance of good agricultural practices in EU membership process

## AB sürecinde iyi tarım uygulamalarının önemi

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### ABSTRACT

Food production has very important strategy in today's world. While half the world struggle with famine, the other half wants food stuffs they produce and consume to be secure. When it is said secure food, foods which is not harmful to health, do not contain any physical, chemical and microbiological residues and also of which traceability provided come to mind. Traceability of agricultural products has become the most important issue to provide food security. It has been accepted by all countries of the world and standards called GLOBALGAP have been developed. Also in Turkey, Good Agricultural Practices Regulation which is based on the same basics was published. Based on the principles of Danger Prevention, Hazard Analysis and Critical Control Point (HACCP), Integrated Pest Management (IPM) and Integrated Crop Management (ICM), Good Agricultural Practices support continuous improvement of methods and Technologies about agriculture. It is understandable that the product which has the Good Agricultural Practices certificate does not contain any physical, chemical and microbiological residues; is produced without polluting the environment and disturbing natural balance; during its production people, employees and the other creatures are not affected negatively; it is suitable for agricultural regulations of countries in which it is produced and consumed. In this review, approaches to good agricultural practices implemented in Turkey are evaluated.

### MAKALE BİLGİSİ

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### ÖZ

Gıda üretimi günümüz dünyasında çok önemli bir stratejiye sahiptir. Dünyanın yarısı açlıkla mücadele ederken, diğer yarısı da ürettiği ve tükettiği gıda maddelerinin güvenli olmasını istemektedirler. Güvenli gıda denildiğinde, insan sağlığına zararlı olmayan, fiziksel, kimyasal ve mikrobiyolojik kalıntılar içermeyen, aynı zamanda izlenilebilirliği sağlanmış ürünler akla gelir. Tarımsal ürünlerin izlenilebilirliği, gıda güvenliğinin sağlanması açısından en önemli konu haline gelmiştir. Tüm dünya ülkeleri tarafından kabul görmüş ve GLOBALGAP adını alan standartlar geliştirilmiştir. Türkiye'de de aynı esaslara dayanan İyi Tarım Uygulamaları Yönetmeliği yayınlanmıştır. İyi Tarım Uygulamaları Tehlike Önleme, Tehlike Analizi (HACCP) Zararlılarla Entegre Mücadele (IPM) ve Entegre Ürün Yetiştiriciliği (ICM) ilkelerini baz alarak, çiftçilikle ilgili metotların ve teknolojilerin sürekli gelişmesini destekler. İyi tarım Uygulamaları sertifikasına sahip ürünün; kimyasal, fiziksel, mikrobiyolojik kalıntılar içermediği, çevreyi kirletmeden ve doğal dengeye zarar vermeden üretildiği; üretimi sırasında insan, işçi ve diğer canlıların olumsuz etkilenmediği; üretildiği ve tüketildiği ülkelerin tarımsal mevzuatına uygun olduğu anlaşılır. Bu makalede AB sürecinde Türkiye'de uygulanan iyi tarım uygulamalarına yaklaşımlar değerlendirilmiştir.

## 1. Introduction

Good Agricultural Practices (GAPs) includes agricultural techniques which environmentally-conscious, is not harmful to human and animal health, target protection of natural resources, provide traceability and food security. With these kinds of production techniques, it is aimed at agricultural production which is socially viable, economically profitable and sustainable (Anonymous 2017a; Anonymous 2017c).

## 2. Extension of Good Agricultural Practices Towards Safety for Agricultural Products

Problems which occurred recently, threaten community health, are related to security of foodstuffs in the world have brought forward development of good agricultural practices. Mad cow disease, dioxin in eggs, chlorine in pears and cyprodinil found in strawberries can be given as examples of these problems and we can multiply them (Devin 2007).

A group created by leader retailers in Europe started a work about Good Agricultural Practices (GAP) and documentation of these in 1997. EUREP (Euro-Retailer Produce Working Group) and including Europe's leader retail companies first, a group consists of foundation representatives, who take part in all phases fresh fruits and vegetables sector's, has prepared document to guide how fruits and vegetables can be produced safely and sustainably. From this document and fundamental principles of food safety management system, checkpoints for all production stages have been determined and conformity criteria for determined checkpoints have been improved. In this document, in which principles of Good Agricultural Practices (GAP) are stated, principles of Hazard Analysis and Critical Control Point (HACCP) are combined (Anonymous 2016a).

Consumers, who gradually become conscious, want foods to be produced without harming the environment, beneficial for human and animal health and safely. Therefore, EUREP comprising of costumers and supplier companies from different countries, have made a protocol determining minimum standards required for agricultural products produced in these countries and imported from the others to provide their own societies consume healthy agricultural products. In this sense, it has to create a system, which can provide opportunity for traceability including any information up to by which company pesticides are used in which fields, for agricultural pesticides used in the phase of cultivation. Thus, products are brought under control with all phases from production to consumption (Devin 2007).

EUREPGAP published documents consisting certification rules for agricultural production in 2001 and these documents have been refreshed and updated in time. In yearly stated meeting, which is held in September 2007 in Bangkok after revisions in July 2007 came into force with its latest renewal's approval in March 2007, Eurepgap took its final form by changing its logo and name. The reason of changing its name as GLOBALGAP is that this practice is accepted and currently becoming widespread not only in European Union countries, but also in many countries around the world (Anonymous 2016 a).

### 2.1. The basic principles of the GLOBALGAP System;

- To achieve high quality in the production of agricultural food,
- To pay attention to environmental conditions during productive activities,
- To avoid activities which will disturb ecological balance and harm the nature,
- To provide usage of natural resources most efficiently,
- To increase productivity in agricultural production,
- To improve the quality of life of consumers, people and society in general,
- To assemble technological possibilities being used today with traditional agricultural techniques most efficiently (Anonymous 2016b).

### 2.2. GLOBALGAP System, in order to apply the basic principles described above, on the other hand, adheres to the principles described below about food safety:

- GLOBALGAP standard is based on HACCP Hazard Analysis and Critical Control Points System standard. Although today HACCP standard is not put into practise, because there is also HACCP standard on the basis of ISO 22000 Food Safety

Management System, Globalgap Standard and ISO 22000 standard have the same policies at one point.

- GLOBALGAP standard also complies with the principles of integrated management. Also known as Integrated Pest Management (IPM) technique, integrated management can be briefly stated as a system struggling with agricultural pests.

- GLOBALGAP standard also uses the technique of Integrated Crop Management (ICM).

### 2.3. These are the standards which GLOBALGAP System is based on and have parallels with:

- HACCP Hazard Analysis and Critical Control Points System (ISO 22000 Food Safety Management System standard) in terms of food safety and quality
- ISO 9001 Quality Management System standard in terms of food safety and quality
- ISO 14001 Environmental Management System standard in terms of environmental management
- OHSAS 18001 Occupational health and safety management standard in terms of occupational health and safety

## 3. Approaches to GAP in the World

### 1- Publicly Requested Practices

- Cross Compliance (EU)
- Ecological Performance (Switzerland)

### 2- Practices in the Presence of Producer Organizations

- COLE-EU-ACP Horticultural Trade Association
- LEAF

With the development of international trade in last years, as in the international trade agreements in all fields, the rules of the trade of agricultural and food products are also determined by Trade Agreement and the Application of Sanitary and Phytosanitary Measures, which are related to World Trade Organization (WTO). Conditions, which are determined with the Application of Sanitary and Phytosanitary Measures for the purpose of "Protection of Human Life and Health", put forward the term of food security as determining principle (Sayın 2002).

With this agreement, countries which are member of WTO as Turkey have to take local precautions about food security by international standards and principles. This necessity sets a justification of practices like Good Agricultural Practices (GAP), Hazard Analysis at Critical Control Point (HACCP) and Good Manufacturing Practice (GMP). We can identify Good Agricultural Practices (GAP) as all works and processes about planning, development, marketing of agricultural production, reaching safe products in the food safety chain to consumer by recording as well as agricultural form which is environmentally-conscious, cover minimum hygiene standards, has identity register system and is widely accepted (Sayın et al. 2004).

In the later 1990s, Good Agricultural Practices (GAP) were started on the purpose of maintaining security of fresh fruits and vegetables, which are consumed by United States Department of Agriculture (USDA) and the Food and Drug Administration (FDA), and in the same periods Food and Agriculture Organization (FAO) also started works about principles of GAP.

World Food Summit Plan of Action promises that governments will reduce hunger by year of 2015. According to the FAO reports, it is recorded that there has been a slow progress about this situation and according to another prediction, to cope with the population increase and the

permanent change in nourishment for the next thirty years, global food production has to be increased by 60% with regard to make up the big difference in nutrition requirements.

In the World Summit on Sustainable Development, which is held in September 2002, Practices and Voluntary Partnership Plan upon which governments agreed is put into practise by governments, international agencies, private sector, civil society organizations (CSO) and non-governmental organizations (NGO). Governments include some precautions in plan on the purpose of management of natural resources which contribute to food security and encouraging to agriculture (to get sufficient, safe and nutritious food).

Large retailers (supermarkets and hypermarkets), which have 70-80% of fresh fruit and vegetable market in EU countries, set minimum standards, which are required for agricultural products produced in these countries and imported from other countries, by making new arrangements to provide consumption of healthy agricultural foods for their own society. This protocol, which is called EUROGAP, was made to identify the condition of Good Agricultural Practices, which include essential basic principles improved to make production of horticultural crops (fruits, vegetables, potatoes, cut flowers and saplings) in the world to be done properly by Euro Retailer Producer Group-EUREP. The world's most comprehensive good agricultural practices protocol is prepared by EUREP (Sayın et al. 2004).

#### 4. The Role of Food and Agriculture Organization in Good Agricultural Practices

FAO works with Latin American Countries in an attempt to ensure food security and quality in commercial fruit and vegetable production and increase the capacity to reduce food loss of public and private institutions. The target is to share experiences in satisfying the market requirements, practice of GAP and HACCP and clarity of rules and models (obligatory and voluntary). In addition, FAO has a role in increasing the awareness of consumers in the member countries about GAP. Consumers have the capacity of making and performing decision about product safety and quality, and they can also be informed about the practices which promote to maintain human and environmental health. Several FAO programs contribute to development of GAP by involving technologies and their systems to continue production system intensely for sustainability of food and environment and to use efficient sourcing for pasture production systems and in production of animal products for produced agriculture, land and land productivity and sustainable yield. The purpose of other programs is to help FAO's role in designing standards and guides of Turkish Food Codex and accepting and practising of international standards. They include increasing food security and quality by strengthening cultivation and marketing in food chain, construction of capacity and risk analyses methodology to conform with pesticide control and food security standards, food security control and protection of consumers, food security evaluation and rapid alert system and food quality and security throughout food chain. The opinion of Committee on Agriculture emphasizes that GAP's approach shouldn't reduce the efforts of reduction poverty and it is necessary not to pose new obstacles for trade and it needs to be compatible with existing regulatory documents (Anonymous 2017b; Anonymous 2017d; Anonymous 2017e).

#### 5. Good Agricultural Practices in Turkey

In Turkey, the procedures and principles of Good Agricultural Practices (GAP) are defined by the regulation of Good Agricultural Practices published in the official gazette dated 07.12.2010 and no. 27778.

##### 5.1. Process of GAP Legislation in Turkey

Regulations For Good Agricultural Practices

Official gazette dated 8 September 2004 and no. 25577

**Regulation Changes;**

Official gazette dated 5 May 2005 and no. 25806

Official gazette dated 15 May 2006 and no. 26169

Regulations About Good Agricultural Practices

Official gazette dated 7 December 2010 and no. 27778

GAP's criteria accepted at an international level are conformed as part of certification system which is applied internationally and conformity criteria of GLOBALGAP.

GAP which is valid internationally has been developed by adaptation of GLOBALGAP to Turkey's provisions. In Turkey, especially producers which make foreign market-oriented production can also take the GLOBALGAP certificate besides GAP. Eligibility criteria are separated in two groups as obligations and recommended practices.

GAP is controlled agriculture. It is based on applying practices for fulfilment of needs and recording all practices. These records contains all the details about product type and variety, the reason for the implementation of the fertilizer and agricultural pesticide (needs), time, quantity, name of the proponent and practitioner, competency in this topic, after how many days the product will be harvested, water quality and irrigation. Thus the principle of traceability and sustainability in agriculture is its main feature will be fulfilled.

Analyses which are made and conclusion documents are also included in the register system. Analyses are made in the authorized laboratories. When there is a problem in business, with whom and how the communications will be made is indicated in quality management system.

According to legal boundaries and criteria determined by Republic of Turkey Ministry of Food, Agriculture and Livestock, making controlled agricultural production which is not harmful to human and animal health, conservation of natural resources are practices carried out for procurement of safe product with the basis of traceability and sustainability.

As long as due precautions for compatibility of criteria of GLOBALGAP protocol aren't taken, it's inevitable the problems which Turkey encounters will increase and export will be affected negatively. Production comply with this protocol is the point to be emphasized not only for foreign markets, but also for Turkish consumers which have natural right of consumption of secure food.

#### 6. Turkey's Targets in the Field of Good Agricultural Practices and Policies Which Need to be Developed

The importance of the secure food in food and agricultural sector has started to be understood in the world, and it's obvious that it's required to focus on the production of safe products

requested in the market instead of classical production because of the expectation of the emphasis on secure food's coming into prominence in future. Nowadays it's more important the security of food products than their prices for some consumers in the market of developed countries.

Today, at this stage, Turkey needs to develop policies to extend good agricultural practices, evaluate its advantageous position for good agricultural production and increase export.

In the process of transition to good agricultural practices, as Turkey's strengths, we can show these topics: legislative regulations, to have organizational structure on country level for supervision and control, being a rich country in respect of biodiversity and natural resources, to have clean land and water resources, to have climate and ecology convenient to biological diversity and to have traditional knowledge and experience as being an agricultural country. Although there is traditional knowledge and experience, it's inevitable that trainings must be organized to solve the problems about producer's lack of knowledge and inadequate organization to develop and organize these kinds of agricultural techniques. Ministry should try to increase support for producers to extend good agricultural practices. By year 2016 supports have been defined as 50 TL decare<sup>-1</sup> for fruits-vegetables involved in field-based supports, 150 TL decare<sup>-1</sup> for under protective cover and 100 TL decare<sup>-1</sup> for ornament and medicinal aromatic plants (Anonymous 2017f; Anonymous 2017g). Ministry also carry on works in water products sector about extending good agricultural practices.

Turkey's opportunities in good agricultural practices can be specified as to adopt Agricultural Producers Law, to have a quick market for good agricultural products, increase in demand for products of good agricultural practices in the world, employment increase in good agricultural sector, increase in demand for healthy and quality products of good agricultural practices with the improvement of consumer awareness, being close to regular markets due to geographical position, to have strong possibility of foreign market access. And Turkey's targets about this subject must be to increase product range, extend market-driven production, increase internal consumption, increase added-value by improving food handling of foods of GAP, raise the consciousness of foods of GAP by education, pay attention to pollution to protect clean areas, develop water products and animal husbandry, develop a traceable system.

Policies which need to be developed in Turkey can be summarized as extension of good agriculture, support for good agriculture, increase of income level of producer, raise the consciousness of agricultural environment, protection of natural resources, avoiding the risk of extinction and decrease of biodiversity, retail and service industry, new employment areas, contribution to national economy, to put more quality and safer products on market, to benefit from the opportunity of advantageous location for good agricultural production, extension of export.

## 7. Results

It must be the ultimate goal to provide production of foods with GAP of which every meter is registered, system is set up completely, which avoids any possible mistakes, earns more for producer, protects environment, plant, animal and human health to the utmost, all income group can consume and provide sustainable agriculture and opportunities for consumers to supply sustainable agriculture.

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