



Adopting Good Agriculture Practices (GAPs) for Enhanced Food Safety in the Arab Region

Economic and Social Commission for Western Asia

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Introduction

Food safety, which is an integral part of food security, is essential for protecting consumers from the hazards of foodborne illnesses that may be introduced at different stages of the food value chain starting right from production and all the way to retail and food preparation. In recent years, food safety has come at the forefront of debates in the Arab region following a spate of foodborne diseases, which affected many countries¹ and these will likely increase if no preventive measures are taken. As such, following a preventive control process is an important aspect to consider for the elimination of sources of food safety hazards before consumption instead of relying only on inspections at the end of the process, which was, and still is, a dominant practice in many parts of the world including the Arab region.

Therefore, addressing food safety is important and demands tight standards to be followed. To achieve this goal food retailers in developed nations have organized to require their supplying famers to abide by very specific Good Agriculture Practices (GAP) aiming at eliminating sources of food hazards while also improving overall conditions for farm workers and protecting the environment. The requirement by retailers has incited food value chain stakeholders to widely adopt GAPs in their day-to-day operations. Such a transition has yet to occur in the Arab region.

In addition, globalization, information and communication tools and increased technological innovations are influencing food systems and value chains at the global and national levels. They are providing producers and consumers alike easier access to markets and product information. Retailers are able to source their produce from multiple suppliers from all corners of the world, while producers have increased access to markets and improved farming technologies that allow them to optimize resource use such as pesticides, fertilizers, and water for an eco-friendly agriculture to improve product quality and safety. Consumers, on the other hand, are more educated and are increasingly more demanding on product quality and safety even when offered in convenient fashion, such as fast-foods. GAPs become a useful tool to achieve this objective.

GAPs also contribute towards sustainable agriculture and rural development and to meeting the Sustainable Development Goals (SDGs) of the 2030 Agenda on Sustainable development that were adopted by the United Nations General Assembly in 2015. The SDGs promotes a good environmental stewardship by emphasizing on the sustainable use of natural resources while enhancing livelihoods through better access to water and energy services, health, education, gender equality and higher income, and reduction in poverty and food insecurity.

Good Agriculture Practices (GAP)

GAPs were introduced in the 1990s as a systematic approach to apply available knowledge during on-farm production and post-production processes to obtain safe, healthy and quality food products while also supporting environmental, economic and social sustainability. The GAP concept is used as a reference tool for deciding, at each step in the production process, the practices and/or outcomes that are environmentally sustainable and socially acceptable.

GAPs are voluntary standards that are increasingly being imposed by importers and retailers and are usually more stringent than mandated ones, which have to abide by WorldTrade Organization rules. Nowadays, most global agro-food industries and supply chains chose to adhere to specific food safety standards, both public and private, from seed and agricultural production to food processing and distribution.²³ This is particularly important for the export of fruit and vegetable produces due to the ease with which they are often contaminated.4 GAP standards are not mandated by law and as such are adopted on a 'voluntary' basis though in reality they have become de facto requirements for product competitiveness to access international markets. Thus, fresh food that is not produced and handled based on specific GAPs on- and off-field to reduce contamination are not allowed to be traded on global markets as contamination risks are high. GAPs preclude or control the use of noncomposted manure, animals roaming in crop fields, the use of chemical products, the quality of product storage areas, the quality of water used for irrigation and washing products or the adequacy of transport practices to name a few.



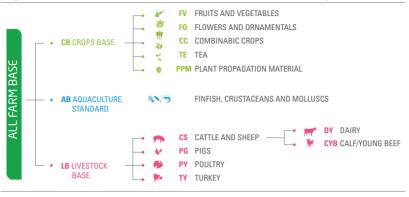
Figure 1. GAP schemes developed in the world7

Some of the prominent private-sector standard for GAPs include LEAF (Linking Environment and Farming) and Tesco Natures Choice in the United Kingdom, the United States Department of Agriculture GAP scheme, the Code of Practice of Minimally Processed Ready-to-Eat Fruit and Vegetables of Canada, ASEAN GAP for ASEAN⁵ countries, Freshcare of Australia and most importantly GLOBALG.A.P.⁶ in Europe. However, GLOBALG.A.P is rapidly becoming a reference standard with an increasing number of other country standards being benchmarked on it such as Kenya GAP, China GAP, Japan GAP and so on (Figure 1).

GAP schemes in developed countries are uniform and applied by all farmers and whoever aims to gain access to their markets. In developing countries, on the other hand, they are established at different scales to provide incentives to producers to effectively comply with set agriculture production regulations and food safety legislation for domestic and /or external markets.

In developing countries, products destined towards external markets are the only ones subject to GAPs since GAPs are usually expensive and cumbersome to adopt and apply for smallholder farmers. To partly address the issue, GLOBALG.A.P has introduced recently a scheme known as localG.A.P, which is less stringent for small-scale farmers though it only provides a 5-year window to graduate to the full GLOBALG.A.P scheme.





GLOBALG.A.P was initiated in 1997 by major European supermarket chains and their major suppliers, representing all stages of the supply chain in the fresh food product sector. It is a privately managed on-farm standard scheme, which started as EUREPG.A.P. and was renamed GLOBALG.A.P. in September 2007 as it expanded worldwide.

As a voluntary international scheme, it seeks to provide a global verification framework for fresh fruits and vegetables, among others, by requesting producer and other food supply chain actors to comply with a set of regulations for the production and handling of fresh food products. Nowadays, it comprises of guidelines to be applied by all farms as well as those specific for crops, livestock and aquaculture systems (figure 2 and box 1).

GAP schemes are usually developed through a consultative process with a variety of stakeholders, which might include farmers and retailers associations, concerned ministries, NGOs and other related public authorities such as national standards bodies. National and regional GAP schemes are established to enhance the adoption of GAPs for local producers who sell their produce in local and regional markets which are often interlinked. The adoption of national and regional GAP schemes is also an intermediate step towards a future benchmarking with global scheme such as GLOBALG.A.P should these producers aim at entering the global food market.

In recent years, a few regional GAP schemes were initiated and these include notably the Association of Southeast Asian Nations (ASEAN) GAP or ASEAN GAP, which was built on already established national GAPs. The ASEAN GAP was developed in 2006 with the aim to harmonize existing national GAP programmes or to serve as a model for adoption in countries without a national GAP scheme in order to facilitate trade between those countries.

The specifics of implementation of GAP programs within the ASEAN region varies, however, with some countries having opted for a government-certified system while others having an independently held programme. However, each of those national GAP schemes is benchmarked to the regional one, thus making them compatible with each other.

The success of the ASEAN GAP prompted the South Asian Association for Regional Cooperation (SAARC) countries to develop a fairly similar common GAPs with individual member countries developing their national GAPs schemes based on a common regional GAP. The SAARC GAP comprises six countries namely Afghanistan, Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka and was develop with the support of a FAO led Regional Technical Cooperation Programme. Participating countries have established their national GAP standards and developed a certification structure in line with the set regional accreditation requirements.



Figure 3. GAP in ASEAN Countries¹⁰

Box 1.	Global	Gap in	Numbers
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	2010	2017	
Number of Countries	113.0	124.0	
Certified Producers	106,008.0	180,022.0	
Area by Region	Hectares (Thousands)		
Asia	92.7	325.6	
Europe	868.6	2,735.5	
Latin America and the Caribbean	519.4	1,344.4	
Middle East and North Africa, Eastern Europe	111.6	195.7	
North America	130.9	371.2	
Sub-Saharan Africa	192.2	278.4	
Total	1,915.6	5,250.9	

The certified areas under GLOBALG.A.P increased since 2010 with the largest expansion being registered in the European region and in high-income countries, where the biggest markets for certified products are located. In the Arab Region, there were 1,451 producers certified under GLOBALG.A.P in 2011, with the majority of producers located in Morocco (520), Palestine (439), Egypt (359) and Tunisia (91).

Sources: https://www.GLOBALG.A.P.org/

World Bank (2019). The Safe Food Imperative: Accelerating Progress in Low- and Middle-Income Countries.

In the Arab Region, the Arab Organization for Agriculture and Development (AOAD), developed, with no major modification, the ArabGAP guide in 2007 to promote the adoption of GAPs based on the international standard of GLOBALG.A.P. It focuses on fruit and vegetables while taking into consideration the region's specificities. 10 The proposed standards may be used for both conventional production systems where produce are grown in the soil and hydroponic systems where produce are grown in inert media. Production may occur in the open or in a protected environment. The AOAD ArabGAP guide provides general rules for the certification process and certification bodies, appropriate certification regulations and the control points. The guide also encompasses a section on National GAP requirements referred to as Approved National Interpretation Guidelines, and the harmonization tools referred to as Benchmarking Cross Reference Checklist (BMCL) and other guidelines.

Implementing National GAP schemes

To adopt national GAP schemes, for fresh fruits and vegetables for example, countries need to proceed through a number of steps including agreeing on a set of standards for GAP with local stakeholders and national standards bodies if available; establishing a national implementation structure; and selecting certification and accreditation bodies. A certification is needed to prove that GAP standards have been followed

Identification and adoption of Standards

This step is the basis for setting up GAP schemes. Countries need to consider their own specific conditions, requirements and regulations on food safety and quality, the environment, labor (workers), air, water and wildlife protection, farming practices including chemical input use (fertilizers, plant protection chemicals), manure use and infrastructure. The requirements also need to cover different farm and post-farm activities such as production, harvest and post-harvest handling of farm produce and packhouse operations when the produce is packed for sale either for direct consumption or for further processing by the food industry.

To determine the applicable GAP standards, the country needs to decide whether their application is to be market-driven (demanded by market participants: farmers, middlemen, retailers, consumers, etc.) or regulation-driven (mandated through laws, rules and regulations) and whether they are to be voluntary or mandatory. The standards are then reviewed and approved by an established technical committee that comprises specialists and stakeholders in those related fields.

Operational Certification Country Scheme Accreditation GAP Owner Body Bodies Body standards set identified established. selected selected

Figure 4. Steps for implementing GAP

The stringency in abiding to the standards in the national GAP could be kept low for farmers producing for the local market until such time they have properly invested in their operations to abide to all requirements or start selling their produce at regional and international levels.

Establishment of the implementing structure

An implementing structure is needed to initiate the National GAP. A number of schemes, including GLOBALG.A.P, have standalone implementing bodies, which are not related to governments while others opt for government-led or -supported entity to as a GAP body. The implementing structure is the Scheme Owner and sets forth the compliance criteria for the Critical Control Point and the process towards certification including the identification of the certification and accreditation bodies. An implementing structure is necessary and must be chosen or setup if the National GAP is to take hold, be endorsed and become operational.

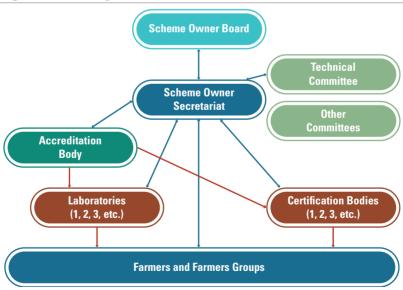


Figure 5. GAP organizational structure

The Scheme Owner

The implementation of the GAP scheme starts with the identification of a Scheme Owner (SO) and the design/set up of its related governing structure. The main responsibility of the Scheme owner is to manage the GAP scheme; introduce, upgrade and/or internalize quality in agriculture and/or horticulture; avoid any conflicts of interest; maintain confidentiality of information; be able to sustain the scheme; and provide guidance as required. It is the SO's responsibility as well to develop, review, maintain and update the Scheme; adopt a "GAP Certification Mark/Logo" and its registration, and select the Certification Bodies (CBs) and Accreditation Bodies (ABs) that will perform the certification/accreditation under the scheme. The SO supervises and monitors CBs, and organizes regular meetings of Committees, handles complaints and appeals, builds capacity and publicizes/promotes the scheme.

The SO could also become a CB or an AB. In that case it will either apply to an accreditation body to be certified as a CB or become an accreditation body that can approve CBs to carry out audits to ensure compliance with the requirements of the Scheme. If the SO becomes an accreditation body (AB) for approving certification bodies (CBs), it needs to comply with relevant ISO standards and function as part of an international system under the guidance of the International Accreditation Forum (IAF).

In some countries (e.g. United States and many developing nations), the government was given the responsibility for setting up and operationalizing the system/scheme at national level, whereby, as a SO, it identifies a government department that caters for the requirements of implementing the GAP. In Europe and those countries with a GAP benchmarked to GLOBALG.A.P, the SO is usually a private or non-governmental entity most often selected by one or several industry bodies (e.g. retailers, farmers, exporters, importers, etc..).

In the Arab region, the SO is setup usually upon the initiative of a related ministry and adopts related policies to ensure compliance with set food safety and quality standards (Box 2).

With respect to the scheme operating body, two options are available:

- The Self-Management option where the operating body is an extension of the SO itself and resources are the owner's employees. For example, the Egyptian Parliament approved the creation of the Egyptian Food Safety Authority to overlook the application of Egypt GAP.
- The Outsourced Management option is when the operating body is appointed by the SO and this body becomes accountable to the SO under a defined contract or agreement with set terms and conditions.

Both setups however need to involve all parties and ensure credibility, impartiality and efficiency of the operations.

Box 2. The Saudi Gap Proposed Scheme

In 2017, the Saudi Ministry of Environment, Water and Agriculture put forward a plan for the development of a Saudi G.A.P scheme, as follows:

- 1. A special unit on Good Agricultural Practices (SGAP) would be established within the Agricultural Product Safety Division
- 2. The Unit would coordinate, with the accredited bodies of the Ministry, the registration process of producers wishing to obtain a certificate of good agricultural practice (Saudi G.A.P.)
- An agreement to comply with the general rules for obtaining the certificate shall be signed with the producer, after registration, provision of the required information, payment of the fees and updating the data until the issuance of the certificate.
- 4. A gradual program of guidance and evaluation would be provided to producers at the end of which a ministry official would visit the farm and make a preliminary assessment of the farm based on Saudi G.A.P. standards.
- 5. An external inspection would be carried out by a Certification Authority approved by the Agricultural Product Safety Unit and a certificate valid for one year would be issue) Application for renewal of the certificate can be applied starting 4 months before the end of the certificate, and up to 4 months after the original expiry date of the certificate.

Source: https://www.mewa.gov.sa/ar/Ministry/Agencies/AgencyofAgriculture/Topics/Pages/topic2.aspx

The Certification Body

A Certification Body (CB) comprises the auditors who will perform the GAP assessment/evaluation at the farm level. The CB is a conformity assessment body operating under a related certification scheme. CBs could take many forms of which private/governmental/NGO – proprietorship, partnership, society, private or public limited – and should be compliant with relevant ISO/IEC standards. In all cases, a CB must be approved by an Accreditation Body. A governmental department (e.g., a division or unit within the Ministry of Agriculture) could be approved to act as a CB though its auditors would not be government employees but rather individual contractors operating on a fee-basis settled by farmers applying for certification.

Auditors, working for the CB, perform independently (as third-party or as unpaid contractor of the Government Body acting as CB) and evaluate the compliance of producers to the requirements of the National GAP scheme, certify abidance to requirements and issue a registration certificate.

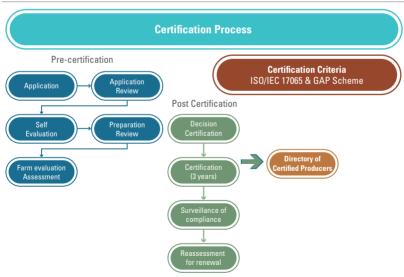


Figure 6. Certification Process of GAP

After granting initial approval, CBs' role involves periodic (frequency to be determined) surveillance of the farmer's field to ensure that compliance has been maintained after the first evaluation, based on the specified requirements in the standards and any additional certification criteria. This step is applicable to producers requiring either individual or group certification.

Other important requirements for selecting a CB, apart from any or all the above-mentioned requirements, are impartiality, confidentiality and competence. The CB should be able to demonstrate that maintaining impartiality and confidentiality are its primary concerns and that it has the requisite competence to deliver the necessary services.

The Accreditation Body

Accreditation is an independent validation of CBs against recognized standards to ensure their impartiality and competence. In an accreditation process, assessment of competency, authority, or credibility of the CB will be carried out.

The AB is a legal entity; that is most of the time government owned, sponsored or endorsed and should be a member of the International Accreditation Forum (IAF) to ensure integrity and consistency at the international level through a peer-review process.

The AB shall have authority and responsibility for decisions relating to accreditation, including the granting, maintaining, extending, reducing, suspending and withdrawing of accreditation. The accreditation process ensures that the certification bodies' practices are acceptable, in that they are competent to test and certify third parties, behave ethically and implement suitable quality assurance practices. Accreditation and ABs also need oversight to ensure uniformity globally. ABs should have international acceptance and need to comply with relevant ISO standards.

Operating procedure for a GAP Scheme

The Scheme Owner provides the prospective applicant producers with an up-to-date detailed description of the evaluation and certification processes and procedures, and the documents containing the requirements for certification, the applicants' rights and the duties of producers (including fees to be paid by applicants and suppliers of certified produce). These shall be consistent as well with the certification scheme offered by the CBs as per their accreditation scopes. This will help the producer to understand clearly what is to be done at various stages to meet the certification requirements.

The Producers aiming to adopt national GAP need to implement it on the farm for at least three production cycles and conduct self-assessment before applying for certification. When applying for certification, general information will need to be provided including name, address, contact details, details of land held and whether under ownership/lease, and proof of legal entity or certified identity, and details of workforce.

Production information is also needed and has to include type of produce, whether greenhouse or field production, production site, single harvest/multiple harvest, annual production area and length of time the area has been under cultivation. If the producer/group has been previously certified, the relevant details of the certification shall also be provided.

The application is then reviewed by a competent person of the CB. The review is done in a timely manner and completed within a defined time limit. Only duly filled applications are to be accepted and applicant will be acknowledged with the issuance of an identification number (ID). When an application has been rejected because of no-compliance a new application can be submitted after a set period, usually 1 year. If during the period of review of the application or later, information is received on the misuse of the GAP certification mark or certification scheme, the applicant will be disqualified.

The different steps for certification include a pre-assessment or pre-evaluation (optional step), off-site review, farm evaluation, audit observations.

The evaluation report will include all observations, findings and conclusions vis-a-vis the evaluation objectives and farm management plan. Verification of actions on all control points are done during the review. Any gaps are communicated to the auditor/inspector for rechecking. The corrective actions taken on nonconformities shall be verified for satisfactory compliance before recommending the granting of certification. The audit observations are given to the producer at the end of site evaluation and Nonconformities are explained in simple understandable language. Unannounced evaluations might be organized as deemed necessary to ensure continued compliance.

Box 3. GAP Governance Proposals for Palestine

As an initial step, the Palestinian National GAP (PALGAP) is being developed as a scheme that implements international standards and best practices, to ensure national, regional as well as global level recognition. The first phase of the scheme establishment will concentrate on the development, design, pilot and dissemination of PALGAP at national level before starting the second phase that will seek international recognition/benchmarking/equivalence depending on the agreed upon Palestinian export strategy.

The scheme governance system being developed includes various procedures and guidelines to be implemented by the Ministry of Agriculture (MOA) and the Palestinian Standards Institute (PSI), the implementing entities of PALGAP

- 1. **Scheme owner:** this item is defined during the design of the scheme; however, parties have agreed that the owner should be the MOA.
- Scheme operating body: this item is defined during the design of the scheme, the operating body could either be PSI, or assigned to another government entity or even outsourced to an existing third party. In all three cases the operating body is to ensure credibility, impartiality, independency and efficiency of the operations.
- 1. Scheme auditing body/ies: The different options for the auditing body/ies vary from the option of qualifying a pool of national auditors to work as subcontractors under the operating body, to the official recognition of existing certification bodies that are accredited for providing audits to the national scheme. An important factor to consider when selecting the auditing body/ies is to ensure that the cost on the farmers and producers will remain as low as possible.

Source: M.A.K International (2016). Establishing a Palestinian GAP scheme

Other considerations when applying GAPs

GAPs adoption offers several benefits such as economic risk reduction; improved market access opportunities; and improved fresh fruits and vegetables safety and quality. However, its application in the region faces many inherent obstacles. Producers tend to have low levels of awareness about Economic, Social and Environmental impacts of agricultural practices, and their low level of education is reflected through poor record keeping and resistance to change.

Problems of land ownership, and the use of seasonal rental contracts for land, also discourage producers from making the investments required by GAP schemes, as benefits accrue to landowners rather than the current producers.¹²

Furthermore, the implementation of GAP does not automatically increase consumer demand for fresh produce unless farmers are able to inform buyers that they are implementing GAPs in the hope that will influence consumers of their product choice. Third-party GAP certification is also a possible way for producers to let buyers know that they follow appropriate food safety and other practices on their farms. Producers, however, also need to measure the economic cost of pursuing GAP application especially those related to compliance with requirements for record-keeping, soil and residue testing and certification. Compliance to standards significantly increase costs.

The cost of implementing GAP, which shifted from retailers to producers, varies with the type of certification needed, product type and farm size and type of government assistance. It is costlier to obtain certification for a smaller farm than for a larger farm as large farms spread the cost of certification to a larger quantity of output. However, both large and small producer incur costs compared to producers not applying the GAPs.

It has been estimated that on average the adoption of GAPs requires a 10% increase in prices to compensate for the cost of compliance, which is why assistance is needed to ensure a ready-made market, e.g., ensuring the participation of retailers and an awareness-raising campaign to highlight the benefit of complying with GAPs.

Box 4. Implementation of GAPs in the UAE

The Abu Dhabi Farmers Services Centre, ADFSC, is an accredited body for GLOBALG.A.P in the UAE. It has helped producers in the UAE to adopt GLOBALG.A.P, whereby by 2018 there were 300 certified farms.

To promote sustainable agriculture practices, ADFSC is supporting GAP certified farms through the development of guidelines and improvements for their facilities and infrastructure. A protocol for a local GAP scheme, known as 'UAE GAP is expected to be adopted.

The centre provides also training to build capacity for producers. About 1,080 farm workers have been trained on health and security standards, 107 farm managers trained to maintain records as per the certificate's requirements, and 92 others on the foundations of applying GAPs and conducting internal inspections, along with a further 50 on analysing risks, critical control points and proper hygiene standards for farms.

Source: http://wam.ae/en/details/1395302627240

Full compliance with GLOBALG.A.P standards could improve access to international markets though the level of stringency is very high. In 2016, Egypt had about 73 thousand hectares certified by GLOBALG.A.P, and of its 2.2 billion USD income from total fresh fruit and vegetable exports, 1.4 billion USD came from certified fresh fruit and vegetable exports to high-income countries.¹³

Improvements can be made to bring down some costs such as start-up costs, cost of record keeping, product testing, training, supervision or periodical inspections and auditing. Some measures could also be adopted to reduce the cost and complexity of implementing the Arab GAP or a national GAP certification requirement if no export is involved, as follows:

 Adopting a flexible system for the certification scheme, to alleviate implementation burdens on farmers and allow gradual development towards full compliance.

- 2. Lowering the cost of certification and training by developing a network of locally trained auditors and assigning local certifying staff to limit costs of travel, accommodation and audit fees.
- Reducing the frequency of certification audits for those applicants who demonstrate strong history of compliance or to validate annual self-audits when these are corroborated by a formal audit once every 2-3 years.

Box 5. Cost of Adopting Global GAP in Jordan

A Jordanian farm needs to pay fees to the Global Gap Center (registration fees for the farm and depend on the cultivated area + certificate award fees - depending on whether the farm is one or a group of farms). In addition, the following fees apply:

- (25) JD for obtaining a copy of the contract.
- (300) JD cost for granting the certificate to farms that do not have facilities for packaging.

Or (350) JD cost for granting the certificate to farms that have facilities for packaging.

Or (500) JD cost for granting the certificate to a group of farmers

- (100) JD for the wages of the inspector / assessor working day.
- (50) JD fees for assessment reports.

If the accredited body carries out sudden inspections of the farm, the first party shall pay the amount of (100) Jordanian Dinars to the inspector / assessor / working day

Source: Presentation made by the Jordan Standards and Metrology Organization during the First Meeting of Arab-GAP Stakeholders for Jordan, Feb 2017

1JD= 1.41 USD as per Nov 2018 exchange rate

Control Points for the Application of GAPs for Fresh Fruits and Vegetables

Control points detail specific areas farmers must comply with in order to be certified. Categorizing standards into different levels of control is important to facilitate checking and verification by the producer, independent certification bodies or the government. Those control points are chosen depending on the objective to be met by the Scheme, noting that those currently being proposed were extracted from the ArabGAP standard though they were updated to maintain comparability to the prevailing requirements of the GLOBALG.A.P given that many entities and farmers are currently applying the last.

The ArabGAP guide groups standards into four main categories namely Critical Control Point and Compliance Criteria for the i) on farm operation and management, ii) produce safety and quality, iii) environmental management and iv) workers safety and welfare.

The first category, on farm operations and management, needs to be implemented by all producers for all schemes developed. The second, third and fourth categories are standalone categories and depending on the objective of the Scheme, may be implemented alone or in combination with any of the other categories, enabling a progressive implementation of GAPs based on individual country/producer priorities. In each category best practices in relevant areas are represented in the form of elements.

The ArabGAP cover, as well, general areas that are applicable with all other requirements such as traceability, complaints handling, planning for records-keeping as well as the organization of internal audits. The producer, as individual or group, is required to comply with all the control points.

It should be emphasized again, that national schemes are adopted to support GAPs for food products destined to local consumption. As such, the Scheme Owner might choose to relax part of the compliance criteria to promote/support a wider adoption of the scheme given that it is usually expensive and cumbersome for farmers to comply with GAPs schemes. Once the scheme becomes accepted and widely used the compliance criteria could be increasingly tightened until they reach requirements level of other internationally recognized ones.

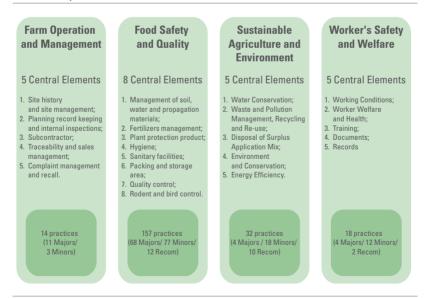
Criteria/requirements are categorized, based on their importance, as "must rules", which are again split into 'major must' and 'minor must', and "recommended" as explained below:

Must rules – those required to maintain integrity of the produce and failing to adhere to the same may result in a serious breach to food safety and product integrity.

- Major must those rules that are mandatory and must be followed, which if not strictly applied will result in hazards and impacts that are very severe to product safety, the environment, workers' safety and sustainability.
- Minor must those rules that must be complied with though their impacts is not very severe.

Recommended – those rules recommended for adoption by producers. In case of Noncompliance, the hazards and impacts are not severe enough to impact the environment, food safety or workers' health and safety.

Figure 7. Classification of ArabGAP Control Points and Compliance Criteria



The compliance levels recommended in the Arab GAP are as follows:

- Major must 100% compliance with all applicable requirements
- Minor must 95% compliance with all applicable requirements
- Recommended No minimum % of compliance set but must still be audited

Concluding remarks

For a locally-based scheme that has as main objective to improve food safety in local markets and where the majority of producers have never been introduced to GAP standards and requirements, a less stringent procedure could be put in place. This would give more time to small-scale and underfunded producers to learn about GAPs and their intricacies, build their technical capacity and make the necessary investments to bring their operations up-to-date with GAPs requirements. For example, in the initial phase the Scheme Owner could lower Major Must compliance to 20-50% rather that 100% while Minor Must compliance could be lowered to 5-10% until such time that the majority of producers are able and capable to comply with higher requirement levels.

The length of time for such transitory period would depend on how inclusive the scheme aims to be and, as such, it would be advisable, if during this transitional period, governments could act as Scheme Owners to cover the associated financial and technical support, as it would ease the burden on struggling producers. The requirements would be tightened as more and more producers join or once consumers and retailers are fully on-board as demonstrated through their willingness to demand and pay higher prices for these safer and more sustainably produced food products.

Endnotes

- Recent examples of foodborne diseases: 518 in Dubai (Khaleej Times, January 2014); 147 cases in Jordan (Barfblog, April 2014); 150 cases of food poisoning in Jeddah (Arabnews, May 2014); 50 cases in Marrakesh (Akhbarona, June 2014); 4 cases of MERS in camel milk in Saudi Arabia (Food Quality News, October 2014); Health minister flags major restaurants and supermarkets in Lebanon (Dailystar, November 2014); or 379 cases of water and food contamination in Sharqiya, Egypt (Alarabiya, April 2015).
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