

Guidelines on contract farming (GLOBALGAP) –horticulture–



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

**Guidelines on contract farming (GLOBALGAP)
–horticulture–**

October 2012

Directorate Marketing

DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES

Contents

- Definition of terms.....iv
- Acronymsvi
- 1. Why this guide? 1
- 2. GLOBALGAP 1
 - 2.1 Why certify? 1
 - 2.1.1 GLOBALGAP approved certification bodies (fruit and vegetables) 2
 - 2.2 Key requirements..... 3
 - 2.3 How to get certified..... 3
 - 2.4 Main opportunities and constraints..... 3
- 3. The minimum requirements for contractual arrangements with formal agri-food markets (GLOBALGAP compliance criteria) 3
 - 3.1 Record keeping and internal self-assessment/internal inspection 3
 - 3.2 Site history and site management 4
 - 3.3 Workers’ health, safety and welfare 4
 - 3.4 Waste and pollution management, recycling and reuse..... 7
 - 3.5 Environment and conservation 8
 - 3.6 Complaints..... 8
 - 3.7 Traceability 9
 - 3.8 Propagation material 9
 - 3.9 Soil and substrate management..... 10
 - 3.10 Fertiliser use 11
 - 3.11 Irrigation/Fertigation 14
 - 3.12 Integrated pest management (IPM)..... 15
 - 3.13 Plant Protection Products (PPPs) 15
 - 3.14 Harvesting 21

2012

Printed and published by
 Department of Agriculture, Forestry and Fisheries

Design and layout by
 Directorate Communication Services
 Private Bag X144, Pretoria 0001

DEFINITION OF TERMS

Biocide:	A biocide can be a pesticide, which includes fungicides, herbicides, insecticides, algicides, molluscicides, miticides and rodenticides; or it can be an antimicrobial, which includes germicides, antibiotics, antibacterials, antivirals, antifungals, antiprotozoans and antiparasites.
Biodiversity:	The 1992 United Nations Earth Summit in Rio de Janeiro defined "biodiversity" as "the variability among living organisms from all sources, including, 'inter alia', terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems". Biodiversity is of main relevance during EIA and EMPs.
Calibration:	Determination of the accuracy of an instrument, usually by measurement of its variation from a standard, to ascertain necessary correction factors.
Certification:	All those actions leading to the issuing of a certificate in terms EN45011 or ISO/IEC Guide 65 Product Certification.
Certification body:	Also known as conformity assessment bodies, are organisations that provide conformity assessment services such as inspections and certifications to producers or producer groups for GLOBALGAP standards in context with the requirements established under EN 45011 / SO/IEC Guide 65.
Compost:	The controlled biological decomposition of organic material in the presence of air to form a humus-like material. Controlled methods of composting include mechanical mixing and aerating, ventilating the materials by dropping them through a vertical series of aerated chambers, or placing the compost in piles out in the open air and mixing it or turning it periodically.
Consumer:	An individual who buys products or services for personal use and not for manufacture or resale.
Environment:	Water, air, land, wild species of fauna and flora, and any interrelationship between these, as well as any relationship with living organisms.
Erosion:	Erosion is the mechanical movement of the land surface by wind, rain, running water or moving ice, resulting in the wearing away of land or soil.
Food safety:	The assurance that food will not cause harm to the consumer when it is prepared and consumed according to its intended use.
Fumigant:	Volatile liquid or gas to kill insects, nematodes, fungi, bacteria, seeds, roots, rhizomes, or entire plants.
GAP:	"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 2003 GAP paper)
Groundwater:	All water that is below the surface of the ground in the saturation zone and in direct contact with the ground of the soil.
Harvesting containers:	Containers that are used for harvesting and transporting produce during and after harvest.
Harvesting tools:	Gloves, scissors, knives, clippers, etc.
Hazard:	A biological, chemical, physical or any other property that may cause a product to be unsafe for consumption.
Herbicide:	A chemical that controls or destroys undesirable plants.

Inorganic fertiliser:	A fertiliser in which the declared nutrients are in the form of minerals obtained by extraction or by physical and/or chemical industrial processes.
IPM:	The careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep PPPs and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPM emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural and or non-chemical pest control mechanisms.
Organic fertiliser:	Organic fertilisers mean materials of animal origin used to maintain or improve plant nutrition and the physical and chemical properties and biological activity of soils, either separately or together, they may include manure, compost and digestion residue.
Packhouse:	Any facility set up for handling harvested produce (see Produce Handling). Only those packhouses that do not pack the GLOBALGAP registered produce in the final package and/or do not process the produce by changing its shape or appearance are included in the GLOBALGAP certificate scope for Integrated Farm Assurance.
Post-harvest chemicals:	Includes post-harvest PPP, including wax, detergents, and lubricants where applicable.
PPP:	Any substance or mixture of substances intended for controlling insects, weeds, fungi and other forms of plant or animal life considered to be pests.
Processed product:	When the structure of the product is altered in appearance or form.
Produce:	The harvested product of the crop after it has been harvested, before it is sold.
Recall:	Refers to the process by which a product is removed from the supply chain and where consumers are advised to take appropriate action, for example, to return or destroy food.
Record:	A record is a document that contains objective evidence, which shows how well activities are being performed or what kind of results are being achieved.
Registration:	The process by which an individual producer or producer group starts the application process for certification with an approved GLOBALGAP CB. 125. Registration number: It is a number issued by the Certification Body to identify the producer and it serves as alias identification to the GLOBALGAP number (GGN).
Responsible persons:	Persons who have been appointed of being responsible by position or agreement.
Rinsate:	The mixture of the water used for rinsing together with remnants of the Plant Protection Product and water mixture that results from the process of rinsing the PPP application machinery/containers.
Risk:	An estimate of the likely occurrence of a hazard.
Risk analysis:	Refers to an estimate of the probability, frequency and severity of the occurrence of a hazard or other non-conformity with regard to quality and food safety.
Sewage water:	Water mixed with waste matter.
Subcontractor:	Specific farm operations performed under contract between the producer and the contractor. The contractor furnishes labour, equipment and materials to perform the operation. Custom harvesting of grain, spraying and picking of fruit are examples of custom work. Within the GLOBALGAP context, subcontractors are those organisations/ individuals contracted by the producer/producer group to carry out specific tasks that are covered in the GLOBALGAP Control Points and Compliance Criteria.
Substrate:	Any growing medium used for holding plants in place of soil, and that has been imported to the site, and can be removed after use.

Traceability:	The ability to retrace the history, use or location of a product (that is the origin of materials and parts, the history of processes applied to the product, or the distribution and placement of the product after delivery) by the means of recorded identification.
Toilet:	Facility where the persons may defecate and urinate in a hygienic manner (including waste disposal) and which poses no food safety contamination risk to surrounding field area while ensuring privacy of the person.
Worker:	Any person on the farm that has been contracted to carry out a task. This includes farm owners and managers.

ACRONYMS

EC	European Commission
EU	European Union
FAO	Food and Agriculture Organization
FAPAS	Food Analysis Performance Assessment Scheme
FBO	Food Business Operators
FR	Fire Resistant
GMOs	Genetically Modified Organisms
ISO	International Organisation for Standardisation
IPM	Integrated Pest Management
MRL	Maximum Residue Limit
NGOs	non-governmental organisations
NPK	Nitrogen Phosphorus Potassium
PPP	Plant Protection Product
SABS	South African Bureau of Standards
ULV	ultra low volume
WHO	World Health Organization

DISCLAIMER

This document has been compiled by the Department of Agriculture, Forestry and Fisheries and every effort has been made to ensure the accuracy and thoroughness of the information contained herein. The department cannot, however, be held responsible for any errors, omissions or inaccuracies in such information and data, whether inadvertent or otherwise. The Department of Agriculture, Forestry and Fisheries, therefore, accepts no liability that can be incurred resulting from the use of this information.

1. WHY THIS GUIDE?

GLOBALGAP has become an important standard not only for large-scale farms but also for smallholders all around the world. GLOBALGAP implementation can improve the farm management practices of smallholders, and GLOBALGAP certification can be a tool for smallholders to access both local and global markets and to be integrated into the formalised supply chains. However, compliance to the standard remains a challenge to the smallholders with a low level of literacy and financial means.

This guide can be used by farmers who want to understand the standard requirements, trainers who implement the standard on small-scale farms and any non-technical person who wishes to understand how the standards operate. This guide covers all the GLOBALGAP Control Points of the following sections:

- Record keeping and internal self-assessment/internal inspection;
- Site history and site management;
- Workers' health, safety and welfare;
- Waste and pollution management, recycling and reuse;
- Environment and conservation;
- Complaints;
- Traceability
- Propagation material;
- Soil and substrate management;
- Fertiliser use.

After having read this guide, the reader should be able to understand the process followed by the formal agri-food markets in applying GLOBALGAP level production guidelines for their suppliers.

2. GLOBALGAP

GLOBALGAP (formerly known as EUREPGAP) is a private sector body that sets voluntary certification standards and procedures for good agricultural practices. It was originally created by a group of European supermarket chains. GLOBALGAP aims to increase the consumers' confidence in food safety by developing good agricultural practices which must be adopted by producers. The focus of GLOBALGAP is on food safety and traceability, although it also includes some requirements on worker safety, health, welfare and conservation of the environment. GLOBALGAP is a prefarm-gate standard, which means that the certificate covers the process of the certified product from before the seed is planted until it leaves the farm. It should be borne in mind that GLOBALGAP is a purely private standard.

GLOBALGAP's standard comprises three categories of compliance. These are the major musts (100% compliance required), minor musts (95% compliance) and shoulds (recommendation level). The major and minor musts constitute most of the food safety related aspects at the production sites with strong emphasis on the regulation of GLOBALGAP in the application of chemicals.

2.1 Why certify?

Global agri-food markets are increasingly demanding that their suppliers be certified against a private food safety standard such as GLOBALGAP. These markets account for over half of fresh produce retail sales in global markets. In addition, each individual retail/agro-processor or export company may impose even stronger quality requirements on its suppliers so as to differentiate its products from those of its competitors.

Likewise, in the local market, some minimum certification on food safety is required by supermarket chains or agro-processing businesses. The customers (supermarket chain or agro-processors) will ask for extra quality requirements to purchase the product from the producers. Both in the local and international market, farmers and food producers will be increasingly required to be certified against food safety standards.

2.1.1 GLOBALGAP approved certification bodies (fruit and vegetables)

Organisation	Address/Phone	Contact
SGS South Africa (Pty) Ltd	First floor, Panther Park, 11 Berkley Rd, Maitland 11 7405 Cape Town South Africa Tel: +27 21 506 3280 Fax: +27 866136602	

CERTIFICATION BODIES WITH BRANCHES IN SOUTH AFRICA

Company	Subcontracted CB	Address/Phone	Contact
BCS South Africa	BCS Öko-Garantie GmbH	P.O. Box 910-1083 0120 Pyramid Tel: +27 (12) 545 04 09 Fax: +27 (12) 545 04 09	Ralph Peckover southafrica@bcs-oeko.com
Bureau Veritas Certification South Africa	Bureau Veritas Certification S.A.U. (Spain)	L496 Summit Road 1st Floor Summit Office Park 2096 Morningside, Johannesburg 2096 Tel: +27 11 666 05000 Mob: +27 8266 93053 Fax: +27 11 666 0510	www.bureauveritas.co.za Winnie Maika winnie.maika@za.bureauveritas.com
Control Union Certifications South Africa	Control Union Certifications B.V.	Johannesburg Tel: 0027 760365951 Fax:	Werner Euler weuler@controlunion.com
Ecocert-Afrisco Pty Ltd	ECOCERT SA	P.O. Box 74192 Lynnwood Ridge 0040 Tel: 123491070 Fax: 865180107	Vincent Morel office.southafrica@ecocert.com
Ecocert-Afrisco Pty Ltd (physical address)	ECOCERT SA	Ecocert-Afrisco Pty Ltd Room 113 A Building 19 A CSIR Campus Meiring Naudé Rd Pretoria 0040	Vincent Morel
NSF-CMi Africa	NSF-CMi Certification	CMi Africa(Pty) Ltd P.O. Box 12900 Die Boord Stellenbosch 7613 South Africa Tel: 0027 218802024/34 Fax: 0027 21 880 2840	Wouter Conradie Wouter.conradie@cmi-africa.com
Perishable Products Export Control Board (PPECB)	Perishable Products Export Control Board (PPECB)	45 Silwerboom Avenue 7500 Plattelkloof Tel: 21 930 1134 Fax: 086 763 7942	www.ppecb.com Dawn Diergaardt dawnd@ppecb.com
SAI Global South Africa	SAI Global Assurance Services	91 Helderzicht Road Somerset West 7130 Cape Town Tel: +27 (0)21 851 4833 Fax: +27 (0)84 516 6186	www.acert-africa.com Mike Wilson info@acert-africa.com

2.2 Key requirements

The GLOBALGAP standard requires that producers establish a complete control and monitoring system. Products are registered and can be traced back to the specific farm unit where they were grown. GLOBALGAP rules are relatively flexible about field practices such as soil fumigation and fertiliser usage.

There are strict regulations on pesticide storage and pesticide residue limits. In addition, it is important to record and justify how the product was produced, therefore detailed records on farm practices must be kept.

2.3 How to get certified

GLOBALGAP does not issue the certificates themselves but has authorised registered certification bodies to issue the certificates. Firstly, it is recommended to read the GLOBALGAP general regulations and control points of the respective product scope before contacting a certification body that will carry out the certification procedure. Farmers who want to get certified to GLOBALGAP have to take certain costs into account. Generally, they have to pay for registration, inspection and certification. Both individual producers and groups of producers can apply for certification, the cost of which depends on the certification agency chosen and the time spent on the inspection.

In addition to the certification fee charged by the certification agency, the producer must also pay an annual producer registration fee to maintain the certification.

2.4 Main opportunities and constraints

The benefits of GLOBALGAP codes, standards and regulations are numerous, including food quality and safety improvement, facilitation of market access and reduction in non-compliance risks regarding permitted pesticides, Maximum Residue Limits (MRLs) and other contamination hazards. The GLOBALGAP certified producer may also have an advantage when selling products to retailers who require GLOBALGAP certification.

To get the GLOBALGAP certification, the producer or group of producers require a complete administrative system to keep track of all farm activities. This requires a sufficient administrative and financial capacity, therefore it is easier for large-scale producers to meet the requirements.

There is no special price premium or product label associated with GLOBALGAP, as it is a minimum standard focused on business-to-business relations.

3. THE MINIMUM REQUIREMENTS FOR CONTRACTUAL ARRANGEMENTS WITH FORMAL AGRI-FOOD MARKETS (GLOBALGAP COMPLIANCE CRITERIA)

3.1 Record keeping and internal self-assessment/internal inspection

Important details of farming practices should be recorded and records kept.

- Producers should keep up-to-date records for a minimum of two years from the date of first inspection, unless legally required to do so for a longer period. In terms of the GLOBALGAP compliance criteria, this is a minor must.
- There should be documented evidence that the GLOBALGAP or benchmarked standard internal self-assessment/internal producer group inspections under responsibility of the producer/producer group have been carried out and are recorded annually. In terms of GLOBALGAP compliance criteria, this is a major must.
- Effective corrective actions should be documented and implemented. In terms of intermediate GLOBALGAP compliance criteria, this is a major must.

3.2 Site history and site management

One of the key features of sustainable farming is the continuous integration of site-specific knowledge and practical experiences into future management planning and practices. This section is intended to ensure that the land, buildings and other facilities which constitute the fabric of the farm, are properly managed to ensure the safe production of food and protection of the environment.

3.2.1 Site history

- Current records must provide a history of GLOBALGAP production of all production areas. For crops, new applicants must have full records for at least three months prior to the date of external inspection that reference each area covered by a crop with all the agronomic activities related to GLOBALGAP documentation required of this area. In terms of GLOBALGAP compliance criteria, this is a major must.
- Compliance must include visual identification in the form of a physical sign at each field/greenhouse/plot/livestock building/pen or other farm, or a farm plan or map that could be cross-referenced to the identification system. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.2.2 Site management

- A documented risk assessment must be carried out when crops, livestock or aquaculture enterprises are to be introduced onto new sites. The risk assessment must be revised to take into account any new food safety risks. The risk assessment must take account of site history (crops/stocking) and consider the impact of proposed enterprises on adjacent stock/crops/environment. In terms of GLOBALGAP compliance criteria, this is a major must.
- A management plan that has implemented strategies to meet the objectives of this specific control point must be developed. The plan should include one or more of the following: habitat quality, soil compaction, soil erosion, emission of greenhouses gases where applicable, humus balance, phosphorus balance, nitrogen balance and intensity of chemical plant protection. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.2.3 Rotations

- The rotations can be verified from planting date and/or plant protection product application records. In terms of GLOBALGAP compliance criteria, this is recommended.

3.3 Workers' health, safety and welfare

The people are key to the safe and efficient operation of any farm. Farm staff and contractors as well as producers themselves stand for the quality of the produce and for environmental protection. Education and training will help progress towards sustainability and build on social capital. The section on workers' health, safety and welfare is intended to ensure safe practice in the workplace and that all workers understand, and are competent to perform their duties; are provided with proper equipment to allow them to work safely; and that, in the event of accidents, proper and timely assistance can be obtained. The following are the guiding principles:

3.3.1 Risk assessments

- The written risk assessment can be generic but it must be appropriate for conditions on the farm. The risk assessment must be reviewed and updated when changes in the organisation (e.g. other activities) occur. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The health, safety and hygiene policy must at least include points identified in the risk assessment above. This could include accident and emergency procedures, hygiene procedures, dealing with any identified risks in the working situation, etc. The policy must be reviewed and updated when the risk assessment changes. In terms of GLOBALGAP compliance criteria, this is a minor must.

- There must be visual or documentary evidence that the principal decisions and actions detailed within the policy statement for health and safety have been actioned on the farm or within the management procedures. In terms of GLOBALGAP compliance criteria, this is a major must. All electrical installations should be compliant with any relevant codes of practice or national legislation. If legally required, all contractors have the required certificates or authorisations to carry out electrical installations. In terms of GLOBALGAP compliance criteria, this is a major must.

3.3.2 Training

- A record for training activities, including the topic covered, the trainer, the date and attendees should be kept. Evidence of the attendance is required. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records must identify workers who carry out such tasks, and show certificates of training or proof of competence. In terms of GLOBALGAP compliance criteria, this is a major must.
- Workers can demonstrate competency in responsibilities and tasks through visual observation. If at the time of inspection there are no activities, there must be evidence of instructions. In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must always be at least one person trained in first aid (within the last 5 years) present on the farm whenever on-farm activities are being carried out. Applicable legislation on first aid training must be followed where it exists. On-farm activities include all activities performed during all applicable chapters and modules. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The hygiene instructions must be visibly displayed and be provided by means of clear signs (pictures) or in the predominant language(s) of the workforce. The instructions must at least include:
 - ✓ the need for hand cleaning;
 - ✓ the covering of skin cuts;
 - ✓ limitation on smoking, eating and drinking to certain areas; and
 - ✓ notification of any relevant infections or conditions (the use of suitable protective clothing).
- The abovementioned hygiene instructions in terms of GLOBALGAP compliance criteria, constitute a minor must.
- Both written and verbal training should be provided as an induction training course for hygiene. Training should be provided by qualified people. All new workers must receive this training and confirm their participation with a signature. All instructions must be covered during training. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Workers with tasks identified in the hygiene procedures must demonstrate competence during the inspection. In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must be evidence that the relevant procedures on personal health, safety and hygiene are officially communicated to visitors and subcontractors (e.g. relevant instructions are in a visible place where all visitors or subcontractors can read them). In terms of GLOBALGAP compliance criteria, this is a minor must.

3.3.3 Hazards and first aid

- Permanent accident procedures must be clearly displayed in accessible, and visible location(s). These instructions are available in the predominant language(s) of the workforce and/or pictograms. The procedures must identify, if appropriate, the following:
 - ✓ farm's map reference or farm address;
 - ✓ contact person(s);
 - ✓ location of the nearest means of communication (telephone, radio) - an up-to-date list of relevant phone numbers (police, ambulance, hospital, fire brigade, access to emergency health care on site or by means of transport, electricity and water supplier);

- ✓ hospital and other emergency services;
 - ✓ location of fire extinguisher;
 - ✓ emergency exits; and
 - ✓ emergency cut-offs for electricity, gas and water supplies (how to report accidents or dangerous incidents).
- The abovementioned accident procedures in terms of GLOBALGAP compliance criteria, constitute a minor must.
 - Permanent and legible signs must indicate potential hazards, e.g. waste pits, fuel tanks, workshops, access doors of the plant protection product/ fertiliser/any other chemical storage facilities as well as the treated crop, etc. Warning signs must be present. In terms of GLOBALGAP compliance criteria, this is a minor must.
 - Information (e.g. website, telephone number, data sheets, etc.) should be accessible, when required, to ensure appropriate action. In terms of GLOBALGAP compliance criteria, this is a minor must.
 - Complete and maintained first aid kits according to national regulations and recommendations must be available and accessible at all permanent sites and available for transport to the vicinity of work. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.3.4 Protective clothing/equipment

- Complete sets of protective clothing, (e.g. rubber boots, waterproof clothing, protective overalls, rubber gloves, face masks, etc.) as specified on label instructions and/or legal requirements and/or requirements as authorised by a competent authority to be complied with, must be available to be used and in a good state of repair. This includes appropriate respiratory, ear and eye protection devices and life jackets, where necessary. In terms of GLOBALGAP compliance criteria, this is a major must.
- Protective clothing should be cleaned regularly. Furthermore, protective clothing should be cleaned according to a schedule adapted to the type of use and degree of soiling. Cleaning the protective clothing and equipment should include separate washing from private clothing and glove washing before removal. Dirty, torn and damaged protective clothing and equipment and expired filter cartridges should be disposed of. Single-use items (e.g. gloves, overalls, etc.) have to be disposed of after one use. All the protective clothing and equipment, including replacements filters etc, should be stored apart and physically separate from the plant protection products/any other chemicals which might cause contamination of the clothing or equipment in a well-ventilated area. In terms of GLOBALGAP compliance criteria, this is a major must.

3.3.5 Worker welfare

- Documentation that demonstrates that a clearly identified, named member of management has the responsibility for ensuring compliance with existing, current and relevant national and local regulations and the implementation of the policy on workers' health safety and welfare must be available. In terms of GLOBALGAP compliance criteria, this is a major must.
- Records that illustrate concerns of the workers about health, safety and welfare recorded in meetings and held at least once a year between management and workers must be available. On such occasions, matters related to the business and worker health, safety or welfare can be discussed openly (without fear of intimidation or retribution). The auditor is not required to make judgements about the content, accuracy or outcome of such meetings. In terms of GLOBALGAP compliance criteria, this is recommended.
- Records that demonstrate clearly an accurate overview over all workers (including seasonal workers) and subcontractors working on the farm must be available. Information must be available of full names, date of entry, the period of employment and regular working time and overtime regulations. Records of all workers (also subcontractors) which provide the required information must be kept for the last 24 months from the date of first inspection. In terms of GLOBALGAP compliance criteria, this is a minor must.

- A place to store food and eat must be available. In addition, hand-washing facilities and potable drinking water must be available to workers. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The living quarters for the workers on the farm should be habitable, have a sound roof, windows and doors, and have the basic services of running water, toilets and drains. In the case of no drains, septic pits are acceptable when proven to be hermetic. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.3.6 Subcontractors

- Subcontractors must carry out an assessment (or the producer must do it on behalf of the subcontractor) of compliance against the GLOBALGAP control points relevant to the services provided on farm. This assessment must be available on farm during the external inspection and the subcontractor must accept that GLOBALGAP approved certifiers are allowed to verify the assessments through a physical inspection where there is doubt. The producer is responsible for observance of the control points applicable to the tasks performed by the subcontractor by checking and signing the assessment of the subcontractor for each task and season contracted. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.4 Waste and pollution management, recycling and reuse

Waste minimisation should include: review of current practices, avoidance of waste, reduction of waste, reuse of waste, and recycling of waste. The following are the guiding principles:

3.4.1 Identification of waste and pollutants

- All possible waste products (such as paper, cardboard, plastic, oil, etc.) and sources of pollution (e.g. fertiliser excess, exhaust smoke, oil, fuel, noise, effluent, chemicals, sheep-dip, feed waste, dead or diseased fish, algae produced during net cleaning, etc.) produced by the farm processes should be listed. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.4.2 Waste and pollution action plan

- A comprehensive, current and documented plan that covers wastage reduction, pollution and waste recycling must be available. Air, soil, water, noise and light contamination must also be considered. In terms of GLOBALGAP compliance criteria, this is recommended.
- There must be visible actions and measures on the farm to confirm that objectives of the waste and pollution action plan are being carried out. In terms of GLOBALGAP compliance criteria, this is recommended.
- There must be visual assessment to confirm that there is no evidence of breeding grounds in areas of waste/litter in the immediate vicinity of the production or storage buildings. Incidental and insignificant litter and waste on the designated areas are acceptable as well as the waste from the current day's work. All other litter and waste must be cleared up. Areas where produce is handled indoors should be cleaned at least once a day. In terms of GLOBALGAP compliance criteria, this is a major must.
- The farm must have designated areas to store litter and waste. Different types of waste are identified and stored separately. In terms of GLOBALGAP compliance criteria, this is recommended.

3.5 Environment and conservation

Farming and the environment are inseparably linked. Managing wildlife and landscape is of great importance; enhancement of species as well as structural diversity of land and landscape features will benefit the abundance and diversity of flora and fauna. The following are the guiding principles:

3.5.1 Impact of farming on the environment and biodiversity

- There must be a written action plan which aims to enhance habitats and increase biodiversity on the farm. This can be either a regional activity or individual plan, if the farm is participating in or covered by it. This includes knowledge of Integrated Pest Management (IPM) practices, nutrient use of crops, conservation sites, etc. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The contents and objectives of the conservation plan must imply compatibility with sustainable agriculture and demonstrate a reduced environmental impact. In terms of GLOBALGAP compliance criteria, this is recommended.
- There must be a commitment within the conservation plan to undertake a base line audit of the current levels, location, condition etc. of the fauna and flora on farm so as to enable actions to be planned. The effects of agricultural production on fauna and flora should be audited and serve as the basis for the action plan. In terms of GLOBALGAP compliance criteria, this is recommended.
- Within the conservation plan, there must be a clear list of priorities and actions to rectify damaged or deteriorated habitats on the farm. In terms of GLOBALGAP compliance criteria, this is recommended.
- Within the conservation plan, there must be a clear list of priorities and actions to enhance habitats for fauna and flora where viable and increase biodiversity on the farm. In terms of GLOBALGAP compliance criteria, this is recommended.
- Where there are potential pollutants from the production and handling processes, there must be measures in place to minimise the impact on all watersources and groundwater. In terms of GLOBALGAP compliance criteria, this is a major must.

3.5.2 Unproductive sites

- There should be a plan to convert unproductive sites and identified areas which give priority to ecology in conservation areas where viable. In terms of GLOBALGAP compliance criteria, this is recommended.

3.5.3 Energy efficiency

- Energy use records must exist. For example, farming equipment shall be selected and maintained for optimum consumption of energy. The use of non-renewable energy sources should be kept to a minimum. In terms of GLOBALGAP compliance criteria, this is recommended.
- There must be visual or documentary evidence that the principal decisions and actions detailed within the policy statement for recycling have been actioned on the farm or within the farm management procedures. In terms of GLOBALGAP compliance criteria, this is a major must.

3.6 Complaints

Management of complaints will lead to a better system and compliance with the GLOBALGAP requirements.

- There must be available on request, a clearly identifiable document for complaints relating to issues covered by GLOBALGAP. In terms of GLOBALGAP compliance criteria, this is a major must.
- There must be documents of the actions taken with respect to such complaints regarding GLOBALGAP standard deficiencies found in products or services. In terms of GLOBALGAP compliance criteria, this is a major must.

3.7 Traceability

Traceability facilitates the withdrawal of foods and enables customers to be provided with targeted and accurate information concerning implicated products.

- All producers must have access to documented procedures which identify the type of event that may result in a withdrawal, persons responsible for taking decisions on the possible withdrawal of the product, the mechanism for notifying customers and the GLOBALGAP Crops Base (CB) (if a sanction was

not issued by the CB and the producer or group recalled the products out of free will) and methods of reconciling stock. The procedures must be tested annually to ensure that they are sufficient. In terms of GLOBALGAP compliance criteria, this is a major must.

- There should be a documented identification and traceability system that allows a GLOBALGAP registered product to be traced back to the registered farm or, in a farmer group, to the registered farms of the group, and tracked forward to the immediate customer. Harvest information must link a batch to the production records or the farms of specific producers. Produce handling must also be covered if applicable. In terms of GLOBALGAP compliance criteria, this is a major must.

3.8 Propagation material

The choice of propagation material plays an important role in the production process and by using the correct varieties can help reduce the number of fertiliser and plant protection product applications. The choice of propagation material is a precondition of good plant growth and product quality. The following are the guiding principles:

3.8.1 Quality and health

- A record/certificate of the seed quality should be kept and available. Furthermore, record/certificate should indicate variety purity, variety name, batch number and seed vendor. In terms of GLOBALGAP compliance criteria, this is recommended.
- There must be records to show that propagation material complies with national legislation or, in its absence, sector organisation guidelines and fit for purpose, i.e. quality certificate, terms of deliverance, signed letters or supplied by a nursery that has GLOBALGAP or GLOBALGAP recognised certification. In terms of GLOBALGAP compliance criteria, this is a minor must.
- When plants have visible signs of pest and disease damage, a justification should be available (e.g. threshold for treatment). In terms of GLOBALGAP compliance criteria, this is recommended.
- A quality control system that contains a monitoring system on visible signs of pests and diseases must be in place and current records of the monitoring system must be available. Nursery means anywhere propagation material is produced, (including in-house grafting material selection). "Monitoring system" must include recording and identification of the mother plant or field of origin crop as applicable. Recording must be periodic at regular established intervals. If the cultivated trees or plants are intended for own use only (not sold), this will suffice. When rootstocks are used, special attention has to be paid to the origin of the rootstocks through documentation. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.8.2 Pest and disease resistance

- The producer should be able to demonstrate awareness of variety pest and disease resistance/tolerance when available and justify varietal selection. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.8.3 Chemical treatment and dressings

- When the seed or annual rootstock has been treated by the producer, there are records with the name of the product(s) used and its target(s) (pests and/or diseases). If the seed has been treated for preservation purposes by the supplier, evidence of the chemicals used must be kept (maintaining records/seed packages, etc.). In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records of plant protection product treatments applied during the plant propagation period for in-house plant nursery propagation must be available. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.8.4 Sowing/planting

- Records of sowing/planting method, rate and date must be kept and be available. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.8.5 Genetically Modified Organisms (GMOs) (not applicable if no GMOs are used)

- The registered farm or group of registered farms must have a copy of the legislation applicable in the country of production and comply accordingly. Records of the specific modification and/or the unique identifier must be kept. Specific husbandry and management advice must be obtained. In terms of GLOBALGAP compliance criteria, this is a major must.
- If GMO cultivars and/or products derived from genetic modification are used, documented records of planting, use or production of GMO cultivars and/or products derived from genetic modification must be available. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Documented evidence of communication must be provided. In terms of GLOBALGAP compliance criteria, this is a major must.
- There must be a written plan that explains how genetically modified (GM) material (crops and trials) are handled and stored to minimise risk of contamination with conventional material. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Visual assessment must be made of GM crops storage for integrity and identification. In terms of GLOBALGAP compliance criteria, this is a major must.

3.8.6 Choice of variety or rootstock

- Cropping techniques and measures must be adopted in the “mother crops” which can minimise inputs such as plant protection products and fertilisers in the registered product crops. In terms of GLOBALGAP compliance criteria, this is recommended.

3.9 Soil and substrate management

Soil is the basis of all agricultural production, and the conservation and improvement of this valuable resource is essential. Good soil husbandry ensures long-term fertility of soil, aids yield and profitability. The following are the guiding principles:

3.9.1 Soil mapping

The type of soil identified for each site, must be based on a soil profile or soil analysis or local (regional) cartographic soil-type map. In terms of GLOBALGAP compliance criteria, this is recommended.

3.9.2 Cultivation

- Techniques applied should be suitable for use on the land. There must be no evidence of soil compaction. In terms of GLOBALGAP compliance criteria, this is recommended.

3.9.3 Soil erosion

- There must be visual evidence that there is no soil erosion or evidence of practices such as mulching and/or cross-line techniques on slopes and/or drains and/or sowing grass or green fertilisers, trees and bushes on borders of sites, etc. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.9.4 Soil fumigation (not applicable if no soil fumigation was applied)

- There must be a written evidence and justification for the use of soil fumigants, including location, date, active ingredient, doses, method of application and operator. The use of methyl bromide as soil fumigant is not permitted. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Preplanting interval must be recorded. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.9.5 Substrates (not applicable if no substrates were used)

- The producer must keep records with quantities recycled and dates. Invoices/loading dockets are acceptable. If there is no participation in a recycling programme available, it should be justified. In terms of GLOBALGAP compliance criteria, this is recommended.
- When the substrates are sterilised on the farm, the name or reference of the field, orchard or greenhouse must be recorded. If sterilised off farm then the name and location of the company which sterilises the substrate must be recorded. The following should be correctly recorded:
 - ✓ the dates of sterilisation (day/month/year);
 - ✓ the name and active ingredient;
 - ✓ the machinery (e.g. 1 000 l-tank etc.);
 - ✓ the method (e.g. drenching, fogging);
 - ✓ the operator's name (the person who actually applied the chemicals and did the sterilisation); and
 - ✓ the replanting interval.
- The abovementioned procedures in terms of GLOBALGAP compliance criteria constitute a major must.
- There must be records that prove the origin of the substrates of natural origin being used. These records should demonstrate that the substrates do not come from designated conservation areas. In terms of GLOBALGAP compliance criteria, this is recommended.
- There must be documented evaluation of the technical viability of peat substitutes for plant propagation material and other usages. In terms of GLOBALGAP compliance criteria, this is a major must.

3.10 Fertiliser use

The decision-making process involves crop demands, the supply that is in the soil and available nutrients from farm manure and crop residue. Correct application to optimise use and storage procedures to avoid loss and contamination must be followed. The following are the guiding principles:

3.10.1 Nutrient requirement

- The producer must demonstrate that consideration has been given to nutritional needs of the crop, soil fertility and residual nutrients on the farm and records must be available as evidence. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.10.2 Advice on quantity and type of fertiliser

- Where the fertiliser records show that the technically responsible person making the choice of the fertiliser (organic or inorganic) is an external adviser, training and technical competence must be demonstrated via official qualifications, specific training courses, etc., unless employed for that purpose by a competent organisation (i.e. fertiliser company). In terms of GLOBALGAP compliance criteria, this is a minor must.
- Where the fertiliser records show that the technically responsible person determining quantity and type of fertiliser (organic or inorganic) is the producer, experience must be complemented by technical knowledge (e.g. product technical literature, specific training course attendance, etc.) or the use of tools (software, on-farm detection methods, etc.). In terms of GLOBALGAP compliance criteria, this is a minor must.

3.10.3 Records of application

- The confirmation records by the operator should be recorded in all soil and foliar fertiliser applications. The reference which identifies the soil and foliar fertilisers on the application instructions should correspond. In terms of GLOBALGAP compliance criteria, this is a major must.

- Records of all fertiliser applications should be kept. The records should provide details on the geographical area, the name or reference of the field, orchard or greenhouse where the registered product crop is located. This is also applicable for hydroponic situations and where fertigation is used. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records of all fertiliser applications should have details on the exact dates (day/month/year) of the application. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records of all fertiliser applications should have details on the trade name, type of fertiliser (e.g. NPK) or concentrations (e.g. 17-17-17). In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records of all fertiliser application should have details on the quantity of a product to be applied in weight or volume. The actual application made must be recorded as this is not necessarily the same as the recommendation. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records of all fertiliser applications should have details on the application machinery type used and the method (e.g. via the irrigation or mechanical distribution). In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records of all fertiliser applications should have details on the name of the operator who has applied the fertiliser. If it is a one-man operation, (the producer) and the producer is the one doing the applications, it is acceptable to record the operator details only once. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Recorded in all soil and foliar fertiliser application, confirmation records by the operator must be the signature of the soil and foliar fertilisers' operator who carried out the treatment. In terms of GLOBALGAP compliance criteria, this is a major must.

3.10.4 Application of machinery

- There must be maintenance records (date and type of maintenance and calibration) or invoices of spare parts of both the organic and inorganic fertiliser application machinery available on request. There must, as a minimum, be documented records stating that the verification of calibration has been carried out by a specialised company, supplier of fertilisation equipment or by the technically responsible person of the farm within the last 12 months. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.10.5 Fertiliser storage

- A stock inventory which indicates the contents of the store (type and quantity) must be available and be updated at least every 3 months. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The minimum requirement is to prevent cross-contamination between fertilisers and plant protection products by the use of a physical barrier. If fertilisers that are applied together with PPPs(i.e. micronutrients or foliar fertilisers) are packed into a sealed container, they can be stored with plant protection products. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The covered area should be suitable to protect all inorganic fertilisers, i.e. powders, granules or liquids, from atmospheric influences like sunlight, frost and rain. Based on risk assessment (fertiliser type, weather conditions, temporary storage), plastic coverage could be acceptable. Storage cannot be directly onto the soil. It is allowed to store lime and gypsum in the field for a day or two before spreading. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Inorganic fertilisers, i.e. powders, granules or liquids, stored in an area that is free of waste, does not constitute a breeding place for rodents, and where spillage and leakage is cleared away. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The storage area for all inorganic fertilisers, i.e. powders, granules or liquids, should be well ventilated and free of rainwater or heavy condensation. No storage directly on the soil is allowed. In terms of GLOBALGAP compliance criteria, this is a minor must.

- All inorganic fertilisers (powders, granules or liquids) are stored in a manner which poses minimum risk of contamination to watersources, liquid fertiliser stores must be surrounded by an impermeable barrier (according to national and local legislation, or contain a capacity to 110% of the volume of the largest container if there is no applicable legislation). Some consideration must be given to the proximity to water- courses and flood risks, etc. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Organic fertilisers, stored on the farm must be stored in a designated area. Appropriate measures must be taken to prevent contamination of surface water (such as concrete foundation and walls, or specially built leak proof container, etc.). Organic fertilisers must be stored at least 25 m from surface water bodies in particular. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Fertilisers cannot be stored with fresh produce. In terms of GLOBALGAP compliance criteria, this is a major must.

3.10.6 Organic fertiliser

- Human sewage sludge should not be used on the farm. In terms of GLOBALGAP compliance criteria, this is a major must.
- Documentary evidence must be available to demonstrate that the following potential risks have been considered:
 - ✓ disease transmission;
 - ✓ weed seed content;
 - ✓ method of composting; and
 - ✓ heavy metal content.
- This also applies to substrates from biogas plants in which case reference must additionally be made to the legal requirements in the risk assessment. In terms of GLOBALGAP compliance criteria, this is a minor must.
- An analysis that takes into account the content of NPK nutrients in organic fertiliser applied must be carried out. In terms of GLOBALGAP compliance criteria, this is recommended.

3.10.7 Inorganic fertiliser

- Documentary evidence detailing NPK content, must be available for all inorganic fertilisers used on crops grown under GLOBALGAP within the last 12-month period. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Documentary evidence detailing chemical content, including heavy metals, must be available for all inorganic fertilisers used on crops grown under GLOBALGAP within the last 12-month period. In terms of GLOBALGAP compliance criteria, this is recommended.

3.11 Irrigation/Fertigation

Water is a scarce natural resource and irrigation should be triggered by appropriate forecasting and by technical equipment allowing for efficient use of irrigation water. The following are the guiding principles:

3.11.1 Predicting irrigation requirements

- Calculations must be available and be supported by data records, e.g. rain gauges, drainage trays for substrate, evaporation meters, water tension meters (% of moisture in the soil) and soil maps. In terms of GLOBALGAP compliance criteria, this is recommended.

3.11.2 Irrigation/Fertigation method

- The idea is to avoid wasting water. The irrigation system used, must be the most efficient available for the crop and accepted as such within good agricultural practice. In terms of GLOBALGAP compliance criteria, this is a minor must.

- A documented plan, which outlines the steps and actions to be taken to implement the management plan, must be available. In terms of GLOBALGAP compliance criteria, this is recommended.
- Records which indicate the date and volume per water meter or per irrigation unit must be kept. If the producer works with irrigation programmes, the calculated and actual irrigated water should be written down in the records. In terms of GLOBALGAP compliance criteria, this is recommended.

3.11.3 Quality of irrigation water

- Untreated sewage water should not be used for irrigation/fertigation. Where treated sewage water is used, water quality must comply with the World Health Organization (WHO) published Guidelines for the Safe Use of Wastewater and Excreta in Agriculture and Aquaculture, 1989. Also, when there is doubt if water is coming from a possibly polluted source (because of a village upstream, etc.) the grower has to demonstrate through analysis that the water complies with the WHO guideline requirements or the local legislation for irrigation water. In terms of GLOBALGAP compliance criteria, this is a major must.
- The risk assessment must consider potential microbial, chemical or physical pollution of all sources of irrigation/fertigation water. Part of the risk assessment should consider the irrigation method and the crop, frequency of analysis, sources of water, the resources and susceptibility for pollutants and drain water of the sources and the environment. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The water analysis must be carried out at a frequency according to the results of the risk assessment, which takes the characteristics of the crop into account. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Results from appropriate laboratories, capable of performing microbiological analyses up to ISO 17025 level, or equivalent standard, should be available. In terms of GLOBALGAP compliance criteria, this is recommended.
- Records with details of what has to be done to rectify the situation must be available. The records should also have information on the current status at that point in time. In terms of GLOBALGAP compliance criteria, this is recommended.

3.11.4 Supply of irrigation/fertigation water

- Water must be abstracted from a sustainable source. Sustainable sources are sources that supply enough water under normal (average) conditions. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Where required by law, there must be written communication from the local water authority on this subject (letter, licence, etc.). In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must be water storage facilities on farms located in areas of seasonal water availability. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Where crops are growing in substrate, there must be systems for the recirculation of runoff drainage water or its reuse. This also applies to product transport machinery where appropriate. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.11.5 Quality of irrigation water

- According to the risk analysis (if there is a risk of microbial contaminants), there must be a documented record of the relevant microbial contaminants through a laboratory analysis. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Records must have corrective actions or decisions taken. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.12 Integrated pest management (IPM)

IPM involves the careful consideration of all available pest control techniques and the subsequent integration of appropriate measures that discourage the development of pest populations, and keeps plant protection products and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. The following are the guiding principles:

- The technically responsible person on the farm must have a formal documented training and/or the external technical IPM consultant can demonstrate their technical qualifications. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The producer must provide evidence of implementing at least one activity that includes the adoption of cultivation methods that could reduce the incidence and intensity of pest attacks, thereby reducing the need for intervention. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The producer must provide evidence of implementing at least one activity that will determine when, and to what extent, pests and their natural enemies are present and use this information to plan what pest management techniques are required. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The producer must provide evidence that in situations where a pest attack adversely affects the economic value of a crop, intervention with specific pest control methods will take place. Where possible, non-chemical approaches must be considered. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All plant protection product inputs must be documented and that should include written justifications. In terms of GLOBALGAP compliance criteria, this is a minor must.
- When the level of a pest, disease or weed requires repeated controls in the crops, there must be evidence that anti-resistance recommendations (where legal and effective alternatives are available) are followed if specified by the product label. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.13 Plant Protection Products (PPPs)

In situations where a pest attack will adversely affect the economic value of a crop, it may be necessary to intervene with specific pest control methods, including PPP. The correct use, handling and storage of plant protection products are essential. The following are the guiding principles:

3.13.1 Choice of PPP

- All the plant protection products applied to the crop must be suitable and can be justified (according to label recommendations or official registration body publication) for the pest, disease, weed or target of the plant protection product intervention. Technically valid (legal) "off-label" uses that are supported by the PPP industry in writing are allowable. If the producer uses off-label PPP, there must be evidence of official approval for use of that PPP on that crop in that country. In terms of GLOBALGAP compliance criteria, this is a major must.
- All the plant protection products applied must be officially registered or permitted by the appropriate governmental organisation in the country of application. In terms of GLOBALGAP compliance criteria, this is a major must.
- Invoices of the registered plant protection products used must be kept for record keeping and available at the time of the external inspection. In terms of GLOBALGAP compliance criteria, this is a minor must.
- An up-to-date documented list, that takes into account any changes in local and national plant protection product legislation, must be available for the commercial brand names of PPPs (including their active ingredient composition, or beneficial organisms) that are used on crops being, or which have been, grown on the farm under GLOBALGAP within the last 12 months. This is an internal man-

agement list, customised to the operation, not general information on approved products. In terms of GLOBALGAP compliance criteria, this is a minor must.

- Where the PPP records show that the technically responsible person making the choice of the PPPs is a qualified adviser, technical competence can be demonstrated via official qualifications or specific training course attendance certificates. Fax and e-mails from advisors, governments, etc. are allowable. In terms of GLOBALGAP compliance criteria, this is a major must.
- Where the PPP records show that the technically responsible person making the choice of PPPs is the producer, experience must be complemented by technical knowledge that can be demonstrated via technical documentation, i.e. product technical literature, specific training course attendance, etc. In terms of GLOBALGAP compliance criteria, this is a major must.

3.13.2 Records of application

- All PPP application records must specify the crop and/or variety treated. In terms of GLOBALGAP compliance criteria, this is a major must.
- All PPP application records must specify the geographical area, the name or reference of the farm, and the field, orchard or greenhouse where the crop is located. In terms of GLOBALGAP compliance criteria, this is a major must.
- All PPP application records must specify the exact dates (day/month/year) of the application. Record the actual date (end date, if applied more than one day) of application. In terms of GLOBALGAP compliance criteria, this is a major must.
- All PPP application records must specify the trade name (including formulation) or beneficial organism. It must be possible to connect the trade name information to the active ingredient. In terms of GLOBALGAP compliance criteria, this is a major must.
- The operator applying PPPs must be identified in the records. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Recorded in all plant protection application confirmation records by the operator must be the signature of the plant protection operator who carried out the treatment. In terms of GLOBALGAP compliance criteria, this is a major must.
- Recorded in all PPP application confirmation records by the operator must be weather condition during the treatment in an abbreviated manner. In terms of GLOBALGAP compliance criteria, this is a major must.
- The common name of the pest(s), disease(s) or weed(s) treated must be documented in all PPP application records. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Recorded in all PPP application confirmation records by the operator must be the exact date and finishing time of the treatment. In terms of GLOBALGAP compliance criteria, this is a major must.
- Technically responsible person making the PPP recommendation must be identified in the records. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All PPP application records must specify the quantity of the product to be applied in weight or volume, or the total quantity of water (or other carrier medium), and dosage in g/l or internationally recognised measures for the PPP. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The application machinery type, for all the PPPs applied (if there are various units, these must be identified individually), and the method used (i.e. knapsack, high volume, ULV, via the irrigation system, dusting, fogger, aerial, or another method), must be detailed in all PPP application records. In terms of GLOBALGAP compliance criteria, this is a minor must.
- For all products, the safety precautions to be observed in the handling by the operator must be available, either on a detailed understandable product label, or stated on the application instructions. In terms of GLOBALGAP compliance criteria, this is a major must.
- Recorded in all PPP application confirmation records by the operator must be the reference which identifies plant protection technical instructions to which the application corresponds. In terms of

GLOBALGAP compliance criteria, this is a major must.

- The preharvest interval must be recorded for all PPP applications. In terms of GLOBALGAP compliance criteria, this is a major must.

3.13.3 Preharvest interval (not applicable for flowers and ornamentals)

- The producer can demonstrate that all preharvest intervals have been observed for PPPs applied to the crops. The demonstration can be through the use of clear documented procedures such as PPP application records and crop harvest dates from treated locations. Specifically in continuous harvesting situations, there are systems in place in the field, orchard or greenhouse, e.g. warning signs, time of application, etc., to ensure compliance with all preharvest intervals. In terms of GLOBALGAP compliance criteria, this is a major must.

3.13.4 Application equipment

- The PPP application machinery must be kept in a good state of repair with documented evidence of up-to-date maintenance sheets for all repairs, oil changes, etc. undertaken. The PPP application machinery (automatic and non-automatic) must be verified for correct operation within the last 12 months and this should be certified or documented either by participation in an official scheme (where it exists) or by having been carried out by a person who can demonstrate their competence. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The producer's involvement in an independent calibration certification scheme must be documented. In terms of GLOBALGAP compliance criteria, this is recommended.
- Facilities, including appropriate measuring equipment, must be adequate for mixing PPPs, so that the correct handling and filling procedures, as stated on the label, can be followed. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.13.5 Disposal of surplus mix

- Surplus mix or tank washings should be disposed of according to the national or local legislation. In terms of GLOBALGAP compliance criteria, this is a minor must.
- When surplus application mix or tank washings are applied over an untreated part of the crop, there must be evidence that the recommended doses (as stated on the label) have not been exceeded and all the treatments have been recorded in the same manner and detail as a normal PPP application. In terms of GLOBALGAP compliance criteria, this is recommended.
- When surplus application mix or tank washings are applied onto designated fallow land, it should be demonstrated that this is legal practice and all the treatments have been recorded in the same manner and detail as a normal PPP application, and avoiding risk of surface water contamination. In terms of GLOBALGAP compliance criteria, this is recommended.

3.13.6 PPP residue analysis (not applicable for flower and ornamental production)

- Documentary evidence that demonstrates compliance with applicable sampling procedures must be produced. Sampling can be carried out by the laboratory or by the grower, provided the procedure is adhered to. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Current documented evidence or records must be available either of annual PPP residue analysis results for the GLOBALGAP registered product crops, or of participation in a third party PPP residue monitoring system which is traceable to the farm. In terms of GLOBALGAP compliance criteria, this is a major must.
- The producer or the producer's customer must have available a list of current applicable MRLs for the market(s) where produce is intended to be traded in (whether domestic or international). The MRLs will be identified by either demonstrating communication with clients confirming the intended market(s), or by selecting the specific country(ies) (or group of countries) where produce is intending to be traded

in, and presenting evidence of compliance with a residue screening system that meets the current applicable country's(ies') MRLs. Where a group of countries is targeted together for trading in, the residue screening system must meet the strictest current applicable MRLs in the group. In terms of GLOBALGAP compliance criteria, this is a major must.

- Where MRLs of the market that the producer is intending to trade his produce in are stricter than those of the country of production, the producer or the producer's customer can demonstrate that during the production cycle these MRLs have been taken into account (i.e. modification where necessary of PPP application regime and/or use of produce residue testing results). In terms of GLOBALGAP compliance criteria, this is a major must.
- There must be a clear documented procedure of the remedial steps and actions, (this will include communication to customers, product tracking exercise, etc.) to be taken where a PPP residue analysis indicates an MRL (either of the country of production or of the countries where his harvested product is intended to be traded in if different) is exceeded. In terms of GLOBALGAP compliance criteria, this is a major must.
- There must be clear documented evidence either on the letter headings or copies of accreditations, etc., that the laboratories used for PPP residue analysis have been accredited, or are in the process of accreditation to the applicable scope by a competent national authority to ISO 17025 or an equivalent standard. In all cases the laboratories must show evidence of participation in proficiency tests, e.g. FAPAS must be available. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.13.7 PPP storage

- The PPP storage facilities must comply with all the appropriate current national, regional and local legislation and regulations. In terms of GLOBALGAP compliance criteria, this is a major must.
- The PPP storage facilities must be built in a manner which is structurally sound and robust. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities must be kept secure under lock and key. In terms of GLOBALGAP compliance criteria, this is a major must.
- The PPP storage facilities should be built of materials or located so as to protect against temperature extremes. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities should be built of materials that are fire resistant (minimum requirement RF 30, i.e. 30 minutes resistance to fire). In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities must have sufficient and constant ventilation of fresh air to avoid a build-up of harmful vapours. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The access to the product storage area must be free of obstacles and also allow for easy access in case of fire. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities must have or be located in areas with sufficient illumination both by natural and by artificial lighting in order to ensure that all product labels can be read easily on the shelves. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities must be located in a separate air space independent from any other materials. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities must be equipped with shelving which is not absorbent in case of spillage, e.g. metal, rigid plastic. In terms of GLOBALGAP compliance criteria, this is recommended.
- The PPP storage facilities must have retaining tanks or have bund/embankment (room should be able to retain 110% of the volume of the largest container of stored liquid); to ensure that there cannot be any leakage, seepage or contamination to the exterior of the store. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities or the PPP filling/mixing area if this is different, must have measuring equipment, the graduation for containers and calibration verification for scales of which must be verified annually by the producer to assure accuracy of mixtures. The facilities must be equipped with utensils,

e.g. buckets, water-supply point, etc. for the safe and efficient handling of all PPPs which can be applied. In terms of GLOBALGAP compliance criteria, this is a minor must.

- The PPP storage facilities and all designated fixed filling/mixing areas must be equipped with a container of absorbent inert material such as sand, floor brush and dustpan and plastic bags, that must be signposted and in a fixed location, to be used in case of spillage of a PPP. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The PPP storage facilities must always be locked and physical access should only be granted in the presence of persons who can demonstrate formal training in the safe handling and use of PPPs. In terms of GLOBALGAP compliance criteria, this is a minor must.
- A stock inventory which indicates the contents (type and quantity) of the store must be available and be updated at least every 3 months. Quantity refers to how many bags, bottles, etc., not on milligramme or centilitre basis. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All the PPPs that are currently in the store must be kept in the original containers and packs, in the case of breakage only, the new package must contain all the information of the original label. In terms of GLOBALGAP compliance criteria, this is a major must.
- All the PPPs currently kept in the PPP store or which are indicated on the stock rotation records must be officially approved and registered for application on the crops within the crop rotation programme. PPPs used for purposes other than application on crops within the rotation should be clearly identified and stored separately within the GLOBALGAP PPP store. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All the PPPs that have liquid formulations should be stored on shelving which is never above those products that are powder or granular formulations. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.13.8 PPP handling

- All workers who are in contact with PPPs should be subjected to voluntary health checks annually. These checks must comply with national, regional or local codes of practice and use of results, in respect of the legality of disclosure of personal data. In terms of GLOBALGAP compliance criteria, this is recommended.
- There must be clear documented procedures which regulate all the re-entry intervals for PPPs applied to the crops according to the label instructions. Where no re-entry information is available on the label, there are no specific requirements. In terms of GLOBALGAP compliance criteria, this is a major must.
- Documentation (e.g. PPP application records) must demonstrate that all re-entry intervals for PPPs applied to the crops have been monitored. In terms of GLOBALGAP compliance criteria, this is a minor must.
- An accident procedure containing all information must visually display the basic steps of primary accident care and be accessible by all persons within 10 m of the PPP/chemical storage facilities and designated mixing areas. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All PPP/chemical storage facilities and all filling/mixing areas present on the farm must have eye-wash capability, a source of clean water no more than 10 m distant, a complete first aid kit and a clear accident procedure with emergency contact telephone numbers or basic steps of primary accident care, all permanently and clearly signed. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.13.9 Empty PPP containers

- There must be evidence that empty PPP containers have not been or currently are not being reused for anything other than containing and transporting of the identical product as stated on the original label. In terms of GLOBALGAP compliance criteria, this is a minor must.

- The system used to dispose of empty PPP containers must ensure that persons cannot come into physical contact with the empty containers by having a secure storage point, safe handling system prior to the disposal and a disposal method that avoids exposure to persons. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The system of disposal of empty PPP containers must minimise the risk of contamination of the environment, watercourses and flora and fauna, by having a safe storage point and a handling system prior to disposal by an environmentally responsible method. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Where official collection and disposal systems exist, there must be documented records of participation by the producer. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All the empty PPP containers, once emptied, should not be reused, and must be adequately stored, labelled and handled, according to the requirements of official collection and disposal schemes where applicable. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Installed on the PPP application machinery there must be pressure-rinsing equipment for PPP containers or there must be clearly written instructions to rinse each container 3 times prior to its disposal. In terms of GLOBALGAP compliance criteria, this is a major must.
- Either via the use of a container-handling device or via a written procedure for the application equipment operators, the rinsate from the empty PPP containers must always be put back into the application equipment tank when mixing. In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must be a designated secure store point for all empty PPP product containers prior to disposal that is isolated from the crop and packaging materials i.e. permanently signed and with physically restricted access for persons and fauna. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All the relevant national, regional and local regulations and legislation, if they exist, must be complied with regarding the disposal of empty PPP containers. In terms of GLOBALGAP compliance criteria, this is a major must.

3.13.10 Obsolete PPPs

- There must be documented records that indicate that obsolete PPPs have been disposed of by officially authorised channels. When this is not possible, obsolete PPPs must be securely maintained and be identifiable. In terms of GLOBALGAP compliance criteria, this is a major must.

3.14 Harvesting

3.14.1 General

- The farm manager or other nominated person should be responsible for the implementation of the hygiene procedures. In terms of GLOBALGAP compliance criteria, this is a major must.
- There must be evidence that the workers received training regarding personal cleanliness and clothing, e.g. hand washing, wearing of jewellery, fingernail length or cleaning, etc.; personal behaviour, e.g. no smoking, spitting, etc. In terms of GLOBALGAP compliance criteria, this is a major must.
- There must be evidence that the workers are complying with the hygiene instructions and procedures. Packers must be trained, using written (in appropriate languages) and/or pictorial instructions, to prevent physical (such as snails, stones, insects, knives, fruit residue, watches, mobile phones, etc.), microbiological and chemical contamination of the product during packing. In terms of GLOBALGAP compliance criteria, this is a major must.
- Reusable harvesting containers, harvesting tools (i.e., scissors, knives, pruning shears, etc.) and harvesting equipment (machinery) must be cleaned and maintained, and a cleaning and disinfection schedule should be in place (at least once a year) to prevent produce contamination. In terms of GLOBALGAP compliance criteria, this is a major must.
- Farm vehicles used for transport of harvested produce that are also used for any purpose other than transport of harvested produce, should be cleaned and maintained, and a cleaning schedule to prevent produce contamination should be in place (i.e. soil, dirt, organic fertiliser, spills, etc.). In terms of GLOBALGAP compliance criteria, this is a major must.

- Fixed or mobile hand-washing equipment to clean and disinfect hands must be accessible to harvest workers. In terms of GLOBALGAP compliance criteria, this is a major must.
- Fixed or mobile toilets (including pit latrines) constructed of materials that are easy to clean and with catch basins designed to prevent contamination in the field must be accessible to harvest workers within 500 m and they must be in a good state of hygiene. Where an employee is working independently, the 500 m distance can be modified to allow the presence of toilets at an increased distance, provided that there is reasonable and adequate transport available for the worker. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Produce containers are only used to contain harvested products (i.e. no agricultural chemicals, lubricants, oil, cleaning chemicals, plant or other debris, lunch bags, tools, etc.). If multipurpose trailers, carts, etc., are used as produce containers, they must be cleaned prior to use. In terms of GLOBALGAP compliance criteria, this is a major must.

3.14.2 Final produce at the point of harvest (applicable when during harvest, final packing and last human contact with product take place in-field)

- All produce packed and handled directly in the field, orchard or greenhouse must be removed from the field overnight in accordance with the harvest hygiene risk assessment results. All packed produce from the field must be covered to prevent contamination once packed. In terms of GLOBALGAP compliance criteria, this is a major must.
- An inspection process must be in place to ensure that products are packed according to documented quality criteria. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All field packed produce must be protected from contamination. In terms of GLOBALGAP compliance criteria, this is a major must.
- If packed produce is stored on-farm, storage areas must be cleaned. In terms of GLOBALGAP compliance criteria, this is a major must.
- Packing material must be stored to protect it against contamination. In terms of GLOBALGAP compliance criteria, this is a major must.
- Bits of packaging material and non-produce waste must be removed from the field. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Temperature and humidity controls (where applicable) must be maintained and documented in accordance with the hygiene risk assessment results and quality requirements when packed produce is stored on-farm. In terms of GLOBALGAP compliance criteria, this is a major must.
- Any ice or water used at the point of harvest should be made with potable water and handled under sanitary conditions to prevent produce contamination. In terms of GLOBALGAP compliance criteria, this is a minor must.

3.15 Produce handling (not applicable if produce handling in a packing facility on farm is excluded from certification)

3.15.1 Principles of hygiene

- There must be a documented and up-to-date (reviewed annually) risk analysis of the possible risks, and an assessment of the likelihood and severity of the risks covering physical, chemical and microbiological contaminants and human transmissible diseases, customised to the products and operation of the packhouse. In terms of GLOBALGAP compliance criteria, this is a major must.
- The nominated manager or person must be responsible for implementation of the hygiene procedures as a direct result of the produce handling hygiene risk analysis. In terms of GLOBALGAP compliance criteria, this is a minor must.
- To prevent contamination, produce handling and storage facilities and equipment (i.e. process lines and machinery, walls, floors, storage areas, pallets, etc.) must be cleaned and/or maintained according to the cleaning and maintenance schedule, with defined minimum frequency. Documented

records of cleaning and maintenance must be kept. In terms of GLOBALGAP compliance criteria, this is a minor must.

- Internal transport should be maintained to avoid product contamination, with special attention to fume emissions. Forklifts and other driven transport trolleys should be electric or gas-driven. In terms of GLOBALGAP compliance criteria, this is recommended.
- Rejected produce and waste materials must be stored in clearly designated and segregated areas designed to avoid contamination of products. These areas are routinely cleaned and/or disinfected according to the cleaning schedule. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Cleaning agents, lubricants, etc., must be kept in a designated area, away from where produce is packed, to avoid chemical contamination of produce. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Documentary evidence (i.e. specific label mention or technical data sheet) authorising the use of the food industry or cleaning agents, lubricants etc. which may come into contact with produce must exist. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Measures to prevent access by animals should be in place. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All entry points to buildings or equipment that may come into contact with animals must be suitably protected to prevent, whenever practically possible, the ingress of rodents and birds. In terms of GLOBALGAP compliance criteria, this is a minor must.
- A site plan showing bait points must exist. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Baits must be placed in such a manner that non-target species do not have access. In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must be records of pest control inspections and a follow-up action plan(s). The producer can have his own records. Inspections must take place whenever there is evidence of the presence of pests. In the case of vermin, the producer must have a contact number of the pest controller or evidence of in-house capacity to control pests. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Light bulbs and fixtures suspended above produce or material used for produce handling should be of a safety type or that are protected/shielded so as to prevent contamination of food in case of breakage. In terms of GLOBALGAP compliance criteria, this is a major must.
- Written procedures for handling glass or brittle plastic breakages in produce handling, preparation and storage areas must exist. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Smoking, eating, chewing and drinking should be confined to designated areas and should never be allowed in the produce handling or storage areas. (Drinking water must be the exception.) In terms of GLOBALGAP compliance criteria, this is a minor must.
- Signs with the main hygiene instructions must be visibly displayed in the packing facility. In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must be evidence that the workers received training regarding transmission of communicable diseases, personal cleanliness and clothing, i.e. hand washing, wearing of jewellery and fingernail length and cleaning, etc.; personal behaviour, i.e. no smoking, spitting, eating, chewing, perfumes, etc. In terms of GLOBALGAP compliance criteria, this is a major must.
- There must be evidence that the workers are complying with the hygiene instructions. In terms of GLOBALGAP compliance criteria, this is a minor must.
- All workers must wear outer garments (e.g. smocks, aprons, sleeves, gloves) that are clean and fit for the purpose or for the operation according to the risk analysis. This will depend on the product and operation. In terms of GLOBALGAP compliance criteria, this is recommended.
- Signs must be visible with clear instructions that hands must be washed before handling products, especially after using the toilets, eating, etc. In terms of GLOBALGAP compliance criteria, this is a major must.

- Toilets in a good state of hygiene must not open directly onto the produce-handling area, unless the door is self-closing. Hand-washing facilities, containing non-perfumed soap, water to clean and disinfect hands, and hand-dry facilities must be accessible and near to the toilets (as near as possible without the potential for cross-contamination). In terms of GLOBALGAP compliance criteria, this is a major must.
- Secure storage facilities should be provided at the changing facility to protect the workers' personal belongings. In terms of GLOBALGAP compliance criteria, this is recommended.
- The changing facilities should be used to change clothing and protective outer garments as required. In terms of GLOBALGAP compliance criteria, this is recommended.

3.15.2 Post-harvest washing (not applicable when no post-harvest washing is taking place)

- The water must have been declared suitable by the competent authorities and/or within the last 12 months. Water analysis must be carried out at the point of entry into the washing machinery. The levels of the parameters analysed must be within accepted WHO thresholds or accepted as safe for the food industry by the competent authorities. In terms of GLOBALGAP compliance criteria, this is a major must.
- A documented procedure for sampling method and handling for the microbiological water analysis must be available. This should be based on ISO 5667-5 or an equivalent international standard. In terms of GLOBALGAP compliance criteria, this is a major must.
- Where water is recirculated for final produce washing, it must be filtered and disinfected, and pH, concentration and exposure levels to disinfectant must be routinely monitored, with documented records maintained. Filtering must be done with an effective system for solids and suspensions that has a documented routine cleaning schedule according to the usage and water volume. In terms of GLOBALGAP compliance criteria, this is a major must.
- The water analysis for the product-washing must be undertaken by a laboratory currently accredited to ISO 17025 or its national equivalent or that can demonstrate (via documentation) that it is in the process of gaining accreditation. In terms of GLOBALGAP compliance criteria, this is recommended.
- Post-harvest treatments (not applicable when no post-harvest treatment is taking place)
- There must be clear procedures and documentation available, e.g. application records for post-harvest biocides, waxes and PPPs, which demonstrate the compliance of the label instructions for chemicals applied. In terms of GLOBALGAP compliance criteria, this is a major must.
- All the post harvest biocides, waxes and PPPs used on harvested crops should be officially registered or permitted by the appropriate governmental organisation in the country of application. They are approved for use in the country of application and are approved for use on the harvested crops to which they are applied as indicated on the biocides, waxes and crop protection products' labels. In terms of GLOBALGAP compliance criteria, this is a major must.
- The documented post-harvest biocide, wax and crop protection product application records must confirm that no biocides, waxes and crop protection products have been used within the last 12 months on the harvested crop grown under GLOBALGAP destined for sale within the EU, that have been prohibited by the EU (under EC Prohibition Directive List - 79/117/EC). In terms of GLOBALGAP compliance criteria, this is a major must.
- An up-to-date documented list that takes into account any changes in local and national legislation for biocides, waxes and PPPs must be available for the commercial brand names (including any active ingredient composition) that are used as post-harvest protection (being, or which have been, grown on the farm under GLOBALGAP (WWGAP) within the last 12 months). In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must be a documented list confirmed by the primary supplier of all the biocides, waxes and crop protection products for post-harvest usage on the produce treated which have been or will be considered for use. In terms of GLOBALGAP compliance criteria, this is a major must.

- The technically responsible person for the post-harvest biocides, waxes and PPP applications must demonstrate a sufficient level of technical competence via nationally recognised certificates or formal training. In terms of GLOBALGAP compliance criteria, this is a major must.
- The lot or batch of the harvested crop treated must be documented in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a major must.
- The geographical area, the name or reference of the farm or harvested crop handling site where the treatment was undertaken, must be documented in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a major must.
- The exact dates (day/month/year) of the applications must be documented in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a major must.
- The type of treatment used for product application (i.e. spraying, drenching, fumigation, etc.) must be documented in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a major must.
- The trade name of the products applied must be documented in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a major must.
- The quantity of the product applied in weight or volume per litre of water or other carrier medium must be recorded in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a major must.
- The name of the operator who has applied the PPP to the harvested crop must be documented in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a minor must.
- The common name of the pest, disease to be treated must be documented in all post-harvest biocide, wax and PPP application records. In terms of GLOBALGAP compliance criteria, this is a minor must.
- There must be documentary evidence to demonstrate that the producer considered all post-harvest biocides and PPP applications under Control Points and acted accordingly. In terms of GLOBALGAP compliance criteria, this is a major must.

3.15.3 Produce quality control

- An inspection process must be in place to ensure that products are packed according to documented quality standards. In terms of GLOBALGAP compliance criteria, this is a minor must.
- If packed produce is stored on-farm, temperature and humidity controls (where applicable and for controlled atmosphere storage) must be maintained and documented in accordance with the hygiene risk assessment results. In terms of GLOBALGAP compliance criteria, this is a major must.
- For products that are sensitive to light (e.g. potatoes), daylight ingress must be controlled in longer-term storage facilities. In terms of GLOBALGAP compliance criteria, this is a major must.
- Stock rotation must be managed to ensure maximum product quality and safety. In terms of GLOBALGAP compliance criteria, this is recommended.
- Equipment used for weighing and temperature control, must be routinely verified to see if the equipment is calibrated according to risk analysis. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Packing materials (including reuseable crates) must be stored in a clean and hygienic area until used. This is to prevent product contamination. In terms of GLOBALGAP compliance criteria, this is a minor must.
- Where fresh produce is packaged, all the food contact plastic packaging materials must be approved for this purpose with documented statements or certificates from the manufacturers for suitability of use with fresh produce. In terms of GLOBALGAP compliance criteria, this is a major must.