



GLOBAL G.A.P.

Impact Driven Approach – IDA to Environmental Sustainability Module

Flowers and Ornamentals

ENGLISH VERSION 0.1 **DRAFT**

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INTRODUCTION

As part of efforts to increase environmental sustainability within good agricultural practices, GLOBALG.A.P. introduces a **Data-Driven Approach to sustainability in our standards**. This consists of collecting data from growers on input consumption, processing the data, and transforming it into information which has a variety of uses.

Collecting input consumption data from growers and transforming it into information is intended to:

- a. Support producers in making their production systems more sustainable through improved decision-making, so that the whole supply chain benefits.
- b. Help GLOBALG.A.P. gain knowledge of producer realities, which in turn can
 - i. improve GLOBALG.A.P. standards and any other interventions within the supply chain,
 - ii. help make the standard leaner and simplify the assurance.
- c. Monitor and evaluate the impact of standards on sustainable farming through the reflection of input indicators on performance.
- d. Give the buyer a stronger sense of trust in a certification system that is outcome-based.

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N°	Control Points	Compliance Criteria	Level
IDA	IMPACT DRIVEN APPROACH TO SUSTAINABILITY IN FLOWERS AND ORNAMENTALS		
IDA 1	SITE HISTORY		
	<i>One of the key features of sustainable farming is the continuous integration of site-specific knowledge and practical experience 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.</i>		
IDA 1.1	Site History		
IDA 1.1.1	Is there a reference system for each field, orchard, greenhouse, yard, plot, and/or other area/location used in production?	<p>Compliance shall include visual identification in the form of:</p> <p>A physical sign at each field/orchard, greenhouse/yard/plot, or other farm area/location</p> <p>or</p> <p>A farm map, which also identifies the location of water sources, rivers, streams, ponds, water storage facilities, storage/handling facilities, unproductive areas, others, and that could be cross-referenced to the identification system. Examples of unproductive areas are low-lying wet areas, woodlands, headland strips, or areas of impoverished soil.</p> <p>No N/A.</p>	Major Must
IDA 1.2	Site Management		
IDA 1.2.1	Has the producer defined quantitative goals for input consumption?	Based on records of input consumption the producer establishes quantitative goals in relation to the use of the following inputs: plant protection products (PPPs), fertilizers, water, and energy.	Recom.
IDA 1.2.2	Record Keeping		
	Are all records requested during the external assessment accessible and kept for a minimum period of 2 years, unless a longer requirement is stated in specific control points?	Producers shall keep up-to-date records for a minimum of 2 years. For the initial assessments, producers shall keep records from at least 3 months prior to the date of the external assessment or from the day of registration, whichever is longer. When an individual record is missing, the respective control point dealing with those records is not compliant. No N/A.	Minor Must

Nº	Control Points	Compliance Criteria	Level
IDA 2	PLANT NUTRITION		
IDA 2.1	Nutrients		
IDA 2.1.1	Is the content of major nutrients (NPK) of applied fertilizers known?	Documented evidence/labels detailing major nutrient content (or recognized standard values) is available for all fertilizers used on crops grown under PFA within the last 24-month period.	Minor Must
IDA 2.1.2	Has the producer taken into account the nutrient contribution of organic fertilizer applications?	An analysis from the supply is carried out or recognized standard values are used, which take into account the contents of NPK nutrients (nitrogen (N), phosphorus (P), potassium (K)) in organic fertilizer applied in order to avoid soil contamination.	Minor Must
IDA 2.2	Records of Fertilizer Application 2.2.1 to 1.2.4: Are the following records of soil and foliar fertilizer applications, both organic and inorganic, digitally reported to GLOBALG.A.P. through a farm management software?		
IDA 2.2.1	Field, orchard or greenhouse reference and crop?	Records shall be kept of all fertilizer applications, detailing the geographical area and the name or reference of the field, orchard or greenhouse where the registered product crop is located. Records shall also be kept for hydroponic situations and where fertigation is used. No N/A.	Major Must
IDA 2.2.2	Application dates?	The exact dates (day, month and year) of the application are detailed in the records of all fertilizer applications. No N/A.	Major Must
IDA 2.2.3	Applied fertilizer types?	The trade name, type of fertilizer (e.g. NPK), and concentrations (e.g. 17-17-17) are detailed in the records of all fertilizer applications. No N/A.	Major Must
IDA 2.2.4	Applied quantities?	The amount of product to be applied in weight or volume relative to a unit of area or number of plants or unit of time per volume of fertigation is detailed in the records of all fertilizer applications. The actual quantity applied shall be recorded, as this is not necessarily the same as the recommendation. No N/A.	Major Must
IDA 3	WATER		
IDA 3.1	Awareness on critical water sources		
IDA 3.1.1	Where information is known to be available, the producer is aware of water sources considered critical as per public knowledge.	The producer is aware of water sources which are considered critical as per public knowledge (media, civil organizations, authorities)	

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IDA 3.2	Records of Water Use		
IDA 3.2.1	Are records of water abstracted kept and digitally reported to GLOBALG.A.P. through a farm management software?	The producer shall keep records and digitally reports to GLOBALG.A.P. through a farm management software of the abstraction of water from water sources.	Major Must
IDA 3.2.2	Are records of water used in irrigation, with total application volumes maintained and digitally reported to GLOBALG.A.P. through a farm management software?	The producer shall keep records and digitally reports to GLOBALG.A.P. through a farm management software of the water used in irrigation/fertigation that includes the date, cycle duration, actual or estimated flow rate, and the volume (per water meter or irrigation unit) updated every month, based on the water management plan and an annual total. This can also be the hours of systems operating on a timed flow basis.	Major Must
IDA 4	INTEGRATED PEST MANAGEMENT		
	<p><i>Integrated pest management (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 (PPPs) and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. Given the natural variation on pest development for the different crops and areas, any IPM system shall be implemented in the context of local physical (climatic, topographical etc.), biological (pest complex, natural enemy complex, etc.), and economic conditions.</i></p> <p>A pest is considered relevant once it has a significant affect on a registered or relevant crop. Relevance of a particular crop can be based on the following: 1) when a crop is occupying a significant area; 2) when the pest management costs of the crops are significantly high, or 3) the crop value is significant.</p>		
	4.1 to 4.3: Can the producer show evidence of implementing activities that fall under the category of:		
IDA 4.1	Prevention?	The producer shall show evidence of implementing at least 1 activity per registered crop that include the adoption of production practices that could reduce the incidence and intensity of pest attacks, and thereby reducing the need for intervention.	Major Must
IDA 4.2	Observation and Monitoring?	The producer shall show evidence of a) implementing at least 1 activity per registered crop that will determine when and to what extent pests and their natural enemies are present, and b) using this information to plan what pest management techniques are required.	Major Must

N°	Control Points	Compliance Criteria	Level
IDA 4.3	Intervention?	The producer shall show evidence that in situations where pest attacks adversely affect the economic value of a crop, intervention with specific pest control methods will take place. Where possible, non-chemical approaches shall be considered. N/A when the producer did not need to intervene.	Major Must
IDA 4.4	What is the existing knowledge at company level, on the relevant pests, diseases and weeds to the registered crop, in terms of life cycle, damage symptoms, identification and is this documented?	A document (digital or in paper) which includes basic information on relevant pests, diseases, and weeds that can affect the registered crop in the specific region is available to demonstrate the necessary knowledge. This may include life cycle, drawings or images that help in its identification, damage symptoms, conditions that promote their development, and time of appearance. Methods to monitor the pest and how to record results are described. No N/A.	Major Must
IDA 4.5	Are strategies to manage relevant pests at farm level documented, including preventive, monitoring and intervention strategies with a stepwise approach that prioritizes preventive measures and the lowest toxicity interventions?	<p>Strategies shall be documented digitally or on paper.</p> <p>For each relevant pest the preventive and monitoring methods, as well as the intervention measures are described.</p> <p>Strategies include:</p> <ul style="list-style-type: none"> - a stepwise approach to manage pests, starting with preventive measures - followed by the use of measures that are compatible with any introduced natural enemies (if applicable) - to only introduce the use of higher toxic or less compatible PPPs, when thresholds are surpassed - between each step, or strategy thresholds are set, that define when the next strategie needs to be implemented. Thresholds are defined by the producer based on own experience, external advice, training, and/or local conditions. <p>The document can include a description of growing conditions which could promote the development of the relevant pests, and may include proper balanced plant nutrition, humidity, etc.</p> <p>Measures can include a list of natural enemies, physical strategies, etc. Measures to avoid the build-up of resistance to PPPs in pests, pathogens, diseases, weeds (including rotation of the PPP mode of action) should also be considered.</p> <p>No N/A.</p>	Major Must

Nº	Control Points	Compliance Criteria	Level
IDA 4.6	Are records of monitoring results for key pests, diseases and weeds documented?	<p>Up to date monitoring records are kept (digital or on paper) and are shall be useful to describe the presence/absence of a pest, weed and/or disease, and also to track their development. These records shall, at a minimum include:</p> <ul style="list-style-type: none"> • identification of the plot and crop • name of person conducting monitoring • date of monitoring (exact dates) • name of pest, disease or weed • location inside the plot • decision taken <p>Records shall be archived in order to allow comparisons of results from different years and different plots. No N/A.</p>	Major Must
IDA 4.7	Is there evidence that the producer has analysed, at least once a year, the available data on IPM, in order to identify opportunities to learn and improve their IPM system?	<p>Documented evidence shall be available, to show that the following data (at a minimum) have been considered:</p> <ul style="list-style-type: none"> - records of pest, disease, or weed monitoring - strategies used to control pests, diseases or weeds - PPP application records - PPP application equipment maintenance and calibration records - trends in amounts of PPP used - records of monitoring of pests and diseases <p>Also, relevant to consider other sources which could lead to understand the origin of increased pest, diseases or weeds, such as:</p> <ul style="list-style-type: none"> - plant nutrition (fertilizer application) and stress mitigation (biostimulants) - evaluation and selection of suitable crop or varieties. - vicinity of production areas with high biodiversity - low risk use of organic matter (if applicable) - optimal water irrigation - productivity data - weather data <p>No N/A.</p>	Major Must
IDA 4.8	Is there evidence of the implementation of any corrective action, if the need for improvement of the IPM system is identified?	As a result of the analysis, conclusions are recorded, including corrective actions (if needed). There shall be evidence of implementation of those corrective actions.	Major Must

N°	Control Points	Compliance Criteria	Level
IDA 5	PLANT PROTECTION PRODUCTS		
	<i>In situations where a pest attack will adversely affect the economic value of a crop, it may be necessary to intervene using specific pest control methods, including plant protection products (PPPs). The correct use, handling and storage of PPPs are essential.</i>		
IDA 5.1	Choice of Plant Protection Products (PPPs)		
IDA 5.1.1	Is a current list kept of plant protection products (PPPs) that are authorized in the country of production for use on crops being grown?	A list is available for the commercial brand names of PPPs (including their active ingredient composition or beneficial organisms) that are authorized on crops being, or which have been, grown on the farm under IDA Module within the last 12 months.	Minor Must
IDA 5.1.2	Is the use of those PPPs listed as persistent organic pollutants in Annex A of the Stockholm Convention and those listed as extremely hazardous (class 1a) by the World Health Organization minimized?	It is possible to identify in the list (IDA 4.1.1) if a PPP has an active ingredient that is listed as persistent organic pollutant in Annex A of the Stockholm Convention and those listed as Extremely Hazardous WHO 1a, (The WHO recommended classification of pesticides by hazard, 2009). There is evidence that the use of these PPP is minimized. No N/A.	Recom.
IDA 5.1.3	Does the producer only use PPPs that are currently authorized in the country of use for the target crop (i.e. where such an official registration scheme exists)?	All the PPPs applied to the crop are suitable and can be justified (according to label recommendations or official registration body publication) for the pest, disease, weed or target of the PPP intervention. If the producer uses an off-label PPP, there shall be evidence of official approval for use of that PPP on that crop in that country. No N/A.	Major Must
IDA 5.1.4	Is the PPP that has been applied appropriate for the target as recommended on the product label?	All the PPPs applied to the crop are suitable and can be justified (according to label recommendations or official registration body publication) for the pest, disease, weed or target of the PPP intervention. If the producer uses an off-label PPP, there shall be evidence of official approval for use of that PPP on that crop in that country. No N/A.	Major Must

IDA 5.2	Records of Plant Protection Products (PPP) Applications		
IDA 5.2.1	<p>Are records of all PPP applications kept and digitally reported to GLOBALG.A.P. through a farm management software, and do they include the following minimum criteria:</p> <ul style="list-style-type: none"> - product category - size of the area affected (in Ha)? - Crop name and/or variety - Application location - Date and end time of application - Product trade name and active ingredient 	<p>All PPP applications, include</p> <ul style="list-style-type: none"> - Biopesticides - PPP treatments for in-house nursery propagation materials - Post-harvest treatments (The following information is recorded in all records of post-harvest biocide, wax and PPP applications, including the lot or batch of harvested crop treated) <p>The following PPP application records shall be digitally reported to GLOBALG.A.P. through a farm management software:</p> <ul style="list-style-type: none"> - the product category according to the GLOBALG.A.P. Product List - the size of the plot (in Ha) where the PPP application was made - the crop and/or variety treated. No N/A. - the geographical area, the name or reference of the farm, and the field, orchard or greenhouse where the crop is located. No N/A. - the exact dates (day/month/year) and end time of the application. The actual date (end date, if applied more than one day) of application shall be recorded. Producers need not record end times, but in these cases it shall be considered that application was done at the end of the day recorded. This information shall be used to cross-check compliance with the pre-harvest intervals. No N/A. - the complete trade name (including formulation) and active ingredient or beneficial organism with scientific name. The active ingredient shall be recorded or it shall be possible to connect the trade name information to the active ingredient. No N/A. 	Major Must
IDA 5.2.2	Is there written justification for the use of soil fumigants?	Includes location, date, active ingredient, amount, doses, method of application, and operator. The use of methyl bromide is not permitted. No N/A.	Major Must

IDA 5.2.3	Are records available for all other substances, including those that are made on-farm, used on crops and/or soil that are not covered under the sections on fertilizer and PPPs?	<p>If preparations, such as plant strengtheners, soil conditioners, or any other such substances are used on certified crops, be they home-made or purchased, records shall be available. These records shall include the name of the substance (e.g. plant from which it derives), the crop, the field, the date, and the amount applied. In case of purchased products, also the trade or commercial name, if applicable, and the active substance or ingredient, or the main source (e.g. plants, algae, mineral, etc.) shall be recorded.</p> <p>Records of these materials must contain information about the ingredients where available.</p>	Minor Must
IDA 5.2.4	Does the producer only use PPPs that are officially registered in the country of use and approved for post-harvest use on the harvested crop being protected?	All the post-harvest PPPs used on harvested crop are officially registered or permitted by the appropriate governmental organization in the country of application, approved for use in the country of application, and approved for use on the harvested crop to which it is applied as indicated on the biocides and PPPs' labels. Where no official registration scheme exists, refer to the localg.a.p. guideline in Annex and the 'FAO International Code of Conduct on the Distribution and Use of Pesticides'.	Major Must
IDA 5.2.5	Is an up-to-date list maintained of post-harvest PPPs that are used, and approved for use, on crops being grown?	An up-to-date documented list that takes into account any changes in local and national PPP legislation is available for the commercial brand names of PPPs (including their active ingredient composition, or beneficial organisms) that have been or are being used on crops grown on the farm under localg.a.p. PFA within the last 6 months. No N/A.	Minor Must

IDA 6	ENERGY		
IDA 6.1	Records of Energy Use		
IDA 6.1.1	<p>Are records of on-farm energy use per source kept and digitally reported to GLOBALG.A.P. through a farm management software?</p>	<p>Records of energy use exist (e.g. invoices where energy consumption is detailed, for small producers estimates of energy use are valid), including electricity, fossil fuels, other sources and are digitally reported to GLOBALG.A.P. through a farm management software.</p> <p>Producer records distinguish amount of energy in kWh from each source and which sources are renewable and which are non-renewable.</p> <p>The producer keeps track of its overall energy use at farm in kWh.</p> <p>The producer is aware of where and how energy is consumed on the farm and through farming practices.</p>	Major Must

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