



FLOWERS AND ORNAMENTALS

Plant Propagation Material – Soil and Fertilizers – Water

DOCUMENT FOR READING REFERENCE

V0.6-2 DRAFT FOR PUBLIC CONSULTATION

CONSULTATION PERIOD:

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Use this document as reading reference. For feedback, use online questionnaire or offline excel file.

TABLE OF CONTENTS

- Plant Propagation Material
- Soil and Fertilizers (Soil and Plant Nutrition)
- Water

PLANT PROPAGATION MATERIAL

INTENTION:

- The choice of propagation material plays an important role in the production process and, by using the appropriate varieties, can help to reduce the number of fertilizer and plant protection product applications.
- The choice of propagation material is a precondition of good plant growth and product quality.

MAIN CHANGES:

- Agreement on rootstock varieties with customer is deleted, as it is not usual in the sector.
- Agreement with customer on varieties planted (FO 1.1.3) is merged with other customer requirements in Management M_3.
- Intellectual property rights moved from a Minor Must to a Major Must. Reputational risk if a certified producer is not paying royalties.
- Records of PPP used by supplier of plant propagation material to the certified producer is moved from Minor Must to Recommendation as it is a practice outside of the scope of the producer.
- Records of PPP used in propagation under certified producer is raised from a Minor Must to a Major Must. Tracking PPP use is key for outcome-based approach.
- Conversion: PPM_11 or FO 1.3.1, purpose of this control point is focused on not allowing that material which is not produced by the certificate holder can be considered certified. At least 3 months under G.A.P. by certificate holder required. Deletion of unclear references to national authorities and to tulip bulbs.

PLANT PROPAGATION MATERIAL

Summary table showing changes in level of requirement

PLANT PROPAGATION MATERIAL (PPM)				
Delete	Variety rootstocks agreed with customers	FO 1.1.2	Recom.	Delete
Delete	Crops match written specification	FO 1.1.3	Recom.	Delete
Propagation Material				
PPM_1	Variety registration rules	CB 2.1.1	Minor Must	Minor Must
PPM_2	Intellectual property rules	CB 2.1.2	Minor Must	Major Must
PPM_3	Plant-health quality control systems	CB 2.1.3	Minor Must	Minor Must
Chemical Treatments and Dressings				
PPM_4	Purchased propagation material has treatment info	CB 2.2.1	Minor Must	Recom.
PPM_5	Records of PPP treatments at nursery	CB 2.2.2	Minor Must	Major Must
Genetically Modified Organisms (N/A if no Genetically Modified Organisms are Used)				
PPM_6	GMO trials comply with legislation	CB 2.3.1	Major Must	Major Must
PPM_7	Documented evidence if producer has GM	CB 2.3.2	Minor Must	Minor Must
PPM_8	Clients informed of GM status	CB 2.3.3	Major Must	Major Must
PPM_9	Plan for handling GM material	CB 2.3.4	Minor Must	Minor Must
PPM_10	Storage of GM to avoid adventitious mixing	CB 2.3.5	Major Must	Major Must
Conversion Period				
PPM_11	Transition Period	FO 1.3.1	Major Must	Major Must

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PPM		Control Points	Compliance Criteria	Level
Delete	FO 1.1.2	Have varieties or rootstocks been agreed with major customers?	There is a written agreement between the customer and the producer, and the variety conforms to the customer's quality specification. N/A when there is evidence of the client not requiring particular specifications or the producer does not know the client yet.	Recom. Delete
Delete	FO 1.1.3	Do the crops match the written specifications?	Documented records, e.g. a plant passport, shall be available and shall match the customers' specification. Not applicable when there is evidence of the client not requiring particular specifications or the producer does not know the client yet.	Recom. Delete
		<i>INTENTION: The choice of propagation material plays an important role in the production process and, by using the appropriate varieties, can help to reduce the number of fertilizer and plant protection product applications. The choice of propagation material is a precondition of good plant growth and product quality.</i>		
PPM_1	CB 2.1.1	When seeds or propagation material have been purchased in the past 24 months, there is evidence that guarantees they have been obtained in compliance with variety registration laws (in the case mandatory variety registration exists in the respective country)?	<p>A document (e.g. empty seed package, plant passport, packing list, or invoice) that states as a minimum variety name, batch number, propagation material vendor, and, where available, additional information on seed quality (germination, genetic purity, physical purity, seed health, etc.) shall be available.</p> <p>Material coming from nurseries that have GLOBALG.A.P. Plant Propagation Material, equivalent or GLOBALG.A.P. recognized certification is considered compliant.</p>	Minor Must

PPM		Control Points	Compliance Criteria	Level
PPM_2	CB 2.1.2	Has the propagation material used been obtained in accordance to applicable intellectual property laws?	<p>When producers use registered varieties or rootstock, there are written documents available on request that prove that the propagation material used has been obtained in accordance to applicable local intellectual property right laws. These documents may be the license contract (for starting material that does not originate from seed, but from vegetative origin), the plant passport if applicable or, if a plant passport is not required, a document or empty seed package that states, as a minimum, variety name, batch number, propagation material vendor, and packing list/delivery note or invoice to demonstrate size and identity of all propagation material used in the last 24 months. No N/A.</p> <p>Note: The PLUTO Database of UPOV (http://www.upov.int/pluto/en) and the Variety Finder Tool on the website of CPVO (cpvo.europa.eu) list all varieties in the world, providing their registration details and the intellectual property protection details per variety and country.</p>	<p>Minor Must</p> <p>Major Must</p>
PPM_3	CB 2.1.3	Are plant health quality control systems operational for in-house nursery propagation?	<p>A quality control system that contains a monitoring system for visible signs of pest and diseases is in place and current records of the monitoring system shall be available. Nursery means anywhere propagation material is produced, (including in-house grafting material selection). The monitoring system shall include the recording and identification of the mother plant or field of origin crop, as applicable. Recording shall be at regular established intervals. If the cultivated trees or plants are intended for own use only (i.e. not sold), this will suffice. When rootstocks are used, special attention shall be paid to the origin of the rootstocks through documentation.</p>	Minor Must
		Chemical Treatments and Dressings		
PPM_4	CB 2.2.1	Is the purchased propagation material (seed, rootstocks, seedlings, plantlets, cuttings) accompanied by information of chemical treatments done by the supplier?	<p>Records with the name(s) of the chemical product(s) used by the supplier on the propagation material (e.g. maintaining records/ seed packages, list with the names of the plant protection product (PPP) used, etc.) are available on request. Suppliers who hold a GLOBALG.A.P. Plant Propagation Material, equivalent or GLOBALG.A.P. recognized certificate are considered compliant with the control point. N/A for perennial crops.</p>	<p>Minor Must</p> <p>Recom.</p>

PPM		Control Points	Compliance Criteria	Level
PPM_5	CB 2.2.2	PPP treatments recorded for in-house nursery propagation materials applied during the plant propagation period	Records of all PPP treatments applied during the plant propagation period for in-house plant nursery propagation are available and include location, date, trade name and active ingredient, operator, authorized by, justification, quantity, and machinery used.	Minor Must Major Must
Genetically Modified Organisms (N/A if no Genetically Modified Varieties are Used)				
PPM_6	CB 2.3.1	Does the planting of or trials with genetically modified organisms (GMOs) comply with all applicable legislation in the country of production?	The registered farm or group of registered farms have a copy of the legislation applicable in the country of production and comply accordingly. Records shall be kept of the specific modification and/or the unique identifier. Specific husbandry and management advice shall be obtained.	Major Must
PPM_7	CB 2.3.2	Is there documentation available of when the producer grows GMOs?	If GMO cultivars and/or products derived from genetic modification are used, records of planting, use or production of GMO cultivars and/or products derived from genetic modification are maintained.	Minor Must
PPM_8	CB 2.3.3	direct clients informed of the GMO status of the product	Documented evidence of communication shall be provided and shall allow verification that all material supplied to direct clients is according to customer requirements.	Major Must
PPM_9	CB 2.3.4	plan for handling (GM) material / identifying strategies to minimize contamination risks	A written plan that explains how GM materials (e.g. crops and trials) are handled and stored to minimize risk of contamination with conventional material and to maintain product integrity is available.	Minor Must
PPM_10	CB 2.3.5	GM crops stored separately to avoid adventitious mixing	A visual assessment of the integrity and identification of GM crops storage shall be made.	Major Must

PPM		Control Points	Compliance Criteria	Level
		Conversion Period		
PPM_11	FO 1.3.1	Are crops sold as GLOBALG.A.P. certified grown under GLOBALG.A.P. standard conditions In the case propagation material was sourced from suppliers who are not certified according to GLOBALG.A.P. IFA for Plant Propagation Material or Flowers and Ornamentals , and has the transition period been completed?	<p>Crops shall be grown under the ownership of the Flowers and Ornamentals (FO) certified/applicant producer at least 3 months before being sold as certified.</p> <p>In the case the growing cycle is shorter than 3 months, at least two thirds of the growing cycle shall be done by the FO producer, and in the case of flowers, growing under GLOBALG.A.P. Standard conditions shall also start before the flower has opened.</p> <p>The beginning of the growing period counts from sowing or when the cuttings are planted.</p> <p>The supplier of the non-certified material shall be an authorized supplier, e.g. propagation material license/authorization according to the national scheme shall be available.</p> <p>In any other case (e.g. tulip bulbs), the propagation material is required to be certified (against GLOBALG.A.P. or an equivalent benchmarked scheme or checklist) to sell the product as GLOBALG.A.P. certified.</p> <p>Note: This situation is not considered as parallel production or ownership, and so producers do not need to register for it in the GLOBALG.A.P. Database.</p>	Major Must

SOIL & PLANT NUTRITION (SOIL & FERTILIZERS). Sub-section Soil and Substrates
INTENTION:

- Good soil husbandry ensures the long-term fertility of the soil, aids yield, and contributes to profitability.
- Promote plant health and avoid overuse, waste or leakage of fertilizers which may pollute the environment.
- For crops on soil, ensure fertility is maintained/improved, avoid soil erosion, or loss of properties that contribute to plant health.
- Minimize soil fumigation to promote biological activity in soil, which benefits plant health.

Summary table showing changes in level of requirement

	Soil Conservation			
SF_1	Soil maps	CB 3.2	Recom.	Minor Must
SF_2	Crop rotation	CB 3.3	Minor Must	Recom.
SF_3	Soil structure, soil compaction	CB 3.4	Minor Must	Minor Must
SF_4	Soil erosion	CB 3.5	Minor Must	Minor Must
SF_5	Records of sowing or planting	CB 3.7	Recom.	Recom.
	Soil Disinfestation Fumigation (N/A if no Soil Disinfestation Fumigation)			
SF_6	Soil Fumigation - justification	FO 2.1.1	Major Must	Major Must
SF_7	Pre-planting intervals	FO 2.1.2	Minor Must	Recom.
SF_8	Alternatives to chemical fumigation	FO 2.1.3	Recom.	Minor Must
	Substrates			
SF_9	Substrates – recycling programs	FO 2.2.1	Minor Must	Minor Must
SF_10	Substrate sterilization (not Data Driven FO)	FO 2.2.2	Major Must	Minor Must
SF_11	Steaming (non-chemical) is preferred.	FO 2.2.3	Recom.	Minor Must
SF_12	Substrates of natural origin	FO 2.2.4	Minor Must	Major Must

MAIN CHANGES:

- “Soil maps” raised from Recommendation to Minor Must, to ensure soil quality characteristics are included in good soil husbandry.
- “Crop rotation” lowered from Minor Must to Recommendation as it is not a practice that is common or feasible in the sector.
- Soil Fumigation name changed to Soil Disinfestation, as fumigation as such is mostly disappearing and disinfestation is still a possibility.
- Pre-planting intervals lowered from Minor Must to Recommendation.
- Alternatives to chemical soil fumigation and to chemical substrate sterilization raised to Minor Must, to minimize use of chemicals.
- Records of chemicals used in substrate sterilization lowered to Minor Must as these are not priority of impact-driven approach records.
- Raising to Major Must the use of natural substrates only from allowed places, not from protected areas.

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SF		Control Points	Compliance Criteria	Level
		<i>INTENTION: The purpose is to promote plant health and avoid overuse of fertilizers, by applying nutrients actually required by the crop, independent if the source of nutrients is organic or inorganic. Avoiding environmental pollution through safe fertilizer storage, optimal use, minimize the inputs of heavy metals. Monitoring quantities of nitrogen and phosphorus applied is aimed at helping to keep overuse as low as possible. In case crops grow on soil, important to ensure its fertility and avoid its loss or the loss of its properties that contribute to plant health. Minimizing soil fumigation leads to less use of chemicals and promoting growth promoting rhizobacteria and other microorganisms which benefit plant health.</i>		
		Soil Conservation		
		<i>INTENTION: Good soil husbandry ensures the long-term fertility of the soil, aids yield, and contributes to profitability. Not applicable in the case of crops that are not grown directly on the soil (e.g. hydroponic or potted plants).</i>		
SF_1	CB 3.2	Soil maps for the farm are available.	The types of soil are identified for each site, based on a soil profile or soil analysis or local (regional) cartographic soil-type map.	Recom. Minor Must
SF_2	CB 3.3	Where feasible, crop rotation for annual crops is implemented.	When rotations of annual crops to improve soil structure and minimize soil borne pests and diseases are carried on, this can be verified from planting date and/or PPP application records. Records shall exist for the previous 2-year rotation.	Minor Must Recom.
SF_3	CB 3.4	Techniques to improve or maintain soil structure and avoid soil compaction have been used.	There is evidence of techniques applied (e.g. use of deep-rooting green crops, drainage, subsoiling, use of low pressure tires, tramlines, permanent row marking, avoiding in-row plowing, smearing, poaching,) that are suitable for use on the land and, where possible, minimize, isolate, or eliminate soil compaction, etc.	Minor Must

SF		Control Points	Compliance Criteria	Level
SF_4	CB 3.5	The producer uses techniques to reduce the possibility of soil erosion.	There is evidence of control practices and remedial measures (e.g. mulching, cross line techniques on slopes, drains, sowing grass or green fertilizers, trees and bushes on borders of sites, etc.) to minimize soil erosion (e.g. water, wind).	Minor Must
SF_5	CB 3.7	The producer keeps records on seed/planting rate, sowing/planting date.	Records of sowing/planting, rate/density, and date shall be kept and be available.	Recom-
Soil Disinfection-Fumigation (N/A if no Soil Disinfection-Fumigation)				
SF_6	FO 2.1.1	Is there written justification for the use of soil fumigants, and records kept?	There is written evidence and justification for the use of soil fumigants, which includes the location, date, active ingredient, amount, doses, method of application, and operator. The use of methyl bromide is not permitted. No N/A.	Major Must
SF_7	FO 2.1.2	Is any pre-planting interval complied with?	The pre-planting interval shall be recorded. No N/A.	Minor Must Recom.
SF_8	FO 2.1.3	Does the producer explore alternatives to chemical fumigation before resorting to the use of chemical fumigants?	The producer is able to demonstrate assessment of alternatives to chemical soil fumigation through technical knowledge, written evidence, or accepted local practice and has implemented them, where feasible.	Recom. Minor Must
Substrates (N/A if no Substrates are Used)				
SF_9	FO 2.2.1	Does the producer participate in recycling programs for substrates, where available?	The producer keeps records of substrate recycling with quantities recycled and dates. Invoices/loading dockets are acceptable. If no participation in a recycling program is available, this should be justified. Not applicable to potted plants that are sold together with the substrate.	Minor Must
SF_10	FO 2.2.2	If chemicals are used to sterilize substrates for reuse, have the amounts and types of chemicals used, the location, the date of sterilization, type of chemical , method of sterilization, name of the operator, and pre-planting interval been recorded?	When substrates are sterilized on farm, the name or reference of field, orchard , or greenhouse is recorded. When substrates are sterilized off farm, the name and location of the company that sterilizes the substrate are recorded. The following are all correctly recorded: The dates of sterilization (day/month/year), the name and active ingredient, the machinery (e.g. 1,000 l tank etc.), amounts of chemicals used (only when sterilized at farm level), the method (e.g. drenching, fogging), the operator's name (the person who actually applied the chemicals and performed the sterilization), and the pre-planting interval.	Major Must Minor Must
SF_11	FO 2.2.3	When substrates are reused, has steaming or non-chemical alternatives been used for sterilization?	When substrates are reused, d Documented evidence shows that steaming or other non-chemical options are is the option used.	Recom. Minor Must

SF		Control Points	Compliance Criteria	Level
SF_12	FO 2.2.4	For substrates of natural origin, can the producer demonstrate that they do not come from designated conservation areas?	Records showing the origin of the substrates of natural origin being used are available. These records demonstrate that the substrates do not come from designated conservation areas.	Minor Must Major Must

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SOIL & PLANT NUTRITION (SOIL & FERTILIZERS). Sub-Section Nutritional Needs and Records of Fertilizer Applications

MAIN CHANGES:

- Knowledge of nutrient content of inorganic and organic fertilizers raised to Major must to enable tracking amounts used.
- Risks to environment and worker's health is raised to Major Must.
- Proposal made in Draft 1 of estimating efficiency of fertilizer applications is deleted, as considered not applicable in the FO sector.

Summary table showing changes in level of requirement

	Nutritional Needs			
SF_13	Advice on applications	CB 4.1.1	Minor Must	Minor Must
SF_14	Nutrient requirement	FO 3.1.1 + CB 3.1	Minor Must	Minor Must
Fertilizers – Nutrients and Risks				
SF_15	Nutrient /chemical content of inorganic fertilizers	CB 4.5.1+ CB 4.5.2	Minor Must	Major Must
SF_16	Nutrient content of organic fertilizers	CB 3.6	Minor Must	Major Must
SF_17	Risks of organic fertilizer	CB 4.4.2	Minor Must	Major Must
SF_18	Human sewage sludge	CB 4.4.1	Major Must	Major Must
Records of Fertilizer Application				
SF_19	Location	CB 4.2.1	Minor Must	Minor Must
SF_20	Dates	CB 4.2.1	Minor Must	Minor Must
SF_21	Quantities to be applied Fertilizer type	CB 4.2.1	Minor Must	Minor Must
SF_22	Fertilizer types and quantities actually applied	CB 4.2.1	Minor Must	Minor Must
SF_23	Ratio of N-P applied / N-P recommended	New	New	Delete
SF_24	Method of application and Operator details	CB 4.2.5+CB 4.2.6	Minor Must	Minor Must

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SF		Control Points	Compliance Criteria	Level
		Nutritional Needs		
SF_13	CB 4.1.1	Are recommendations for the application of fertilizers (organic or inorganic) provided by competent and qualified persons?	Where the fertilizer records show that the technically responsible person determining quantity and type of the fertilizer (organic or inorganic) is In case of an external adviser, training and technical competence shall be demonstrated via official qualifications, specific training courses, etc., unless employed for that purpose by a competent organization (e.g. official advisory services). Where the fertilizer records show that the technically responsible person determining quantity and type of fertilizer (organic or inorganic) In case it is the producer or designated employee, experience shall be complemented by technical knowledge (e.g. access to product technical literature, specific training course attendance, etc.) and/or the use of tools (software, on farm detection methods, etc.).	Minor Must
SF_14	CB 3.1 and FO 3.1.1	The decision to apply fertilizers is based on the consideration of nutritional needs of the crop, aims to minimize nutrient loss and aims to maintain soil fertility	The producer shall demonstrate that consideration has been given to the nutritional needs of the crop and to maintaining soil fertility. The producer shall make a fertilization program (time, frequency, and quantity) to minimize nutrient loss. Records of analyses and/or crop-specific literature shall be available as evidence. The producer shall perform calculations at least once for every single crop harvested and on a justified regular basis (e.g. every 2 weeks in closed systems) for continuously harvested crops. (Analysis may be conducted with on-farm equipment or mobile kits). No N/A.	Minor Must
		Fertilizers – Nutrients and Risks		
SF_15	CB 4.5.2 and CB 4.5.1	Are purchased inorganic fertilizers accompanied by documented evidence of chemical content, which includes major nutrients (NPK) and heavy metals?	Documented evidence detailing chemical content, including major nutrient content (or recognized standard values) and heavy metals, shall be is available for all inorganic fertilizers used on crops grown under GLOBALG.A.P. within the last 24 12 -month period.	Recom. Major Must

SF		Control Points	Compliance Criteria	Level
SF_16	CB 3.6	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 Major Must
SF_17	CB 4.4.2	Has a risk assessment been carried out for organic fertilizer, which, prior to application, considers its source, characteristics and intended use?	Documented evidence is available to demonstrate that written risk assessments for both worker's health safety food safety and environment are in place for the use of organic fertilizer. These include as a minimum: <ul style="list-style-type: none"> • Type of organic fertilizer • Method of treatment to obtain the organic fertilizer • Microbial contamination (plant and human pathogens) • Weed/seed content • Heavy metal content • Timing of application, and placement of organic fertilizer (e.g. direct contact to edible part of crop, ground between crops, etc.). This also applies to substrates from biogas plants.	Minor Must Major Must
SF_18	CB 4.4.1	Does the producer prevent the use of human sewage sludge on the farm?	No treated or untreated human sewage sludge is used on the farm for the production of GLOBALG.A.P. registered crops. No N/A.	Major Must
		Records of Application		
		4.2.1 to 4.2.6: Do records of all applications of soil and foliar fertilizers, both organic and inorganic, include the following criteria:		
SF_19	CB 4.2.1	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 fertilizer application was made to the registered product crop is located. Records shall also be kept for hydroponic situations and where fertigation is used. No N/A.	Minor Must Major Must Minor Must
SF_20	CB 4.2.2	Application dates?	Exact dates (day, month and year) of the application are detailed in the records of all fertilizer applications. No N/A.	Minor Must Major Must Minor Must

SF		Control Points	Compliance Criteria	Level
SF_21	CB 4.2.3	Quantities to be applied? Applied fertilizer types?	The amount of product to be applied, as per soil and/or leaf analysis or according to the recommendation , 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. 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.	Minor Must Major Must Minor Must
SF_22	CB 4.2.4	Quantities and type of fertilizer actually applied? Applied quantities?	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. 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. Records specify the amount of N and of P per application. No N/A.	Minor Must Major Must Minor Must
SF_23	New	Ratio of N and P applied in relation to recommended amounts of N and P.	Recommended amounts of N and P would follow soil or leaf analysis (N and P content), or per recommendation according to or recognized by local industry as best practice. Such a ratio can offer an insight into the optimal use of fertilizers.	New Minor Must Delete
SF_24	CB 4.2.5 and CB 4.2.6	Method of application? Operator details?	The method and/or equipment used and the name of the operator who has applied the fertilizer are detailed in the records of all fertilizer applications. In the case the method/equipment is always the same, it is acceptable to record these details only once. If there are various equipment units, these are identified individually. Methods may be e.g. via irrigation or mechanical distribution. Equipment may be e.g. manual or mechanical. No N/A. If a single individual makes all of the applications, it is acceptable to record the operator details only once. If there is a team of workers performing the fertilization, all of them need to be listed in the records. No N/A.	Minor Must Recom. Minor Must

SOIL & PLANT NUTRITION (SOIL & FERTILIZERS). Sub-Section Fertilizer Storage

MAIN CHANGES:

- Risks of polluting water sources with storage of inorganic and organic fertilizers is raised to Major Must.
- Storage together with harvested product lowered to Minor Must as it is not food products.
- Inventory of fertilizers lowered to Minor Must, as it is good practice.

Summary table showing changes in level of requirement

	Fertilizer Storage			
SF_25	Separation from PPP	CB 4.3.1	Minor Must	Minor Must
SF_26	Covered area	CB 4.3.2	Minor Must	Minor Must
SF_27	Clean area	CB 4.3.3	Minor Must	Minor Must
SF_28	Dry area	CB 4.3.4	Minor Must	Minor Must
SF_29	Reduced risk to water sources	CB 4.3.5	Minor Must	Major Must
SF_30	Separation from harvested product	CB 4.3.6	Major Must	Minor Must
SF_31	Updated stock inventory of fertilizers	CB 4.3.7	Major Must	Minor must
SF_32	Concentrated acids	FO 3.2.2 + FO 3.2.1	Minor Must	Minor Must
SF_33	Organic fertilizer storage	CB 4.4.3	Minor Must	Major Must

SF		Control Points	Compliance Criteria	Level
		Fertilizer Storage		
		4.3.1 to 4.3.7: Are all fertilizers stored: Separately from PPPs?		
SF_25	CB 4.3.1		The minimum requirement is to prevent physical cross-contamination between fertilizers (organic and inorganic) and PPPs by using a physical barrier (wall, sheeting, etc.). If fertilizers that are applied together with PPPs (i.e. micronutrients or foliar fertilizers) are packed in a closed container, they can be stored with PPPs.	Minor Must
SF_26	CB 4.3.2	In a covered area?	The covered area is suitable to protect all inorganic fertilizers (e.g. powders, granules or liquids) from atmospheric influences (e.g. sunlight, frost and rain, high temperature). Based on a risk assessment (fertilizer type, weather conditions, storage duration and location), plastic coverage could be acceptable. It is permitted to store lime and gypsum in the field. As long as the storage requirements on the material safety data sheet are complied with, bulk liquid fertilizers can be stored outside in containers.	Minor Must
SF_27	CB 4.3.3	In a clean area?	Inorganic fertilizers (e.g. powders, granules or liquids) are stored in an area that is free from waste, does not constitute a breeding place for rodents, and where spillage and leakage may be cleared away.	Minor Must Recom. Minor Must
SF_28	CB 4.3.4	In a dry area?	The storage area for all inorganic fertilizers (e.g. powders, granules or liquids) is well ventilated and free from rainwater or heavy condensation. Storage cannot be directly on the soil except for lime/gypsum.	Minor Must
SF_29	CB 4.3.5	In an appropriate manner that reduces the risk of contamination of water sources?	All fertilizers are stored in a manner that poses minimum risk of contamination to water sources. Liquid fertilizer stores/tanks shall be surrounded by an impermeable barrier to contain a capacity to 110% of the volume of the largest container, if there is no applicable legislation.	Minor Must Major Must
SF_30	CB 4.3.6	Not together with harvested products?	Fertilizers shall not be stored with harvested products.	Major Must Recom. Minor Must
SF_31	CB 4.3.7	Is there an up-to-date fertilizer stock inventory or stock calculation listing incoming fertilizer and records of use available?	The stock inventory (type and amount of fertilizers stored) shall be updated within a month after there is a movement of the stock (in and out). A stock update can be calculated by registration of supply (invoices or other records of incoming fertilizers) and use (treatments/applications), but there shall be regular checks of the actual content so as to avoid deviations with calculations.	Major Must Recom. Minor Must

SF		Control Points	Compliance Criteria	Level
SF_32	FO 3.2.2 + FO 3.2.1	Are concentrated acids stored in a separated, lockable room, separately from any other material ?	Concentrated acids shall be stored in a separate, lockable room, separately from any other material , unless stored according to the requirements for PPP storage.	Minor Must
SF_33	CB 4.4.3	Is organic fertilizer stored in an appropriate manner that reduces the risk of contamination of the environment?	Organic fertilizers shall be stored in a designated area. Appropriate measures, taken to prevent the contamination of water sources (e.g. concrete foundation and walls, specially built leak-proof container, etc.) or shall be stored at least 25 meters from water sources.	Minor Must Major Must

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WATER

INTENTION:

- Provide plants with optimal amounts of water of appropriate quality
- Minimize abstraction from water sources (efficient use and when possible, collect rainwater and / or recycling water).
- Avoid discharges, emissions, effluents that can pollute water sources.

MAIN CHANGES:

- To raise as Minor Musts measures to collect rainwater and maintain water storage facilities, Depending on context.
- Raise to Major records of water abstracted and water used in irrigation, as to enable tracking amounts used.
- Introduce as Recommendation to keep records of TOTAL water used (include non-irrigation uses).
- Introduce as Recommendation, water quality use in pre-harvest, which are NON-APPLICABLE to FO, as to protect worker's health and safety.

Summary table showing changes in level of requirement

WATER (W)				
WATER SOURCES				
W_1	Risk assessment to the environment	CB 5.2.1	Major Must	Major Must
W_2	Water management plan	CB 5.2.2	Major Must	Major Must
SUPPLY OF IRRIGATION WATER				
W_3	Tools are used to determine irrigation needs	CB 5.1.1	Minor Must	Minor Must
W_4	Permits	CB 5.4.1	Minor Must	Minor Must
W_5	Restrictions defined in permits are met	CB 5.4.2	Major Must	Major Must
W_6	Measures to collect and recycle water	AF 7.4.1	Recom.	Minor Must
W_7	Water storage facilities	CB 5.5.1	Recom.	Minor Must
RECORDS				
W_8	Records of abstracted water	New	New	Major Must
W_9	Records of water used in irrigation	CB 5.2.3	Minor Must	Major Must
W_10	Records of total water used	New	New	Recom.

WATER QUALITY				
W_11	Use of treated sewage water	CB 5.3.1	Major Must	Major Must
W_12	Risk assessment of chemical and physical pollutants in water	CB 5.3.2	Minor Must	Minor Must
W_13	Water is analyzed based on risk assessment	CB 5.3.3	Minor Must	Recom.
W_14	Laboratory analysis consider chemical and physical pollutants	CB 5.3.4	Minor Must	Recom.
W_15	Corrective actions to findings from laboratory test	CB 5.3.5	Minor Must	Recom.

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W		Control Points	Compliance Criteria	Level
W		WATER		
		Water Sources		
		<p>INTENTION: Provide plants with optimal amounts of water of appropriate quality Minimize abstraction from water sources (efficient use and when possible, collect rainwater and / or recycling water). Avoid discharges, emissions, effluents that can pollute water sources.</p>		
W_1	CB 5.2.1	<p>Has the producer identified and documented the potential impacts that the farm and its activities may have on the water sources as well as the potential impacts of the water sources on the farm, and has it been reviewed within the previous 12 months?</p>	<p>The producer maintains an updated document describing:</p> <ul style="list-style-type: none"> - the potential negative impacts of farm activities on water sources and off-farm environment, including the risk to deplete water sources or to affect the quality of its water. - the potential negative impacts that the water sources may have on the crops, on the production system, and on worker's health. - the opportunities to collect rainwater or to recycle water. <p>The producer is aware of regional water sources which are considered in critical state as per public knowledge (media, civil organizations, authorities).</p> <p>There is a documented risk assessment that identifies environmental impacts of the water sources, distribution system and irrigation and crop washing usages. In addition, the risk assessment shall take into consideration the impact of the water sources on distribution system and irrigation and postharvest usages, own farming activities on off-farm environments, where information is known to be available.</p> <p>The risk assessment shall be completed, fully implemented and it shall be reviewed and approved annually by the management. See 'Annex AF 1 GLOBALG.A.P. Guideline Risk Assessment - Generals' and 'Annex CB 1 GLOBALG.A.P. Guideline: (Responsible On-Farm Water Management for Crops)' for further guidance. No N/A.</p>	Major Must

W		Control Points	Compliance Criteria	Level
W_2	CB 5.2.2	Is there a water management plan available that identifies water sources and measures to ensure environmental protection of water sources, and that addresses potential risks of the water sources to the farm and its workers, and the efficiency of application and which management has approved within the previous 12 months?	<p>There is a written and implemented action plan, approved by the management within the previous 12 months, which identifies water sources and measures to avoid excessive abstraction and ensure efficient use and application.</p> <p>The plan shall include one or more of the following: Maps (see AF 1.1.1.), photographs, drawings (hand drawings are acceptable) or other means to identify the location of water source(s), permanent fixtures and the flow of the water system (including holding systems, reservoirs or any water captured for re-use). Permanent fixtures, including wells, gates, reservoirs, valves, returns and other above-ground features that make up a complete irrigation system, shall be documented in such a manner as to enable location in the field. The plan shall also assess the need for the maintenance of irrigation equipment. Training and/or retraining of personnel responsible for the oversight or performance duties shall be provided. Short and long-term plans for improvement, with timescales where deficiencies exist, shall be included. This can either be an individual plan or a regional activity that the farm may be participating in or is covered by such activities.</p>	Major Must
Supply of Irrigation Water				
W_3	CB 5.1.1	Are tools used routinely to calculate and optimize the crop irrigation requirements?	<p>The producer can demonstrate that crop irrigation requirements are calculated based on data (e.g. local agricultural institute data, farm rain gauges, drainage trays for substrate growing, evaporation meters, water tension meters for the percentage of soil moisture content). Where on-farm tools are in place, these should be maintained to ensure that they are effective and in a good state of repair. N/A only for rain-fed crops.</p>	Minor Must
W_4	CB 5.4.1	Where legally required, are there valid permits/licenses available for all farm water extraction, water storage infrastructure, on-farm usage and, where appropriate, any subsequent water discharge?	<p>There are valid permits/licenses available issued by the competent authority. for all farm water extraction; water storage infrastructure; all on-farm water usage including but is not restricted to irrigation, product washing or flotation processes; and where legally required, for water discharge into river courses or other environmentally sensitive areas. These permits/licenses shall be available for inspection and have valid dates.</p>	Minor Must
W_5	CB 5.4.2	Where the water permits/licenses indicate specific restrictions, do the water usage and discharge records	<p>It is not unusual for Specific conditions set in the permits/licenses, such as hourly, daily, weekly, monthly, or yearly extraction volumes or usage rates. Records shall be maintained and available to demonstrate that these conditions are being met.</p>	Major Must

W		Control Points	Compliance Criteria	Level	
		confirm that the management has complied with these?			
W_6	AF 7.4.1	Where feasible, Have measures been implemented to collect water and, where appropriate, to recycle taking into consideration phytosanitary risks? e.g. phytosanitary all food safety aspects?	Water collection is recommended where it is commercially and practically feasible, e.g. There is evidence of water collection of rainwater from building roofs, glasshouses, etc. Collection from watercourses within the farm perimeters may need legal permits from the authorities. NA when the producer can explain with data and/or documents that there is no scarcity of water.	Recom Minor Must	
W_7	CB 5.5.1	Are water storage facilities present and well maintained to take advantage of periods of maximum water availability?	Where the farm is located in areas of seasonal water availability, there are water storage facilities for water use during periods when water availability is low. Where required, they are legally authorized, in a good state of repair, and appropriately fenced/secured to prevent accidents. NA in areas with sufficient available water through all the seasons.	Recom Minor Must	
		Records			
W_8	New	Are records for volumes of water extracted from water sources for the whole farm maintained?	The producer shall keep records of the volumes of water abstracted from water sources, that includes the date, actual or estimated flow rate, and the volume (per water meter or based on estimated) updated every month. This can also be the hours of systems operating on a timed flow basis.	New Major Must	
W_9	CB 5.2.3	Are records for crop irrigation/fertigation water usage and the previous individual crop cycle(s) with total application volumes maintained?	The producer shall keep records of the usage of crop irrigation/fertigation water that includes the date, cycle duration, actual or estimated flow rate, and the volume (per water meter or irrigation unit) updated on a monthly basis, based on the water management plan and an annual total. This can also be the hours of systems operating on a timed flow basis.	Minor Must Major Must	
W_10	New	Are records of total water usage for the whole farm maintained?	Total water usage is recorded, including but not restricted to irrigation, such as domestic use, post-harvest, other. This can be estimated, not necessarily measured.	New Recom	

W		Control Points	Compliance Criteria	Level
		Water Quality		
W_11	CB 5.3.1	Is the use of treated sewage water in pre-harvest activities justified according to a risk assessment?	<p>Untreated sewage is not used for irrigation/fertigation or other pre-harvest activities.</p> <p>Where treated sewage water or reclaimed water is used, water quality shall comply with the WHO published Guidelines for the Safe Use of Wastewater and Excreta in Agriculture and Aquaculture 2006. Also, when there is reason to believe that the water may be coming from a possibly polluted source (i.e. because of a village upstream, etc.) the producer shall demonstrate through analysis that the water complies with the WHO guideline requirements or the local legislation for irrigation water. No N/A.</p>	Major Must
W_12	CB 5.3.2	Has a risk assessment on physical and chemical quality pollution of water used on pre-harvest activities (e.g. irrigation/fertigation, washings, spraying) been completed and has it been reviewed by the management within the last 12 months?	<p>A risk assessment that takes into consideration, at a minimum, the following shall be performed and documented:</p> <ul style="list-style-type: none"> • Identification of the water sources and their historical testing results (if applicable). • Method(s) of application (see Annex CB 1 for examples) • Timing of water use (during crop growth stage) • Contact of water with the crop • Characteristics of the crop and the growth stage • Purity of the water used for PPP applications <p>PPP must be mixed in water whose quality does not compromise the effectiveness of the application. Any dissolved soil, organic matter, or minerals in the water can neutralize the chemicals. For guidance, producers must obtain the required water standards from the product label, the literature provided by the chemical manufacturers, or seek advice from a qualified agronomist.</p> <p>The risk assessment shall be reviewed by the management every year and updated any time there is a change made to the system or a situation occurs that could introduce an opportunity to contaminate the system. The risk assessment shall address potential physical (e.g. excessive sediment load, rubbish, plastic bags, bottles) and chemical hazards and hazard control procedures for the water distribution system.</p>	Minor Must

W		Control Points	Compliance Criteria	Level
W_13	CB 5.3.3	Is water used on pre-harvest activities analyzed at a frequency in line with the risk assessment (CB 5.3.2) taking into account current sector-specific standards?	Water testing shall be part of the water management plan as directed by the water risk assessment and current sector-specific standards or relevant regulations for the crops being grown. There shall be a written procedure for water testing during the production and harvest season, which includes the frequency of sampling, who is taking the samples, where the sample is taken, how the sample is collected, the type of test, and the acceptance criteria. N/A for sub-scope Flowers and Ornamentals.	Minor Must N/A for FO Recom.
W_14	CB 5.3.4	According to the risk assessment in CB 5.3.2 and current sector specific standards, does the laboratory analysis consider chemical and physical contamination, and is the laboratory accredited against ISO17025 or by competent national/local authorities for testing water?	If according to the risk assessment and current sector specific standards there is a risk of contamination, the laboratory analysis provides a record of the relevant identified chemical and physical contaminants. Analysis results from an appropriate laboratory accredited against ISO 17025 or equivalent standard, or laboratories approved for water testing by the competent national/local authorities are available. N/A for sub-scope Flowers and Ornamentals.	Minor Must N/A for FO Recom.
W_15	CB 5.3.5	Are corrective actions taken based on adverse results from the risk assessment before the next harvest cycle?	Where required, corrective actions and documentation are available as part of the management plan as identified in the water risk assessment and current sector specific standards. N/A for sub-scope Flowers and Ornamentals.	Minor Must N/A for FO Recom.