



## FLOWERS AND ORNAMENTALS

# Integrated Pest Management – Plant Protection Products – Equipment and Post-Harvest

DOCUMENT FOR READING REFERENCE

V0.6-2 DRAFT FOR PUBLIC CONSULTATION

CONSULTATION PERIOD:

30 NOVEMBER 2020 TO 31 JANUARY 2021

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

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## INTEGRATED PEST MANAGEMENT

### INTENTION:

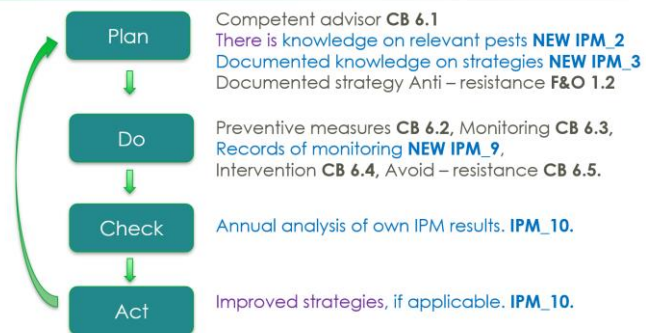
- The goal is to support producers in continuous learning and improvement of integrated pest management – IPM.
- Integrated Pest Management (IPM) is an ecosystem approach to crop production and protection that combines different management strategies and practices to grow healthy crops and minimize the use of pesticides. **IPM is an approach-based method for analysis** of the agro-ecosystem and the management of its different elements **to control pest and keep them at an acceptable level** (action threshold) with respect to the economic, health and environmental requirements. (FAO website 27.10.2020)

### MAIN CHANGES:

- Introduce 4 requirements to strengthen IPM as a virtuous cycle of continuous improvement: plan-do-check-act.
- Since draft 1, reduced weight on documentation as far as possible, while keeping need to document an IPM plan.
- Introduce need for producer to be able to explain knowledge of pest, diseases and weeds,
- Introduce the need to keep records of monitoring, as to enable analysis of the system in specific dates.
- Introduce the need to analyze the overall IPM system once a year, to understand if there are learnings to implement.



**GLOBALG.A.P.'s Version 6 Flowers & Ornamentals**  
Enhancing IPM



**PLANT PROTECTION PRODUCTS**

Summary table showing changes in level of requirement

IPM	IPM			
IPM_1	Assistance on IPM	CB 6.1	Minor Must	Minor Must
IPM_2	Existing knowledge on pests, diseases	New	New	Minor Must
IPM_3	Doc knowledge on strategies	New	New	Minor Must
IPM_4	Varieties' degree susceptibility	FO 1.2.1	Recom.	Recom.
IPM_5	Implementing Strategies (prevention)	CB 6.2	Major Must	Major Must
IPM_6	Implementing Strategies (monitoring)	CB 6.3	Major Must	Major Must
IPM_7	Implementing Strategies (alternatives)	CB 6.4	Major Must	Major Must
IPM_8	Implementing Strategies (anti-resistance)	CB 6.5	Minor Must	Minor Must
IPM_9	Records of monitoring	New	New	Minor Must
IPM_10	Analysis of IPM results and corrective actions	New	New	Minor Must

Color code for table below: text in black font: original (v5.2); **Red**/strikethrough: deleted. **Blue**: proposed in Draft 1. **Green**: proposed in Draft 2.

		Control Points	Compliance Criteria	Level
<b>IPM</b>		<b>INTEGRATED PEST MANAGEMENT</b>		
		<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 PPPs and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. An IPM toolbox (Annex CB 2) has been developed to provide alternative actions for the application of IPM techniques in the commercial production of agricultural and horticultural crops. 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>		
IPM_1	CB 6.1	<p><del>Has assistance with the implementation of IPM systems been obtained through training or advice?</del></p> <p><b>Question form:</b> Is the implementation of IPM systems supported on training or advice?</p> <p><b>Statement form:</b> The farm keeps updated knowledge in relation to IPM applicable to the location and crops</p>	<p>Where the technically responsible person is the producer, experience shall be complemented by technical knowledge (e.g. access to IPM technical literature, specific training course attendance, etc.) and/or the use of tools (software, on-farm detection methods, etc.).</p> <p>Where an external adviser has provided assistance, training and technical competence shall be demonstrated via official qualifications, specific training courses, etc., unless this person has been employed for that purpose by a competent organization (e.g. official advisory services).</p> <p><del>Where the technically responsible person is the producer, experience shall be complemented by technical knowledge (e.g. access to IPM technical literature, specific training course attendance, etc.) and/or the use of tools (software, on-farm detection methods, etc.).</del></p>	Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
IPM_2	New	<p><u>Question form:</u> Is there evidence that the producer has knowledge of the most relevant pests, diseases and weeds that affect his/her crops?</p> <p><u>Statement form:</u> The producer understands and knows the relevant pests, diseases and weeds that affect its crops</p>	<p>A pest, disease or weed is considered relevant if it needs to be managed (costly to control, control measures have a high impact to the environment or to human health).</p> <p>The producer is in the capacity to describe their knowledge, and how they train their employees on the relevant pest, diseases or weeds of that affect the registered crop(s).</p> <p>Knowledge on the relevant pest, disease or weed, refers to the ability to identify its presence, and its potential damage or damage level. No N/A.</p>	New Minor Must
IPM_3	New	<p><u>Question form:</u> Is there a documented IPM plan where methods used at farm level, to manage relevant pests, are described, and these include a stepwise approach that prioritizes preventive measures?</p> <p><u>Statement form:</u> The different elements of IPM used at the farm are clear for the farmer, and through experience and new knowledge, the producer can track its evolution and learnings, improving with time.</p>	<p>A pest, disease or weed is considered relevant if it needs to be managed (costly to control, control measures have a high impact to the environment or to human health).</p> <p>A description of the following is documented:</p> <ul style="list-style-type: none"> <li>- a stepwise approach to manage pests, starting with preventive measures, including the planning phase of the crop,</li> <li>- followed by measures which are compatible with introduced natural enemies, if applicable,</li> <li>- between each step or strategy there are thresholds as defined by the producer based on own experience, external advice, or training,</li> <li>- only introduce the use of higher toxic or less compatible plant protection products when the previously mentioned thresholds are overpassed,</li> <li>- growing conditions which could promote the development of the relevant pests, diseases or weeds,</li> <li>- measures to avoid the build-up of resistance to PPP in the relevant pests, pathogens, diseases, weeds.</li> </ul> <p>In the case of Option 2, the IPM plan can be defined at QMS level No N/A.</p>	New Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
IPM_4	FO 1.2.1	<u>Question form:</u> Is the producer aware of the varieties' degree of susceptibility to pest and diseases?  <u>Statement form:</u> The producer is aware of the varieties degree of susceptibility to pests and diseases	There is written evidence of the varieties' degree of susceptibility to pests and diseases.	Recom.
		CB 6.2 to 6.5: <u>Question form:</u> Can the producer show evidence of implementing activities that fall under the category of:		
IPM_5	CB 6.2	Prevention.  <u>Statement form:</u> The producer implements prevention measures	The producer shall show evidence of implementing at least 2 activities 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
IPM_6	CB 6.3	Observation and Monitoring.  <u>Statement form:</u> The producer practices monitoring of its crops to plan pest and disease management.	The producer shall show evidence of a) implementing at least 2 activities 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
IPM_7	CB 6.4	Intervention.  <u>Statement form:</u> When pest attacks adversely affect the economic value of a crop, the producer makes interventions to manage the pest.	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

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
IPM_8	CB 6.5	<p><u>Question form:</u> Have anti-resistance recommendations, either on the label or other sources, been followed to maintain the effectiveness of available PPPs?</p> <p><u>Statement form:</u> Anti-resistance recommendations, either on the label or other sources, have been followed to maintain the effectiveness of available PPPs</p>	When the level of a pest, disease, or weed requires repeated controls in the crops, there is evidence that anti-resistance recommendations (where available) are followed. <b>In the event of only one chemical mode-of-action or class of PPP exists or is permitted for use in the country of production or country of export, rotation of product types may not be possible due to lack of availability of suitable alternatives.</b>	Minor Must
IPM_9	New	<p><u>Question form:</u> <b>Are records of monitoring results for relevant pests, diseases and weeds maintained?</b></p> <p><u>Statement form:</u> <b>The producer keeps records of the results of monitoring and can use these later when doing overall evaluation of its pest management.</b></p>	<p>Up to date monitoring records are kept (digital or paper) and include:</p> <ul style="list-style-type: none"> <li>- Identification of the crop and the plot (location within the plot, if applicable),</li> <li>- Name of person conducting monitoring</li> <li>- Date of monitoring (exact dates)</li> <li>- Name of pest, disease or weed</li> <li>- Name of natural enemies or beneficials</li> <li>- Level of infestation / damage</li> </ul> <p>No N/A.</p>	New Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
IPM_10	New	<p><u>Question form:</u> Has the producer evaluated, at least once a year, the IPM plan and adjusted if necessary?</p> <p><u>Statement form:</u> The producer uses the results in IPM to learn and improve it.</p>	<p>There is evidence that the producer has made an evaluation and introduced improvements to its strategies, if these were identified as necessary.</p> <p>The evaluation could be based on different sources, some of the below listed information <b>may be considered</b> by the producer when doing the analysis :</p> <ul style="list-style-type: none"> <li>- Records of pest, disease, or weed monitoring,</li> <li>- Strategies used to control pests, diseases or weeds,</li> <li>- PPP application records,</li> <li>- PPP application equipment maintenance and calibration records,</li> <li>- Trends in amounts of PPP used,</li> <li>- Plant nutrition (fertilizer application) and stress mitigation (biostimulants)</li> <li>- Evaluation and selection of suitable crop or varieties. - Vicinity of production areas with high biodiversity.</li> <li>- Low risk use of organic matter (if applicable),</li> <li>- Optimal water irrigation,</li> <li>- Productivity data.</li> <li>- Weather data.</li> </ul> <p>In the case of Option 2, the analysis can take place at QMS level.</p> <p>No N/A.</p>	New Minor Must



## PLANT PROTECTION PRODCUTS – PPP

### INTENTION:

- PPP used are authorized/registered
- Records of PPP are kept
- Safe storage and disposal of PPP to protect workers and the environment

### MAIN CHANGES:

- Raise level of record keeping, as to enable analysis of the system in specific dates.
- Delete requirement of keeping records of surplus mix, but keep good management of it.
- Raise to Major musts requirements that protect workers when transporting, handling PPP.

### Sub-section Choice, Advice, Records and Disposal of Surplus Mix: Summary table showing changes in level of requirement.

Plant Protection Products (PPP)				
	Choice of PPPs			
PPP_1	List of authorized PPPs	CB 7.1.1	Minor Must	Minor Must
PPP_2	Usage of authorized PPPs only	CB 7.1.2	Major Must	Major Must
PPP_3	PPP for target crop	CB 7.1.3	Major Must	Major Must
PPP_4	Invoices	CB 7.1.4	Minor Must	Minor Must
Advice on Quantity and Type of PPPs				
PPP_5	Competency of staff	CB 7.2.1	Major Must	Major Must
Records of Application				
PPP_6	Records general	CB 7.3.1 and CB 7.3.2	Major Must	Major Must
PPP_7	Records of PPP application	CB 7.3.5 and CB 7.3.6	Minor, Minor, New	Major Must
PPP_8	Justification	CB 7.3.3	Minor Must	Minor Must
PPP_9	Technical authorization	CB 7.3.4	Minor Must	Minor Must
PPP_10	Weather conditions	CB 7.3.7	Minor Must	Minor Must
PPP_11	Preventive measures against pesticide drift (own)	CB 7.3.8	Minor Must	Minor Must
PPP_12	Preventive measures against pesticide drift (from others)	CB 7.3.9	Recom.	Recom.
Disposal of Surplus Application Mix				
PPP_13	Disposal of surplus application mix	CB 7.5.1	Minor Must	Minor Must

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		Control Points	Compliance Criteria	Level
<b>PPP</b>		<b>PLANT PROTECTION PRODUCTS</b>		
		<b>Choice of PPPs</b>		
PPP_1	CB 7.1.1	Is a current list kept of PPPs that are authorized in the country of production for use on crops being grown? <b>Extremely hazardous PPP are identifiable in the list, if present.</b>	<del>A list is available for</del> <b>Includes</b> the commercial brand names of PPPs (their active ingredient composition or beneficial organisms) that are authorized on crops being, or which have been, grown on the farm under GLOBALG.A.P. within the last 12 months. <b>It is possible to identify in the list if a PPP has an active ingredient that is listed by WHO as Extremely Hazardous WHO 1a, (The WHO recommended classification of pesticides by hazard, 2009).</b> No N/A.	Minor Must
PPP_2	CB 7.1.2	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 are officially and currently authorized or permitted by the appropriate governmental organization in the country of application. Where no official registration scheme exists, refer to the GLOBALG.A.P. guideline on this subject (Annex CB 3) as well as the 'FAO International Code of Conduct on the Distribution and Use of Pesticides'. Refer also to Annex CB 3 for cases where the producer takes part in legal field trials for final approval of PPPs by the local government. No N/A.	Major Must
PPP_3	CB 7.1.3	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
PPP_4	CB 7.1.4	Are invoices of PPPs kept?	Invoices or packing slips of all PPPs used and/or stored shall be kept for record keeping and available at the time of the external inspection. No N/A.	Minor Must

		Control Points	Compliance Criteria	Level
		<b>Advice on Quantity and Type of PPPs</b>		
PPP_5	CB 7.2.1	Are the persons selecting the PPPs competent to make that choice?	Where the PPP records show that the technically responsible person making the choice of the PPPs is an external qualified adviser, technical competence shall be demonstrated via official qualifications or specific training course attendance certificates. <a href="#">Electronic or digital communications</a> from advisers, governments, etc. are permissible. Where the PPP records show that the technically responsible person making the choice of PPPs is the producer or designated employee, experience shall be complemented by technical knowledge that can be demonstrated via technical documentation (e.g. product technical literature, specific training course attendance, etc.).	Major Must
		<b>Records of Application</b>		
PPP_6	CB 7.3.1 and CB 7.3.2	Are records <a href="#">of confiditions</a> of all PPP applications kept and do they include the following minimum criteria: <ul style="list-style-type: none"> <li>• Crop name and/or variety.</li> <li>• <a href="#">Category of the crop according to the GLOBALG.A.P. Product List</a></li> <li>• Application location</li> <li>• <a href="#">Area affected (in ha)</a></li> <li>• Date and end time of application</li> <li>• Name of Operator</li> <li>• PPP trade name and active ingredient</li> <li>• <del>Pre-harvest interval</del></li> </ul>	All PPP application records shall specify <a href="#">the following information</a> : <ul style="list-style-type: none"> <li>• The crop and/or variety treated.</li> <li>• <a href="#">The product category of the crop according to the GLOBALG.A.P. Product List</a></li> <li>• The geographical area, the name of farm, field, <del>orchard</del> or greenhouse</li> <li>• The exact dates (day/month/year)</li> <li>• The complete trade name <a href="#">of the PPP</a> (including formulation) and active ingredient. The active ingredient shall be recorded or it shall be possible to connect the trade name information to the active ingredient.</li> <li>• <a href="#">Full name and/or signature of the responsible operator(s) applying the PPPs. For electronic software systems, measures shall be in place to ensure authenticity of records. If a single individual makes all the applications, it is acceptable to record the operator details only once. If there is a team of workers doing the application, all of them need to be listed in the records.</a></li> </ul> No N/A.	Major Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
PPP_7	CB 7.3.5 and CB 7.3.6	Are records all PPP applications kept and do they include the following minimum criteria: <ul style="list-style-type: none"> <li>• Product quantity applied</li> <li>• Product trade name and active ingredient</li> <li>• Concentration of active Ingredient (gr/ltr or kg)</li> <li>• CAS Number of active ingredient</li> <li>• Application machinery used.</li> </ul>	All PPP application records specify the amount of product to be applied in weight or volume or the total quantity of water (or other carrier medium) and dose in g/l or internationally recognized measures for the PPP. CAS number refers to the number assigned by the CAS Registry <a href="http://www.cas.org">www.cas.org</a> The application machinery type (e.g. knapsack, high volume, U.L.V., via the irrigation system, dusting, fogger, aerial, or another method) for all the PPPs applied (if there are various units, these are identified individually) is detailed in all PPP application records. If it is always the same unit of application machinery (e.g. only 1 boom sprayer), it is acceptable to record the details only once. No N/A.	<del>Minor</del> , <del>Minor</del> , <b>New</b> <b>Major Must</b>
		<b>7.3.2 to 7.3.7: Are records of all PPP applications kept and do they also include the following criteria:</b>		
PPP_8	CB 7.3.3	Justification for application?	The name of the pest(s), disease(s) and/or weed(s) treated is documented in all PPP application records. If common names are used, they shall correspond to the names stated on the label. No N/A.	Minor Must
PPP_9	CB 7.3.4	Technical authorization for application?	The technically responsible person making the decision on the use and the doses of the PPP(s) being applied has been identified in the records. If a single individual authorizes all the applications, it is acceptable to record this person's details only once. No N/A.	Minor Must
PPP_10	CB 7.3.7	Weather conditions at time of application?	Local weather conditions (e.g. wind, sunny/covered and humidity) affecting effectiveness of treatment or drift to neighboring crops shall be recorded for all PPP applications. This may be in the form of pictograms with tick boxes, text information, or another viable system on the record. N/A for covered crops.	Minor Must
PPP_11	CB 7.3.8	Does the producer take active measures to prevent pesticide drift to neighboring plots?	The producer shall take active measures, this may include, but is not limited to, knowledge of what the neighbors are growing, maintenance of spray equipment, etc.	Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
PPP_12	CB 7.3.9	Does the producer take active measures to prevent pesticide drift from neighboring plots?	<p>Example by making agreements and organizing communication with producers from neighboring plots in order to eliminate the risk for undesired pesticide drift, by planting vegetative buffers at the edges of cropped fields, and by increasing pesticide sampling on such fields.</p> <p>The producer shall take active measures to avoid the risk of pesticide drift from adjacent plots e.g. by making agreements and organizing communication with producers from neighboring plots in order to eliminate the risk for undesired pesticide drift, by planting vegetative buffers at the edges of cropped fields, and by increasing pesticide sampling on such fields.</p> <p>N/A if not identified as risk.</p>	Recom.
PPP_13	CB 7.5.1	Is surplus application mix or tank washings disposed of in a way that does not compromise <b>worker's safety</b> and the environment?	<p>Applying surplus spray and tank washings to the crop is a first priority under the condition that the overall label dose rate is not exceeded. Disposal should be in a manner that does not compromise <b>worker's safety</b> nor the environment. <del>Records are kept</del>-No N/A.</p>	Minor Must

**Sub-section Choice, Advice, Records and Disposal of Surplus Mix: Summary table showing changes in level of requirement**

<b>PPP Storage</b>				
PPP_14	Compliance with applicable legislation	CB 7.7.1	Major Must	Major Must
PPP_15	Soundness	CB 7.7.2	Minor Must	Minor Must
PPP_16	Temperature conditions	CB 7.7.3	Minor Must	Minor Must
PPP_17	Ventilation	CB 7.7.4	Minor Must	Minor Must
PPP_18	Sufficient lighting	CB 7.7.5	Minor Must	Minor Must
PPP_18.1	Separated from other materials	CB 7.7.6	Minor Must	Minor Must
PPP_19	Non-absorbent shelving material	CB 7.7.7	Minor Must	Minor Must
PPP_20	Spillage retainment	CB 7.7.8	Minor Must	Minor Must
PPP_21	Facilities to deal with spillage	CB 7.7.9	Minor Must	Minor Must
PPP_22	Physical access	CB 7.7.10	Minor Must	Minor Must
PPP_23	Separation of PPPs for other purposes than production under GLOBALG.A.P. certification	CB 7.7.11	Minor Must	Minor Must
PPP_24	Liquids and powders	CB 7.7.12	Minor Must	Minor Must
PPP_25	Stock inventory	CB 7.7.13	Minor Must	Minor Must
PPP_26	Accident procedure	CB 7.7.14	Minor Must	Minor Must
PPP_27	Facilities for accidental operator contamination	CB 7.7.15	Minor Must	Minor Must
<b>PPP Handling (N/A if no PPP Handling)</b>				
PPP_28	Health checks	CB 7.8.1	Minor Must	Major Must
PPP_29	Procedures concerning re-entry interval	CB 7.8.2	Major Must	Major Must
PPP_30	On-farm transportation	CB 7.8.3	Minor Must	Major Must
PPP_31	Handling and filling procedures when mixing PPPs	CB 7.8.4	Minor Must	Major Must
<b>Empty PPP Containers</b>				
PPP_32	Rinsing procedure	CB 7.9.1	Major Must	Major Must
PPP_33	Re-use of empty containers	CB 7.9.2	Minor Must	Minor Must
PPP_34	Secure storage of empty containers	CB 7.9.3	Minor Must	Minor Must
PPP_35	Disposal of empty containers	CB 7.9.4	Minor Must	Minor Must
PPP_36	Collection and disposal systems	CB 7.9.5	Minor Must	Minor Must
PPP_37	Compliance with local legislation	CB 7.9.6	Major Must	Major Must

Obsolete PPPs				
PPP_38	Records of disposal of obsolete PPPs	CB 7.10.1	Minor Must	Minor Must
Application of Substances other than Fertilizer and PPPs				
PPP_39	Records for substances other than fertilizers and PPPs	CB 7.11.1	Minor Must	Major Must

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		Control Points	Compliance Criteria	Level
		<b>PPP Storage</b>		
		The PPP store must comply with basic rules to ensure safe storage and use.		
PPP_14	CB 7.7.1	Are PPPs stored in accordance with local regulations in a secure place with sufficient facilities for measuring and mixing them, and are they kept in their original package?	<p>The PPP storage facilities shall:</p> <ul style="list-style-type: none"> <li>• Comply with all the appropriate current national, regional and local legislation and regulations.</li> <li>• Be kept secure under lock and key. No N/A.</li> <li>• Have measuring equipment whose graduation for containers and calibration verification for scales been verified annually by the producer to assure accuracy of mixtures, and are equipped with utensils (e.g. buckets, water supply point, etc.), and they are kept clean for the safe and efficient handling of all plant protection products that can be applied. This also applies to the filling/mixing area if this is different. No N/A.</li> <li>• Contain the PPPs in their original containers and packs. In the case of breakage only, the new package shall contain all the information of the original label. Refer to CB. 7.9.1. No N/A.</li> </ul>	Major Must
		<b>7.7.2 to 7.7.6: Are PPPs stored in a location that is:</b>		
PPP_15	CB 7.7.2	Sound?	<p>Built in a manner that is structurally sound and robust.</p> <p>Storage capacity shall be appropriate for the highest amount of PPPs that need to be stored during the PPP application season, and the PPPs are stored in a way that is not dangerous for the workers and does not create a risk of cross-contamination between them or with other products.</p> <p>No N/A.</p>	Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
PPP_16	CB 7.7.3	Appropriate to the temperature conditions?	According to label storage requirements. No N/A.	Minor Must
PPP_17	CB 7.7.4	Well ventilated (in the case of walk-in storage)?	Storage facilities have sufficient and constant ventilation of fresh air to avoid a build-up of harmful vapors. No N/A.	Minor Must
PPP_18	CB 7.7.5	Well lit?	Facilities have or are located in areas with sufficient illumination by natural or artificial lighting to ensure that all product labels can be easily read while on the shelves. No N/A.	Minor Must
PPP_18.1	CB 7.7.6	Located away from other materials?	The minimum requirement is to prevent cross contamination between PPPs and other surfaces or materials that may enter into contact with the edible part of the crop by the use of a physical barrier (wall, sheeting, etc.). No N/A.	Minor Must
PPP_19	CB 7.7.7	Is all PPP storage shelving made of non-absorbent material?	Shelving is not absorbent in case of spillage (e.g. metal, rigid plastic, or covered with impermeable liner, etc.).	Minor Must
PPP_20	CB 7.7.8	Is the PPP storage facility able to retain spillage?	There are retaining tanks or products are bunded according to 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 facility. No N/A.	Minor Must
PPP_21	CB 7.7.9	Are there facilities to deal with spillage?	Storage facilities and all designated fixed filling/mixing areas are equipped with a container of absorbent inert material such as sand, floor brush and dustpan, and plastic bags that must be in a fixed location to be used exclusively in case of spillage of PPPs. No N/A.	Minor Must
PPP_22	CB 7.7.10	Are keys and access to the PPP storage facility limited to workers with formal training in the handling of PPPs?	Storage facilities are kept locked and physical access is only granted in the presence of persons who can demonstrate formal training in the safe handling and use of PPPs. No N/A.	Minor Must
PPP_23	CB 7.7.11	Are PPP approved for use on the crops registered for GLOBALG.A.P. Certification are stored separately within the storage facility from PPPs used for other purposes?	PPPs used for purposes other than for registered and/or certified crops (i.e. use in garden etc.) are clearly identified and stored separately in the PPP store.	Minor Must
PPP_24	CB 7.7.12	Are liquids not stored on shelves above powders?	All the PPPs that are liquid formulations are stored on shelving that is never above those products that are powder or granular formulations. No N/A.	Minor Must
PPP_25	CB 7.7.13	Is there an up-to-date PPP stock inventory or calculation of stock	The stock inventory (type and amount of PPPs stored, number of units, e.g. bottles, is allowed) shall be updated within a month after there is a movement of the stock (in and out). The stock update can be calculated by registration of supply	Minor Must



		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
		with incoming PPPs and records of use available?	(invoices or other records of incoming PPPs) and use (treatments/applications), but there shall be regular checks of the actual content to avoid deviations with calculations.	
PPP_26	CB 7.7.14	Is the accident procedure visible and accessible within 10 meters of the PPP/chemical storage facilities?	An accident procedure containing all information detailed in AF 4.3.1 and including emergency contact telephone numbers shall visually display the basic steps of primary accident care and be accessible by all persons within 10 meters of the PPP/chemical storage facilities and designated mixing areas. No N/A.	Minor Must
PPP_27	CB 7.7.15	Are there facilities to deal with accidental operator contamination?	All PPP/chemical storage facilities and all filling/mixing areas present on the farm have eye washing amenities, a source of clean water at a distance no farther than 10 meters, and a first aid kit containing the relevant aid material (e.g. a pesticide first aid kit might need aid material for corrosive chemicals or alkaline liquid in case of swallowing, and might not need bandages and splints), all of which are clearly and permanently marked via signage. No N/A.	Minor Must
		<b>PPP Handling (N/A if no PPP Handling)</b>		
PPP_28	CB 7.8.1	Does the producer offer all workers who have contact with PPPs the possibility to be submitted to annual health checks or with a frequency according to a risk assessment that considers their exposure and toxicity of products used?	These health checks shall comply with national, regional or local codes of practice, and use of results shall respect the legality of disclosure of personal data.	<del>Minor Must</del> Major Must
PPP_29	CB 7.8.2	Are there procedures dealing with re-entry times on the farm?	There are clear documented procedures based on the label instructions that regulate all the re-entry intervals for PPPs applied to the crops. Special attention should be paid to workers at the greatest risk, i.e. pregnant/lactating workers, and the elderly. Where no re-entry information is available on the label, there are no specific minimum intervals, but the spray must have dried on the plants before workers re-enter the growing area.	Major Must
PPP_30	CB 7.8.3	If concentrate PPPs are transported on and between farms, are they transported in a safe and secure manner?	All transport of PPPs shall be in compliance with all applicable legislation. When legislation does not exist, the producer shall in any case guarantee that the PPPs are transported in a way that does not pose a risk to the health of the worker(s) transporting them.	<del>Minor Must</del> Major Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
PPP_31	CB 7.8.4	When mixing PPPs, are the correct handling and filling procedures followed as stated on the label?	Facilities, including appropriate measuring equipment, shall be adequate for mixing PPPs, so that the correct handling and filling procedures, as stated on the label, can be followed. No N/A.	<del>Minor Must</del> Major Must
		<b>Empty PPP Containers</b>		
PPP_32	CB 7.9.1	Are empty containers rinsed either via the use of an integrated pressure-rinsing device on the application equipment or at least 3 times with water before storage and disposal, and is the rinsate from empty containers returned to the application equipment tank or disposed of in accordance with CB 7.5.1?	Pressure-rinsing equipment for PPP containers shall be installed on the PPP application machinery or there shall be clear written instructions to rinse each container at least 3 times prior to its disposal. Either via the use of a container-handling device or according to a written procedure for the application equipment operators, the rinsate from the empty PPP containers shall always be put back into the application equipment tank when mixing, or disposed of in a manner that does compromise neither food safety nor the environment. No N/A.	Major Must
PPP_33	CB 7.9.2	Is re-use of empty PPP containers for purposes other than containing and transporting the identical product being avoided?	There is evidence that empty PPP containers have not been or currently are not being re-used for anything other than containing and transporting identical product as stated on the original label. No N/A.	Minor Must
PPP_34	CB 7.9.3	Are empty containers kept secure until disposal is possible?	There is a designated secure store point for all empty PPP containers prior to disposal that is isolated from the crop and packaging materials (i.e. permanently marked via signage and locked, with physically restricted access for persons and fauna).	Minor Must
PPP_35	CB 7.9.4	Does disposal of empty PPP containers occur in a manner that avoids exposure to humans and contamination of the environment?	Producers shall dispose of empty PPP containers using a secure storage point, a safe handling system prior to the disposal, and a disposal method that complies with applicable legislation and avoids exposure to people and the contamination of the environment (watercourses, flora and fauna). No N/A.	Minor Must
PPP_36	CB 7.9.5	Are official collection and disposal systems used when available, and in that case are the empty containers adequately stored,	Where official collection and disposal systems exist, there are records of participation by the producer. All the empty PPP containers, once emptied, shall be adequately stored, labeled, handled, and disposed of according to the requirements of the official collection and disposal schemes, where applicable.	Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
		labeled, and handled according to the rules of a collection system?		
PPP_37	CB 7.9.6	Are all local regulations regarding disposal or destruction of containers observed?	All the relevant national, regional and local regulations and legislation, if such exist, have been complied with regarding the disposal of empty PPP containers.	Major Must
		<b>Obsolete PPPs</b>		
PPP_38	CB 7.10.1	Are obsolete PPPs securely maintained and identified and disposed of by authorized or approved channels?	There are records that indicate that obsolete PPPs have been disposed of via officially authorized channels. When this is not possible, obsolete PPPs are securely maintained and identifiable.	Minor Must
		<b>Application of Substances other than Fertilizer and PPPs</b>		
PPP_39	CB 7.11.1	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. If in the country of production a registration scheme for this substance(s) exists, it has to be approved.</p> <p>Where the substances do not require registration for use in the country of production, the producer shall make sure that the use does not compromise <b>feed safety</b>, <b>worker's health</b> or the environment.</p> <p>Records of these materials must contain information about the ingredients where available, and if there is a risk of exceeding MRLs, CB 7.6.2 must be met.</p>	<p><del>Minor Must</del> Major Must</p>

## EQUIPMENT AND POST-HARVEST

### INTENTION:

- Safe use of PPP for workers and the environment. Delete reference to food safety.
- Records of PPP used in post-harvest are kept
- PPP used in post-harvest are authorized

### MAIN CHANGES:

- Merge point on calibration of equipment and focus on environment.

EQUIPMENT (E) & POSTHARVEST (PH)				
EQUIPMENT				
Delete	Equipment sensitive to food safety in good state of repair	CB 8.1	Minor Must	Delete
E_1	Equipment sensitive to environment in good state of repair	CB 8.2	Minor Must	Minor Must
E_2	Independent calibration system	CB 8.3	Recom.	Recom.
E_3	PPP equipment storage	CB 8.4	Minor Must	Minor Must
POST HARVEST				
PH_1	Risk assessment for postharvest water	FO 5.1.1	Minor Must	Minor Must
PH_2	Laboratory doing analysis is suitable	FO 5.1.2	Minor Must	Minor Must
PH_3	Corrective actions taken	FO 5.1.3	Minor Must	Minor Must
PH_4	Post harvest treatments only used in absence of alternatives	FO 5.2.1	Minor Must	Minor Must
PH_5	Label instructions are followed	FO 5.2.2	Major Must	Major Must
PH_6	Only PPP registered for postharvest	FO 5.2.3	Major Must	Major Must
PH_7	List of PPP approved for postharvest	FO 5.2.4	Minor Must	Minor Must
PH_8	Person responsible for PPP - competence	FO 5.2.7	Major Must	Major Must
PH_9	Records of all PPP postharvest applications	FO 5.2.8	Major Must	Major Must
PH_10	Record of operator of PPP postharvest applic.	FO 5.2.9	Minor Must	Minor Must
PH_11	Record of justification of PPP postharvest applic.	FO 5.2.10	Minor Must	Minor Must
PH_12	Post-harvest packaging stored - no rodents	FO 4.1.2	Minor Must	Minor Must
PH_13	Reusable cultivation material is clean	FO 4.1.3	Minor Must	Minor Must

Color code for table below: text in black font: original (v5.2); **Red**/strikethrough: deleted. **Blue**: proposed in Draft 1. **Green**: proposed in Draft 2.

		Control Points	Compliance Criteria	Level
<b>E</b>		<b>EQUIPMENT</b>		
Delete	CB 8.1	<del>Is equipment sensitive to food safety (e.g. PPP sprayers, irrigation/fertigation equipment, post-harvest product application equipment) maintained in a good state of repair, routinely verified and, where applicable, calibrated at least annually, and are records of measures taken within the previous 12 months available?</del>	<del>The equipment is kept in a good state of repair with documented evidence of up-to-date maintenance sheets for all repairs, oil changes, etc. undertaken. E.g.: PPP sprayers: See Annex CB 6 for guidance on compliance with visual inspection and functional tests of application equipment. The calibration of the PPPT application machinery (automatic and non-automatic) has been verified for correct operation within the last 12 months and this is 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. If small handheld measures not individually identifiable are used, then their average capacity has been verified and documented, with all such items in use having been compared to a standard measure at least annually. Irrigation/fertigation equipment: As a minimum, annual maintenance records shall be kept for all methods of irrigation/fertigation machinery/techniques used.</del>	<del>Minor Must Delete</del>
E_1	CB 8.2	Is equipment sensitive to the environment and other equipment used on the farming activities (e.g. <b>PPP sprayers, irrigation/fertigation equipment, post-harvest product application equipment, fertilizer spreaders, equipment used for weighing and temperature control</b> ) <b>in a good state of repair</b> , routinely verified and, where applicable, calibrated at least annually, <b>and are records of measures taken within the previous 12 months available?</b>	The equipment used is kept in a good state of repair with documented evidence of up-to-date maintenance sheets for all repairs, oil changes, etc. undertaken. E.g. fertilizer spreader: There shall exist, as a minimum, records stating that the verification of calibration has been carried out by a specialized company, supplier of fertilization equipment or by the technically responsible person of the farm within the last 12 months. If small handheld measures not individually identifiable are used, then their average capacity has been verified and documented, with all such items in use having been compared to a standard measure at least annually.	Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
E_2	CB 8.3	Is the producer involved in an independent calibration-certification scheme, where available?	The producer's involvement in a calibration scheme is documented. In the case the producer uses an official calibration system cycle longer than one year, the producer still requires internal annual verification of the calibration as per CB 8.1.	Recom.
E_3	CB 8.4	Is the PPP equipment stored in such a way as to prevent risks to people's health or polluting the environment <del>product contamination?</del>	The equipment used in the application of PPPs (e.g. spray tanks, knapsacks) is stored in a secure way that prevents risks to people's health or environmental pollution or <del>product contamination or other materials that may enter into contact with the edible part</del> of the harvested products.	Minor Must
<b>PH</b>		<b>POST-HARVEST TREATMENTS (N/A IF NO POST-HARVEST TREATMENT IS APPLIED)</b>		
		<b>Quality of Post-Harvest Water</b>		
PH_1	FO 5.1.1	Has a risk assessment for post-harvest water been completed and has the management reviewed it within the last 12 months?	Part of the risk assessment shall consider frequency of analysis, sources of water, chemical and mineral contaminants, and the environment. 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.	Minor Must
PH_2	FO 5.1.2	Is the laboratory carrying out the water analysis a suitable one?	The water analysis for the product washing is undertaken by a laboratory currently accredited to ISO 17025 or its national equivalent or one that can demonstrate via documentation that it is in the process of gaining accreditation.	Minor Must
PH_3	FO 5.1.3	Have any adverse results been acted upon?	Records are available of the actions taken and their results.	Minor Must
		<b>Post-Harvest Treatments</b>		
PH_4	FO 5.2.1	Are post-harvest treatments only used if no alternative exists to ensure maintenance of good quality?	All possible alternatives for the use of post-harvest chemicals have been considered and evaluated, and chemicals are only used where there is no technically accepted alternative.	Minor Must
PH_5	FO 5.2.2	Are all label instructions observed?	Clear procedures are in place and documentation is available, i.e. post-harvest protection products application records and packaging/delivery dates of treated products, which demonstrate that the label instructions for chemicals applied to the harvested crop have been observed.	Major Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
PH_6	FO 5.2.3	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 GLOBALG.A.P. guideline in Annex CB 3 on this subject and the 'FAO International Code of Conduct on the Distribution and Use of Pesticides'.	Major Must
PH_7	FO 5.2.4	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 GLOBALG.A.P. within the last <del>4</del> 12-months. No N/A.	Minor Must
PH_8	FO 5.2.7	Is the technically responsible person for the harvested crop handling process able to demonstrate competence and knowledge with regard to the application of PPPs?	The technically responsible person for the post-harvest PPPs applications can demonstrate sufficient level of technical competence via nationally recognized certificates or formal training.	Major Must
PH_9	FO 5.2.8	Are all records of post-harvest treatments maintained and do they include the minimum criteria listed below? <ul style="list-style-type: none"> <li>• Identity of harvested crops (i.e. lot or batch of products)</li> <li>• Location</li> <li>• Application dates</li> <li>• Type of treatment</li> <li>• Product trade name and active ingredient</li> <li>• Product quantity</li> </ul>	The following information is recorded in all records of post-harvest biocide, wax and PPP applications: <ul style="list-style-type: none"> <li>• The lot or batch of harvested crop treated</li> <li>• The geographical area, the name or reference of the farm, or harvested crop-handling site where the treatment was undertaken</li> <li>• The exact dates (day/month/year) of the applications</li> <li>• The type of treatment used for product application (e.g. spraying, drenching, gassing etc.)</li> <li>• 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</li> <li>• The amount of product applied in weight or volume per liter of water or other carrier medium</li> </ul> No N/A.	Major Must
PH_10	FO 5.2.9	The name of the operator	The name of the operator who has applied the PPP to the harvested crop is documented in all records of post-harvest PPP applications.	Minor Must

		<b>Control Points</b>	<b>Compliance Criteria</b>	<b>Level</b>
PH_11	FO 5.2.10	The justification for application	The common name of the pest and/or disease to be treated is documented in all records of post-harvest PPP applications.	Minor Must
PH_12	FO 4.1.2	Has post-harvest packaging on the farm been stored in such a way as to avoid contamination by rodents, pests, birds, and physical and chemical hazards?	All consumer packaging is stored with control measures for rodents, pests, birds, and physical and chemical hazards. No N/A. Note: Pots where plants are grown are not considered packaging material.	Minor Must
PH_13	FO 4.1.3	Are reusable cultivation materials cleaned to ensure that they are free of foreign material?	Cultivation materials including pots, crates, buckets and other containers are cleaned, and based on risk of contamination, there is a cleaning schedule in place at a minimum to ensure that they are free of foreign materials before reuse.  This is not applicable to pots that are not re-used.	Minor Must

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