



GLOBALG. A.P.

Summary of Changes from IFA V5 to IFA V6 Smart and GFS Editions

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1 INTRODUCTION

This document explains the major differences in the GLOBALG.A.P. general regulations as well as the Integrated Farm Assurance (IFA) principles and criteria between version 5 and version 6, as well as highlighting the differences between the IFA v6 Smart and GFS editions.

All rules are the same for IFA v6 Smart and IFA v6 GFS, unless differences are specified. The specific GFS rules are included at the end of each GLOBALG.A.P. general regulations document if there are any.

2 GLOBALG.A.P. GENERAL REGULATIONS

The GLOBALG.A.P. general regulations content is now divided into several documents:

- Registration data requirements
- Rules for individual producers
- Rules for producer groups and multisite producers with QMS
- Rules for certification bodies
- Rules for parallel ownership
- Rules for flexible distribution
- Rules for plants scope
- Rules for aquaculture scope
- Full Remote
- Full Remote List of auditable add-ons
- Audit Online Hub upload rules
- Certification body sanction catalogue

2.1 IFA v6 Smart and IFA v6 GFS editions

IFA v6 is available in a Smart edition and a GFS edition. This is explained in the new introduction to the GLOBALG.A.P. general regulations – Rules for certification bodies (CBs). Requirements that are called control points and compliance criteria in IFA v5, are called principles and criteria (P&Cs) in IFA v6.

2.2 Livestock is no longer included in IFA v6

Livestock and any references to animals are no longer included in IFA v6 normative documents, as the livestock scope will not be covered by IFA v6.

2.3 GLOBALG.A.P. registration data requirements

The GLOBALG.A.P. registration data requirements have been adapted (e.g., unique email address mandatory for the certificate holder) and the new system participation fee concept is described (clarification of productive areas).

2.4 Extension of CB approval

A rule has been added that allows the GLOBALG.A.P. Secretariat to grant automatic approval for certain new standard/add-on versions to already approved CBs/verification bodies, however pending sanctions (e.g., Yellow Cards) may exclude CBs/verification bodies from this automatic approval process.

2.5 In-house trainers

A clarification was added that explains that CB in-house trainers shall follow formal communications issued by the GLOBALG.A.P. Secretariat, especially the technical news, and be responsibile for updating CB auditors regarding this information.



2.6 CB commercial offer

A rule has been added that requires the CB commercial offer (or any document used for a similar purpose) signed by the applicant to include the audit duration and its justification.

2.7 Parallel ownership

What was called parallel production and parallel ownership in IFA v5 is called parallel ownership in IFA v6. See the GLOBALG.A.P. general regulations – Rules for parallel ownership.

2.8 Streamlined checklist

During registration, questions regarding the producer's specific certification process (e.g., product handling unit (PHU) included/not included, covered crop/open field, genetically modified organisms applicable/not applicable, seedlings (ova/juveniles) additionally purchased, feed supplied (externally or internally)) are included to filter the P&Cs applicable to each specific producer and thus provide a customized checklist.

The CB shall carry out the audit using the complete checklist for the applicable scope(s) annually.

2.9 Guidelines

Guidelines referenced in the P&Cs to help producers comply with the requirements are *not* normative documents.

2.10 Introduction of three-year audit cycle

Three-year audit cycle rule (with annual certification and on-site CB audit) allows auditors to thoroughly observe the production processes while operations are ongoing.

First CB audit: All requirements are included in the applicable checklists (quality management system (QMS) and farm).

Subsequent CB audit (year 2): operational items, as identified in the checklist

Subsequent CB audit (year 3): operational items, as identified in the checklist

Note: The CB shall conduct the audit using the complete checklist for the applicable scope(s) anually, but in years 2 and 3 the auditor shall focus on the operational items if there has been no change in the more permanent items (e.g., qualification of the agronomist).

2.11 Terminology changes

Term v5	New term v6
Auditor (for auditing QMS and farms)	QMS auditor
Inspector (for auditing farms)	Farm auditor

Refer to the Guide to IFA v6 terminology.

2.12 Unannounced CB audits

2.12.1 10% rule

During subsequent CB audits, a minimum of 10% of all certificate holders of the CB with QMS and without QMS shall be audited unannounced. The calculation of the 10% shall be carried out for each scope and for each standard covered by the GLOBALG.A.P. general regulations (for IFA v6 Smart, IFA v6 GFS, HPSS, and PHA).



These 10% unannounced CB audits are no longer counted as additional audits, but rather included in the original number of certification audits.

2.12.2 Notification period

	IFA Smart	IFA GFS
Unannounced farm audits of individual producers and unannounced QMS audits of producer groups and multisite producers with QMS (10% rule)	Notification of 48h prior to CB audit is allowed	No notification prior to CB audit is allowed
Sampling of members of producer groups and production sites of multisite producers with QMS (during certification, recertification, and surveillance audits)	All producer group members/production sites (with 48h notification)	20% of producer group members/production sites with no notification and the rest (80%) with 48h notification

2.13 QMS audit

The duration of the complete QMS audit (including the audit of the central PHUs and the sample of producer group members/production sites) has been limited to a maximum of one month.

2.14 Sampling of producer groups and multisite producers with QMS

IFA Smart	IFA GFS
No change regarding sampling of producer group members/production sites/PHUs	Producer group members/Production sites/PHUs deemed high risk* are not eligible for sampling

^{*}To classify a producer group member/production site/PHU as high risk, the CB shall examine a **combination of product and process risk factors**. Therefore, a producer group member, production site, or PHU that grows or handles high-risk products but has no high-risk processes is not considered high risk.

- High-risk products include:
 - Fresh herbs, leafy greens, berries, cantaloupe melons. This list may be updated and shall be checked (see the GLOBALG.A.P. product list).
- High-risk processes include:
 - Postharvest use of water/ice/steam
 - Preharvest and/or harvest activities where water touches the edible part of the product
 - Preharvest use of raw organic manure applied less than 60 days before harvest

Example: A producer group consists of 10 producer group members producing lettuce with 2 central PHUs. On the farms there is no use of raw organic manure and there are drip irrigation emitters below a plastic mulch. In the PHUs the lettuce is rinsed before packing. In this case, the producer group member farms are not considered high risk, but the PHUs are. Therefore, both PHUs will have to be audited on-site every year while in operation.



2.15 QMS manager

Tasks and minimum qualification requirements for QMS managers have been defined.

2.16 Complaints to certificate holders, foodborne outbreaks

A rule has been established that states that if a reputable government regulatory authority has established a clear link between a producer and a foodborne outbreak, suspension of the certificate shall be imposed by the CB.

If a certificate holder has informed a CB about a complaint, and is involved in actions that may endanger the reputation and credibility of FoodPLUS GmbH and/or the GLOBALG.A.P. standard, the CB shall inform the GLOBALG.A.P. Secretariat within 24 hours.

2.17 GLOBALG.A.P. Full Remote audit

The GLOBALG.A.P. Full Remote audit procedure that was developed in 2020 as a tool to maintain certification during the covid pandemic is being kept as an exceptional solution in the event of pandemics, war, etc. See the GLOBALG.A.P. Full Remote document (N/A for GFSI recognized standards).

2.18 CB certificates

2.18.1Paper certificate template

IFA v5	IFA v6
Templates to be used	No more template, all certificates will be issued in Validation Service

CB reports are generated by Audit Online Hub (AOH) (GLOBALG.A.P. IT systems).

Certificates can only be issued if there is a report/checklist registered in AOH (GLOBALG.A.P. IT systems). There is a new document about AOH upload rules.

2.18.2Extension

IFA Smart	IFA GFS
The three pre-defined reasons to justify extensions have been removed. Extensions can now be given because of several other justified reasons.	The three predefined reasons allowed to justify extensions have been kept.*

^{*}The only reasons that are considered valid for IFA GFS certificate validity extension are:

- The CB wants to observe a certain part of the production process because it is considered
 a high-risk process in terms of product safety, or because it involves a newly added product
 or process.
- The CB needs it because of resource restraints.
- The CB audit was not possible due to circumstances beyond CB/producer control.

2.19 CB auditor initial sign-off and maintenance of competence

Additional requirements are set out in the IFA GFS edition for CB auditor initial sign-off and maintenance of coSmpetence.



2.20 Flexible distribution (group certification)

IFA Smart	IFA GFS
	Allowed as an exception (see <u>GLOBALG.A.P.</u> <u>general regulations – Rules for flexible</u> <u>distribution</u>) only for the fruit and vegetables product category of IFA GFS and HPSS.

2.21 Food safety policy declaration

The requirement for a food safety policy declaration has been removed from the GLOBALG.A.P. general regulations – Rules for producer groups and multisite producers with QMS to avoid duplications with the P&Cs.

2.22 Requirement to share final CB audit report including the checklist

The requirement for the CB to provide the final CB audit report including the completed audit checklist to the producer, at the latest by the time of the certification decision, has been added where the country of destination (as registered in the GLOBALG.A.P. IT systems) includes the USA and/or Canada.

Where the country of destination is not the USA and/or Canada, if any producer requests it, the CB shall provide the full CB audit report including the completed audit checklist, within five working days after certification decision.

2.23 GLOBALG.A.P. trademarks use: Policy and guidelines

A new document has been developed explaining the new policy and guidelines for trademark use.

2.24 Certification Integrity Program (CIPRO)

The CIPRO process description, including different kind of assessments and the evaluation and classification of assessment results has been updated and further clarified.

2.25 Benchmarking

The "resembling" option is not available anymore. Benchmarking options are only available for benchmarked checklists or benchmarked schemes.

Introduction of a "compared" option.

Approved modified checklists have been renamed benchmarked checklists, equivalent certification schemes have been renamed benchmarked schemes.

3 PRINCIPLES AND CRITERIA

3.1 Aquaculture scope – finfish, crustaceans, molluscs, and seaweed (Smart and GFS)

Here we present a summary of changes comparing IFA versions 5.2, 5.3-GFS, and 5.4-1-GFS for aquaculture with the current interim IFA v6 Smart/GFS for aquaculture (there is no difference in content between the Smart and GFS editions).

It is important to highlight that the total number of P&Cs covers all the systems used, including hatchery, harvesting, and slaughter which shall be less in each individual case, depending on the steps covered and the system used.

 The most important topics: animal welfare, the environmental impact assessment criteria, impact on benthic fauna and flora, and feed ingredients.



Note: The summary of changes is not relevant to postharvest operations, section 28, "POSTHARVEST – MASS BALANCE AND TRACEABILITY" (equivalent to the P&Cs in Chain of Custody (CoC) version 6). The CoC standard v6 is subject to revision during Q4 2022. Any amendments shall be transferred to IFA v6 for aquaculture as soon as the CoC version is finalized (expected end of 2022).

3.1.1 Summary of number of P&Cs

This is for hatchery, grow-out, harvesting, and slaughter; without section 28. POSTHARVEST – MASS BALANCE AND TRACEABILITY (to be included when CoC revision finalized, expected end 2022)

Level	V5.2 and v5.3-GFS	V6 (Smart/GFS)
Major Musts	182	199
Minor Musts	46	22
Recommendations	9	5
Total (without postharvest section AQ 28)	237	226

3.1.2 Summary of new P&Cs

AQ#	Principle	Level
01.02.03	Location, design, and structure of the facility	Major Must
02.06	Procedure for document and record control	Major Must
02.09	Documented continuous improvement plan	Major Must
02.10	Implemented continuous improvement plan	Major Must
04.02.04	Staff training on animal welfare	Major Must
06.03.04	Further evaluations show no significant negative impact on the biodiversity of the benthic fauna and/or recipient water body sediment/water column.	Recom.
06.04.05	Water quality – in all storage systems – is verified as adequate for its uses.	Major Must
13.05	Documented annual test of the traceability system	Major Must
17.01	Specifications materials and services	Major Must
17.02	Procedures to manage and handle non-conforming products	Major Must
17.03	A system to ensure that the farmed aquatic species are ready to harvest from a food safety point of view	Major Must



AQ#	Principle	Level
18.01.05	Shrimp specific: only larvae originating from shrimp females without eye stalk ablation (or any other type of physical invasive method for inducing breeding). This shall be achieved from April 2024 onwards.	Major Must
19.01.03	All chemical compounds are approved for aquaculture production processes.	Major Must
20.02.15	The producer considers enhancing the rearing conditions to improve performance and animal welfare of the farmed aquatic species.	Minor Must
20.03.01	Vaccination is preferred over therapeutic treatments if available for recurring diseases	Major Must
	Total	15

3.1.3 Summary of merged P&Cs

Number of P&Cs that have been merged and/or deleted: 12

3.1.4 Summary of level changes

Number of P&Cs changed from Minor Must to Major Must: 17

Number of P&Cs changed from Recommendation to Minor Must: 4

3.1.5 Summary of considerably extended P&Cs

AQ#	Principle	Level
04.01.01	Documented risk assessment for hazards to workers' health and safety	Major Must
04.01.02	Health and safety procedures exist.	Major Must
04.01.03	Diving operations are carried out in accordance with relevant legislation and in accordance with generally accepted principles for safe labor diving.	Major Must
04.02.01	All persons working on the farm have received health and safety training according to the risk assessment.	Major Must
04.05.02	There is communication between management and workers on workers' health, safety, and welfare issues.	Major Must
06.02.01	A comprehensive, current, and documented waste management system is implemented.	Major Must



AQ#	Principle	Level
06.03.01	A biodiversity-inclusive environmental impact assessment (EIA) and environmental risk assessment (ERA) are in place. New Guideline AQ III – Environmental parameters of relevance based on the aquaculture system used.	Major Must
06.03.03	There is no significant negative impact on the biodiversity of the benthic fauna and/or recipient water body sediment/water column.	Major Must
07.02.03	Predator control techniques avoid any type of lethal interaction with the wildlife.	Major Must
20.02.01	An aquaculture health plan (AHP) is available, updated during the last 12 months, for the last production cycle, or when new medicines or treatments not previously used have been added.	Major Must
20.02.08	The hatchery/farm has a system to monitor and register farmed aquatic species health and welfare indicators and all disease occurrences.	Major Must
20.08.01	The sites have a documented biosecurity plan.	Major Must
20.08.02	If there is an area management plan , the farm is actively participating and can demonstrate compliance with the plan's requirements.	Major Must
22.01.02	Based on the latest GFSI recommendations, the 12-month period for farms to comply with certified compound feed no longer applies. Compliance is now required from initial CB audit onwards.	Major Must
22.01.04	Protein elements in the compound feed are <i>not</i> obtained from the same fish/crustacean species, unless hydrolyzed protein of same species is verified as adequate.	Major Must
26.01.04	Farmed aquatic species are effectively stunned , with consideration of animal welfare.	Major Must



3.1.6 Summary of P&Cs requiring recording of metrics

For these P&Cs the audit report shall include values on top of evidence that measurements are done at the production units.

AQ#	Principle	Level
20.05.02	Audit report shall include a value for the overall percentage of mortalities per production stage and values linked to the causes of death.	Major Must
22.02.03	Audit report shall include at least two values: average fishmeal and fish oil percentage (where possible, both described according to origin) <i>and</i> the fish in/fish out information (whole fish from wild catch).	Major Must
22.02.05	Audit report shall include at least one value : eFCR per production life cycle. Economic feed conversion ratio = Feed, kg or mt/Net aquaculture production, kg or mt (wet weight).	Major Must

3.2 Plant scope – flowers and ornamentals (Smart)

3.2.1 Summary of number of P&Cs in v6 Smart

Level	V5.2	V6 (Smart)
Major Musts	64	67
Minor Musts	116	77
Recommendations	17	14
Total	197	158

3.2.2 Summary of deleted P&Cs

3.2.2.1 Deleted because not applicable to product category (no food safety)

V5 #	Principle		
AF 10	Food defense		
AF 15	ood safety policy declaration		
AF 16	ood fraud mitigation		
CB 7.4	Preharvest interval		
CB 7.5	Plant protection product residue analysis		



3.2.2.2 **Deleted**

V5 #	Principle		
FO 1.1.2– 1.1.3	Varieties/Rootstock match customer crops specifications		
CB 3.21	Soil maps are prepared to guide fertilizer application plans		
CB 7.7.3	Temperature conditions for plant protection product (PPP) storage		
CB 8.1	Equipment maintenance in relation to food safety risks		
CB 8.3	Producer involved in independent calibration scheme		
AF 3	Hygiene section. Hygiene instructions within Health and safety.		
FO 5.2.5	Aware of import country restrictions on postharvest chemicals		

3.2.3 Summary of new P&Cs

FO#	Principle	Level
01.03.03	Continuous improvement plan is documented	Major Must
01.03.04	Continuous improvement plan is implemented	Minor Must
04.03.04	Evidence of not more than 10% of substrates being peat	Minor Must
04.06.02	Metrics are used to monitor amounts of fertilizer used	Recom.
05.03.01	Records of abstracted water	Minor Must
05.03.03	Records of total volumes water used	Recom.
06.02	Knowledge of pests, diseases	Minor Must
06.03	Integrated pest management (IPM) plan	Minor Must
06.09	Annual analysis of IPM plan and improvements introduced, if found	Minor Must
07.02.05	Metrics are used to monitor amounts of PPP used	Recom.
10.01	The farm interacts with the ecosystem	Recom.
10.03	Biodiversity is protected	Minor Must
10.05	Conversion of natural lands as of 2014	Major Must
10.06	Conversion of natural lands between 2008 and 2014	Major Must
10.07	Invasive alien species: awareness	Recom.



FO#	Principle	Level
10.08	Invasive alien species: actions	Recom.
11.04	Contribution to measure, reduce greenhouse gases	Recom.

3.2.4 Summary of merged P&Cs (no level change)

V5 #	Principle
CB 4.1.1 + CB 7.2.1 + FO 5.2.7	Competent advisor for fertilizer, PPP applications
CB 4.2.1 + CB 4.2.2 + CB 4.2.3 + CB 4.2.4 + CB 4.2.5 + CB 4.2.6	Records of fertilizer applications
CB 7.3.1 + CB 7.3.3 + CB 7.3.5	Records of PPP applications
CB 4.3.1 + CB 4.3.6 + CB 4.3.2 + CB 4.3.3 + CB 4.3.4	Storage of fertilizers
FO 3.2.2 + FO 3.2.1	Storage of concentrated acids
CB 7.7.1 + CB 7.7.4 + CB 7.7.6 + CB 7.7.10 + CB 7.7.11	Storage of PPP and postharvest treatments
CB 7.7.2 + CB 7.7.7 + CB 7.7.12	PPP storage structurally sound and robust

3.2.5 Summary of P&Cs where the level has been lowered

V5 #	V6 FO #	Principle	V5	V6
AF 17.1	01.07.01	Non-conforming product	Major Must	Minor Must
AF 9.1	01.08.01	Recall and withdrawal of non-conforming product.	Major Must	Minor Must
CB 3.7	04.01.04	Records of sowing/planting are kept	Minor Must	Recom.
FO 2.2.2	04.03.02	02 Records of chemicals used to sterilize substrates		Minor Must
CB 5.3.4	08.01.02	Laboratory requirements for postharvest water	Minor Must	Recom.



3.2.6 Summary of P&Cs where the level has been raised

V5 #	V6 FO #	Principle	V5	V6
CB 4.1.1	01.04.02	Advisor for fertilizer and plant nutrition	Minor Must	Major Must
CB 2.1.1	03.01.01	Variety registration laws	Minor Must	Major Must
CB 2.1.2	03.01.02	Intellectual property rights for propagation material	Minor Must	Major Must
FO 2.2.4	04.03.03	Substrates do not originate from designated protected areas	Minor Must	Major Must
CB 4.3.5 CB 4.4.3	04.07.03	Storage of inorganic and organic fertilizers	Minor Must	Major Must
CB 5.4.1	05.02.02	Water permit	Minor Must	Major Must
AF 7.4.1	05.02.04	Collect and recycle water	Recom.	Minor Must
CB 5.5	05.02.05	Water storage facilities are maintained	Recom.	Minor Must
CB 6.1	06.01	Competence of IPM advisor	Minor Must	Major Must
CB 7.1.4	07.01.03	Invoices for illegal PPP shall be kept	Minor Must	Major Must
CB 7.8.1	07.05.01	Workers handling hazardous substances are offered health check	Minor Must	Major Must
CB 7.8.4	07.05.04	Safe handling of concentrated PPPs	Minor Must	Major Must
AF 6.1.1	09.01	Waste, identification of waste sources	Minor Must	Major Must
AF 6.2.1	09.02	Waste management system, instead of a documented plan.	Minor Must	Major Must
AF 6.2.4	09.05	Organic waste managed to avoid contamination	Recom.	Minor Must
AF 6.2.5	09.06	Disposal of wastewater	Recom.	Minor Must
AF 7.2.1	10.02	Unproductive sites: enhance biodiversity	Recom.	Minor Must
AF 7.3.1	11.01	Records monitoring energy usage	Minor Must	Major Must
AF 7.3.2	11.02	Improve energy efficiency	Recom.	Minor Must
AF 7.3.3	11.03	Renewable and nonrenewable energy	Recom.	Minor Must
AF 4.3.2	12.01.06	Warning signals for hazards	Minor Must	Major Must



3.2.7 Summary of modified P&Cs

V5 #	V6 FO #	Principle	Level v6
AF 4.1.2 AF 3.2	12.01.02	Hygiene instructions added to health and safety procedures	Minor Must
AF 4.2.2	12.01.04	Competence required for working at heights	Major Must
AF 4.4.1	12.03.01	Obligation to provide personal protective equipment (PPE) is complemented with obligation to use it	Major Must
FO 1.3.1	03.04.01	Transition period for bulbs as plant propagation material adjusted to specific final product	Major Must
CB 6.5	06.08	Antiresistance strategies: more detailed guidance included	Minor Must
CB 7.5.1	07.03.01	Surplus mix: no need to keep records of surplus volumes	Minor Must
CB 7.11.1	07.08.01	No need to record amounts of other substances.	Minor Must
FO 5.1.2	08.01.02	Laboratory for postharvest water quality must have quality controls, not necessarily accredited to ISO 17025.	Recom.
AF 6.1.1	09.01	Waste, identification of waste sources: include specific identification of type of plastics used	Major Must
AF 6.2.1	09.02	No documented plan is required for a waste management system. Evidence is visible. See guidelines. Concrete actions to manage plastic waste.	Major Must
AF 6.2.4	09.05	Organic waste management allowed to be done off farm	Minor Must
AF 6.2.5	09.06	.06 Disposal of wastewater: scope extended to all types of wastewater	
AF 4.3.1	12.01.01	Health and safety risk assessment now includes attention to local legislation regarding infectious diseases (e.g., COVID 19); reinforced with attention to fire risks, exits, etc.	Major Must
AF 7.1.1	10.3	From a wildlife conservation plan to evidence of actions to protect biodiversity	Minor Must
AF 7.1.2	10.04	From enhancing the environment to enhancing biodiversity. Mention of environmental impact of agricultural activity deleted as this is covered in other points.	Recom.



3.2.8 Summary of P&Cs with different criteria for same principle between IFA Smart for fruit and vegetables and IFA Smart for flowers and ornamentals

Principle topic	Difference
Peat	A minimum volume/year/operation (10%) of substitute substrate (non-peat) is required. Increased use of certified peat.
Alien invasive species	Two new principles (both Recommendations) are introduced. Trade of ornamentals can be responsible for the introduction of such elements in other countries.
PPP appropriate for pest and crop	Introduces guidance on specific and general registrations to raise awareness and steer the industry towards PPPs being registered for the crop/use site, i.e., a generic level (e.g., bulbs, ornamentals, bedding, potted plants, and cut flowers), and not necessarily at species level (e.g., rosa, dracaena). Similarly for the target pest (specific could be, e.g., "green aphids" while a general registration could be e.g., "piercing and sucking insects").
Recall and withdrawal	Less demanding as it does not include the risk of food safety, lower level
Non-conforming products	Less demanding as it does not include the risk of food safety, lower level
Fertilizer application decision-making	Nutrient contribution from irrigation water and soil amendments are considered when making decisions on the amount and type of fertilizer applications.

3.3 Plant scope – fruit and vegetables (Smart and GFS)

3.3.1 Summary of number of P&Cs in v6 Smart and v6 GFS

Level	V5	V6 Smart	V6 GFS
Major Musts	93	103	118
Minor Musts	114	67	53
Recommendations	15	20	20
Total	222	190	191



3.3.2 Summary of new P&Cs

3.3.2.1 In IFA v6 Smart/GFS compared to v5.4-1-GFS and v5.2

FV#	Principle	IFA v6 Smart/GFS
02.01	A continuous improvement plan is documented.	Major Must
02.02	A continuous improvement plan is implemented.	Minor Must/Major Must
10.02	Workers are informed of their rights related to the standard, and there is a grievance mechanism available and implemented.	Major Must
20.03.03	Provided PPE is used by the workers.	Minor Must
21.05	The farm is recognized as an agricultural ecosystem that interacts with neighboring landscapes.	Recom.
22.01.01	Biodiversity is managed to enable its protection and enhancement.	Minor Must
22.03.01	Conversion of natural lands as of 2014	Major Must
22.03.02	Conversion of natural lands between 2008 and 2014	Major Must
22.03.03	Management of biodiversity is supported with metrics.	Recom.
23.04	Management of energy is supported with metrics.	Recom.
24.01	Reducing greenhouse gas (GHG) emissions	Recom.
24.02	Enabling the formation of organic carbon in soils and biomass	Recom.
24.03	Reducing and removing GHGs from the atmosphere is supported with metrics.	Recom.
25.08	Plastics are managed in a responsible way.	Minor Must
25.09	Food waste is prevented and managed.	Recom.
29.01.07	Management of fertilizers is supported with metrics.	Recom.
30.01.04	Actions are taken to complement on-farm water management with off-farm activities	Recom.
30.05.06	Treated water used during harvest or postharvest is monitored.	Major Must
30.06.03	Management of water is supported with metrics.	Recom.
31.02	The producer is informed about the relevant pests, diseases, and weeds that affect their registered crops.	Major Must



FV#	Principle	IFA v6 Smart/GFS
31.03	IPM plan	Minor Must
31.08	Improvement of the IPM plan.	Minor Must
32.02.03	Management of PPPs is supported with metrics.	Recom.

3.3.2.2 In IFA v6 Smart compared to v5.2. (in addition to 3.3.2.1)

FV#	Principle	IFA v6 Smart
1.01	Procedure in place to manage and control documents and records	Minor Must
3.01	Roles and responsibilities of workers whose jobs have an impact on the implementation of the standard	Minor Must
5.01	Specifications for materials and services relevant to food safety	Minor Must
30.04.02	Storage of water	Major Must
33.06	Environmental monitoring program for product handling areas	Minor Must

3.3.3 Summary of merged P&Cs (no level change)

V5.4-1 GFS#	V6 Smart/GFS FV #	Principle topic
CB 4.1.1 + CB 7.2.1 + FV 5.8.4	03.02	Competence of experts
AF 17.1 + AF 17.2	05.01	Specifications of procedures and materials
CB 4.3.7 + CB 7.7.13 + FV 5.11.1	05.02	Inventory to manage stock
CB 1.1 + AF 13.5	06.01	Traceability
AF 17.3 + AF 17.4	11.01	Procedures to manage and handle non- conforming products
CB 5.3.4 + CB 7.6.6 + FV 4.1.4 + FV 5.7.3	12.01	Laboratory testing and requirements
CB 8.1 + CB 8.2	13.01	Equipment, tools, and devices
AF 16.1 + AF 16.2	16.01	Food fraud
AF 3.1 + FV 5.1.1 + AF 1.2.1	19.01	Documented hygiene risk assessment



V5.4-1 GFS#	V6 Smart/GFS FV #	Principle topic
AF 3.2 + AF 3.4 + FV 5.1.2 + FV 5.1.3 + FV 5.1.5	19.02	Documented hygiene procedures
AF 3.3 + FV 5.1.3	19.03	All workers have received hygiene training.
FV 5.2.1 + FV 5.2.3	19.06	Handwashing facilities
AF 1.2.1 + FV 1.1.1	21.01	Documented risk assessment for all registered areas
AF 1.2.2 + FV 1.1.2	21.02	Management plan to minimize identified risks
CB 4.3.1 + CB 4.4.3 + CB 4.3.6	29.02.01	Storage of fertilizers and biostimulants does not compromise food safety.
CB 4.3.2 + CB 4.3.3 + CB 4.3.4 + CB 4.3.5	29.02.02	Storage of fertilizers and biostimulants reduces risk of environmental contamination.
CB 3.6 + CB 4.5.1	29.04.01	Content of major nutrients is known.
CB 5.3.2 + FV 4.1.1	30.01.01	Risk assessment to assess food safety risks from pre- and postharvest water used
CB 5.3.5 + FV 4.1.3	30.05.02	Corrective actions based on results from the risk assessment and results of the water analysis
FV 5.3.1 + FV 5.7.1 + FV 5.8.5	30.05.04	Water that comes into contact with the product – microbial standard for drinking water
CB 7.1.1 + CB 7.1.2 + FV 5.8.2 + FV 5.8.3	32.01.01	PPPs authorized for the country of production
CB 7.1.3 + FV 5.8.1	32.01.02	PPPs are applied according to label requirements
CB 7.3.1 + CB 7.3.2 + CB 7.3.3 + CB 7.3.4 + CB 7.3.5 + FV 5.8.7	32.02.01	Records of PPPs
CB 7.6.1 + CB 7.6.2 + FV 5.8.10	32.07.01	Information regarding maximum residue levels (MRLs) for the markets
CB 7.6.3 + FV 5.8.10	32.07.02	Risk assessment for all registered products has been completed and the MRL requirements of the applicable market(s) are met.
CB 7.6.5 + FV 5.8.10	32.07.03	Correct MRL sampling and testing



V5.4-1 GFS#	V6 Smart/GFS FV #	Principle topic
CB 7.6.7 + CB 5.8.10	32.07.05	Documented action plan when MRLs are exceeded
CB 7.7.1 + CB 7.7.4 + CB 7.7.6	32.09.01	Storage of PPPs, biocontrol substances, and any other treatments in a manner to ensure risks are managed
CB 7.7.7 + CB 7.7.8 + CB 7.7.9	32.09.06	PPP storage is able to retain and manage spillage.
CB 4.3.6 + FV 5.4.1	33.01.01	Harvested and packed products are stored to minimize food safety risks.
AF 3.5 + FV 5.4.5 + FV 5.4.6	33.01.04	Storage and use of cleaning equipment, agents, lubricants, etc.

3.3.4 Summary of P&Cs where the level has been lowered

V5.4-1 GFS #	V5.4-1-GFS Level	V6 Smart/GFS FV #	V6 Smart Level	V6 GFS Level
FV 5.4.4	Major Must	25.07	Minor Must	Minor Must
CB 7.5.1	Major Must	32.06.01	Minor Must	Minor Must
FV 5.4.7	Major Must	25.03	Recom.	Recom.
FV 3.2	Major Must	28.03.02	Minor Must	Minor Must
FV 3.3	Major Must	28.03.03	Minor Must	Minor Must
CB 6.1	Major Must	31.01	Minor Must	Minor Must
CB 7.5.1	Major Must	32.06.01	Minor Must	Minor Must
CB 7.11.1	Major Must	32.08.01	Minor Must	Minor Must

3.3.5 Summary of P&Cs where the level has been raised

V5.4-1 GFS #	V5.4-1-GFS Level	V6 Smart/GFS FV #	V6 Smart Level	V6 GFS Level
AF 4.1.1	Minor Must	20.01.01	Major Must	Major Must
AF 4.1.2	Minor Must	20.01.02	Major Must	Major Must
AF 4.3.1/2	Minor Must	20.02.01	Major Must	Major Must
FV 5.2.5	Recom.	20.03.04	Minor Must	Minor Must
AF 7.3.1	Minor Must	23.01	Major Must	Major Must



V5.4-1 GFS #	V5.4-1-GFS Level	V6 Smart/GFS FV #	V6 Smart Level	V6 GFS Level
AF 7.3.2	Recom.	23.02	Minor Must	Minor Must
AF 7.3.3	Recom.	23.03	Minor Must	Minor Must
AF 6.2.5	Recom.	25.06	Minor Must	Minor Must
CB 2.1.1	Minor Must	26.01	Major Must	Major Must
CB 2.1.4	Minor Must	26.02	Major Must	Major Must
CB 3.1	Minor Must	28.01.01	Major Must	Major Must
restructured	Minor Must	29.01.01	Major Must	Major Must
CB 5.4.1	Minor Must	30.02.01	Major Must	Major Must
AF 7.4.1	Recom.	30.03.01	Minor Must	Minor Must
CB 5.2.3	Minor Must	30.06.02	Major Must	Major Must
CB 7.3.7	Minor Must	32.01.03	Major Must	Major Must
CB 7.3.6	Minor Must	32.02.02	Major Must	Major Must
CB 7.9.2	Minor Must	32.04.02	Major Must	Major Must
CB 7.8.4	Minor Must	32.10.02	Major Must	Major Must
CB 7.1.4	Minor Must	32.11.01	Major Must	Major Must
FV 5.4.10	Minor Must	33.02.02	Major Must	Major Must
FV 5.5.1	Minor Must	33.03.01	Minor Must	Major Must
FV 5.6.3	Minor Must	33.04.02	Minor Must	Major Must

3.3.6 Summary of differences in P&Cs between IFA v6 Smart and IFA v6 GFS editions

FV#	Criteria and/or level Smart	Criteria and/or level GFS
01.01	A system shall demonstrate:	A documented procedure shall describe:
	Minor Must	Major Must
01.02	(Records) Minor Must	Major Must



FV#	Criteria and/or level Smart	Criteria and/or level GFS
01.03		Additional text (self-assessment): A program of site inspections ensures the site and equipment are maintained, in support of food safety. The frequency of inspections is based on assessed risk and type of activities.
02.02	(Continuous improvement plan implementation) Minor Must	Major Must
03.01		Additional text (requirement for roles and responsibility of workers): Duties that affect food safety Job function, responsibilities, and title Position within organizational structure
	Minor Must	Major Must
05.01		Additional text (requirement for specifications): A procedure shall be implemented and maintained for the control of suppliers of inputs and services that may introduce a food safety risk. The procedure shall include:
		- Evaluation, approval, and continued monitoring of suppliers
		- Procurement in emergency situations to ensure materials and services still conform to specifications
		- Availability of records of evaluations, investigations, and follow-up actions
	Minor Must	Major Must
05.02	(Inventory) Minor Must	Major Must
11.01		Additional text (non-conforming product): The non-conforming product procedures shall also address the treatment of dropped product, as per the risk assessment.



FV#	Criteria and/or level Smart	Criteria and/or level GFS
12.01	Additional text (laboratories): In countries, regions, or situations where a laboratory with current ISO/IEC certification is not available, alternative national/regional lab verifications may be presented. In countries and regions with laboratories operating in accordance with ISO/IEC 17025, such laboratories shall be used for analysis required by the standard and supporting risk assessments	
	Minor Must	Major must
13.01		Additional text (equipment): Made of materials (nontoxic) Equipment shall be identified. Calibration shall be traceable to a national or international standard or method.
13.03		Additional text (vehicles): Vehicles and equipment shall be suitable for the intended purpose and stored to minimize food safety risk.
14.01		Additional text (food safety policy): Serves as documented evidence of review by management of all elements of the food safety system, on an annual basis or whenever changes occur that impact food safety
15.01	Additional text (food defense): - Procedures to mitigate the identified threats	Additional text (food defense): - A documented food defense plan to specify the measures to control any risks identified in the risk assessment
		- Consideration of identification of tampering with the premises and products, monitoring of external storage and intake points, controlled access where relevant, receiving inputs from safe sources, and having available information for all employees and subcontractors
	Minor Must	Major Must
16.01	The system shall include the following points:	The system shall include:



FV#	Criteria and/or level Smart	Criteria and/or level GFS
	- A risk assessment shall be in place to identify ways in which a producer may inadvertently purchase fraudulent supplies and materials, as well as how	- A risk assessment to identify potential threats to the safety of the product, taking into account risks from fraudulent or adulterated materials
	the producer's finished product or packaging could be used inappropriately.	- A documented food fraud plan to specify the measures to control any risks identified in the risk assessment
	- Procedures shall be in place to mitigate the identified vulnerabilities. The producer shall demonstrate that the risk of incurring of fraud is mitigated by procuring authentic plant	- Consideration shall be given to potential impacts of intentional inaccurate information associated with a product for economical gain.
	protection products, propagation material, and packaging.	- Where applicable, risks associated with counterfeit PPP, unauthorized propagation material, origin of packaging,
	- Where applicable, a description of how labeling and packaging is controlled to limit theft and misuse shall be available. Mitigating measures taken to reduce the likelihood of and define the response to fraud events shall be documented.	use of approved suppliers, control over access to packaging shall be considered.
	Minor Must	Major Must
19.01		Additional text (hygiene risk assessment): - Measurement and monitoring of cleaning and hygiene activities
19.07	(Animal activity) Minor Must	Major Must
25.01		Additional text (wastewater): Addresses potential for contamination of nearby water sources, roadways, and adjacent land
30.01.01		Additional text (water risk assessment):
		- Control of water not intended for use in food production (e.g., stored water for grounds maintenance, etc.)
32.07.02		Additional text (MRLs): Residues of agricultural chemicals shall not exceed levels as established by applicable and prevailing legislation (in both countries of production and intended sale), or by the Codex Alimentarius Commission.



FV#	Criteria and/or level Smart	Criteria and/or level GFS	
33.01.03	(Storage of packing material) Minor Must	Major Must	
33.01.04		Additional text (cleaning equipment, lubricants): Chemicals shall be applied according to the product label instructions	
33.02.02	A system for handling foreign material contamination	A documented procedure for handling foreign material contamination	
33.03.01	(Controlled storage conditions) Minor Must	Major Must	
33.05.01	(Product labeling) Minor Must	Major Must	
33.06.01		Additional text (EMP): The program shall allow for assessment of effectiveness of cleaning procedures in reducing food safety risks and identify sources of potential contamination (e.g., in water, on surfaces).	
	Minor Must	Major Must	
33.07.01	N/A	(Air and compressed gases)	

3.3.7 Residue monitoring checklist in IFA v6

As in IFA v5, producers can be members of a third-party residue monitoring system (RMS) and Option 2 producer groups may run their own RMS.

This requirement was part of the mandatory QMS checklist and CPCC annex in IFA v5. In IFA v6, it is part of the QMS checklist and also a standalone checklist for RMS providers.

3.4 Plant scope – hops (Smart)

Like past versions, the hops standard is based on the IFA for fruit and vegetables standard content. In this case, the IFA v6 Smart edition for fruit and vegetables was used as the basis for the IFA v6 for hops standard content. The annex for IFA for hops was removed, and the information incorporated into the P&Cs. IFA v6 for hops includes some content that is unique to the product.

3.4.1 New or modified P&Cs

HO #	Principle	Level
23.01	On-farm energy monitoring (Major Must in IFA v6 Smart for fruit and vegetables)	Minor Must



НО#	Principle	Level
23.03	Use of nonrenewable energy (Minor Must in IFA v6 Smart for fruit and vegetables)	Recom.
23.04	Specific reference is made to energy use in drying operations	Minor Must
25.01	A waste management system is implemented. The criterion has some content in common with the IFA v6 Smart edition for fruit and vegetables. The inclusion of green waste is a criterion for the waste management plan that is unique to IFA for hops.	Major Must
26.01	The choice of variety is based on acceptable agronomic performance appropriate to local conditions.	Minor Must
28.02.03	Alternatives to fumigation are considered.	Recom.
29.01.02	There is a slight difference in the way fertilizer application sites are identified.	Minor Must
29.03.02	The organic fertilizer criterion is modified to not include a reference to tree fruits or leafy greens. The principle remains harmonized with IFA v6 Smart for fruit and vegetables	Major Must
30.04.02	The water storage topic is combined for simplicity, with both tanks and ponds referenced in the criterion of the same principle. The content is similar to IFA v6 Smart for fruit and vegetables, but is presented in a manner more specific to the hops industry.	Minor Must
30.05.04	The reference to flooded cranberry fields was removed, as it does not apply to hops.	Major Must
33.01.01	The harvest makes specific reference to bales and dried product.	Major Must
33.01.02	Signs shall be posted for hygiene requirements.	Minor Must
33.01.03	There is specific language for cleaning of sites and locations.	Minor Must
33.01.04	There is specific language addressing cleaning and maintenance of conveyors.	Major Must
33.01.05	There is specific language for cleaning of hops areas, including the kiln, cooling room floors, etc.	Major Must
33.01.06	For packing materials, the principle is harmonized with IFA v6 Smart for fruit and vegetables, but references specific hops packing materials in the criterion.	Minor Must
33.02.02	Specific reference is made to risks associated with metal contamination.	Major Must
33.03.01	A principle that specifically addresses drying equipment is included.	Minor Must



HO #	Principle	Level
33.03.02	There is a specific reference to the use of direct heaters for drying, particularly as it relates to the use of diesel and the potential for odors.	Minor Must
33.03.03	There is a specific reference to sun and field drying.	Major Must
33.04.02	There is a specific reference to roosting birds as a risk.	Minor Must
33.04.03	Additional language was added to the criterion to ensure pest control continues through the off-season. The principle remains harmonized with IFA v6 Smart for fruit and vegetables.	Minor Must
33.05.02	There is a specific principle addressing finished bale weights.	Minor Must
33.05.03	There is a specific principle addressing product analysis for quality.	Minor Must
33.05.04	Comingling prevention is addressed in a unique principle.	Major Must
33.05.01	The principle addressing final product labeling is supported by a criterion that references bales. The principle remains harmonized with IFA v6 Smart for fruit and vegetables.	Minor Must
33.06.01	The criterion addressing vehicle maintenance and cleaning includes a reference to bines and harvested hops. The principle remains harmonized with IFA v6 Smart for fruit and vegetables.	Major Must
33.06.02	A written procedure is required for the inspection of transport vehicles. The annex topics from IFA v5.3 for hops are rolled into the criteria and the annex was removed.	Major Must
33.06.03	The use of spaces for off-season storage is addressed.	Minor Must
33.06.04	There is a specific reference to the use of refrigerated containers when storing bales.	Minor Must
33.07.01	There is a requirement for fire extinguishers to be present in specific locations.	Minor Must
33.07.02	There is a specific requirement for drying facility ventilation.	Minor Must
33.07.03	There is a specific requirement for maintaining workers' safety during night harvest.	Minor Must

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