

ཤིང་འབྲུལ་དང་ཚོད་བསྐྱེའི་དོན་ལུ་འབྲུག་སོ་ནམ་ཚད་ལྡན་ལག་ལེན་གྱི་

ནམ་ཚད།

## BHUTAN STANDARD

Standard for Good Agriculture Practices (GAP): Fruits and Vegetables.



ICS 65.020.01

© Copyright 2017

## BHUTAN STANDARDS BUREAU

The National Standards Body of Bhutan  
THIMPHU 11001

April, 2017

Price group F

ཤིང་འབྲུལ་དང་ཚོད་བསྐྱེད་དོན་ལུ་འབྲུག་སོ་ནམ་ཚོད་ལྡན་ལག་ལེན་གྱི་

ནམ་ཚོད།

**BHUTAN STANDARD**

**Standard for Good Agriculture Practices (GAP): Fruits and Vegetables.**

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's Licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The Bhutan Standards Bureau accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

**COPYRIGHT PROTECTED DOCUMENT**

© BSB 2017

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either BSB at the address below in the country of the requester.

Director General  
Bhutan Standards Bureau  
Thimphu-11001  
Tel : 00975-2-325104/325401  
Fax: 00975-2-323712/328298  
Web: [www.bsb.gov.bt](http://www.bsb.gov.bt)  
Published in April 2017.

## Contents

FOREWORD.....	v
1 Scope .....	1
2 Normative References.....	2
3 Terms and Definition .....	2
4 Food Safety Module (FSM) .....	3
4.1 Site History and Management.....	3
4.2 Planting material (Propagation material).....	3
4.3 Genetically Modified Organisms (GMO): .....	3
4.5 Water (Irrigation/Fertigation). .....	4
4.6 Chemicals (Plant Protection Products or Other Agro and Non-agrochemicals) .....	4
4.7 Harvesting and Handling Produce .....	5
4.15 Traceability and Recall .....	7
4.16 Training .....	7
5 Environmental Management Module (EMM) .....	21
5.1 Site History and Management.....	21
5.2 Planting Material .....	21
6 Worker Health, Safety and Welfare Module (WHSM).....	29
6.1 Chemicals.....	29
7 Produce Quality Module (PQM) .....	36
7.1 Quality Plan .....	36
7.2 Planting Material .....	36
7.3 Fertilizers and Soil Additives .....	36
7.4 Water.....	36
7.5 Chemicals.....	36
7.6 Harvesting and Handling Produce.....	36
7.7 Handling and Packaging Produce.....	37
7.8 Storage and Transport.....	37
7.9 Traceability and Recall System.....	37
7.10 Training .....	37
7.11 Documents and Records.....	37
7.12 Review of Practices.....	37
7.13 Chemicals.....	38
7.14 Harvesting and Handling Produce .....	38
8 General Requirements Module (GRM).....	42
8.1 Legal.....	42
8.2 Visitor Requirements.....	42
8.3 Redressal of Complaints .....	42
8.4 Site Details .....	42
8.5 Record Keeping and Internal Inspection .....	42
8.6 Calibration .....	42

## BTS 30: 2017

8.7	Legal Requirements .....	42
8.8	Written Contract .....	43
8.9	Producer Register .....	43
8.10	Structure of Organization .....	43
8.11	Competency and Training to Staff .....	43
8.12	Quality Manual .....	43
8.13	Document Control .....	43
8.14	Complaint Handling .....	44
8.15	Internal Audit .....	44
8.16	Non-Compliances, Corrective Actions and Sanctions .....	44
8.17	Product Traceability and Segregation .....	44
8.18	Withdrawal of Certified Product.....	44
8.19	Common Pack house.....	44
8.20	Agreement with Buyer .....	44
8.21	Subcontracting .....	45
8.22	Criteria/Requirements Control.....	45
Annex 1	.....	51

# BHUTAN STANDARD

## Good Agriculture Practices (GAP): Fruits and Vegetables

### FOREWORD

This Bhutan Standard for Good Agriculture Practices (GAP): Fruits and Vegetables was adopted by Bhutan Standards Bureau after the draft finalization by the Food and Agriculture Technical Committee had been approved by the Standardization Council and endorsed by BSB Board.

Food safety has gained increasing importance over the years due to its significance both from health and economic perspectives. Production of safe food is essential for protecting consumers from the hazards of food borne illnesses and is important both in the domestic food business as well as for increasing competitiveness in export markets. Hazards may occur at different stages in the food chain starting right from the primary production such as residues of pesticides, other chemicals, heavy metals above permitted levels, microbial contaminants and others. It, therefore, becomes important to address food safety right from food production at farm level. Implementing Good Agriculture Practices during on-farm production and post-production (post-harvest) processes resulting in safe agricultural products is of immense importance for assuring a safe food supply.

Good Agriculture Practices (GAP), as defined by Food and Agriculture Organization of the United Nations (FAO), are a “Collection of principles to apply for on-farm production and post-production processes, resulting in safe and healthy food and non-food agricultural products, while taking into account economic, social and environmental sustainability”.

Many countries importing food products as well as domestic buyers, especially organized retail are requiring producers to implement GAP as a pre-requisite for procurement to ensure quality and safety of their produce. In addition, implementing GAP also helps promote sustainable agriculture and contributes to meeting national and international environment and social development objectives. It has been documented that implementation of GAP encourages promotion of optimum use of resources such as pesticides, fertilizers, and water, and eco-friendly agriculture. Its social dimension would be to protect the agricultural workers’ health from improper use of chemicals and pesticides.

In SAARC, many of the countries have not adopted GAP and do not even have an institutional infrastructure for supporting the same in terms of standards as well as their implementation, certification and accreditation. Most of the food safety standards are focused towards the end products. It is, therefore, important to support the countries of the Region in development of standards on GAP as well as certification and accreditation mechanisms to enable the implementation and verification of GAP.

It is a particular opportune time to promote GAP when second generation of reforms in agriculture in the region is on focus both by government and the agro-processing industries of the countries. With a common standard as a basis for SAARC Region, it will also help to promote regional trade.

With the above background, FAO on request of some countries of SAARC, has instituted a regional project on “Development of Standards and Scheme for Good Agriculture Practice (GAP) Implementation and Certification in countries of SAARC” under which it has developed a common standard SAARC GAP for the horticulture sector as a basis for GAP in the region along with criteria for certification based on international requirements. This is based on the SAARC GAP Scheme which has been developed as a Regional Scheme to suit Bhutan’s needs.

It is hoped that this will encourage not only increased safety of produce in domestic markets but also result in increased regional and global trade.

The GAP Standard has been developed in relation to food safety, quality, environmental management and workers health, safety and welfare modules which can be implemented individually or in various combinations.

## **BTS 30: 2017**

In order to align this Standard with other international and national requirements, various national and international standards, such as ASEAN GAP, GLOBAL G.A.P., other country GAPs (like IndGAP, PhilGAP) and best practices, prevalent industry standards have been referred to.

## BHUTAN STANDARD FOR GOOD AGRICULTURE PRACTICES (GAP): FRUITS AND VEGETABLES

### 1 Scope

This standard specifies the requirements of Good Agriculture Practices (GAP) with respect to all types of fresh fruits and vegetables covering activities such as production, harvesting and post-harvest handling of farm produce and pack house operations for produce in case it is packed for sale either for direct human consumption or for further processing for human consumption by food industry.

The standard may be used for all types of production systems, namely conventional production systems where produce are grown in the soil, and hydroponic systems where produce are grown in inert media. Production may occur in the open or in a protected environment.

High-risk products such as sprouts and minimally processed produce such as cut fruits and vegetables are not covered by this standard. The standard also does not provide any basis for certification of either organic products or GMO status (GMO free products) but these products can also be certified as GAP compliant in case GAP requirements are implemented.

**Objective:** The fundamental objective of laying down this standard is to strengthen Good Agriculture Practices (GAP) on fruits and vegetables in Bhutan. The challenges currently being faced by Bhutan include the absence of standards for good practices in the farming sector. Most of the food safety standards are focused towards end products, whether it is mandatory technical standards or voluntary standards.

**Purpose:** The purpose of this document is to lay down Good Agriculture Practices to be implemented by fruits and vegetables producers to improve the safety and quality of produce while at the same time protecting the environment and safeguarding health and safety of the worker.

This standard specifies the requirements to be met with respect to good agriculture practices (GAP) in the farms for production of fruits and vegetables in the form of five modules. The first four are standalone modules and may be implemented depending upon the objective to be met, namely food safety; environmental management; produce quality; worker health safety and welfare. A fifth module is on general requirements which are common requirements applicable to each of the four sections and are covered in a separate section so as not to repeat these. Each of the four modules can be used alone or in combination with other modules. This enables progressive implementation of GAP module by module based on individual country/producer priorities. A comparison of the requirements in each module is given in Annex 1.

This standard further categorizes the criteria/requirements, based on their importance, into 'critical', 'major' or 'minor' which are given against each requirement.

- 1.1 Each module is designed as a complete section enumerating criteria/requirements for control that should be implemented in a farm, whether a single unit or a group of farms coming under a common group with internal management.
- 1.2 The criteria/requirements have been categorized, based on their importance, into 'critical', 'major' or 'minor' as explained below:
  - i. 'Critical' requirements – which are required to maintain integrity of the produce and failing to adhere to the same may result in a serious food safety incidence due to breach in food safety and product integrity.
  - ii. 'Major' requirements - which are mandatory and must be followed
  - iii. 'Minor' requirements - which are important but not essential depending upon the produce category.

Compliance criteria:

*Critical* – 100% compliance shall be compulsory.

*Major* – 90% compliance shall be compulsory.

*Minor* – 50% compliance shall be compulsory.



### 2 Normative References

Many standards, guidelines and certified systems for GAP from around the world were used as references to prepare this standard. The main sources of information were:

- ASEAN Secretariat 2006. Good Agriculture Practices (GAP) for production of fresh fruits and vegetables in the ASEAN Region.
- FAO Training Manual, Implementing ASEANGAP in the Fruit and Vegetable Sector: Its Accreditation and Certification (FAOP Publication 2014/02)
- GLOBALG.A.P - Control Points and Compliance Criteria, Fruit and Vegetables

### 3 Terms and Definition

For the purpose of this standard the following definitions shall apply

- 3.1 Composting-** A managed process where organic materials are subjected to moisture, heat and microorganisms for a specified period to produce a product known as compost.
- 3.2 Customer** - A business or person who buys or receives produce. For example, a packer, marketing group distributor, wholesaler, exporter, processor, retailer or consumer.
- 3.3 Environmental hazard** - A source of environmental harm or a situation with a potential to cause harm to the environment.
- 3.4 Fertigation-** The application of Fertilizers/nutrients through an irrigation system
- 3.5 Food safety hazard** - Any chemical, biological, physical substance or property that can make fruit and/or vegetables unacceptable and may cause health risk to consumers.
- 3.6 Fumigation** - The application of a chemical to control pests in the soil or substrate, such as insects, diseases and weeds in a protected condition.
- 3.7 Hazard-** An adverse effect or harm to produce the environment or workers.
- 3.8 Integrated pest management** - The careful consideration of all available pest control techniques and the subsequent integration of appropriate measures that discourage the development of pest populations, and keeps plant protection products and other interventions to levels that are economically justified and reduce or minimize hazards to human health and the environment
- 3.9 Intervention** –After the use of IPM techniques if monitoring shows thresh hold is reached then intervention is needed by way of chemical approach.
- 3.10 Maximum Residue Limit (MRL)** - The maximum amount of a chemical that is permitted by a competent authority in fruit and vegetables for sale for human consumption.
- 3.11 Monitoring** – It is the systematic inspection of crop and its surrounding for pests, diseases including its eggs larvae etc. so that the preventive measures can be taken
- 3.12 Obsolete chemical** - A chemical that is no longer suitable for use. For example, approval for use of the chemical may be withdrawn, the chemical expiry date over, the container may be damaged and the chemical soiled.
- 3.13 Prevention** – This includes the adoption of cultivation techniques and management practices at farm level to prevent reduce the incidence and or intensity of pest, diseases and weeds
- 3.14 Producer** – The farmer, company or the person legally responsible for the production at farm level
- 3.15 Producer Group** – A group of farmers coming together as a single unit for implementation and/or certification against the requirements stipulated in the GAP standard

## 4 Food Safety Module (FSM)

The purpose of this module is to minimize harmful effects of production and post-production practices on the safety of the produce. The good agricultural practices (GAP) for controlling food safety hazards are grouped into ten elements.

### 4.1 Site History and Management

- 4.1.1 Site history shall be assessed to identify the risk of contamination to crops grown from the previous use of chemical and/or biological hazards on the site or on adjoining sites and the same shall be documented. **(Major)**.
- 4.1.2 Where significant risks are identified, the site shall not be used for fresh produce without first taking some action to manage the risk. **(Critical)**.
- 4.1.3 If remedial action is required to manage any risk, a monitoring programme shall be in place to make sure that contamination to the produce does not occur and records of the same shall be maintained. **(Critical)**

### 4.2 Planting material (Propagation material)

- 4.2.1 If planting material is produced on the farm, a record shall be kept of any fertilizers and/or chemicals used and the reason for usage. The records shall cover the treatments with date, trade name, active ingredient, name of operator, method of application, dosages and reason for its use. **(Major)**.
- 4.2.2 A document that guarantees seed quality (free from injurious pests, diseases, virus, etc.) shall be in the farm. A record/certificate of seed quality shall be kept stating variety purity, variety name, batch number and seed vendor. **(Major)**
- 4.2.3 The planting material shall be free of visible signs of pest and disease. Quality root stock and scion material should be used for in-house propagation or propagation material to be sourced from certified nursery (Government / private nurseries / agricultural institutions / accredited tissue culture laboratories). **(Major)**.
- 4.2.4 If seeds are treated with additives/pesticides (fungicides, insecticides, biocides and/or others), these shall be approved one and as per recommended technologies. **(Major)**.
- 4.2.5 If planting material is obtained from another farm or nursery, the name of the farm and date of supply shall be recorded. **(Major)**.
- 4.2.6 Varieties known to be toxic to humans shall not be grown. **(Critical)**.

### 4.3 Genetically Modified Organisms (GMO):

- 4.3.1 Planting or trials with GMO's shall be done if permitted by the applicable legislation in the country. **(Critical)**.
- 4.3.2 If producer is growing GMO, as permitted by the country's legislation, this shall be documented. **(Critical)**.
- 4.3.3 The producer shall inform clients about the GMO status of the product. **(Critical)**.
- 4.3.4 A written plan shall be available for handling GM material (crops and trials), setting out strategies to minimize contamination hazards, such as accidental mixing of adjacent non-GM crops and maintaining product integrity shall be recorded. **(Critical)**.
- 4.3.5 GMO crops shall be stored separately from other crops before dispatches to avoid adventitious mixing. **(Critical)**.

### 4.4 Fertilizers and Soil Additives (Plant Nutrient Management and Fertilizer Use).

- 4.4.1 Assessment of the chemical and biological risks related to fertilizers and soil additives used for each crop grown shall be carried out and records of any significant hazards identified maintained. **(Major)**.
- 4.4.2 If any significant hazards are identified, measures shall be taken to minimize the risk of contamination to produce. **(Critical)**.

## BTS 30: 2017

- 4.4.3 Application of fertilizers and soil additives shall be based upon soil analysis and/or recommendations of National Soil Service Center/technically competent personnel/institutions/authorities or based on own experience. **(Minor)**
- 4.4.4 Fertilizers and soil additives shall be selected and applied so as to minimize the risk of heavy metal contamination to produce. **(Minor)**.
- 4.4.5 Fertilizers and soil additives shall be applied through recommended application practices at appropriate stages of crop growth. **(Minor)**.
- 4.4.6 Untreated organic materials shall not be applied where significant risk of contaminating produce is identified. If organic materials are treated on farm, the method of application, date and duration of treatment shall be recorded. If organic material is obtained from outside the farm and there is a significant risk identified, documents shall be available from the supplier to show that the material has been treated to minimize the risk of contamination to produce. **(Major)**.
- 4.4.7 Untreated human sewage shall not to be used for production of fresh produce. **(Critical)**.
- 4.4.8 The facilities for storage, mixing and loading of fertilizer/soil additives and for composting of organic material shall be located and constructed and maintained in a manner to minimize the risk of contamination to production sites and water sources. **(Major)**.
- 4.4.9 Records shall be maintained for fertilizers and soil additives detailing the source, product name, date and quantity obtained and also for the application detailing the date, name of product, rate and method of application and name of the operators. **(Major)**.
- 4.4.10 The inorganic and organic fertilizers shall be stores separate from harvested farm produce. **(Major)**.

### 4.5 Water (Irrigation/Fertigation).

- 4.5.1 The water available for irrigation/fertigation should be free from harmful contaminants. **(Major)**.
- 4.5.2 Assessment of the source of water used for irrigation, application of chemicals or handling, washing, treating the produce or cleaning and sanitation shall be done at least annually to minimize the risks of chemical and biological contamination and records shall be kept. **(Minor)**.
- 4.5.3 Where water testing is required to assess the risk of contamination, tests shall be conducted at a frequency appropriate to the conditions impacting on the water supply and records shall be maintained. **(Critical)**.
- 4.5.4 Where a significant risk is identified, either a safe alternative water source shall be used or the water treated before use. **(Major)**.
- 4.5.5 Untreated sewage water shall not be used during production or for post-harvest handling. Where treated water is permitted, the water quality shall comply with the Water Act, 2012, Rules and Regulations 2014... **(Critical)**.
- 4.5.6 The farmer shall maintain irrigation equipment as per manufacturer's guidelines/ manual. **(Minor)**
- 4.5.7 The farmer shall employ adequate measures to prevent flow of water into the fields from undesirable sources like municipal landfill areas, hospital and industry waste dump areas, etc. **(Major)**

### 4.6 Chemicals (Plant Protection Products or Other Agro and Non-agrochemicals)

Chemicals used on the farm can be categorized into agrochemicals that are applied on the farm or produce such as fertilizers, pesticides, seed treatment material, plant growth regulators and additives, and non-agrochemicals such as grease, fuels and oils that are required for other purposes. The requirements for chemicals are as given below:

- 4.6.1 Only pesticides as permitted under **country's regulation** shall be used. **(Critical)**.
- 4.6.2 Chemicals shall be purchased only from registered/licensed suppliers. **(Major)**.
- 4.6.3 Mixing of two or more chemicals shall not be done, unless recommended by technically competent personnel/institutions/authorities. **(Minor)**.
- 4.6.4 The dosage as recommended by competent authorities shall be applied and excess chemicals shall not be used. **(Major)**
- 4.6.5 Surplus chemicals shall be disposed in a manner to avoid contamination to the produce. **(Major)**

- 4.6.6 Withholding periods for the interval between chemical application and harvest shall be maintained as per the pre harvest interval mentioned on the label. **(Major)**
- 4.6.7 Equipment for applying chemicals shall be maintained in working condition and checked for effective operation by a technically competent person. **(Major)**
- 4.6.8 Equipment shall be washed properly after every use and washing water shall be disposed in a manner to avoid contamination to produce. **(Major)**.
- 4.6.9 Chemicals shall be stored in a well-lit sound and secure structure, which is located and constructed to minimize the risk of contaminating produce and equipped with notices and emergency facilities in the event of a chemical spill. **(Minor)**.
- 4.6.10 Liquid chemicals shall not be stored on shelves above powders. **(Major)**
- 4.6.11 Chemicals shall be stored in the original container with a legible label and according to label directions; if chemicals are transferred to another container, the same shall be clearly marked with the name of the chemicals, the dosage to be used and the withholding period. **(Major)**
- 4.6.12 Empty chemical containers shall not be reused and shall be collected in a secure place and properly disposed of according to the country's regulations and in a manner to avoid contamination of produce and the environment. **(Major)**.
- 4.6.13 Obsolete or expired chemicals shall be clearly identified and kept in a secure place till disposal. These shall be disposed of through official collection channels or in legal off-site areas. **(Major)**
- 4.6.14 A record of chemicals obtained, detailing the chemicals used, name of the supplier, date and quantity obtained, date of manufacture and expiry. **(Minor)**
- 4.6.15 A record of application for each crop shall be maintained giving details of chemical, reason for application, treatment location, dosage, method, date of application and name of operator. **(Major)**
- 4.6.16 A record of chemicals held in storage shall be maintained, detailing chemical name, date and quantities procured and date of complete use or disposal. **(Major)**
- 4.6.17 If chemical residues in excess of MRL are detected, in the market where the product is traded or exported, the marketing of the product shall cease and the cause of contamination shall be investigated. Corrective actions shall be taken to prevent recurrence and a record kept of the incident and the actions taken. **(Major)**
- 4.6.18 Non-agrochemicals shall be handled, stored and disposed in a manner to avoid any risks to food safety. **(Major)**
- 4.6.19 Integrated Pest Management (IPM) if implemented, shall requires careful consideration of available pest control techniques and the subsequent integration of appropriate measures to discourage the development of pest population while keeping the use of plant protection chemicals at minimal level. **(Major)**.

#### 4.7 Harvesting and Handling Produce

- 4.7.1 Harvested produce shall not be placed directly on the soil, or on the floor of the handling, packing or storage areas. **(Major)**

#### 4.8 Equipment, Containers and Materials:

- 4.8.1 Equipment, containers and materials that come in contact with produce shall be made of material that will not contaminate the produce and is easy to clean. **(Major)**.
- 4.8.2 The containers used for storage of chemicals, waste, and other dangerous substances shall be clearly identified and not be used to hold or store produce. **(Major)**.
- 4.8.3 Equipment and containers shall be regularly maintained to minimize contamination of produce and shall be kept in areas separate from chemicals, fertilizers and soil additives to avoid cross contamination. **(Major)**.
- 4.8.4 Equipment, containers and material shall be checked for soundness and cleanliness before use and cleaned, repaired and discarded as required. **(Major)**
- 4.8.5 The producer will have his measuring devices calibrated for ensuring correctness of measurement. **(Major)**.

## BTS 30: 2017

### 4.9 Buildings and Structures:

- 4.9.1 Building and structures used for growing, packing, handling and storage of produce shall be constructed and maintained to minimize the risk of contaminating produce. **(Major)**.
- 4.9.2 Grease, oil, fuel and farm machinery shall be segregated from handling, packing and storage areas to prevent contamination of produce. **(Minor)**.
- 4.9.3 Sewage, waste disposal and drainage systems shall be constructed so as to minimize the risk of contaminating the production site and the water supply. **(Major)**.
- 4.9.4 Lights in the packing house or store shall be shatter proof or protected with a shatter proof cover. **(Minor)**.
- 4.9.5 Where equipment and tools that may be sources of physical hazards are located in the same building as handling, packing and storage areas, these shall be isolated by a physical barrier or not used during the handling and packing of produce. **(Minor)**.

### 4.10 Cleaning and Sanitation:

- 4.10.1 Equipment, tools, containers and materials that may be sources of contamination to produce shall be identified and regularly cleaned and sanitized. **(Minor)**.
- 4.10.2 Appropriate cleaning and sanitation chemicals shall be selected to minimize the risk of these chemicals contaminating produce. **(Minor)**.

### 4.11 Animal and Pest Control:

- 4.11.1 House and farm animals shall be kept out of the production site (especially where crops are grown in or close to the ground. and around handling, packing and storage areas. **(Minor)**.
- 4.11.2 Measures shall be taken to prevent the presence of pests in and around handling, packing and storage areas. **(Major)**.
- 4.11.3 Baits and traps used for pest control shall be located and maintained to minimize the risk of contaminating produce. The location of bait traps shall be recorded. **(Major)**.

### 4.12 Personal Hygiene:

- 4.12.1 Workers shall be trained in personal hygiene practices and training records kept. **(Major)**.
- 4.12.2 Written instructions on personal hygiene shall be provided to workers and displayed in prominent locations. **(Minor)**.
- 4.12.3 Toilets and hand washing facilities shall be available to workers and maintained in a hygienic condition. **(Major)**.
- 4.12.4 Sewage shall be disposed of in a manner that minimizes of direct or indirect contamination to produce. **(Major)**.

### 4.13 Produce Treatment:

- 4.13.1 The quality of the water applied to the edible parts of produce shall be equivalent to that of drinking water. **(Major)**.
- 4.13.2 Chemicals applied for post-harvest and waxes shall follow the same practices as under the chemical section and shall comply with instructions and recommendations from competent authorities. **(Critical)**.
- 4.13.3 Specific test on produce shall be included if required by importing country. **(Minor)**.

### 4.14 Storage and Transport:

- 4.14.1 Produce shall be stored and transported separately from goods that are potential sources of chemical, biological or physical contamination. **(Major)**.
- 4.14.2 Produce shall be stored in cool places and overloading should be avoided. Produce should be covered to reduce moisture loss during transportation. **(Minor)**.
- 4.14.3 Containers filled with produce shall not be placed in direct contact with soil, where there is a significant risk of contaminating produce from soil. Pallets, if used, shall be checked for cleanliness, chemical spills, foreign objects and pest infestation and rejected if there is any risk of contaminating produce. **(Major)**.

4.14.4 Vehicles used for transporting produce shall be kept clean and maintained in good condition. These shall be checked before loading for cleanliness, chemical spills, foreign objects and pest infestation. **(Major)**.

#### 4.15 Traceability and Recall

4.15.1 Production sites shall be identified by a name or code and recorded on a site map. **(Major)**

4.15.2 Packed produce shall be clearly marked with name and identification to enable traceability of the produce to the farm or site where produce is grown. **(Major)**

4.15.3 A record detailing the date of delivery and destination of each produce consignment shall be maintained. **(Minor)**

4.15.4 Where produce is identified as contaminated or potentially contaminated, it shall be isolated, but if such identification is made after the produce is sold the buyers or consumers shall be notified immediately. **(Critical)**

4.15.5 The cause of contamination shall be investigated and corrective action taken to prevent its recurrence and a record kept of the incident and the action taken. **(Major)**

#### 4.16 Training

4.16.1 The farmers and workers shall be given sufficient training in the areas of responsibility relevant to good agricultural practices and records of training shall be kept. Some of the aspects that need to be included in any training are:

- a) The proper purchase, handling, storage and use of chemicals, including labeling requirements, selection of chemicals or bio-pesticides, which are approved and recommended by the competent authorities for the crops grown. **(Major)**.
- b) The application of suitable Integrated Pest Management and avoidance of use of inorganic chemicals. **(Major)**.
- c) Information and updates on the maximum residue limits (MRL) as specified in the Codex standards or the importing country's standards where the produce is to be traded. **(Minor)**.
- d) The need to test produce for chemical residues at a frequency required by customers or the market. **(Major)**.

4.16.2 The training needs shall be reviewed once a year.

#### 4.17 Documents and Records

4.17.1 Records of good agricultural practices shall be kept for two years or more in accordance with statutory requirements, if any, or business requirements. **(Major)**.

4.17.2 Obsolete (out-of-date) documents shall be discarded and only current versions should be in use. **(Major)**.

#### 4.18 Review of Practices

4.18.1 A review to be carried out at least once a year to identify new or emerging risk related to food safety and actions to correct any deficiencies identified and corrective actions taken. **(Major)**.

4.18.2 A record of the review undertaken and corrective action taken shall be kept. **(Major)**.

### OPTIONAL REQUIREMENTS

#### 4.19 Fertilizers and Soil Additives (Plant Nutrient Management and Fertilizer Use)

4.19.1 Documents should be made available to demonstrate that application of fertilizers/nutrients (organic or inorganic) is done by a competent/ trained person. **(Minor)**.

4.19.2 Records should be made available to demonstrate that the types and dosages of fertilizers/nutrients are in tune with the soil test – crop response studies and/or recommendations of National Soil Service Centre/ National Research Centre (NRC)/other approved organizations for the crop. **(Minor)**.

## **BTS 30: 2017**

- 4.19.3** A record indicating competence of producer(s) should be maintained to demonstrate their competence and knowledge in determining types and dosages of fertilizers in case advisers are absent. **(Minor)**.
- 4.19.4** The recommendations on the type and quantity of fertilizers/nutrient being used should be done by a competent, qualified advisor. **(Major)**.

### **4.20 Chemicals (Plant protection products or other agro and non- agrochemicals)**

- 4.20.1** It shall be ensured that chemicals are applied correctly by testing produce (in an accredited laboratory) for chemical residues at a predetermined frequency in line with the competent authority requirement of the country where produce is traded. **(Minor)**
- 4.20.2** Records for technical authorization of all chemicals applied along with their quantities should be maintained. **(Minor)**
- 4.20.3** A documented procedure should be available for correct handling and filling as stated on the label while mixing plant protection chemicals. **(Minor)**
- 4.20.4** The application of such formulations should be a manner that usage of chemical that they are economically justified and have minimal adverse impact to the environment. **(Minor)**

### **4.21 Criteria/Requirements Control**

The criteria and levels of controls required with respect to each criteria/requirements of the Food Safety Module shall be as follows:

## Food Safety Module (FSM)

Clause No.	Requirement (Category)	Verification Statement	Self /Auditor Comments	Compliance Status
4	<b>FOOD SAFETY MODULE</b>			
4.1	<b>Site History and Management</b>			
4.1.1	Site history shall be assessed to identify the risk of contamination to crops grown from the previous use of chemical and/or biological hazards on the site or on adjoining sites and the same shall be documented. <b>(Major)</b>	Site history assessment record		
4.1.2	Where significant risks are identified, the site shall not be used for production of fresh produce without first taking some action to manage the risk. <b>(Critical)</b>	Records and visual evidence		
4.1.3	If remedial action is required to manage any risk, a monitoring programme shall be in place to make sure that contamination to the produce does not occur and records of the same shall be maintained. <b>(Critical)</b>	Monitoring programme and applicable records		
4.2	<b>Planting Material</b>			
4.2.1	If planting material is produced on the farm, a record shall be kept of any fertilizers and/or chemicals used and the reason for usage. The records shall cover the treatments with date, trade name, active ingredient, name of operator, method of application, dosages and reason for its use. <b>(Major)</b>	Records of on farm planting material treatment		
4.2.2	A document that guarantees seed quality (free from injurious pests, diseases, virus, etc.) shall be in the farm. A record/certificate of seed quality shall be kept stating variety purity, variety name, batch number and seed vendor. <b>(Major)</b>	Visual confirmation of planting material		
4.2.3	The planting material shall be free of visible signs of pest and disease. Quality root stock and scion material should be used for in-house propagation or propagation material to be sourced from certified nursery (Government / private nurseries / agricultural institutions / accredited tissue culture laboratories). <b>(Major)</b>	Visual check and certificates		



## BTS 30: 2017

4.2.4	If seeds are treated with additives/pesticides (fungicides, insecticides, biocides and/or others), these shall be approved ones and as per recommended technologies <b>(Major)</b>	Records of seed treatment		
4.2.5	If planting material is obtained from another farm or nursery, the name of the farm and date of supply shall be recorded; <b>(Major)</b>	Traceability records of procured planting material		
4.2.6	No varieties known to be toxic to humans shall be grown <b>(Critical)</b> .	Varieties identified and records		
<b>4.3</b>	<b>Genetically Modified Organisms (GMO)</b>			
4.3.1	Planting or trials with GMO's shall comply with all applicable legislation in the country <b>(Critical)</b>	A copy of the country regulations and a compliance statement		
4.3.2	If producer is growing GMO this shall be documented <b>(Critical)</b>	GMO Documentation		
4.3.3	The producer shall inform clients about the GMO status of the product <b>(Critical)</b>	Details of communication		
4.3.4	A written plan shall be available for handling GM material (crops and trials) setting out strategies to minimize contamination hazards, such as accidental mixing of adjacent non-GM crops and maintaining product integrity and the same shall be recorded <b>(Critical)</b>	Written Plan and visual check		
4.3.5	GM crops shall be stored separately from other crops before dispatches to avoid adventitious mixing. <b>(Critical)</b>	Visual observation and dispatch records		
<b>4.4</b>	<b>Fertilizers and soil additives (Plant Nutrient Management and Fertilizer Use)</b>			
4.4.1	Assessment of the chemical and biological risks related to fertilizers and soil additives used for each crop grown shall be carried out and records of any significant hazards identified maintained <b>(Major)</b> ;	Risk assessment documentation		

4.4.2	If any significant hazards are identified, measures shall be taken to minimize the risk of contamination to produce ( <b>Critical</b> );	Measures taken and visual assessment		
4.4.3	Application of fertilizers and soil additives shall be based upon soil analysis and/or recommendations of technically competent personnel/ institutions/ authorities or based on own experience ( <b>Minor</b> );	Application records and recommendation		
4.4.4	Fertilizers and soil additives shall be selected and applied so as to minimize the risk of heavy metal contamination to produce ( <b>Minor</b> )	Application records		
4.4.5	Untreated organic materials shall not be applied where significant risk of contaminating produce is identified. If organic materials are treated on farm, the method of application, date and duration of treatment shall be recorded. If organic material is obtained from outside the farm and there is a significant risk identified, documents shall be available from the supplier to show that the material has been treated to minimize the risk of contamination to produce. ( <b>Major</b> )	Documentary evidence of compliance		
4.4.6	Untreated human sewage shall not be used for production of fresh produce. ( <b>Critical</b> )	Visual inspection		
4.4.7	The facilities for storage, mixing and loading of fertilizer/soil additives and for composting of organic material shall be located, constructed (e.g: - compost pits) and maintained in a manner to minimize the risk of contamination to production sites and water sources. ( <b>Major</b> )	Visual inspection		
4.4.8	Records shall be maintained for fertilizers and soil additives detailing the source, product name, date and quantity obtained and also for the application detailing the date, name of product, rate and method of application and name of the operators. ( <b>Major</b> )	Farm dairy/records verified		
4.4.9	The inorganic and organic fertilizers shall be stored separate from harvested farm produce ( <b>Major</b> ).	Visual verification		

## BTS 30: 2017

<b>4.5</b>	<b>Water (Irrigation/Fertigation)</b>			
4.5.1	The water used for irrigation/fertigation should be free from harmful contaminants. <b>(Major)</b>	verify		
4.5.2	Assessment of the source of water used for irrigation, application of chemicals or handling, washing, treating the produce or cleaning and sanitation shall be done at least annually to minimize the risks of chemical and biological contamination and records shall be kept. <b>(Minor)</b>	Annual assessment records		
4.5.3	Where water testing is required to assess the risk of contamination, tests shall be conducted at a frequency appropriate to the conditions impacting on the water supply and records shall be maintained. <b>(Critical)</b>	Test reports		
4.5.4	Where a significant risk is identified, either a safe alternate water source shall be used or the water treated before use. <b>(Major)</b>	Check for safe alternate/ water treatment Records		
4.5.5	Untreated sewage water shall not be used during production or for post-harvest handling. Where treated water is permitted, the water quality shall comply with the national regulations. <b>(Critical)</b>	Visually/ Water quality test reports		
4.5.6	The farmer shall maintain irrigation equipment as per manufacturer guidelines/manual. <b>(Minor)</b> ;	Maintenance schedule		
4.5.7	The farmer shall employ adequate measures to prevent flow of water into the fields from undesirable sources like municipal landfill areas, hospital & industry waste dump areas, etc. <b>(Major)</b>	Physical structure present		
<b>4.6</b>	<b>(Plant protection products or other agro and non-agrochemicals)</b>			
4.6.1	Only pesticides as permitted under <b>country's regulation</b> shall be used. <b>(Critical)</b>	List of permitted pesticides and application records		

4.6.2	Chemicals shall be purchased only from registered/licensed suppliers. <b>(Major)</b>	Invoices and/or proof of purchase		
4.6.3	Mixing of two or more chemicals shall not be done, unless recommended by technically competent personnel/ institutions/authorities. <b>(Minor)</b>	Mixing protocols documents		
4.6.4	The dosage as recommended by competent authorities shall be applied and excess chemicals shall not be used. <b>(Major)</b>	Recommendations		
4.6.5	Surplus chemicals shall be disposed in a manner to avoid contamination to the produce. <b>(Major)</b>	Disposal records		
4.6.6	Withholding periods for the interval between chemical application and harvest shall be maintained as per the pre harvest interval mentioned on the label. <b>(Major)</b>	Application and harvesting records		
4.6.7	Equipment for applying chemicals shall be maintained in working condition and checked for effective operation by a technically competent person. <b>(Major)</b>	Physical verification of equipments and maintenance records		
4.6.8	Equipment shall be washed properly after every use and washing water shall be disposed in a manner to avoid contamination to produce. <b>(Major)</b>	Cleaning records		
4.6.9	Chemicals shall be stored in a well-lit sound and secure structure, which is located and constructed to minimize the risk of contaminating produce and equipped with notices and emergency facilities in the event of a chemical spill. <b>(Minor)</b>	Visual inspection on construction, notices and emergency services		
4.6.10	Liquid chemicals shall not be stored on shelves above powders. <b>(Major)</b>	Physical verification		

## BTS 30: 2017

4.6.11	Chemicals shall be stored in the original container with a legible label and according to label directions; If chemicals are transferred to another container, the same shall be clearly marked with the name of the chemicals, the dosage to be used and the withholding period. <b>(Major)</b>	Physical verification		
4.6.12	Empty chemical containers shall not be reused and shall be collected in a secure place and properly disposed of according to the country's regulations and in a manner to avoid contamination of produce and the environment. <b>(Major)</b>	SOP, on-site check and interviews		
4.6.13	Obsolete or expired chemicals shall be clearly identified and kept in a secure place till disposal. These shall be disposed of through official collection channels or in legal off-site areas. <b>(Major)</b>	MoA with service providers and SOP carried out by farms		
4.6.14	A record of chemicals obtained, detailing the chemicals used, name of the supplier, date and quantity obtained, date of manufacture and expiry. <b>(Minor)</b>	Farm diary and proof of purchase		
4.6.15	A record of application for each crop shall be maintained giving details of chemical, reason for application, treatment location, dosage, method, date of application and name of operator. <b>(Major)</b>	Application records		
4.6.16	A record of chemicals held in storage shall be maintained, detailing chemical name, date and quantities procured and date of complete use or disposal. <b>(Major)</b>	Storage Records		
4.6.17	If chemical residues in excess of MRL are detected, in the market where the product is traded or exported, the marketing of the product shall cease and the cause of contamination shall be investigated. Corrective actions shall be taken to prevent recurrence and a record kept of the incident and the actions taken. <b>(Major)</b>	Check for any such case and corrective and preventive action record		
4.6.18	Non-agrochemicals shall be handled, stored and disposed in a manner to avoid any risks to food safety. <b>(Major)</b>	SOP and onsite verification		

4.6.19	Integrated Pest Management (IPM) if implemented, shall requires careful consideration of available pest control techniques and the subsequent integration of appropriate measures to discourage the development of pest population while keeping the use of plant protection chemicals at minimal level. <b>(Major)</b> .	IPM policy and records		
4.7	<b>Harvesting and Handling Produce</b>			
4.7.1	Harvested produce should not be placed directly on the soil, or on the floor of the handling, packing or storage areas. <b>(Major)</b>	Physical verification of practices		
4.8	<b>Equipment, containers and materials:</b>			
4.8.1	Equipment, containers and materials that come in contact with produce shall be made of material that will not contaminate the produce and is easy to clean. <b>(Major)</b>	Visual inspection		
4.8.2	The containers used for storage of chemicals, waste, and other dangerous substances shall be clearly identified and not be used to hold or store produce. <b>(Major)</b> .	Containers present and labelled.		
4.8.3	Equipment and containers shall be regularly maintained to minimize contamination of produce and shall be kept in areas separate from chemicals, fertilizers and soil additives to avoid cross contamination. <b>(Major)</b>	Maintenance schedule or visually		
4.8.4	Equipment, containers and material shall be checked for soundness and cleanliness before use and cleaned, repaired and discarded as required. <b>(Major)</b>	Visual check		
4.8.5	The producer shall have his measuring devices calibrated at least once per year or as per the legal requirements of the country. <b>(Major)</b>	Calibration report		
4.9	<b>Buildings and structures:</b>			
4.9.1	Building and structures used for growing, packing, handling and storage of produce shall be constructed and maintained to minimize the risk of contaminating produce. <b>(Major)</b>	Verification of building and structure		

## BTS 30: 2017

4.9.2	Grease, oil, fuel and farm machinery shall be segregated from handling, packing and storage areas to prevent contamination of produce ( <b>Minor</b> ).	Visual check of Segregation		
4.9.3	Sewage, waste disposal and drainage systems shall be constructed so as to minimize the risk of contaminating the production site and the water supply. ( <b>Major</b> )	Visual verification of drainage systems		
4.9.4	Lights in the packing house or store shall be shatter proof or protected with a shatter proof cover. ( <b>Minor</b> ).	Shatter proof material		
4.9.5	Where equipment and tools that may be sources of physical hazards are located in the same building as handling, packing and storage areas, these shall be isolated by a physical barrier or not used during the handling and packing of produce ( <b>Minor</b> ).	Isolation of physical hazards		
4.10	<b><i>Cleaning and sanitation:</i></b>			
4.10.1	Equipment, tools, containers and materials that may be sources of contamination to produce shall be identified and regularly cleaned and sanitized. ( <b>Minor</b> )	Cleaning/sanitation records and visual check		
4.10.2	Appropriate cleaning and sanitation chemicals shall be selected to minimize the risk of these chemicals contaminating produce. ( <b>Minor</b> )	List of chemicals		
4.11	<b><i>Animal and pest control:</i></b>			
4.11.1	House and farm animals shall be kept out of the production site (especially where crops are grown in or close to the ground. and around handling, packing and storage areas ( <b>Minor</b> ))	On site verification		
4.11.2	Measures shall be taken to prevent the presence of pests in and around handling, packing and storage areas. ( <b>Major</b> )	Pest control records		
4.11.3	Baits and traps used for pest control shall be located and maintained to minimize the risk of contaminating produce. The location of	Visual check and records		

	bait traps shall be recorded. <b>(Major)</b>			
4.12	<b>Personal hygiene:</b>			
4.12.1	Workers shall be trained in personal hygiene practices and training records kept. <b>(Major)</b>	Training records		
4.12.2	Written instructions on personal hygiene shall be provided to workers and displayed in prominent locations. <b>(Minor)</b>	Written instructions displayed		
4.12.3	Toilets and hand washing facilities shall be available to workers and maintained in a hygienic condition. <b>(Major)</b>	Availability of facilities		
4.12.4	Sewage shall be disposed of in a manner that minimizes of direct or indirect contamination to produce. <b>(Major)</b>	Manner of disposal of sewage		
4.13	<b>Produce treatment:</b>			
4.13.1	The quality of the water applied to the edible parts of produce shall be equivalent to that of drinking water. <b>(Major)</b>	Test reports		
4.13.2	Chemicals applied for post-harvest and waxes shall follow the same practices as under the chemical section and shall comply with instructions and recommendations from competent authorities. <b>(Critical)</b>	Chemical list		
4.13.3	Specific test on produce shall be included if required by importing country. <b>(Minor)</b>	Test report		
4.14	<b>Storage and transport:</b>			
4.14.1	Produce shall be stored and transported separately from goods that are potential sources of chemical, biological or physical contamination. <b>(Major)</b>	On-site segregation		
4.12.2	Produce shall be stored in cool places and overloading should be avoided. Produce should be covered to reduce moisture loss during transportation. <b>(Minor)</b>	Visual check		
4.14.3	Containers filled with produce shall not be			



## BTS 30: 2017

	placed in direct contact with soil, where there is a significant risk of contaminating produce from soil. Pallets, if used, shall be checked for cleanliness, chemical spills, foreign objects and pest infestation and rejected if there is any risk of contaminating produce. <b>(Major)</b>	SOP and visual check		
4.14.4	Vehicles used for transporting produce shall be kept clean and maintained in good condition. These shall be checked before loading for cleanliness, chemical spills, foreign objects and pest infestation. <b>(Major)</b>	Maintenance and cleaning records		
<b>4.15</b>	<b>Traceability and recall</b>			
4.15.1	Production sites shall be identified by a name or code and recorded on a site map. <b>(Major)</b>	Code and site map		
4.15.2	Packed produce shall be clearly marked with name and identification to enable traceability of the produce to the farm or site where produce is grown <b>(Major)</b> ;	Visual check for Markings		
4.15.3	A record detailing the date of delivery and destination of each produce consignment shall be maintained. <b>(Minor)</b>	Records		
4.15.4	Where produce is identified as contaminated or potentially contaminated, it shall be isolated, but if such identification is made after the produce is sold the buyers or consumers shall be notified immediately. <b>(Critical)</b>	SOP and mock drills		
4.15.5	The cause of contamination shall be investigated and corrective action taken to prevent its recurrence and a record kept of the incident and the action taken. <b>(Major)</b>	Root cause analysis and corrective action records		
<b>4.16</b>	<b>Training</b>			
4.16.1a	The proper purchase, handling, storage and use of chemicals, including labeling requirements, selection of chemicals or bio-pesticides, which are approved and recommended by the competent authorities for the crops grown. <b>(Major)</b>	Records and recommendations		
4.16.1b	The application of suitable Integrated Pest			

	Management and avoidance of use of inorganic chemicals. <b>(Major)</b>	Pest management documented verified		
4.16.1c	Information and updates on the National MRLs and MRLs of the countries where the produce is to be traded. <b>(Minor)</b>	List of permitted MRLs		
4.16.1d	The need to test produce for chemical residues at a frequency required by customers or the market. <b>(Major)</b>	Test produce frequency with reports		
4.16.2	The training needs shall be reviewed once a year.	Review report		
<b>4.17</b>	<b>Documents and records</b>			
<b>4.17.1</b>	Records of all practices shall be kept for a minimum period of two years or longer, if required by country legislation or customer. <b>(Major)</b>	Records retention policy, visual check of records		
<b>4.17.2</b>	Out-of-date documents should be discarded and only current versions should be used. <b>(Major)</b>	Visual check		
<b>4.18</b>	<b>Review of practices</b>			
<b>4.18.1</b>	A review to be carried out at least once a year to identify new or emerging risk related to food safety and actions to correct any deficiencies identified and corrective actions taken. <b>(Major)</b>	Review records		
<b>4.18.2</b>	ii. A record of the review undertaken and corrective action taken shall be kept. <b>(Major)</b>	Review and Corrective action records		
	<b>OPTIONAL REQUIREMENTS</b>			
<b>4.19</b>	<b>Fertilizers and soil additives (Plant nutrient management and fertilizer use)</b>			
<b>4.19.1</b>	Documents should be made available to demonstrate that application of fertilizers / nutrients (organic or inorganic) is done by a	Competence		

## BTS 30: 2017

	competent/ trained person. <b>(Minor)</b>	records		
4.19.2	A record indicating competence of producers should be maintained to demonstrate their competence and knowledge in determining types and doses of fertilizers in case advisers are absent. <b>(Minor)</b>	Records and knowledge assessed by interviews		
4.19.3	Records should be made available to demonstrate that the types and dosages of fertilizers/ nutrients are in tune with the soil test – crop response studies and or recommendations of the State Agriculture Universities (SAU) / National Research Centre (NRC)/other approved organizations, recommendations for the crop. <b>(Minor)</b>	Records of type and dosage of inputs		
4.19.4	The recommendations on the type and quantity of fertilizers/nutrients being used should be done by a competent qualified advisor. <b>(Major)</b>	Record of type and quantities prescribed by advisor		
4.20	<b>Chemicals (Plant protection products or other agro and non- agrochemicals)</b>			
4.20.1	It shall be ensured that chemicals are applied correctly by testing produce (in an accredited laboratory) for chemical residues at a predetermined frequency in line with the competent authority requirement of the country where produce is traded. <b>(Minor)</b>	Chemical application dosage records along with test reports.		
4.20.2	Records for technical authorization of all chemicals applied along with their quantities should be maintained. <b>(Minor)</b>	Authorization records		
4.20.3	A documented procedure should be available for correct handling and filling as stated on the label while mixing plant protection chemicals. <b>(Minor)</b>	Procedure		
4.20.4	The application of such formulations should be a manner that usage of chemical that they are economically justified and have minimal adverse impact to the environment. <b>(Minor)</b>	Formulation and application records		

## 5 Environmental Management Module (EMM)

This section deals with Good Agricultural Practices (GAP) to be implemented in order to minimize harmful effects of production and production practices on the environment. While addressing these, consideration should be given to National Environmental Policy. These practices are grouped into 13 elements.

### 5.1 Site History and Management

- 5.1.1 Sites used for production shall comply with the country's regulation to restrict production on steep slopes. **(Major)**.
- 5.1.2 For new sites, the risk of causing environmental harm on and off the site shall be assessed and a record kept of the hazards assessed. The risk assessment shall take into consideration prior use of a site, the potential impact of crop production and post-harvest handling on and off the site, and potential impact of adjacent sites on the new site. If there is a significant risk to the environment identified, the new site should either not be used for crop production and post-harvest handling or measures to prevent or minimize these potential hazards shall be taken. **(Critical)**.
- 5.1.3 Highly degraded areas shall be managed to avoid further degradation. **(Major)**.
- 5.1.4 Management of the site activity shall conform to the country environmental conditions covering air, water, noise, soil, biodiversity and other environmental issues. **(Major)**.
- 5.1.5 A farm layout map shall be maintained showing the crop production sites, environmentally sensitive or degraded areas (if any), storage and mixing areas of chemicals, water storage, water-course and drains, building structures and roads. **(Major)**.

### 5.2 Planting Material

- 5.2.1 Diseases or pest-resistant planting material shall be selected to minimize the use of chemicals. **(Major)**.
- 5.2.2 The planting material shall also be selected based on compatibility with soil type, soil fertility and so that the use of additional nutrient supplying chemicals is avoided. **(Major)**.

### 5.3 Soil and Substrates (Substrate Management)

- 5.3.1 The production practices selected shall be suitable for the soil type and not increase the risk of environmental degradation. **(Major)**.
- 5.3.2 Where possible soil maps should be used to plan for crop rotation or a fallow period to increase soil fertility should be encouraged. **(Minor)**.
- 5.3.3 Production practices to improve and maintain soil structure as well as soil compaction shall be used to avoid erosion. **(Major)**.
- 5.3.4 Chemicals used to sterilize soils and substrates may be used and a record shall be kept detailing the site name, name of the product or material, name of the chemicals, the date of application, dosage and method of application and operator's name. **(Critical)**.

### 5.4 Fertilizers and Soil Additives

- 5.4.1 Fertilizers and soil additives shall be applied according to the recommendation of National Soil Service Centre or any other competent source and also considering the crop and soil type to avoid the nutrient run-off or leaching. **(Major)**.
- 5.4.2 Facilities for storage, mixing or loading of fertilizer and soil additives and for composting of organic matter shall be located, constructed and maintained to minimize the risk of environmental pollution on and off the site and of water sources. **(Minor)**.
- 5.4.3 The equipment used to apply fertilizers and soil additives shall be maintained in good condition and annually checked by a technically competent person. **(Minor)**.
- 5.4.4 The application of fertilizers and soil additive shall be recorded detailing the name of the fertilizer or soil additive, location, date, rate and method of application and the operator's name. **(Major)**.

## BTS 30: 2017

### 5.5 Water

- 5.5.1 Irrigation shall be based on crop water requirements, availability of water and soil moisture levels. The irrigation system shall be checked and maintained in good condition to ensure its efficiency during irrigation and to minimize wastage of water. **(Major)**.
- 5.5.2 Water collection, storage and use shall be managed in accordance with The Water Act, 2012, Rules and Regulations, 2014 and a record shall be kept of irrigation use, detailing crop, date, location and volume of water irrigated or duration of irrigation. **(Major)**.
- 5.5.3 To minimize the risk to the environment, any water discharge or wastewater shall be treated. **(Major)**.
- 5.5.4 A water management plan to optimize water usage and reduce waste shall be made available. **(Major)**.

### 5.6 Chemicals (Plant Protection Products and Other Inputs)

- 5.6.1 Farmers or workers need to be trained to a level appropriate to their area of responsibility for chemical application. **(Major)**.
- 5.6.2 Chemicals used for crop protection shall be selected so as to minimize the negative effect on the environment and antagonist organisms of pests and diseases. **(Major)**.
- 5.6.3 Crop protection measures shall be based on the recommendations of competent authorities or a plant protection organization. **(Major)**.
- 5.6.4 The use of chemicals should be minimized by the application of Integrated Pest Management (IPM) and biological control products. **(Major)**.
- 5.6.5 Only chemicals obtained from licensed suppliers and approved by a competent authority for the crop grown shall be used. **(Major)**.
- 5.6.6 Chemicals shall be applied according to the label directions and guidance from the competent authority. **(Critical)**
- 5.6.7 A rotation strategy for chemical application and crop protection measures shall be used to avoid pests and diseases resistance. **(Minor)**.
- 5.6.8 Appropriate volumes of chemicals shall be mixed to minimize the amount of surplus chemical after application. **(Major)**.
- 5.6.9 Surplus chemical mixes and tank washings shall be disposed of in a manner that minimizes the risk of environmental harm on and off the site. Empty chemical containers shall be collected and disposed of according to Pesticides Act. 2000. **(Major)**.
- 5.6.10 Obsolete chemicals shall be identified clearly, kept in secure places and disposed of through official collection systems. **(Critical)**.
- 5.6.11 The application of chemicals shall be recorded for each crop, detailing the chemicals' names, the reason for application, date of application, location, dosage and method of application and name of operator and, where applicable, a record of chemicals held in storage shall be kept detailing the chemicals' names, date and quantity of purchase and date when completely used or disposed of. **(Major)**.
- 5.6.12 Chemicals used for post-harvesting and handling produce should be stored and disposed of according to Pesticides Act. 2000, so as to minimize the risk to environment. **(Major)**.

### 5.7 Waste Management

- 5.7.1 A waste management procedure shall be documented and followed, including identification of waste products generated during production, harvesting and handling produce, using practices to minimize waste generation, to reuse, recycle waste and dispose of waste. **(Major)**.

### 5.7 Energy Efficiency

- 5.8.1 The use of electricity and fuel should be reviewed to ensure that efficient operation practices are implemented. **(Major)**
- 5.8.2 Machine and equipment shall be maintained in good condition to ensure the efficiency of operation and to save energy. **(Minor)**.

### 5.9 Biodiversity

**5.9.1** The production plan shall comply with National Biodiversity Act of Bhutan, 2003 and National Biodiversity Strategy and Action Plan covering protected plant and animal species and to preserve native plant and animal species, including native vegetation areas, wildlife corridors and vegetation areas on or near the bank of waterways. **(Major)**.

**5.9.2** Measures shall be applied to control/protect feral animals. **(Minor)**.

**5.10 Air/Noise**

**5.10.1** If an offensive odor, or smoke, dust or noises are generated from production practices, management action shall be taken to minimize the impact on neighbouring property and surrounding areas. **(Major)**.

**5.11 Training**

**5.11.1** Farmers and workers shall be trained to have appropriate knowledge in their areas of responsibility related to good agricultural practices and training records shall be kept. **(Major)**.

**5.12 Documents and Records**

**5.12.1** Records of good agricultural practices shall be kept for two years or more in accordance with statutory requirements, if any, or business requirements. **(Major)**.

**5.12.2** Obsolete (out-of-date) documents shall be discarded and only current versions should be in use. **(Major)**.

**5.13 Review of Practices**

**5.13.1** A review to be carried out at least once a year to identify any new and emerging hazards due to inputs, processes or hazards affecting the environment. **(Major)**.

**5.13.2** A record of the review undertaken and the corrective actions taken shall be kept. **(Major)**.

**OPTIONAL REQUIREMENTS**

**5.14 Site History and Management**

**5.14.1** Each producer should maintain a management and conservation plan for protecting biodiversity and wildlife impacted due to farming activities which should include baseline audit to understand biodiversity, mentions action to avoid damage and deterioration of habitats and details measure to enhance biodiversity on the farm. **(Minor)**.

**5.14.2** The producer should have policy and consider improving the environment for the benefit of the local community and flora and fauna. **(Minor)**.

**5.15 Soil and Substrates (Substrate Management)**

**5.15.1** The producer should participate in substrate recycling programmes for substrates where available. **(Minor)**.

**5.15.2** There should be written justification available for the use of soil fumigants. **(Minor)**.

**5.15.3** A pre-planting interval should be identified and complied with soil fumigation. **(Minor)**.

**5.16 Criteria/Requirements Control**

The criteria and levels of controls required with respect to each criteria/requirements of the Environmental Management Module (EMM) shall be as follows:

**Environmental Management Module (EMM)**

Clause No.	Requirement (Category)	Verification Statement	Self/Auditor Comments	Compliance Status
<b>5</b>	<b>ENVIRONMENTAL MANAGEMENT MODULE (EMM)</b>			
<b>5.1</b>	<b>Site History and Management</b>			
5.1.1	Sites used for production shall comply with the country regulations that restrict production at high altitudes or steep slope <b>(Major)</b>	Site assessed with respect to country regulations		
5.1.2	For new sites, the risk of causing environmental harm on and off the site shall be assessed and a record kept of the hazards assessed <b>(Critical)</b> .	Risk assessment conducted and hazards recorded		
5.1.3	Highly degraded areas shall be managed to avoid further degradation <b>(Major)</b>	Management of degraded areas documented		
5.1.4	Management of the site activity shall conform to the country requirements for environmental conditions covering air, water, noise, soil, biodiversity and other environmental. <b>(Major)</b>	Records to demonstrate Conformance		
5.1.5	A farm layout map shall be maintained showing the crop production sites, environmentally sensitive or degraded areas (if any), storage and mixing areas of chemicals, water storage, water-course and drains, building structures and roads. <b>(Major)</b>	Farm layout map with legends/ markings		
<b>5.2</b>	<b>Planting Material</b>			
5.2.1	Diseases or pest-resistant planting material shall be selected to minimize the use of chemicals. <b>(Major)</b>	Selection criteria available		
5.2.2	The planting material shall also be selected based on compatibility with soil type, soil fertility and so that the use of additional nutrient supplying chemicals is avoided. <b>(Major)</b>	Criteria of planting material recorded/ visual/ interviews		
<b>5.3</b>	<b>Soils and Substrate</b>			
5.3.1	The production practices selected shall be suitable for the soil type and not increase the risk of environmental degradation. <b>(Major)</b>	Verify production practices		
5.3.2	Where possible soil maps should be used to plan for crop rotation or a fallow period to increase soil fertility should be encouraged. <b>(Minor)</b>	Plans based on soil maps		
5.3.3	Production practices to improve and maintain soil structure as well as soil compaction shall be used to avoid erosion. <b>(Major)</b>	Visual check		

5.3.4	Chemicals used to sterilize soils and substrates may be used and a record kept. <b>(Critical)</b>	Records		
<b>5.4</b>	<b>Fertilizers and Soil Additives</b>			
5.4.1	Fertilizers and soil additives shall be applied according to the recommendation of competent authorities or any other competent source and also considering the crop and soil type to avoid the nutrient run-off or leaching. <b>(Major)</b>	Basis of applications and application records		
5.4.2	Facilities for storage, mixing or loading of fertilizer and soil additives and for composting of organic matter shall be located, constructed and maintained to minimize the risk of environmental pollution on production related sites and of water sources <b>(Minor)</b>	Visual check		
5.4.3	The equipment used to apply fertilizers and soil additives shall be maintained in good condition and annually checked by a competent person <b>(Minor)</b> .	Equipment maintenance records		
5.4.4	The application of fertilizers and soil additive shall be recorded detailing the name of the fertilizer or soil additive, location, date, rate and method of application and the operator's name. <b>(Major)</b>	Fertilizer application records		
<b>5.5</b>	<b>Water</b>			
5.5.1	Irrigation shall be based on crop water requirements, availability of water and soil moisture levels. The irrigation system shall be checked and maintained in good condition to ensure its efficiency during irrigation and to minimize wastage of water. <b>(Major)</b>	Irrigation schedule and details Soil moisture may be checked physically		
5.5.2	Water collection, storage and use shall be managed in accordance with country regulations and a record shall be kept of irrigation use, detailing crop, date, location and volume of water irrigated or duration of irrigation. <b>(Major)</b>	Irrigation system records		
5.5.3	To minimize the risk to the environment, any water discharge or wastewater shall be treated. <b>(Major)</b>	Treatment process and record		
5.5.4	A water management plan to optimize water usage and reduce waste shall be made available. <b>(Major)</b>	Water management plan		
<b>5.6</b>	<b>Chemicals (Plant Protection Products and Other Inputs)</b>			
5.6.1	Farmers or workers need to be trained to a level appropriate to their area of responsibility for chemical application. <b>(Major)</b>	Interviews/Training records		



## BTS 30: 2017

5.6.2	Chemicals used for crop protection shall be selected so as to minimize the negative effect on the environment and antagonist organisms of pests and diseases. <b>(Major)</b>	Chemical application records		
5.6.3	Crop protection measures shall be based on the recommendations of competent authorities or a plant protection organization. <b>(Major)</b>	Recommendation of measures and its source		
5.6.4	The use of chemicals should be minimized by the application of Integrated Pest Management (IPM) and biological control products. <b>(Major)</b>	IPM effectiveness records		
5.6.5	Only chemicals obtained from licensed suppliers and approved by a competent authority for the crop grown shall be used. <b>(Major)</b>	Invoice and/or proof of procurement		
5.6.6	Chemicals shall be applied according to the label directions and guidance from the competent authority. <b>(Critical)</b>	Application records		
5.6.7	A rotation strategy for chemical application and crop protection measures shall be used to avoid pests and diseases resistance <b>(Minor)</b>	Application records		
5.6.8	Appropriate volumes of chemicals shall be mixed to minimize the amount of surplus chemical after application. <b>(Major)</b>	Application records		
5.6.9	Surplus chemical mixes and tank washings shall be disposed of in a manner that minimizes the risk of environmental harm on and off the site. Empty chemical containers shall be collected and disposed of according to country regulations. <b>(Major)</b>	Disposal on-site verification		
5.6.10	Obsolete chemicals shall be identified clearly, kept in secure places and disposed of through official collection systems. <b>(Critical)</b>	On-site verification		
5.6.11	The application of chemicals shall be recorded for each crop, detailing the chemicals' names, the reason for application, date of application, location, dosage and method of application and name of operator and, where applicable, a record of chemicals held in storage shall be kept detailing the chemicals' names, date and quantity of purchase and date when completely used or disposed of. <b>(Major)</b> .	Chemical application records		
5.6.12	Chemicals used for post-harvesting and handling produce should be stored and disposed of according to country regulations. <b>(Major)</b> .	Visual verification/ interviews		
<b>5.7</b>	<b>Waste Management</b>			

5.7.1	A waste management procedure shall be documented and followed, which includes identification of waste products generated during production, harvesting and handling produce, using practices to minimize waste generation, to reuse, recycle waste and dispose of waste. <b>(Major)</b>	Check procedure, visual & Records		
<b>5.8</b>	<b>Energy Efficiency</b>			
5.8.1	The use of electricity and fuel should be reviewed to ensure that efficient operation practices are implemented <b>(Major)</b>	Electricity and fuel consumption records over time		
5.8.2	Machine and equipment shall be maintained in good condition to ensure the efficiency of operation and to save energy. <b>(Minor)</b>	Maintenance records/fuel consumption records		
<b>5.9</b>	<b>Biodiversity</b>			
5.9.1	The production plan shall comply with <b>country regulations</b> covering protected plant and animal species and to preserve native plant and animal species, including native vegetation areas, wildlife corridors and vegetation areas on or near the bank of waterways. <b>(Major)</b>	Production plan		
5.9.2	Measures shall be applied to control/protect feral animals. <b>(Minor)</b>	Visual & interview		
<b>5.10</b>	<b>Air/Noise</b>			
5.10.1	If an offensive odour, or smoke, dust or noises are generated from production practices, management action shall be taken to minimize the impact on neighboring property and surrounding areas. <b>(Major)</b>	Mitigating action documentation, visual & interview		
<b>5.11</b>	<b>Training</b>			
5.11.1	Farmers and workers shall be trained to have appropriate knowledge in their areas of responsibility related to good agricultural practices. <b>(Major)</b>	Training records or Interview		
<b>5.12</b>	<b>Documents and Records</b>			
5.12.1	Records of good agricultural practices shall be kept for two years or more in accordance with the country regulations or customer requirements, if any. <b>(Major)</b>	Records		
5.12.2	Obsolete documents should be discarded and only the current versions of documents relevant to good agriculture practices shall be in use. <b>(Major)</b>	Records & current documents in circulation		
<b>5.13</b>	<b>Review of practices</b>			

## BTS 30: 2017

5.13.1	A review to be carried out at least once a year to identify any new and emerging hazards due to inputs, processes or hazards affecting the environment. <b>(Major)</b>	Review records		
5.13.2	A record of the review undertaken and the corrective actions taken shall be kept. <b>(Major)</b>	Corrective actions records		
	<b>OPTIONAL REQUIREMENTS</b>			
5.14	<b>Site History and Management</b>			
5.14.1	Each producer should maintain a management and conservation plan for protecting biodiversity and wildlife impacted due to farming activities which should include baseline audit to understand biodiversity, mention action to avoid damage and deterioration of habitats and details measure to enhance biodiversity on the farm. <b>(Minor)</b>	Conservation & management plan		
5.14.2	The producer should have policy and consider improving the environment for the benefit of the local community and flora and fauna. <b>(Minor)</b>	Policy & implementation		
5.15	<b>Soil and Substrates (Substrate Management)</b>			
5.15.1	The producer should participate in substrate recycling programmes for substrates where available. <b>(Minor)</b>	Records		
5.15.2	There should be written justification available for the use of soil fumigants. <b>(Minor)</b>	Soil fumigation record		
5.15.3	A pre-planting interval should be identified and complied with soil fumigation. <b>(Minor)</b>	Cross check records of soil fumigation and planting.		

## 6 Worker Health, Safety and Welfare Module (WHSM)

This module addresses the issue of worker health, safety and welfare requirement. The types of hazards encountered by workers include mechanical, chemical, biological, electrical, solar radiation, noise, stress and fatigue and welfare related. The good agricultural practices (GAP) requirements for controlling hazards to worker health, safety and welfare are grouped into six elements. Any person who works in the farm including, adult family members, permanent, temporary/causal/sub-contracted labour is a worker.

### 6.1 Chemicals

- 6.1.1 Chemical should be handled and applied by trained workers with appropriate knowledge and skills. **(Critical)**.
- 6.1.2 Chemicals shall be stored in well lit, sound and secure structures with access permitted to authorized persons only. The storage structures should be such as to minimize the risk of contaminating workers and it be equipped with emergency facilities to deal with cases of a chemical spill. **(Major)**.
- 6.1.3 Chemicals should be stored in their original containers with legible labels and instructions from competent authorities. If chemicals are transferred to another container, the new container shall be clearly marked with the brand name, dosage of use, and withholding period. **(Major)**.
- 6.1.4 Reuse of empty chemical containers for purposes other than containing and transporting identical products shall not be permitted. **(Major)**.
- 6.1.5 The Material Safety Data Sheets (MSDS) of all chemicals shall be available. **(Major)**.
- 6.1.6 Safety instructions shall be provided to workers and displayed in appropriate and readily accessible places. **(Major)**.
- 6.1.7 A facility along with first - aid measures shall be available and accessible to treat workers contaminated with chemicals and accident. **(Major)**.
- 6.1.8 Emergency instructions shall be documented and placed in prominent places within the chemical storage area. **(Major)**.
- 6.1.9 The workers who are handling and applying chemicals or entering newly sprayed sites shall be equipped with suitable protective clothing and equipment. Clothes and protective equipment shall be cleaned and stored separately from crop protection chemicals. **(Major)**.
- 6.1.10 People shall not be allowed access to the sites where chemical are being applied or have just been applied for the appropriate period depending on the type of chemical used and if chemicals have been applied in public areas of public access, the site should be marked with warning sign. **(Major)**.

### 6.2 Working Conditions

- 6.2.1 Working conditions shall be suitable for workers but where hazardous conditions cannot be avoided entirely, protective equipment/ clothing should be provided. **(Major)**.
- 6.2.2 All farm vehicles, equipment and tools, including electrical and mechanical devices shall be adequately guarded and maintained in good condition to minimize the risk to workers. **(Major)**.
- 6.2.3 A safety operation manual for operation of equipment, machinery, accessories and their handling practices shall be provided to workers and displayed in prominent places. **(Major)**.

## BTS 30: 2017

### 6.3 Personal Hygiene:

**6.3.1** Farmers and workers should be trained on personal hygiene practices for ensuring his own health and well-being. The records of training shall be kept. **(Major)**

**6.3.2** Written instructions on personal hygiene practices should be provided to workers and displayed in prominent locations. **(Major)**

**6.3.3** Medical check-up of workers shall be done at six monthly intervals and records kept for 5 years. **(Minor)**.

**6.3.4** Toilets and hand and body washing facilities should be readily available and maintained in a hygienic condition. **(Major)**.

**6.3.5** Sewage shall be disposed of in a manner to minimize the risk of contamination to workers. **(Major)**.

**6.3.6** Where employers are to provide health cover to workers, any serious health issue is to be reported to the appropriate authorities. **(Major)**.

**6.3.7** Measures should be applied to minimize the access of domestic and farm animals to production sites and around the handling, packing and storage areas. **(Major)**.

### 6.4 Worker Welfare

This is important both for the wellbeing of workers and the productivity of the farm or the processing shed;

**6.4.1** Workers shall not be exploited because of gender, age or other reasons. **(Major)**.

**6.4.2** Living quarters should be suitable for human habitation and contain basic services and facilities – clean food storage areas, designated eating areas, hand washing facilities and drinking water. **(Major)**.

**6.4.3** The minimum working conditions including working hours and minimum wages shall comply with the Labour and Employment Act of Bhutan, 2007 and Rules and Regulations framed there under. **(Critical)**.

**6.4.4** Work place shall be secured from dangers of wild animals. **(Major)**.

### 6.5 Training

**6.5.1** Workers shall be trained in safety requirements (Safety Drill), accident and emergency response measures, First – Aid practices, safe use of chemicals and personal hygiene. **(Major)**.

**6.5.2** Workers shall also be provided appropriate training in areas of their responsibility such as vehicles, tools and equipment operation, handling and application of chemicals. **(Major)**.

**6.5.3** “Environmental Education and Awareness” programme and “Human – Animal Coexistence Training” for all personnel working in the farm shall be organized. **(Major)**.

**6.5.4** The training needs shall be reviewed once a year. **(Minor)**.

### 6.6 Documents and Records

**6.6.1** Records of good agricultural practices (GAP) shall be kept for two years or more in accordance with statutory requirements, if any, or business requirements. **(Major)**.

**6.6.2** Obsolete (out-of-date) documents shall be discarded and only current versions should be in use. **(Major)**.

### 6.7 Review of Practices

**6.7.1** All practices affecting occupational health and safety of workers shall be reviewed at least once a year to ensure that they are done correctly and actions should be taken to correct any deficiencies identified. **(Major)**.

**6.7.2** A record of the review undertaken and any corrective actions taken shall be kept. **(Minor)**.

**6.7.3** Actions should be taken to resolve complaints related to worker health, safety and welfare, and records kept on complaints and action taken. **(Minor)**.

#### **OPTIONAL REQUIREMENTS**

##### **6.8 Worker Welfare**

**6.8.1** A member of management should be identified as responsible for workers health, safety and welfare. **(Minor)**.

**6.8.2** Regular two-way communication meetings should take place between management and workers for which records are kept and made available. **(Minor)**.

**6.8.3** All workers who have contact with plant protection products should be subjected to voluntarily annual health checks. **(Minor)**.

##### **6.9 Criteria/Requirements Control**

The criteria and levels of controls required with respect to each criteria/requirements of the Worker Health, Safety and Welfare Module (EMM) shall be as follows:

## Worker Health, Safety and Welfare Module (WHSM)

Clause No.	Requirement (Category)	Verification Statement	Self/Auditor Comments	Compliance Status
6	<b>WORKER HEALTH, SAFETY AND WELFARE MODULE (WHSM)</b>			
6.1	<b>Chemicals</b>			
6.1.1	Chemical should be handled and applied by trained workers with appropriate knowledge and skills. <b>(Critical)</b>	Interviews or training records		
6.1.2	Chemicals shall be stored in well lit, sound and secure structures with access permitted to authorized persons only. The storage structures should be such as to minimize the risk of contaminating workers and it be equipped with emergency facilities to deal with cases of a chemical spill. <b>(Major)</b> .	Visual assessments and Interviews		
6.1.3	Chemicals should be stored in their original containers with legible labels and instructions from competent authorities. If chemicals are transferred to another container the new container shall be clearly marked with the brand name, dosage of use, and withholding period <b>(Major)</b>	Visual assessments and Interviews		
6.1.4	Reuse of empty chemical containers for purposes other than containing and transporting identical products shall not be permitted. <b>(Major)</b>	Visual assessments and Interviews		
6.1.5	The Material Safety Data Sheets (MSDS) of all chemicals shall be available. <b>(Major)</b>	MSDS availability		
6.1.6	Safety instructions shall be provided to workers and displayed in appropriate and readily accessible places. <b>(Major)</b>	Safety instructions documents and visual		
6.1.7	A facility along with first aid measures shall be available and accessible to treat workers contaminated with chemicals and accident. <b>(Major)</b>	First - aid Kit availability and content		
6.1.8	Emergency instructions shall be documented and placed in prominent places within the chemical storage area. <b>(Major)</b>	Emergency instructions & visual assessment		
6.1.9	The workers that are handling and applying chemicals or entering newly sprayed sites shall be equipped with suitable protective clothing and equipment. Clothes and protective equipment shall be cleaned and stored separately from crop protection chemicals. <b>(Major)</b>	visual assessment and interviews		
6.1.10	People shall not be allowed access to the sites where chemical are being applied or have just been applied for the appropriate period depending on the type of chemical used and if	Warning signs, visual assessment and interviews		

	chemicals have been applied in public areas of public access, the site should be marked with warning sign. <b>(Major)</b>			
<b>6.2</b>	<b>Working Conditions</b>			
6.2.1	Working conditions shall be suitable for workers but where hazardous conditions cannot be avoided entirely, protective equipment/ clothing should be provided. <b>(Major)</b>	Protecting clothing visual		
6.2.2	All farm vehicles, equipment and tools, including electrical and mechanical devices shall be adequately guarded and maintained in good condition to minimize the risk to workers. <b>(Major)</b>	Visual and maintenance record		
6.2.3	A safety operation manual for operation of equipment, machinery, accessories and handling practices shall be provided to workers and displayed in prominent places. <b>(Major)</b>	Safety manual		
<b>6.3</b>	<b>Personal Hygiene:</b>			
6.3.1	Farmers and workers should be trained on personal hygiene practices for ensuring his own health and well-being. The records of training shall be kept. <b>(Major)</b>	Training records or Interviews		
6.3.2	Written instructions on personal hygiene practices should be provided to workers and displayed in prominent locations. <b>(Major)</b>	Written instruction display		
6.3.3	Medical checkup of workers at six monthly/ yearly intervals shall be done and records kept for 5 years. <b>(Minor)</b>	Records of medical check-up verified		
6.3.4	Toilets and hand and body washing facilities should be readily available and maintained in a hygienic condition <b>(Major)</b>	Visual assessment		
6.3.5	Sewage shall be disposed of in a manner to minimize the risk of contamination to workers. <b>(Critical)</b>	Visual assessment and interviews		
6.3.6	Where employers are to provide health cover to workers, any serious health issue is to be reported to the appropriate authorities. <b>(Major)</b>	Records		
6.3.7	Measures should be applied to minimize the access of domestic and farm animals to production sites and around the handling, packing and storage areas. <b>(Major)</b>	Visual assessment		
<b>6.4</b>	<b>Worker Welfare</b>			
6.4.1	Workers treated equally in all aspects. <b>(Major)</b>	Worker interview		
6.4.2	Workers shall not be exploited because of gender, age, race or other reasons. <b>(Major)</b>	Worker Interviews		
6.4.3	Living quarters should be suitable for human habitation and contain basic services and facilities – clean food storage areas, designated eating areas, hand washing facilities and drinking water. <b>(Major)</b>	Quarters visited		
6.4.4	The minimum working conditions including working hours and minimum wages shall comply with the Labour and Employment Act of Bhutan, 2007 and Rules and Regulations framed there	Payment Ledger & interviews of workers		



## BTS 30: 2017

	under. <b>(Critical)</b> .			
<b>6.5</b>	<b>Training</b>			
6.5.1	Workers shall be trained in safety requirements (Safety Drill), accident and emergency response measures, First – Aid practices, safe use of chemicals and personal hygiene. <b>(Major)</b> .	Workers interview		
6.5.2	Workers shall also be provided appropriate training in areas of their responsibility such as vehicles, tools and equipment operation, handling and application of chemicals. <b>(Major)</b> .	Training records or workers interviews		
6.5.3	“Environmental Education and Awareness” programme and “Human – Animal Coexistence Training” for all personnel working in the farm shall be organized. <b>(Major)</b> .	Training Records		
6.5.4	The training needs shall be reviewed once a year. <b>(Minor)</b>	Review records		
<b>6.6</b>	<b>Documents and Records</b>			
6.6.1	Records of all practices shall be kept for a minimum period of two years or longer, if required by country legislation or customer. <b>(Major)</b>	Records and documents		
6.6.2	Out-of-date documents should be discarded and only current versions should be used. <b>(Major)</b>	Document update register/ Records and documents in circulation		
<b>6.7</b>	<b>Review of Practices</b>			
6.7.1	All practices affecting occupational health and safety of workers shall be reviewed at least once a year to ensure that they are done correctly and actions should be taken to correct any deficiencies identified. A record of the review undertaken and any corrective actions taken shall be kept. <b>(Major)</b>	Records of review		
6.7.2	A record of the review undertaken and any corrective actions taken shall be kept. <b>(Minor)</b> .			
6.7.3	Actions should be taken to resolve complaints related to worker health, safety and welfare, and records kept on complaints and action taken. <b>(Major)</b>	Action taken report		
	<b>OPTIONAL REQUIREMENTS</b>			
<b>6.8</b>	<b>Worker Welfare</b>			
6.8.1	A member of management should be identified as responsible for workers health, safety and welfare. <b>(Minor)</b>	Written document on the responsibility/ declaration		
6.8.2	Regular two-way communication meetings should take place between management and workers for which records are kept and made available. <b>(Minor)</b>	Minutes/attendance of meeting & interviews		
6.8.3	All workers who have contact with plant protection products should be subjected to	Annual health check records		

	voluntarily annual health checks. ( <b>Minor</b> )			
--	--	--	--	--

## BTS 30: 2017

### 7 Produce Quality Module (PQM)

This module focuses on aspects that affect the produce quality. Produce quality relates to characteristics such as external appearance (colour, texture, shape and size), internal quality (Total Soluble Solids, turgidity, water content) and hidden quality (nutritional value, shelf life, etc). The producer needs to design its processes to address good agricultural practices to address produce quality. These can be grouped under the following 10 heads:

#### 7.1 Quality Plan

7.1.1 A plan shall be maintained on practices that are critical to manage produce quality during the production, harvesting and post-harvesting stages. **(Major)**.

#### 7.2 Planting Material

7.2.1 Vegetables and fruits planting material (seeds, rootstock, scion) shall be obtained from farms or nurseries certified or recognized by the competent authority of the country of origin or other reliable sources to ensure the good quality and freedom from diseases to satisfy market requirement. Records of the same shall be available. **(Minor)**.

#### 7.3 Fertilizers and Soil Additives

7.3.1 The applications of fertilizers and soil additives shall be based on the crop grown and recommendations from the competent authority and shall be properly applied to ensure their effectiveness. The facilities used for composting shall be constructed and maintained so as to prevent cross contamination of the crop. Records of application of fertilizers or soil additives shall be maintained giving details of quantity and date of application and the name of person who applied the fertilizers and additives as well as the provider. **(Major)**.

#### 7.4 Water

7.4.1 Irrigation is based on water requirements of the crop grown, water availability and soil moisture levels. Records detailing the date of irrigation, location, duration and volume of water applied shall be kept. **(Major)**.

#### 7.5 Chemicals

7.5.1 Farmers or workers shall be trained to a level appropriate to their responsibility for chemical application. **(Major)**.

7.5.2 Chemicals shall be obtained from licensed suppliers and applied according to label directions or permit issued by a competent authority for the crop grown. **(Major)**.

7.5.3 A chemical rotation strategy and other crop protection measures shall be practiced to avoid pest resistance to chemicals. **(Major)**.

7.5.4 Equipment used to apply chemicals should be maintained in good conditions and should be working properly. **(Minor)**.

7.5.5 Records shall be maintained, giving the name of chemical, reason for application, date and dosage of application, method of application, weather condition and the name of person who applied the chemicals. **(Major)**

#### 7.6 Harvesting and Handling Produce

These include the following aspects:

##### Harvesting:

7.6.1 A maturity index is used to determine the appropriate time to harvest produce. Harvesting shall be carried out at the coolest time of the day, namely early in the morning. **(Major)**.

7.6.2 The equipment, containers, liners used shall be suitable for harvesting and shall be cleaned before using. The container shall not be overfilled. Liners should be used to cover the rough

surfaces. Containers should be covered to reduce moisture loss. The containers should not be stacked on top of each other unless these are designed to avoid produce damage when stacked. **(Major)**.

7.6.3 Produce shall be placed in the shade and should leave the field as early as possible. **(Major)**

#### 7.7 Handling and Packaging Produce:

7.7.1 Clean water should be used for handling, washing and treatment of produce and the water should be changed regularly to avoid spoilage organisms damaging the produce. **(Major)**.

7.7.2 Excessive drops and impacts shall be avoided to minimize mechanical damage to produce. **(Major)**.

7.7.3 Packing and storing shall be under roofs and in cool places. Produce shall not be placed directly on the soil or floor surfaces. **(Major)**.

7.7.4 Produce shall be graded and packed according to the customer or market requirements. **(Major)**.

#### 7.8 Storage and Transport:

7.8.1 Produce shall be quickly transported to its destination. If there is to be a long wait for transport, produce should be held at the lowest temperature possible. **(Major)**.

7.8.2 Produce shall be covered during transportation and maintained at appropriate temperature to avoid quality loss. **(Major)**

7.8.3 Checking for cleanliness and removing all sources of contamination shall be done. Mixing incompatible produce during transport shall be avoided. **(Minor)**.

#### 7.9 Traceability and Recall System

7.9.1 Produce from different sites should be identified by name or code, and the same should be placed on the containers and suitably recorded. **(Major)**.

7.9.2 A record shall be kept of the date of supply, quantity of produce and destination of each consignment. **(Minor)**.

#### 7.10 Training

7.10.1 Farmers and workers shall be trained in the area of their responsibility relevant to GAP and a record of training kept. **(Minor)**.

#### 7.11 Documents and Records

7.11.1 Records of good agricultural practices shall be kept for two years or more in accordance with statutory requirements, if any, or business requirements. **(Major)**.

7.11.2 Obsolete (out-of-date) documents shall be discarded and only current versions should be in use. **(Major)**.

#### 7.12 Review of Practices

7.12.1 All practices shall be reviewed once a year to ensure that they are done correctly and action should be taken to correct any deficiencies identified. A record shall be kept to show that all practices have been reviewed and any corrective actions taken documented. **(Major)**.

7.12.2 Action shall be taken to resolve complaints related to produce quality and a record kept of the action taken related to the complaint. **(Major)**.

## **BTS 30: 2017**

### **OPTIONAL REQUIREMENTS**

#### **7.13 Chemicals**

7.13.1 A documented procedure should be available for correct handling and filling as stated on the label while mixing plant protection products. (**Minor**)

#### **7.14 Harvesting and Handling Produce**

7.14.1 When packed produce are stored on farm, temperature and humidity should be recorded. (**Minor**).

#### **7.15 Criteria/Requirements Control**

The criteria and levels of controls required with respect to each criteria/requirements of Produce Quality Module (PQM) shall be as follows:

## Produce Quality Module (PQM)

Clause No.	Requirement (Category)	Verification Statement	Self/Audit or Comments	Compliance Status
<b>7</b>	<b>PRODUCE QUALITY MODULE (PQM)</b>			
<b>7.1</b>	<b>Quality plan</b>			
7.1.1	A plan shall be maintained on practices that are critical to manage produce quality during the production, harvesting and post-harvesting stages. <b>(Major)</b>	Check the plan		
<b>7.2</b>	<b>Planting material</b>			
7.2.1	Vegetables and fruits planting material (seeds, rootstock, scion) shall be obtained from farms or nurseries certified or recognized by the Plant Health Office or other reliable sources to ensure the good quality and freedom from diseases to satisfy market requirement. Records of the same shall be maintained. <b>(Minor)</b>	Check Invoices/delivery notes for recognitions/approvals Check records		
<b>7.3</b>	<b>Fertilizers and soil additives</b>			
7.3.1	Fertilizers and soil additives applications shall be based on the crop grown and recommendations from the competent authority and shall be properly applied to ensure their effectiveness. The facilities used for composting shall be constructed and maintained so as to prevent cross contamination of the crop. Records of application of fertilizers or soil additives shall be maintained giving details of quantity and date of application and the name of person who applied the fertilizers and additives as well as the provider. <b>(Major)</b>	Recommendations, and application records and visual assessments.		
<b>7.4</b>	<b>Water</b>			
7.4.1	Irrigation should be based on water requirements of the crop grown, water availability and soil moisture levels. Records detailing the date of irrigation, location, duration and volume of water applied shall be kept. <b>(Major)</b>	Irrigation records		
<b>7.5</b>	<b>Chemicals</b>			
7.5.1	Farmers or workers shall be trained to a level appropriate to their responsibility for chemical application. <b>(Major)</b>	Training records and/or interviews		
7.5.2	Chemicals shall be obtained from licensed suppliers and applied according to label directions or permit issued by a competent authority for the crop grown. <b>(Critical)</b>	Invoices/delivery notes		
7.5.3	A chemical rotation strategy and other crop protection measures shall be practiced to avoid pest resistance to chemicals based on information available in the country. <b>(Major)</b>	Rotation strategy & interviews		
7.5.4	Equipment used to apply chemicals should be maintained in good conditions and should be working properly. <b>(Major)</b>	Equipment maintenance records & visual		

## BTS 30: 2017

		assessment s		
7.5.5	Records shall be maintained, giving the name of chemical, reason for application, date and dosage of application, method of application, weather condition and the name of person who applied the chemicals. <b>(Major)</b>	Chemical application Records		
<b>7.6</b>	<b>Harvesting and handling produce</b>			
7.6.1	A maturity index is used to determine the appropriate time to harvest produce. Harvesting shall be carried out at the coolest time of the day, namely early in the morning. <b>(Major)</b>	Maturity index available and Harvesting records.		
7.6.2	The equipment, containers, liners used shall be suitable, used appropriately for harvesting and shall be cleaned before using. The container shall not be overfilled. Liners should be used to cover the rough surfaces. Containers should be covered to reduce moisture loss. The containers should not be stacked on top of each other unless these are designed to avoid produce damage when stacked. <b>(Major)</b>	Visual assessment		
7.6.3	Produce should be placed in the shade and leave the field as early as possible. <b>(Major)</b>	Visual assessment		
<b>7.7</b>	<b>Handling and packaging produce</b>			
7.7.1	Clean water should be used for handling, washing and treatment of produce and the water should be changed regularly to avoid spoilage organisms damaging the produce. <b>(Major)</b>	Visual observation		
7.7.2	Excessive drops and impacts shall be avoided to minimize mechanical damage to produce. <b>(Major)</b>	Visual assessment		
7.7.3	Packing and storing shall be under roofs and in cool places. Produce shall not be placed directly on the soil or floor surfaces. <b>(Major)</b>	Visual assessment		
7.7.4	Produce shall be graded and packed according to the customer or market requirements. <b>(Major)</b>	Packing QC records & visual assessment		
<b>7.8</b>	<b>Storage and transport:</b>			
7.8.1	Produce shall be quickly transported to its destination. If there is to be a long wait for transport, produce should be held at the lowest temperature possible. <b>(Major)</b>	Visual/Transport records		
7.8.2	Produce shall be covered during transportation and maintained at appropriate temperature to avoid quality loss. <b>(Major)</b>	Visual checks/Transport records		
7.8.3	Checking for cleanliness and removing all sources of contamination shall be done. Mixing incompatible produce during transportation shall be avoided. <b>(Minor)</b>	Visual checks/Transport records		
<b>7.9</b>	<b>Traceability and recall system</b>			
7.9.1	Produce from different sites (as applicable) should be identified by name or code, and the same should be placed on the containers and suitably recorded. <b>(Major)</b>	Records of traceability and drawing sample to check one-step forward		
7.9.2	A record shall be kept of the date of supply, quantity of produce and destination of each			

	consignment. <b>(Minor)</b>	and one-step backward		
<b>7.10</b>	<b>Training</b>			
7.10.1	Farmers and workers shall be trained in the area of their responsibility relevant to GAP and a record of training kept. <b>(Minor)</b>	Training records and interview		
<b>7.11</b>	<b>Documents and records</b>			
7.11.1	All records of GAP shall be kept for at least two years or longer depending on the countries' legal requirements. <b>(Major)</b>	Records		
7.11.2	Out-of-date documents should be discarded and only current versions should be used. <b>(Major)</b>	Records and documents		
<b>7.12</b>	<b>Review of practices</b>			
7.12.1	All practices shall be reviewed once a year to ensure that they are done correctly and action should be taken to correct any deficiencies identified. A record shall be kept to show that all practices have been reviewed and any corrective actions taken documented. <b>(Major)</b>	Records of review		
7.12.2	Action shall be taken to resolve complaints related to produce quality and a record kept of the action taken related to the complaint. <b>(Major)</b>	Action taken reports		
	<b>OPTIONAL REQUIREMENTS</b>			
<b>7.13</b>	<b>Chemicals</b>			
7.13.1	A documented procedure should be available for correct handling and filling as stated on the label while mixing plant protection products. <b>(Minor)</b>	Check for procedure		
<b>7.14</b>	<b>HARVESTING AND HANDLING PRODUCE</b>			
7.14.1	When packed produce are stored on farm, temperature and humidity should be recorded. <b>(Minor)</b>	Check records		



### 8 General Requirements Module (GRM)

This module contains certain common criteria applicable to the four modules. It also contains criteria for farms that seek to apply for certification.

#### Section-A (At Farm Level)

##### 8.1 Legal

8.1.1 The land under certification shall either be owned by the applicant, or an agreement between the legal owner of land and the applicant shall be in place granting authorization to applicant to carry out the agricultural operation and certification. **(Major)**.

##### 8.2 Visitor Requirements

8.2.1 Any visitors to the farm or place where operations are being carried out in relation to GAP shall follow the practices applicable to farm workers to ensure the safety of the produce as well their own safety. **(Major)**.

##### 8.3 Redressal of Complaints

8.3.1 All complaints shall be adequately registered and addressed. A record of action taken shall be maintained.

8.3.2 Each farm to address complaints effectively and record of the same should be available. **(Major)**.

##### 8.4 Site Details

8.4.1 Each farm and production unit shall be referenced on a farm plan or map. **(Major)**.

##### 8.5 Record Keeping and Internal Inspection

8.5.1 All records pertaining to GAP shall be retained for a minimum period of two years unless required by legislation. **(Major)**.

##### 8.6 Calibration

8.6.1 The producer shall, where applicable, have his equipment calibrated as per the legal requirements of the country. **(Major)**.

#### Section B (Group Requirements)

This module is applicable only if the growers form a group as a single legal entity to adopt the standard as a group. They would require to not only implementing the GAP Standard's requirements but also shall need to have an internal control system in place. All the requirements stipulated in this arrangement are required to be written in a formal contract accompanied with policies and procedure for the operation of group. The basic requirements to be implemented are as follows:

##### 8.7 Legal Requirements

8.7.1 Documentation shall be available to demonstrate that the producer group is a registered/legal entity. **(Major)**.

8.7.2 Producer group shall have a clearly defined structure to implement GAP and own responsibility for production and management of the produce. **(Major)**

8.7.3 The administrative/management structure of the producer group shall clearly establish relationship among members of the producer group. **(Major)**.

## 8.8 Written Contract

- 8.8.1 A written signed contract shall be available between each member of the group and the group (legal entity), which shall cover individual details, farm details, obligations (to abide by the requirements laid by producer group and the GAP standard, sanctions in case of non-compliance with GAP/any other internal requirements. **(Major)**).

## 8.9 Producer Register

- 8.9.1 A register shall be maintained containing details of all members in the group with their current implementation status shall include details of producer group, registered planting/production area, crops cultivated, details of internal audit and its findings etc. **(Major)**.

## 8.10 Structure of Organization

- 8.10.1 The organization structure shall demonstrate availability of appropriate resources to carry out operations as per the GAP Standard. **(Major)**.
- 8.10.2 The group shall assess key roles and responsibilities for maintaining requirements of the GAP standard. **(Major)**.
- 8.10.3 The authority matrix for approval and decision making shall be defined. **(Major)**.

## 8.11 Competency and Training to Staff

- 8.11.1 The group shall assess knowledge and competency requirement of the key personnel managing the group certification such as the trainer, quality manager, internal auditor, group manager etc. **(Major)**.
- 8.11.2 The group shall ensure that all staff assigned to operate the GAP certification is well trained and competent and capable of functioning according to requirements. **(Major)**.
- 8.11.3 The group shall determine knowledge and competency, required training and qualification of designated staff, which shall be well written in line with GAP requirements; shall keep a record on qualifications and training of designated staff. **(Major)**.
- 8.11.4 The group shall ensure that internal inspectors are trained and evaluated to ensure compliance with audit procedures and interpretation of GAP requirements of internal and surveillance auditor. **(Major)**.

## 8.12 Quality Manual

- 8.12.1 The group shall develop a Quality Manual to include the scope of certification, the management and internal control, policy and working procedures and policy for member registration and designated members. **(Critical)**.
- 8.12.2 The Quality Manual shall be periodically verified and updated to ensure compliance with GAP/ other requirements of the producer group. **(Major)**.
- 8.12.3 The group shall ensure that the system of updating information and awareness on developments, dissemination and legislative revision (latest version) in relation to GAP compliance is in place. **(Major)**.

## 8.13 Document Control

- 8.13.1 All documents are under document control system. **(Critical)**.
- 8.13.2 There shall be a master list of all documents as required by the GAP Scheme such as the quality manual, working procedures, instructions, record formats and external origin documents. **(Major)**.
- 8.13.3 Records are available to demonstrate effective document control. **(Major)**.

## BTS 30: 2017

8.13.4 There shall be a procedure for using external origin documents if used as a part of their operational requirement. **(Major)**.

### 8.14 Complaint Handling

8.14.1 A procedure for handling of all complaints regarding GAP shall be available which shall cover complaint receiving, registering, problem identification, causative analysis, solution and follow up. **(Major)**.

8.14.2 There shall be a defined timeline for complaint handling. **(Major)**.

8.14.3 Records relating to complaints shall be maintained. **(Major)**.

8.14.4 There shall be provisions to maintain confidentiality, where applicable. **(Major)**.

### 8.15 Internal Audit

8.15.1 A system to audit the compliance to GAP of each member, compliance to the requirements of the internal control system of the producer group shall be in place. **(Critical)**.

8.15.2 The competency requirement of the internal auditor shall be defined. **(Major)**.

8.15.3 A procedure documenting the internal audit procedure by an internal auditor, review and action taken on finding of internal audit shall be available. **(Major)**.

### 8.16 Non-Compliances, Corrective Actions and Sanctions

8.16.1 A procedure for identifying and recording of corrective actions shall be available and implemented. This shall include root cause analysis of non-compliance, responsibilities and time frame for corrective action. **(Critical)**.

8.16.2 Sanctions and Infringement - Producer group shall have procedures for imposing sanctions on members not complying with requirements. These shall include prompt notification to Certification Body of suspension or revocation of its registered member. The provision of sanctions and infringement shall be a part of the contract between each producer and producer group. **(Critical)**.

8.16.3 All information pertaining to non-compliance, corrective action, and sanctions shall be recorded. **(Major)**.

### 8.17 Product Traceability and Segregation

8.17.1 All GAP certified products shall be traceable to each individual registered producer and their farm. Effective systems and procedures shall be in place to reduce the risk of wrong labeling or mixing of GAP with non-GAP product. **(Critical)**.

8.17.2 The harvesting area shall be managed for registered produce so that produce are identifiable and traceable from the purchase order through post-harvest handling, storage and distribution. **(Critical)**.

### 8.18 Withdrawal of Certified Product

8.18.1 A system for product recall and withdrawal shall be in place which is annually reviewed. **(Critical)**.

### 8.19 Common Pack house

8.19.1 If the group has one or more common pack house within their farming operation, then every pack house shall require meeting the GAP requirements. **(Critical)**.

### 8.20 Agreement with Buyer

8.20.1 A written agreement shall be entered into between a group and each of their buyer cautioning misuse of GAP certification claim, as applicable. **(Critical)**.

**8.21 Subcontracting**

8.21.1 In case subcontractors are used, a subcontracting procedure shall be in place ensuring **(Critical)**:

- a. such external services to be in compliance with GAP requirements;
- b. assessment of subcontractor competency and records of the same to be maintained; and
- c. subcontractor to operate in compliance with the group's quality system.

**8.22 Criteria/Requirements Control**

The criteria and levels of controls required with respect to each criteria/requirements of General Requirements Module (GRM) shall be as follows:

General Requirements Module (GRM)

Clause No.	Requirement (Category)	Verification Statement	Self/Auditor Comments	Compliance Status
8	<b>GENERAL REQUIREMENTS MODULE (GRM)</b>			
	<b>Section-A (At Farm Level)</b>			
8.1	<b>Legal</b>	Legal documents		
8.1.1	The land under certification shall either be owned by the applicant, or an agreement between the legal owner of land and the applicant shall be in place granting authorization to applicant to carry out the agricultural operation and certification. <b>(Major)</b>			
8.2	<b>Visitor Requirements</b>	Display of requirements for Visitors including instructions.		
8.2.1	Any visitors to the farm or place where operations are being carried out in relation to GAP, shall follow the practices applicable to farm workers to ensure the safety of the produce as well their own safety. <b>(Major)</b>			
8.3	<b>Redressal of Complaints</b>			
8.3.1	All complaints shall be adequately registered and addressed. A record of action taken shall be maintained <b>(Major)</b>	Action taken records		
8.3.2	Effective complaints handing mechanism shall be available. <b>(Major)</b>	Complaint handling mechanism		
8.4	<b>Site Details</b>	Farm map		
8.4.1	Each farm shall have a registration record or Lag Thram of land. The record will have segregation of dry land, wet land, and sokshing (leaf litter collection area). <b>(Major)</b>			
8.5	<b>Record Keeping and Internal Inspection</b>	Records		
8.5.1	All records pertaining to GAP shall be retained for a minimum period of two years, unless required by legislation. <b>(Major)</b>			
8.6	<b>Calibration</b>	Calibration reports/ certificates.		
8.6.1	The producer shall, where applicable, have his equipment calibrated as per the legal requirements of the country. <b>(Major)</b>			

<b>Section B (Group Requirements)</b>				
8.7	<b>Legal requirements</b>			
8.7.1	Documentation shall be available to demonstrate that the producer group is a registered entity <b>(Major)</b>	Legal documents		
8.7.2	Producer group shall have a clearly defined structure to implement GAP and own responsibility for production and management of the produce <b>(Major)</b>	Organization structure		
8.7.3	The administrative/management structure of the producer group shall clearly establish relationship among members of the producer group. <b>(Major)</b>	Organization structure showing relationships		
8.8	<b>Written Contract</b>	Signed Contracts		
8.8.1	A written signed contract shall be available between each member of the group and the group (legal entity), which shall cover individual details, farm details, obligations (to abide by the requirements laid by producer group and the GAP standard, sanctions in case of non-compliance with GAP/any other internal requirements. <b>(Major)</b>			
8.9	<b>Producer Register</b>			
8.9.1	A register shall be maintained containing details of all the members in the group with their current implementation status which shall include details of producer group, registered planting/production area, crops cultivated details of internal audit and its findings, etc. <b>(Major)</b>	Member Register		
8.10	<b>Structure of Organization</b>			
8.10.1	The organization structure shall demonstrate availability of appropriate resources to carry out operations as per the GAP Standard. <b>(Major)</b>	Co-relation of org structure with existing manpower		
8.10.2	The group shall assess key roles and responsibilities for maintaining requirements of the GAP standard. <b>(Major)</b>	Verification of roles and responsibilities		
8.10.3	The authority matrix for approval and decision making shall be defined. <b>(Major)</b>	Authority matrix defined		
8.11	<b>Competency and training to staff</b>			
8.11.1	The group shall assess knowledge and competency requirement of the key personnel managing the group certification such as the trainer, quality manager, internal auditor, group manager etc. <b>(Major)</b>	Records of Competency assessment against defined requirements		

## BTS 30: 2017

8.11.2	The group shall ensure that all staff assigned to operate on GAP certification are well trained and competent and capable of functioning according to requirements; <b>(Major)</b>	Interviews and training records		
8.11.3	The group shall determine knowledge and competency, required training and qualification of designated staff, which shall be well written in line with GAP requirements; shall keep a record on qualifications and training of designated staff. <b>(Major)</b>	Qualification check records and interviews		
8.11.4	The group shall ensure that internal inspectors are trained and evaluated to ensure compliance with audit procedures and interpretation of GAP requirements of internal and surveillance auditor. <b>(Major)</b>	Witness reports and training records		
8.12	<b>Quality Manual</b>			
8.12.1	The group shall develop a Quality Manual to include the scope of certification, the management and internal control, policy and working procedures and policy for member registration and designated members <b>(Major)</b>	Quality manual availability and completeness		
8.12.2	The Quality Manual shall be periodically reviewed and updated to ensure compliance with GAP/ other requirements of the producer group <b>(Major)</b>	Check for review and updation of QM		
8.12.3	The group shall ensure that the system of updating information and awareness on developments, dissemination and legislative revision (latest version) in relation to GAP compliance is in place. <b>(Major)</b>	Interviews and documents		
8.13	<b>Document Control</b>			
8.13.1	All documents are under document control system <b>(Critical)</b>	Check document identification system and randomly verify documents		
8.13.2	There shall be a master list of all documents as required by the GAP Scheme such as the quality manual, working procedures, instructions, record formats and external origin documents <b>(Major)</b>	Master List		
8.13.3	Records are available to demonstrate effective document control <b>(Major)</b>	Document control procedure		
8.13.4	There shall be a procedure for using external origin documents if used as a part of their operational requirement. <b>(Major)</b>	Procedure for using outside references/documents		

8.14	<b>Complaint Handling</b>			
8.14.1	A procedure for handling of all complaints regarding GAP shall be available which shall cover complaint receiving, registering, problem identification, causative analysis, solution and follow up <b>(Major)</b>	Complaint handling Procedure		
8.14.2	There shall be a defined timeline for complaint handling <b>(Major)</b>	Complaint handling Procedure		
8.14.3	Records relating to complaints shall be maintained <b>(Major)</b>	Records and formats		
8.14.4	There shall be provisions to maintain confidentiality, where applicable. <b>(Minor)</b>	Verify provisions to ensure Confidentiality		
8.15	<b>Internal Audit</b>			
8.15.1	A system to audit the compliance to GAP of each member, compliance to the requirements of the internal control system of the producer group shall be in place <b>(Critical)</b>	internal inspection check list and reports		
8.15.2	The competency requirement of the internal auditor shall be defined. <b>(Major)</b>	Documents		
8.15.3	A procedure documenting the internal audit procedure by an internal auditor, review and action taken on finding of internal audit shall be available. <b>(Major)</b>	Internal audit check list of internal auditor and statement of corrective and preventive action		
8.16	<b>Non-Compliances, Corrective Actions and Sanctions</b>			
8.16.1	A procedure for recording of corrective actions shall be available and implemented. This shall include root cause analysis of non-compliance, responsibilities and time frame for corrective action <b>(Critical)</b>	Procedure for handling corrective actions		
8.16.2	Sanctions and Infringement - Producer group shall have procedures for imposing sanctions on members not complying with requirements. These shall include prompt notification to CB of suspension or revocation of its registered member. The provision of sanctions and infringement shall be a part of the contract between each producer and producer group <b>(Critical)</b>	Sanction and infringement mechanism.		
8.16.3	All information pertaining to non-compliance, corrective action, and sanctions shall be recorded. <b>(Major)</b>	Records available		



## BTS 30: 2017

8.17	<b>Product Traceability and Segregation</b>			
8.17.1	All GAP certified products shall be traceable to each individual registered producer and their farm. Effective systems and procedures shall be in place to reduce the risk of wrong labelling or mixing of GAP with non-GAP product <b>(Critical)</b>	Traceability systems and traceability exercise		
8.17.2	ii. The harvesting area shall be managed for registered produce so that produce is identifiable and traceable from the purchase order through post-harvest handling, storage and distribution. <b>(Critical)</b>	Traceability systems		
8.18	<b>Withdrawal of Certified Product</b>	Product recall and withdrawal mechanism available and reviewed		
8.18.1	A system for product recall and withdrawal shall be in place which is annually reviewed. <b>(Critical)</b>			
8.19	<b>Common Pack house</b>	Inspect all pack houses		
8.19.1	If the group has one or more common pack house within their farming operation, then every pack house shall require to meet the GAP requirements. <b>(Critical)</b>			
8.20	<b>Agreement with Buyer</b>	Check Agreement		
8.20.1	A written agreement shall be entered into between a group and each of their buyer cautioning misuse of GAP certification claim, as applicable. <b>(Critical)</b>			
8.21	<b>Subcontracting</b>	Subcontracting procedure		
8.21.1	In case subcontractors are used, a subcontracting procedure shall be in place. <b>(Critical)</b> .			

## Annex 1

## Integration of Modules

Standard requirement	Food Safety FSM	Environmental Management EMM	Workers Health Safety and Welfare WHSM	Produce Quality PQM
Site history and management	X	X		
Soils and substrates (substrate management)		X		
Quality plan				X
Planting material (propagation material)	X	X		X
Genetically Modified Organisms (GMO)	X			
Fertilizers and soil additives	X	X		X
Water	X	X		X
Chemicals (plant protection product and other inputs)	X	X	X	X
Harvesting and handling produce	X			X
Traceability and recall system	X			X
Waste management		X		
Energy efficiency		X		
Biodiversity		X		
Air/noise		X		
Working conditions			X	
Personal hygiene			X	
Worker Welfare			X	
Training	X	X	X	X
Documents and records	X	X	X	X
Review of practices	X	X	X	X

**FOOD AND AGRICULTURE TECHNICAL COMMITTEE (TC-02)**

<b>Organization</b>	<b>Representative(s)</b>
Bhutan Agriculture and Food Regulatory Authority, Ministry of Agriculture and Forests.	Mr. Jamyang Phuntsho
Bhutan Agro Industries Limited, Thimphu.	Mrs. Nimdem Hingmang
Bhutan Brewery Private Limited, Pasakha	Mr. Ngawang Dorji
Bhutan Exporters Association, Phuentsholing	Mr. Dorji Tshering
Department of Agricultural Marketing Corporatives Ministry of Agriculture and Forests.	Mr. Sonam Norbu
Department of Trade, Ministry of Economic Affairs, Thimphu	Mr. Tashi Dorji
Ministry of Agriculture and Forests.	Mrs. Pema Choden
National Dairy Research Centre, Ministry of Agriculture and Forests, Thimphu	Mr. Phuntsho Tobgyal Norbu
Taj Tashi, Thimphu	Mrs. Eden Choden Dorji
Bhutan Standards Bureau	Mr. Sonam Phuntsho, Director General (Ex-officio member)

**Member Secretary**  
Tashi Choden  
Standardization Division  
Bhutan Standards Bureau