

Plant Based Food Standards

Implementation and Management of Plant-Based Food Standards

Development

To define detail, scope and purpose.

Development

This information can be used to develop food safety and quality programs that meet the requirements of modern Regulatory, Customer and Industry Standards:

- We take the time to explain the expectations and requirements of food safety and quality compliance as these relate to your food safety and quality programs.
- You may choose to use our Premium Resources to build, enhance or upgrade your food safety and quality program.
- We encourage you to share this webpage with any food compliance associates and peers you believe may benefit from our commitment to providing our users with user friendly information and resources to achieve superior Food Compliance Culture.
- We welcome your suggestions for additions of general or specific content through the haccp.com Contact Page.

Key Definitions for Plant-Based Food Standards

- **Cross Contact:** The unintentional transfer of materials of animal origin, or other unwanted substances, onto or into a plant-based food, for example through shared equipment, surfaces, utensils, personnel or airborne dust.
- **Food Additive:** A Food Additive is an approved natural or synthetic substance added to foods to enhance flavour or appearance, to preserve them or for many defined technological functions.
- **Food Ingredient:** A Food Ingredient is an approved natural or synthetic food or substance used as a component of another Food Ingredient or a Finished Food Product.
- **Food Processing Aid:** A Food Processing Aid is an approved natural or synthetic substance used during Food Production or Food Processing to facilitate a specific process. Food Processing Aids generally do not affect the intrinsic characteristics of foods, do not facilitate ongoing technological functions within foods, and generally are minimally detectable within Finished Food Products.
- **Identity Preservation:** A system of controls that maintains the identity and integrity of a material or product, and any claim made about it, from source to consumer.
- **Plant-Based:** A raw material, ingredient or finished product that is free from materials of animal origin and is produced and handled to prevent cross contact with them. How a plant-based claim is defined and regulated varies by jurisdiction.
- **Vegan:** A claim, defined in different ways by regulators and certification bodies, that a food contains no animal-derived materials or processing aids. Its criteria may differ from those for a plant-based claim.

Plant-Based Food Standards Development

When considering the development, documentation and implementation of Plant-Based Food Standards within food safety and quality management systems, the following information should be considered to ensure effective outcomes:

About Plant-Based Food Standards



Plant-based foods start with fresh, safe and well sourced raw materials.

Plant-Based Foods have become increasingly popular with the advent of modern Food Production Systems, including highly evolved technological solutions for the production of Ingredients and Raw Materials which exclude materials of Animal Origin.

While the general Food Safety and Quality Risk Profiles and Programs for Plant-Based Foods remain the same as for similar food products containing materials of Animal Origin, additional risk is attributed to the following Food Standard Elements due to the nature of Identity Preservation status for Plant-Based Foods:

- Approved Supplier Management;
- HACCP: Regulatory Hazards Management;
- Identity Preservation;
- Labelling Standards;
- Process Control Management;
- Product Design and Development;
- Site and Supply Chain Security Management;
- Social Responsibility Standards; and
- Training, Competency, and Resources Requirements.

Approved Supplier Management



Pulses such as chickpeas should come only from approved suppliers.

In addition to the general requirements for Approved Supplier Management as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Additional Supplier approval criteria and evidence of each supplier's ability to supply food ingredients or food materials that consistently exclude any materials of animal origin;
- Consideration of Service Providers (and their interactions) which may alter the status of Plant-Based Foods at the relevant sites;
- Enhanced focus upon the validated and verified exclusion of all materials of animal origin from materials and

products supplied;

- Focused Approved Supplier review processes that confirm each suppliers' ability to supply food ingredients or food materials that consistently exclude any materials of animal origin;
- More stringent site acceptance protocols for materials specified to exclude all materials of animal origin;
- Participants within the selection, approval, and review of Approved Suppliers generally require specialist ongoing training to ensure their understanding of the significant risks the unintentional and/or deliberate presence of materials of animal origin within the Food Ingredients, Food Additives and Food Processing Aids received and used by your food business poses.

Classes of Food Ingredients, Food Additives, and Food Processing Aids Commonly Associated with Materials of Animal Origin may include:

- Animal Derived Fibres;
- Animal Derived Food Additives (for example gelatine, carmine and shellac);
- Animal Derived Dairy Products (for example whey, casein and lactose);
- Animal Slaughter Derived Products and By-Products;
- Insect Derived Products and By-Products (for example honey and beeswax);
- Human Derived Substances (for example some sources of L-cysteine); and
- Marine Animal Derived Products and By-Products.

The hidden nature of some of these classes of materials highlights the importance of robust risk assessments and supplier interactions as a part of a best practice Approved Supplier Program.

Further information regarding Approved Supplier Management can be found within the haccp.com Approved Supplier Management Food Standard Element.

HACCP: Regulatory Hazards Management

In addition to the general requirements for HACCP: Regulatory Hazards Management as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Detailed Plans of Action for managing scenarios where the status of your Plant-Based Products are found to be compromised, for example, where your Plant-Based Products are confirmed to contain, or are likely to contain materials of animal origin;
- Ensuring any New or Emerging Technologies, Food Ingredients, Food Additives and Food Processing Aids or Processes considered for implementation by your Food Business for the production of Plant-Based Food are permitted both by the Regulatory Authority within the country of Manufacturing and within the country of Sale of your Plant-Based Food products.

Further information regarding HACCP: Regulatory Hazards Management can be found within the haccp.com HACCP: Regulatory Hazards Management Food Standard Element.

Identity Preservation

In addition to the general requirements for Identity Preservation as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Ensuring that any Provenance or Identity Preserved Status claims for Plant-Based Foods are unambiguous and align with your Food business' commitments to Social Responsibility Standards.

Further information regarding Identity Preservation can be found within the haccp.com Identity Preservation Management Food Standard Element.

Labelling Standards

In addition to the general requirements for Labelling Standards as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Any specific Regulatory, Industry, or Customer requirements for the labelling of your Plant-Based Foods.

Further information regarding Labelling Standards can be found within the haccp.com Labelling Standards Food Standard Element.

Claims, Certification and Labelling

Rules for claims such as plant-based, vegan or free from animal products vary between jurisdictions, and some jurisdictions have no formal definition. A claim should only be made where it can be substantiated and where it meets the requirements of the Regulatory Authority in each country of sale.

The following requirements generally require consideration for Plant-Based Foods:

- Confirming how each country of sale defines and regulates plant-based and vegan claims;
- Holding documented evidence that supports each claim, including supplier declarations and production controls;
- Considering third-party certification where customers or markets expect it, and checking that its criteria match your product claims;
- Reviewing precautionary statements about possible cross contact, and ensuring they are consistent with your actual risk controls;
- Reviewing labels, marketing materials and images so that they do not imply animal origin or mislead customers.

Further information can be found within the haccp.com Labelling Standards and Food Fraud Risk Management Food Standard Elements.

Process Control Management

In addition to the general requirements for Process Control Management as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Consideration of the movements of Materials, People and Product at your Food Business site which may impact upon the integrity and provenance of Plant-Based Foods;
- Inclusion of specific Process Control requirements to ensure Plant-Based Foods are not compromised by contacts with materials of Animal Origin.

Further information regarding Process Control Management can be found within the haccp.com Process Control Management Food Standard Element.

Production Scheduling and Cleaning for Plant-Based Foods



Clean, well organised production areas support safe plant-based food manufacture.

Where plant-based products and products containing materials of animal origin share a site, production planning and cleaning are the main controls for preventing cross contact. The following measures generally require consideration:

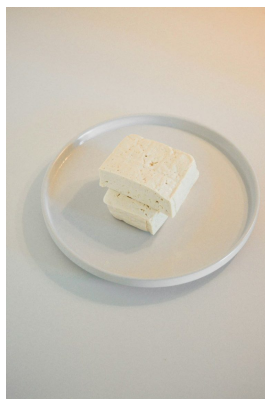
- Scheduling plant-based products before products that contain animal-origin materials where lines are shared;
- Using dedicated or clearly segregated equipment, utensils, containers and storage areas where practicable;
- Documented changeover procedures with defined clean-down steps and sign-off;
- Cleaning procedures validated to remove animal-origin residues, including fats, proteins and residues on shared

surfaces;

- Controlling rework so that animal-origin materials are never added to plant-based products;
- Controlling shared frying oils, steam, water, air and conveying systems that could carry animal-origin materials or residues.

Further information can be found within the haccp.com Cleaning and Sanitation and Process Control Management Food Standard Elements.

Product Design and Development



Plant protein products such as tofu need careful design and allergen control.

In addition to the general requirements for Product Design and Development as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Clear guidance must be provided as part of Product Design and Development to ensure at no stage of the process are Food Ingredients, Food Additives and Food Processing Aids containing materials of animal origin considered for use in Plant-Based Foods;
- Development of systems for ensuring Food Ingredients, Food Additives and Food Processing Aids used by your Food Business exclude any materials of animal origin;
- Enhanced food ingredient or food material substitution risk assessments to ensure such food ingredients or food materials exclude any materials of animal origin;
- Verification and Validation of your Food business' Guarantees that your Plant-Based Products consistently exclude any materials of animal origin.

Further information regarding Product Design and Development can be found within the haccp.com Product Design and Development Food Standard Element.

Allergen and Food Safety Considerations for Plant-Based Foods

Plant-based does not mean allergen free or lower risk. Many plant-based alternatives rely on ingredients that are common allergens, such as soy, tree nuts, peanuts, wheat and sesame, and the risk assessment must address them. The following considerations generally apply:

- Identifying all allergens in plant-based ingredients and recipes, including new protein sources, and declaring them as required;
- Controlling allergen cross contact where plant-based products share equipment with other products;
- Assessing microbiological hazards specific to the product type, for example *Listeria monocytogenes* in ready-to-eat chilled products and spore-forming bacteria in cooked cereal and legume products;
- Assessing chemical hazards such as mycotoxins, pesticide residues and heavy metals in plant-based raw materials;
- Validating shelf life, because the pH, water activity and ingredients of plant-based products differ from the animal-based products they replace.

Further information can be found within the haccp.com Allergen Management and Food Microbiology Management Food Standard Elements.

Site and Supply Chain Security Management

In addition to the general requirements for Site and Supply Chain Security Management as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Awareness and consideration of deliberate acts that may impact upon the status of your Plant-Based products.

Further information regarding Site and Supply Chain Security Management can be found within the haccp.com Site and Supply Chain Security Management Food Standard Element.

Social Responsibility Standards

In addition to the general requirements for Social Responsibility Standards as part of your Food Safety and Quality Program, the following elements generally require additional consideration for Plant-Based Foods:

- Adherence to any Social Responsibility Standards to which the Senior Management of your Food Business has made commitments, regarding the ethos of Plant-Based Foods.

Further information regarding Social Responsibility Standards can be found within the haccp.com Social Responsibility Standards Food Standard Element.

Training, Competency and Resources Requirements

In addition to the general requirements for Training, Competency and Resources Requirements as part of your Food Safety and Quality Program, the following requirements generally require additional consideration for Plant-Based Foods:

- Participants within the Development and Implementation of Food Safety and Quality Programs generally require specialist ongoing training to ensure their understanding of the significant risks the unintentional and/or deliberate presence of materials of animal origin poses to your food business;
- Process Workers must be trained in the aspects of their positional roles related to ensuring the integrity and provenance of Plant-Based Foods.

Further information regarding Training, Competency, and Resources Requirements can be found within the haccp.com Training, Competency, and Resources Requirements Food Standard Element.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Development requirements in relation to their items.

References

The following references provide further guidance on food safety, standards and labelling:

- World Health Organization: Food safety fact sheet
- Codex Alimentarius: Standards, including general standards on food labelling
- International Organization for Standardization: ISO 22000 food safety management systems (check the current edition)

Plant-Based Food Standards Development Key Points

- Plant-Based Food Standards programs must be developed to meet relevant Regulatory, Industry, and Customer standards and requirements;
- The Senior Management of your business facilitates a commitment to ensuring adequate resources for the development of your Plant-Based Food Standards program;
- Should you require additional resources for the development of Plant-Based Food Standards program elements, please discuss this with the relevant Senior Management representative;
- A properly developed Plant-Based Food Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly developed Plant-Based Food Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Documentation

To establish the developed detail in a viewable format to facilitate information.

Documentation

Document: A document provides guidance and/or direction for performing work, making decisions, or rendering judgements which affect the safety or quality of the products or services that customers receive.

Documented policies, procedures, work instructions and schedules form the basis of any food safety and quality management system. The following documentation formats may be considered to ensure ongoing compliance with specified requirements for Plant-Based Food Standards:

- Plant-Based Food Standards policy;
- Plant-Based Food Standards development procedures;
- Plant-Based Food Standards implementation procedures and work instructions;
- Plant-Based Food Standards monitoring procedures;
- Plant-Based Food Standards corrective and preventative action procedures;
- Plant-Based Food Standards verification schedule;
- Plant-Based Food Standards verification procedures;
- Plant-Based Food Standards validation schedule;
- Plant-Based Food Standards validation procedures;
- Plant-Based Food Standards training procedures;
- Supplier declaration and animal-origin exclusion register;
- Changeover and cleaning procedures for plant-based production.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Documentation requirements in relation to their items.

You may wish to visit the Plant-Based Food Standards Templates section of haccp.com for examples of Plant-Based Food Standards documentation, record and resource formats commonly applied within food safety and quality systems.

Plant-Based Food Standards Documentation Key Points

- Plant-Based Food Standards programs must be documented to meet relevant Regulatory, Industry, and Customer standards and requirements;
- All documented Plant-Based Food Standards program elements must be controlled to ensure compliance;
- Key documented Plant-Based Food Standards program elements should be available to your business team at all times to ensure they can facilitate required tasks;
- A properly documented Plant-Based Food Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly documented Plant-Based Food Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Implementation

To facilitate the application of the documentation.

Implementation

Implementation: Implementation is the application of documented food safety and quality system elements into the actual business operation.

The implementation of Plant-Based Food Standards within any food business requires genuine commitment from senior management, staff and visitors to ensure the nominated goals of implementation are achievable on an

ongoing basis. It is a step which requires significant planning and consideration of general and specific food business circumstances to ensure the outcomes of Plant-Based Food Standards do not negatively impact upon the safety and quality of the food items dispatched from the business.

Implementation of Plant-Based Food Standards must include the clear definition of responsibilities and authorities for all levels of participation by senior management, staff and visitors to the site.

When implementing Plant-Based Food Standards within a food safety and quality system, you may wish to consider the following requirements prior to completion:

- Communication and display of the Plant-Based Food Standards policy;
- Completion of Verification and Validation of Plant-Based Food Standards development procedures;
- Availability of Plant-Based Food Standards implementation procedures and work instructions;
- Availability of Plant-Based Food Standards monitoring procedures and record templates (where applicable);
- Availability of Plant-Based Food Standards corrective and preventative action procedures and record templates (where applicable);
- Availability of the Plant-Based Food Standards verification schedule;
- Availability of Plant-Based Food Standards verification procedures;
- Availability of the Plant-Based Food Standards validation schedule;
- Availability of Plant-Based Food Standards validation procedures;
- Completion of Plant-Based Food Standards training procedures;
- Completion of product design and development requirements related to Plant-Based Food Standards;
- Completion of process design and development requirements related to Plant-Based Food Standards;
- Completion of training for team members who have responsibilities and involvement within Plant-Based Food Standards;
- Completion of competency approval for team members who have responsibilities and involvement within Plant-Based Food Standards.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Implementation requirements in relation to their items.

Plant-Based Food Standards Implementation Key Points

- Plant-Based Food Standards programs must be Implemented to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Your Plant-Based Food Standards program must be fully implemented as per relevant documented Policies, Procedures, and Work Instructions;
- The implementation of Plant-Based Food Standards requires a commitment to the provision of resources by the Senior Management of your business;
- A properly implemented Plant-Based Food Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly implemented Plant-Based Food Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Monitoring

To review, confirm and document evidence of the implementation against documented limits.

Monitoring

Monitoring: Monitoring is the act of reviewing and confirming measurable parameters of a defined process or product status.

Monitoring requirements within food industry sectors are generally identified against limits of acceptability defined within HACCP plans, implementation procedures and work instructions. Monitoring usually includes some element

of record keeping, which may be maintained manually or through digital systems. It is important to consider that advancements of technology have spawned many systems and processes which are self-monitored and/or self-adjusted when variances are identified. Regardless of the system used, the goal of any monitoring activity is to provide sufficient evidence that any limit of acceptability has been met.

Traditional Plant-Based Food Standards monitoring requirements include manual recording and the application of corrective actions when the results of monitoring are found to be outside acceptable limits. Corrective Actions should also generally be strongly linked to the monitoring process where applied to ensure full traceability of the applied actions.

Common monitoring activities and record formats may be applicable to Plant-Based Food Standards:

- Plant-Based Food Standards Monitoring Records: The monitoring activities for Control Points, Critical Control Points, Quality Points and Critical Quality Points are designed to provide evidence of meeting the nominated Critical Limits.
- Ingredient specification and supplier declaration checks on receipt;
- Changeover and cleaning verification records, including any checks used to confirm removal of animal-origin residues;
- Routine monitoring of GMP Prerequisite Programs for all food manufacturing premises is recommended: Daily pre-operational checks allow management and staff to ensure that all items are cleaned and sanitised and suitably stored prior to commencement of daily production.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Monitoring requirements in relation to their items.

You may wish to visit the Plant-Based Food Standards Templates section of haccp.com for examples of Plant-Based Food Standards documentation, record and resource formats commonly applied within food safety and quality systems.

Plant-Based Food Standards Monitoring Key Points

- Monitoring provides real-time confirmation and evidence that your risk-based FS&Q Controls are effectively implemented;
- Plant-Based Food Standards programs must be monitored to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Monitoring of Plant-Based Food Standards must be facilitated as per relevant documented Policies, Procedures, and Work Instructions;
- Nominated monitoring records for Plant-Based Food Standards must be maintained as per relevant documented Policies, Procedures, and Work Instructions;
- A properly monitored Plant-Based Food Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly monitored Plant-Based Food Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Corrective Action and Preventative Action

To apply "real time" interventions to documented monitoring limits.

Corrective Action and Preventative Action

Corrective Action: Corrective action is mandatory action to be taken when a deviation to the Quality System occurs, particularly in relation to a Critical Control Point.

Preventative Action: At any step in the process where a hazard has been identified, preventative action must be put into place to prevent re-occurrence.

Corrective Action and Preventative Action are implemented to ensure that any identified non-conformance issues are documented, investigated and rectified within appropriate time-frames. Corrective action is any action applied to

regain control over a product, process, policy or procedure that has been identified as being non-conforming or outside nominated limits of acceptability. Preventative action is any action applied to prevent any identified non-conformance from reoccurring.

The outcomes of corrective and preventative actions should result in regained process control after effective application. Specified corrective actions are commonly linked to HACCP plans and to the food business certification process.

Below are Corrective Action and Preventative Action examples which may be associated with Plant-Based Food Standards related non-conformance:

- Review of the Plant-Based Food Standards policy;
- Review of Plant-Based Food Standards development procedures;
- Review of Plant-Based Food Standards implementation procedures and work instructions;
- Review of Plant-Based Food Standards monitoring procedures;
- Review of Plant-Based Food Standards corrective and preventative action procedures;
- Review of the Plant-Based Food Standards verification schedule;
- Review of Plant-Based Food Standards verification procedures;
- Review of the Plant-Based Food Standards validation schedule;
- Review of Plant-Based Food Standards validation procedures;
- Review of Plant-Based Food Standards training procedures;
- Re-training in Plant-Based Food Standards;
- Review of management review activities to include Plant-Based Food Standards as an agenda item;
- Call-out of an investigation into the source of any animal-origin material, including review of supplier approval;
- Review of changeover and cleaning procedures where cross contact is suspected;
- Review of the plant-based claim where animal-origin material is suspected or confirmed;
- Initiation of product hold procedures where safety or quality may be compromised;
- Initiation of product recall or product recall procedures where investigations show that there is a substantial safety and/or quality risk to released product;
- Contacting stakeholders including customers regarding any confirmed or potential Plant-Based Food Standards concerns involving their product.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Corrective Action requirements in relation to their items.

You may wish to visit the Corrective Action and Preventative Action section of haccp.com for examples of best practice applications for this food safety and quality system element.

Plant-Based Food Standards Corrective Action and Preventative Action Key Points

- The implementation of Corrective Action and Preventative Action provides confidence that your FS&Q Program is effectively implemented and that FS&Q criteria are being met;
- Where deviations or variations are observed, Corrective Action and Preventative Actions must be facilitated to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Corrective Action and Preventative Action of Plant-Based Food Standards must be facilitated as per relevant documented Policies, Procedures, and Work Instructions;
- Records of Corrective Action and Preventative Action must for Plant-Based Food Standards be maintained per relevant documented Policies, Procedures, and Work Instructions;
- Proper application of Corrective Action and Preventative Action for your Plant-Based Food Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- Poor application of Corrective Action and Preventative Action for your Plant-Based Food Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Verification

To review and confirm documented monitoring and corrective actions against documented parameters.

Verification

Verification: The act of reviewing, inspecting, testing, checking, auditing, or otherwise establishing and documenting whether items, processes, services, or documents conform to specified requirements.

Verification is the detailed review of all food safety and quality system elements to confirm that they are effectively developed, documented, implemented, monitored and reviewed. It is important that all food safety and quality system elements, including documented policies, procedures, training, HACCP plans and their operational applications are verified on an ongoing scheduled basis. The verification process commonly includes a defined schedule for which verification activities are required, how often they are conducted, who is responsible and detailed documented procedures for each nominated verification activity.

The general goal of an established verification process is to ensure any systemic non-conformance issues are identified and rectified within an appropriate time-frame. When non-conformance issues are identified through the verification process, Corrective Actions and Preventative Actions should be implemented to ensure they do not impact upon the effectiveness of the food safety and quality system.

The following examples of verification activities may be applicable to Plant-Based Food Standards:

- Review of the Plant-Based Food Standards policy;
- Review of Plant-Based Food Standards development procedures;
- Review of Plant-Based Food Standards implementation procedures and work instructions;
- Review of Plant-Based Food Standards monitoring procedures;
- Review of Plant-Based Food Standards monitoring records;
- Review of Plant-Based Food Standards corrective and preventative action procedures;
- Review of the Plant-Based Food Standards verification schedule;
- Review of Plant-Based Food Standards verification procedures;
- Review of the Plant-Based Food Standards validation schedule;
- Review of Plant-Based Food Standards validation procedures;
- Review of Plant-Based Food Standards training procedures;
- Review of Plant-Based Food Standards performance since the last review and historically;
- Review of supplier declarations and ingredient specifications for animal-origin materials;
- Analytical testing of product or process, including testing for animal-origin DNA or protein where risk warrants, to ensure the effectiveness of Plant-Based Food Standards;
- Inclusion of Plant-Based Food Standards as an agenda item within the Management Review Process.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Verification requirements in relation to their items.

You may wish to visit the Verification Activities section of haccp.com for examples of best practice applications for this food safety and quality system element.

Plant-Based Food Standards Verification Key Points

- Your verification program provides evidence that your FS&Q Controls have worked;
- Plant-Based Food Standards programs must be verified to meet relevant Regulatory, Industry, and Customer standards and requirements;
- The verification of Plant-Based Food Standards must be facilitated as per relevant documented Policies, Procedures, and Work Instructions;
- Nominated verification records for Plant-Based Food Standards must be maintained as per relevant documented Policies, Procedures, and Work Instructions;
- A properly verified Plant-Based Food Standards program will provide a strong framework for your business to

maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;

- A poorly verified Plant-Based Food Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Validation

To confirm the documented monitoring or procedural limits.

Validation

Validation: The process of gathering evidence to provide a scientific basis for the documented act of demonstrating that a procedure, process and activity will consistently lead to the expected results. It often includes the qualification of systems and equipment.

Validation is the provision of evidence to support the limits of control or acceptability for food safety or quality parameters nominated within systemic elements. Limits of control or acceptability are commonly included within documented food safety and quality system elements such as procedures, HACCP plans and specifications.

Common sources of validation include regulatory and legislative standards, finished product specifications and customer requirements, industry codes of practice and guidelines, verified and validated research, historical product and process control outcomes and analytical testing.

The general goal of an established validation process is to ensure any systemic non-conformance issues are identified and rectified within an appropriate time-frame. When non-conformance issues are identified through the validation process, Corrective Actions and Preventative Actions should be implemented to ensure they do not impact upon the effectiveness of the food safety and quality system.

Validation activities are commonly defined within the verification schedules and procedures of established food safety and quality management systems.

The following examples may be applicable to validation of the limits of control or acceptability for Plant-Based Food Standards:

- Confirmation of nominated food safety and food quality control limits for Plant-Based Food Standards. These limits may be applicable to regulatory, industry, customer or finished product specifications;
- Confirmation of analytical testing methods being used to confirm the effectiveness of Plant-Based Food Standards and ensure the accuracy of outcomes;
- Confirmation that cleaning and changeover procedures effectively remove animal-origin residues;
- Confirmation that plant-based claims are substantiated against applicable regulatory and certification criteria.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Validation requirements in relation to their items.

You may wish to visit the Validation Activities section of haccp.com for examples of best practice applications for this food safety and quality system element.

Plant-Based Food Standards Validation Key Points

- Your validation program provides evidence that your FS&Q Controls will work;
- Plant-Based Food Standards programs must be validated to meet relevant Regulatory, Industry, and Customer standards and requirements;
- The validation of Plant-Based Food Standards must be facilitated as per relevant documented Policies, Procedures, and Work Instructions;
- Nominated validation records and supporting documentation for Plant-Based Food Standards must be maintained as per relevant documented Policies, Procedures, and Work Instructions;
- A properly validated Plant-Based Food Standards program will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- A poorly validated Plant-Based Food Standards program will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.

Training, Competency and Resources

Skills, knowledge and competency requirements to facilitate development, documentation, implementation, monitoring, corrective action, verification and validation of every Food Safety and Quality System Element.

Training, Skills and Knowledge

Skills and Knowledge: Skills and knowledge are attributes of human interactions commonly linked to competency within any specified job related task.

Training and competency requirements for Plant-Based Food Standards must be ongoing, including regular scheduled reviews to ensure the effectiveness of training and competency outcomes.

Team members who have defined responsibilities regarding Plant-Based Food Standards should have knowledge including:

- Basic Plant-Based Food Standards requirements;
- Positive outcomes of Plant-Based Food Standards;
- Negative outcomes of a lack of Plant-Based Food Standards;
- Current Plant-Based Food Standards procedures, methods and techniques;
- General operational, corporate and social awareness regarding Plant-Based Food Standards;
- Regulatory, industry and customer requirements regarding Plant-Based Food Standards.

Team members who have defined responsibilities regarding Plant-Based Food Standards should have skills including:

- Competency regarding basic Plant-Based Food Standards;
- Effective application of current Plant-Based Food Standards procedures, methods and techniques;
- The basic development, documentation and implementation of Plant-Based Food Standards and Prerequisite Programs within the food industry sector;
- Recognising animal-derived ingredient names and hidden sources of animal-origin materials;
- Preventing cross contact during production, changeovers and cleaning.

Team members who have defined responsibilities regarding Plant-Based Food Standards should have access to resources including:

- Plant-Based Food Standards training;
- Plant-Based Food Standards associations and events;
- Regulatory standards, industry and customer information and updates regarding Plant-Based Food Standards;
- Incidents within the food industry sector regarding Plant-Based Food Standards;
- Commitment to Plant-Based Food Standards by senior management;
- Suitably qualified food industry professionals with verified experience in Plant-Based Food Standards;
- Effective communication systems including email, internet and phone through which Plant-Based Food Standards information can be sent and received within suitable timeframes.

If your food business supplies foodstuffs manufactured to a customer's specifications, it is important to consider any specific Plant-Based Food Standards Training, Competency and Resources requirements in relation to their items.

You may wish to visit the Training, Competency and Resources section of haccp.com for examples of best practice applications for this food safety and quality system element.

Plant-Based Food Standards Training, Skills and Knowledge Key Points

- Your Training, Skills, and Knowledge program ensures all participating personnel, visitors, and contracted have the required skills and knowledge to effectively facilitate the requirements of your FS&Q Program;
- Training, Skills, and Knowledge programs for Plant-Based Food Standards must be facilitated to meet relevant Regulatory, Industry, and Customer standards and requirements;
- Training, Skills, and Knowledge programs for Plant-Based Food Standards must be facilitated as per relevant

documented Policies, Procedures, and Work Instructions;

- Training, Skills, and Knowledge records for Plant-Based Food Standards must be maintained as per relevant documented Policies, Procedures, and Work Instructions;
- Properly applied Training, Skills, and Knowledge programs for Plant-Based Food Standards will provide a strong framework for your business to maintain compliance with relevant Regulatory, Industry, and Customer standards and requirements;
- Poorly applied Training, Skills, and Knowledge programs for Plant-Based Food Standards will not fully support your business and may contribute to significant non-compliance against Regulatory, Industry, and Customer standards and requirements.



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