

Workflow: Product Quality

Toolkit 5.2

Setting Standards and Planning for Quality

target audience

Farm managers, contractors, service providers, supervisors, product agents, and strategic partners.

what it is

Customer product requirements must be translated into a set of product specifications and standards, with specific targets and tolerances, that can be controlled across the value chain. This includes specifications that can be observed, such as shape, colour, or size, as well as specifications that need to be tested, such as phytosanitary specifications, shelf-life, and sugar content. These specifications should be classified based on their relative importance to the customer:

- **Critical** – characteristics that, if not up to specification, will disqualify the product from distribution and usage.
- **Major** – characteristics that have a significant impact on the customer's choice to use the product. In the presence of similar products, it could be disqualified or downgraded.
- **Minor** – characteristics that do not materially impact the customer's choice to use the product.

Once the specifications have been agreed upon, they need to be developed into a product quality standard. Defining and documenting quality standards is a key step in developing an effective quality plan. Meeting product standards requires an effective plan, like achieving any other business objective. Quality plans should initially (primarily) focus on addressing known quality gaps and sustaining outcomes in line with tolerances accepted but should also address potential improvement.

The quality plan should address all the critical and major quality characteristics, as well as consider the production processes that will impact final product quality. For example, pest and disease control measures not followed strictly during the production season will result in a smaller volume of product meeting the critical characteristics.

Standard work (Refer to [Toolkit 2.5 – Standard Work](#) for more information) is a term describing a standard routine (daily, weekly, monthly tasks) against a standard operating procedure (well defined actions) that is essential for embedding and sustaining a quality standard. Standard work needs to be supported by a concept called leader standard work (LSW), which changes the role of leadership from directing to coaching.

Change control is a process whereby all requests for changes/improvements/upgrades/new requirements must be formally logged, evaluated, and approved by the relevant process owners.

Changes to product specifications and standards (e.g., changes to food safety regulations), must be carefully interpreted to ensure compliance.

why it is important

Defining an acceptable quality standard and then putting in place the value chain processes to deliver that quality is essential to achieving customer satisfaction. The quality standard should be based on a rigorous process of aligning with customer and food safety requirements. Without this alignment the company will find it difficult to stay relevant and compete effectively in a competitive and changing environment. Quality standards and specifications should drive all short- and long-term decisions related to quality management.

The process of developing a quality plan challenges the organization to identify the most critical quality issues, whether those involve known quality gaps or new customer requirements that will challenge the organization to meet even tougher specifications. In so doing, the organization will need to study quality complaint trends and engage the sales or customer service organization to better understand customer needs and emerging requirements.

success factors

- **Understanding Customer Quality Specifications** – An unambiguous alignment with and understanding of Customer Quality and Food Safety requirements, translated into a clear final product quality standard.
- **Critical to Control Specifications and Processes** – Identifying the Critical to Control (CTC) quality specifications. For overseas consumers these should include size, colour, appearance (blemish free), easy to peel and sweetness. Identifying how the farmer can control the above-mentioned specifications and putting processes in place to control the outcomes. For example, product size can be manipulated through pruning, flower manipulations, thinning, etc. (Refer to [Toolkit 3.6 – Plant Manipulation and Fruit Set Stages](#)). Another example is the introduction of Integrated Pest and Disease Management Systems (Refer to [Toolkit 3.7 – Crop and Plant Protection \(Pest, Disease and Weed Control\)](#)).
- **Developing a Quality Plan** – A quality plan is a document, or several documents, that together specify quality standards, practices, resources, specifications, and the sequence of activities relevant to a particular product. A comprehensive Quality Plan should include:
 - Quality goals/objectives - This should include compliance to product specifications, customer complaints, material usage and cost.
 - Standard work process steps and activities.
 - Distribution of responsibilities aligned to quality at source procedures - Who does what, when and where?
 - Standards and testing requirements- What are the practices and procedures that need to be applied?
 - Reference to a change procedure.
 - Other actions as needed to meet the objectives.

➤ Template Reference:

Example of an eight-column table quality plan (from article QUALITY MANAGEMENT SYSTEM: GOOD AGRICULTURAL PRACTICE (GAP) FOR ON-FARM PRODUCTION IN THAILAND)							
Surmsuk Salakpetch, Chanthaburi Horticultural Research Center, Khlung, Chanthaburi, 22110 Thailand							
Process	Hazards	Control	CP/CCP	Operating Limits	Monitoring	Corrective Actions	Records
Key:							
Process step : Stage of plant growth and development affecting the quality objectives	Hazards : Problems or hazards related to quality objectives (descriptive information)	The control measures of problems and hazards	In a particular stage of plant growth and development, should the practice (control point or critical control point) be followed to produce a fruit or vegetable in accordance with the quality objectives?	Indicators to control or monitor hazards or CCP	What, how to and frequency of monitoring	Corrective actions when problems or hazards exceed operating limits	All corrective actions must be recorded

Example of an eight-column table quality plan

Specific and measurable outcomes should be allocated to individuals with clear deadlines within a governance structure. Standard work should be deployed to the right level in the organisation with clear responsibilities and leadership support.

A quality plan should relate to the specifications of the final product that can be controlled by a process of accepting or rejecting the product at different stages of the process during and after harvesting. The plan should however also cover quality requirements during the growth season that will reduce potential yield losses. For example, if a tree is well looked after during the growth season, chances are good that a higher percentage of product will comply to colour, size, shape, sugar content, etc. specifications. Chemical residue left on product after harvesting could result in rejections.

Ensuring the organisation keeps up with customer requirement and specifications will require an effective change control process. It should always be used to effectively manage other significant changes including the introduction of new equipment, upgrades to equipment and systems, as well as new raw materials and product additives.

execution steps

1. Interact directly with key clients, trade agents and other role players to develop/ confirm key customer product and process requirements.
2. Develop the product standard based on customer requirements and food safety standards. The standard should be specific per product variety, specifying characteristics to be controlled per activity in the value chain, responsibilities, remedial action and escalation requirements, food safety checks, etc.
3. Study quality complaint trends and engage Sales Agents and key customers to better understand customer needs and emerging requirements.
4. Develop the **Quality plan**.
5. Communicate and implement the final quality plan with employees across the site.
6. Conduct Quality training with reference to the quality plan and quality at source responsibilities.
7. Ongoing monitoring of progress against the plan with short-interval corrective action.

Table 1. Core concept of QMS for GAP for on-farm quality and safety of fresh produce

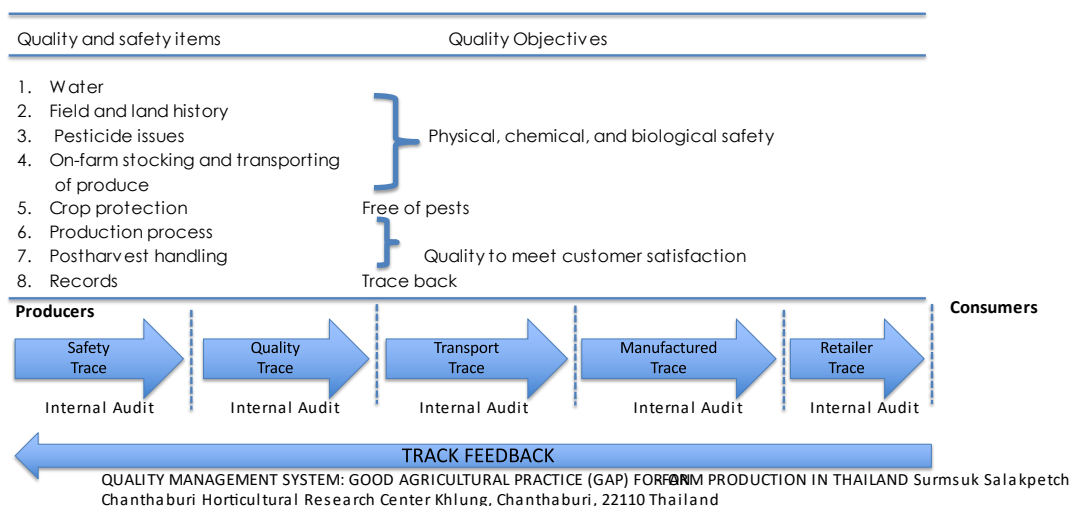


Table 1. Core concept of QMS for GAP for on-farm quality and safety of fresh produce

assessment questions

Please Note: There is no minimum / maximum amount of questions you can add

1.	Do we have documented quality specifications and standards to meet customer requirements per product?
2.	Has a quality plan had been developed to cover all critical and major characteristics?
3.	Does the quality plan cover all quality aspects across the value chain?

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| 4. | Has the quality plan has been fully introduced? |
| 5. | Have all role players been trained and certified as per the quality plan? |
| 6. | Do we monitor progress against the implementation of the quality plan? |
| 7. | Do we visually communicate progress against the quality plan? |

resources

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| 1. | Excel Template – Quality Plan |
| 2. | Quality Management System example |