



Quality assurance: product specifications in horticulture

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Quality Assurance in horticulture can be defined as a systematic approach to ensure consistent production of produce to meet a quality specification. To meet these specifications becomes the objective of the quality system.

In order to have consistent production, quality must be measured in some way. This is where a specification or standard is used. A specification describes the product or service in enough detail to ensure it can be produced to a reliable and consistent level of quality.

A specification can be described as being a standard or a measure, and can include numbers, colours, taste or pictures (ie. it can be objective or subjective).

Specifications can be either a product specification, or a process specification. A product specification can be used to measure the product or the packaging. These are often measured at the end of the production line. A process specification can be used to measure raw material requirements or processing requirements. These are specifications that control the process of production, and will usually be measured before and during production.

Drawing up product specifications

Firstly, draw up a list of products provided by your business. For example, you might produce sultanas for drying, Thompson seedless for fresh market and Chardonnay for wine.

Secondly, outline the features/characteristics that decide the quality of each of these products. These may include:

- **Physical;** eg. diameter, weight
- **Chemical;** eg. residues
- **Biological;** eg. maturity
- **Timeliness;** eg. delivery time
- **Satisfaction;** eg. cost-effectiveness
- **Accuracy;** eg. tolerances
- **Legal Requirements;** eg. labelling

To ensure that the measurement of the product against the specification is accurate, these characteristics should, if possible, be objective.

Once these characteristics have been defined, an acceptable limit can be given to each of them. This can be either a maximum, a minimum, cover a range or have a tolerance. For example, temperature: range 0-2°C; tolerance 1°C±1°C. This can be done for many aspects of the specification for the product.

Customer requirements

Product specifications should also contain the requirements of the customer. A good quality system will continually assess these requirements. The specifications should be written in a language easily understood by people producing the product as well as the customer and the tests carried out on the product should imitate the final use of the product by the customer.

Legal requirements

With the continuing increase in customer demands, the legal requirements for products, both on domestic and export markets, are becoming more stringent. For this reason, the product specifications must show that these requirements are being adhered to. The easiest way to show that this is occurring is to consider the legal requirements a minimum requirement, not a maximum. This will give the business a safety margin and will allow the product to meet customer expectations.

Financial considerations

Although specifications are the basis for the quality system, it must be remembered that the product should at all times remain cost effective. In writing specifications, the company's profit margin should be considered as well as the customer's ability to purchase the product.

An important concept to remember is that the product must be "fit for the purpose". This means that the specifications must be written so that the product will be "cost effective", that is, it will meet the customer's requirements at a competitive price.

There are many definitions for quality, however, almost all of them refer to the necessity for good product specifications, be they your requirements or your customer's requirements. There are a number of references

that will assist in developing good product specifications for some horticultural produce. These include:

- **Product Description Language - Pears.** Available from the AHC (Australian Horticultural Corporation).
- **Product Description Language - Apples.** Available from the AHC.
- **Quality Management Guide - Citrus.** Available from the AHC.
- **Guide to Quality Management - Apples.** Available from the AHC.
- **Pears. A Quality Product Manual.** Available from the NVFA (Northern Victoria Fruitgrowers' Association Ltd.), Shepparton.
- **Strawberry Product Quality Manual.** Available from the Institute for Horticultural Development, Knoxfield, Melbourne.
- **Fresh Broccoli Quality Descriptor Language.** Available from the Institute for Horticultural Development, Knoxfield, Melbourne.

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