

Title Is it the genetic quality or the management of the supply chain that has the biggest impact on consumer satisfaction of horticultural products?

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Abstract

This project reviewed the relative impact of genetic quality characteristics and the supply chain management on consumer satisfaction of Horticultural crops. The results were to be used by the Australian industry to determine the key areas for research investment. Strawberries were the case study, due to a large range of information, project results and technology available on varietal improvement, postharvest handling and flavour preferences. The case study showed that varietal difference in flavour quality as measured by the sugar to acid ratio is very large (up to 56%). Plant breeders can make use of that potential by breeding varieties that suit local conditions as the major reason for the complaints of poor quality strawberries in Australia is often due to the early season crops of the day-neutral variety Selva. Selva was bred in California and does not always have the optimum sugar to acid ratio early in the season. Breeders are therefore working to find a superior quality day-neutral variety that suits Australian conditions. Obviously strawberry quality cannot be improved during supply chain handling and there is potential for a 10% loss in flavour during marketing and a 29% loss in volume. Therefore for strawberries in Australia there is a need for more local breeding and education and incentives for better supply chain management. This type of study could be done for other products in an effort to objectively determine the relative investment that should be made in breeding and supply chain research. Funding organisations are increasingly asking for quantifiable outcomes and this review used previously published research results to provide those for the Australian strawberry industry.