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## Development of diagnostic methods to identify fresh produce with the highest potential for maintaining minerals and nutrition during processing

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Maintaining the quality of fresh produce is not only important during postharvest handling for fresh market, but also has an important impact on the quality of processed products. Growers applied chemical compounds like calcium salts as pre-harvest and postharvest treatments for maintaining texture of fresh produce for a long time. Also delaying maturation after harvest through controlled atmosphere storage and application of 1-MCP (SmartFresh™) as an inhibitor of ethylene perception revolutionized storage life of fresh produce. This helped food industry to have access to fresh produce for a longer time. For better understanding of the quality changes in the fresh produce stored for a long time and the impacts after processing, it is important to develop diagnostic methods to identify changes in minerals and nutrition. Most of the previous studies focused on total calcium concentration, while it is known that certain amount of calcium could be bound and are not active within the tissues that affect the distribution of available minerals. This study focused on identifying new diagnostic methods to have a better view about the content of available minerals during storage time and helps for a better prediction of proceeding changes of nutrition after processing in food industry. Bramley's seedling apple as the most popular British cooking apple was studied in this research and studies on other fruit and vegetable like banana, broccoli and potato are continuing.

### Biography

Mehrdad Mirzaee completed his BSc in Horticulture at Tabriz University in 1994 and worked as greenhouse producer and consultant for more than 10 years in Iran. In 2007, he moved to the UK and continued his studies in MSc and PhD in postharvest and natural resources in University of Essex and University of Greenwich. He started his job as Technical and Business Development Manager at Landseer Ltd. (AgroFresh agent in the UK) since 2008. He combined his academic and work experience in commercial sectors for conducting many applicable research projects for industry related to crop production and postharvest technology.

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