

PlantLink Researcher in the spotlight

Federico Gómez

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*This month, we turn the spotlight to **Senior Lecturer Federico Gómez** at the Division of Food Technology, LTH. Dr. Gómez graduated as a Food Engineer in Ecuador before arriving in Lund to do his MSc. The subsequent PhD studies at LTH was followed by a postdoc period in Portugal, and now a permanent position back at LTH. You may also have seen him describing his research with great enthusiasm on Swedish national television SVT1 Rapport in May last year.*



- *What is currently on top of your research agenda, Federico?*

- We are working on improving the freezing tolerance of harvested edible tissues, with focus on spinach, strawberries and parsnips. The tissues are impregnated with cryo-protectants before freezing using two emerging technologies: vacuum impregnation and pulsed electric fields.

- *Please tell us about your latest publication?*

- Together with a PhD student and colleagues at USDA, the influence of several cryo-protectants on the freezing point and ice propagation rate on spinach was tested. Important information about supercooling effects and ice formation and propagation could be reported.

- *What led you into your particular field of research?*

- My PhD dealt with the influence of cold acclimation on quality of carrots. In my postdoc I worked with reversible electroporation in plant tissues and in 2010 I got funding from the EU to study the possibilities of freezing preservation combining the knowledge gained from previous projects.

- *What are the implications of your research for the society?*

- To increase the competitiveness of food suppliers, improving the preservation process for locally cultivated vegetables. This may lead to import substitution and reduced amount of long-distance transport of vegetables, resulting in increased freshness of vegetables and increased competitiveness of the food industry.