

Excess nitrogen fertilisation speeds up ready-to-fry potato decay

Researchers from the University of Catania have studied the effects of nitrogen fertilisation, storage time, packaging film and gum-based edible coating (LBG) on the quality maintenance of fresh-cut ready-to-fry potato sticks.

The change in quality was assessed by monitoring colour and texture, microbiological parameters and bioactive component content. "Results show that a higher nitrogen quantity (280 kg/ha) causes quick colour changes, lower firmness and faster microbial growth (total mesophilic bacteria, yeasts and moulds)," report the researchers.

Similarly, excessive nitrogen fertilisation determines lower ascorbic acid levels and a faster loss of nutritional value during storage, while the LBG coating was effective in reducing colour changes and microbial growth.

"Results show the need for an accurate management of nitrogen fertilisation so as to obtain high-quality potato sticks. Excess nitrogen levels enhance the vulnerability to physical, microbial and nutritional change, affecting quality."

Source: Licciardello Fabio, Lombardo Sara, Rizzo Valeria, Pitino Iole, Pandino Gaetano, Strano Maria Gabriella, Muratore Giuseppe, Restuccia Cristina, Mauromicale Giovanni, 'Integrated agronomical and technological approach for the quality maintenance of ready-to-fry potato sticks during refrigerated storage', 2018, Postharvest Biology and Technology, Vol. 136, pag. 23-30.

Lien article : <http://www.freshplaza.com/article/187437/Excess-nitrogen-fertilisation-speeds-up-ready-to-fry-potato-decay>