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Study of the table olive processing technology in order to improve the Italian cultivar “Piantone di Mogliano” production using *Lactobacillus plantarum* 319 and SYN BIO® as innovative technique

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Table olives are a fermented product and recently, this process has been investigated and subjected to more control. Oleuropein, main phenolic compound, is responsible for the olive bitter taste. For this purpose, several processes, mainly based on alkaline hydrolysis or fermentation in brine, are employed in order to degradation oleuropein. Understanding the oleuropein characteristics for table olive processing helps manufacturer to produce high quality table olives and to develop innovative methods for its production. This study was aimed to enhance the Italian cultivar “Piantone di Mogliano” in the table olive production. The olives were harvested in the period when they have finished the stage of enlargement and veraison has not begun, obtaining a type of fruit class “green”. The olives were processed with two different traditional methods, Sevillan and Natural system, developing innovative techniques in order to obtain a food variety which maintains as much as possible the organoleptic and qualitative characteristics. The use of specific inoculum of *Lactobacillus plantarum* 319 and SYN BIO® combination (*Lactobacillus rhamnosus* IMC501® and *Lactobacillus paracasei* IMC502®) in brine helped to drive, improve and speed up the fermentation. These strains play an important role during table olive fermentation; in fact they are able to enhance the olive preservation due to a progressive acidification of the fermenting brine with a consequent pH decrease and the production of antimicrobial substances and bacteriocins. Moreover, they also improve the aroma and flavor characteristics of the product. Therefore, a correct inoculum of selected strains allows improving the product quality.

Biography

Ambra Ariani was graduated in 2013 in Animal Production Science and Technology at the Camerino University and in 2014, completed Post-graduate stage. Now, she is enrolled in a PhD program in Life and Health Sciences - Molecular Biology and Cellular Biotechnology with the project “Study for the improvement of the Marchigiana cultivar “Piantone di Mogliano”, aimed at the production of table olives, with use of methods for food traceability”. She was involved in several research projects, focusing the interest on the bioactive molecules in food and she has 4 publications in international journals.

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