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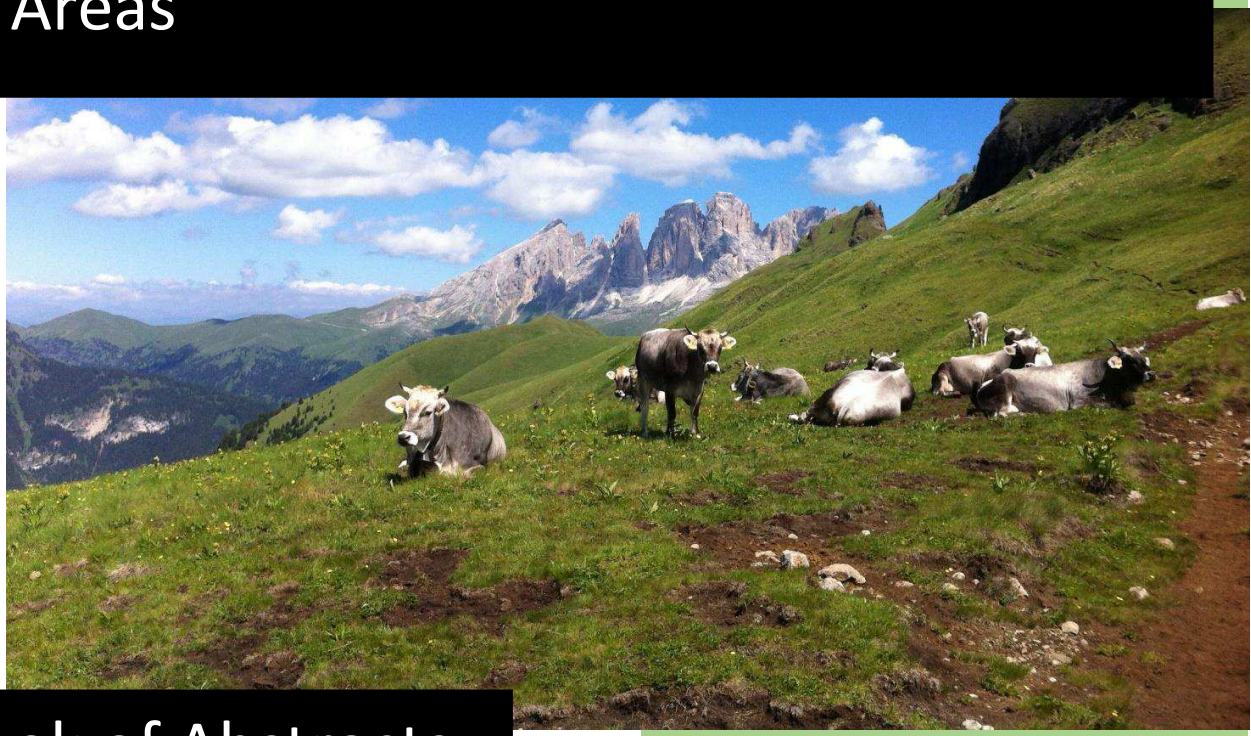

Book of Abstracts

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a cooperation of Freie Universität Bozen-Bolzano, EURAC Research, EAAP, Università degli studi di Padua and FIBL Switzerland

Protection of traditional pastures cheeses made in Trento Province (Italy) through the native lactic acid bacteria selection

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The production of raw milk cheeses in the alpine farms called “Malghe” is a traditional practices that deserve cares. Beside the production of cheeses with valuable organoleptic and nutritional features, this farmer model ensures the protection of the Alpine ecosystem. The Malga cheese is at risk of survival because the unpredictability of microflora of the raw milk causes relevant economical losses. Optimizing the production process, without altering the typical features of cheeses, is the main purpose of a 7-years project performed in the province of Trento (Italy).Lactic bacteria native from raw milk of different Alpine pastures (n=17) were characterized from the genotypic and technological point of view, in order to select strains suitable as starters in the production of Malga cheese. Two mixture of these strains (n=14) were employed in cheese production in 50 Malghe, monitoring the dairy attitude of bacteria, and the features of obtained cheese both from chemical than the organoleptic point of view.Raw milk showed a large biodiversity in terms of bacterial identity and dairy aptitude. According to the productive process of Malga cheese, where curd was cooked at about 45°C, we identified strains of thermophilic bacteria as primarily starters and mesophilic bacteria as component of non-starter microbiota, involved in cheese ageing. Surprisingly, bacteria showed a better performance during Malga cheese production, than that in the laboratory tests, demonstrating a good adaption at this peculiar environment. The use of starter reduces of about 80% the defect of cheese, independently from seasonal features and productive process of different malghe (years 2013-2017). A panel of expert judges not reviled alteration in the typical cheeses features. In conclusion, the this project is an effective example of safeguard of traditional food production by a modern and pragmatic approach in the management of indigenous microflora.