COURSE REGISTRATION FORM

Teacher	Zorica Radulović
University	University of Belgrade, Faculty of Agriculture
Course	Autochthonous lactic acid bacteria -vector of traditional cheeses standardization and innovative technology of functional food development
Target	Agricultural Middle Schools
Type	classic
Duration	2 days - 16 hours

Description	The course should contribute to strengthening the awareness of teachers about the importance of traditional products and their standardization and protection, and the possibility of developing new innovative technologies safe functional foods, all based on preserving the biodiversity of indigenous lactic acid bacteria. The course should include the role and importance of indigenous lactic acid bacteria (LAB), isolated from traditional cheeses, as well as a rich biodiversity with great potential multiple applications. On one hand, the course should contribute to the expansion of knowledge about the role of these bacteria in traditional cheeses, which are characterized by rich smell and taste and their importance in the standardization of the production of traditional cheeses as safe food of uniform quality and also in preserving the quality and better marketing of traditional cheeses. On the other hand, the course will contribute to expanding knowledge on the development of innovative technologies in the production of functional foods, which are based on the use of commercial probiotics or indigenous lactic acid bacteria which are confirmed to have potential probiotic properties.

Contents	1. Introduction to the general characteristics of LAB, their metabolism and important properties that should have to be applied as a starter culture in cheese production 2. The issue of selection of LAB and their application in a standardized production of traditional cheeses in brine will be covered by the methodology of selection of indigenous potential probiotic LAB strains in vitro. 3. The impact of gastrointestinal (GI) microflora on human health, with special emphasis on the importance of probiotics in maintaining and improving the health of people. 4. Pointing out the potential application of indigenous probiotics in functional foods (probiotic cheeses, yoghurt enriched omega-3 fatty acids, probiotic chocolate, sausages).

Objectives	1. Expanding knowledge about general characteristics and metabolism of LAB o

	Consideration of the role and importance of starter cultures in the production and cheese 2. Expanding knowledge of knowledge about the characteristics of indigenous LAB and their role in standardization of traditional cheeses 3. Raising awareness about the importance of standardized production of traditional cheeses as safe food, in order to protect the origin label and improve sales of traditional cheese 4. Acquiring knowledge about the role of lactic acid bacteria (probiotics) in the GI tract and significance for human health 5. Acquiring knowledge about the criteria for selection of potential probiotics in vitro 6. Developing awareness of the importance of new technologies to produce functional foods enriched with probiotic bacteria

Activities	The first part of the first day of the course will include communication with participants about their previous knowledge, and then the characteristics and metabolism of lactic acid bacteria, as well as the characteristics important for the starter culture and their role in the production and maturation of cheeses will be presented. The second part of the first day will be devoted to a more detailed explanation of the importance of indigenous LAB in the traditional cheeses, methodology and selection criteria for their use as starter cultures in order to standardize the production of traditional cheeses. The third part of the first day will cover the course participants work in pairs, where will be necessary to draw up a starter culture of the offered species and characteristics of LAB. Discussion about solutions, which each pair offered. The first part of the second day will be devoted to communication with participants about their current knowledge on the composition of the GI microflora as ecosystem important for human health. In addition, participants will have the opportunity to expand their knowledge on the role of probiotics in the digestive organs and their impact on human health, and then on the selection criteria of autochthonous potential probiotics for use in functional food production. The second part of the second day will cover the involvement of all participants in the scenario, which implies solving the original problem in working in groups.

Materials	Video beam, laptop, white board or large paper pad, marker. For the interactive class - an additional three laptops