

**Building Capacity  
of Serbian Agricultural  
Education  
to Link with Society**



**Tempus**

**Izgradnja kapaciteta  
srpskog obrazovanja  
u oblasti poljoprivrede  
radi povezivanja sa društvom**

**Coordinator:  
University of Belgrade  
Faculty of Agriculture**

**Koordinator:  
Univerzitet u Beogradu  
Poljoprivredni fakultet**

## COURSE REGISTRATION FORM

<b>Teacher</b>	Dragan Žikić
<b>University</b>	University of Novi Sad, Faculty of Agriculture
<b>Course</b>	Stress and its importance in contemporary livestock production
<b>Target</b>	Agricultural Middle Schools and Agricultural Extension Service
<b>Type</b>	blended
<b>Duration</b>	2 days - 16 hours

<b>Description</b>	<p>Livestock production is becoming more intensive and the importance of stress in farm animals are increasing and becoming more and more of a significant problem. This course will review existing knowledge about stress in domestic animals, point to new research on the impact of stress on performance of farm animals, and bring up the importance and place of animal welfare in modern livestock production to advisors and teachers. I also want to give attention to the link between stress in animals and food safety of animal products. Their improved knowledge in this field will enable advisors and teachers extend this information to farmers and students.</p>
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<b>Contents</b>	<p>The course is planned to include several educational entities:</p> <ol style="list-style-type: none"> <li>1. General information about stress</li> <li>2. Physiological fundamentals of stress and mechanisms of action (neuroendocrine and immune system)</li> <li>3. Stress indicators</li> <li>4. Stress in the farm animals and productive performance</li> <li>5. Stress and welfare</li> <li>6. Importance of stress for the food safety</li> </ol> <p>The course is scheduled for two days and the first day is classic teaching methods with the application of the active learning methods.</p> <p>On the first day, the discussion should remind participants of definitions of stress and kinds of stressors. Divided into groups, participants will learn the physiological basis of stress through labeling posters as part of the prepared material. In this way participants will be introduced to the most important mechanisms (hypothalamic-pituitary-adrenal axis, hypothalamic-pituitary-thyroid axis and hypothalamic-pituitary-gonadal axis).</p> <p>The study of the indicators of stress would be done through quantification of the degree of response of animals to the influence of certain types of stressors</p> <p>On the second day course participants will access to course content on-line in an informative and animative way, but also evaluative tool such a quizzes will be used for checking acquired knowledge. In this way participants will be engaged and given the opportunity to use a discussion group (forum) as a tool with aim to connect course participants. The course evaluation will be done on-line.</p>
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<b>Objectives</b>	The goal of this course is introducing the concept of stress and its impact on the production of farm animals, as well as the importance of stress on food safety. By attending this course, the target group will review and improve their existing knowledge, which will effectively be able to transfer to students and agricultural producers. In this way we will provide a better understanding of the problem of stress as a physiological response and raise awareness on the necessity of implementing animal welfare. Also, to bring up on important of necessary changes in the work with animals in order to ensure better results and obtaining food safety products. Participants will learn about the impact of stress on the production results of farm animals and potential mechanisms of action through real examples from production and group discussion. Participants will connect the individual stressors with potential hazards related to food safety through group work.
<b>Activities</b>	The role of the lecturer in this course will be the preparation of materials, engaging participants actively in discussions about the subjects, group forming, directing and modeling work in groups, analyzing and evaluating the knowledge of students about subjects of this course. The role of the participants in this course will be the actively participating in discussions, review concepts and terminology, acquiring new knowledge through examples and group work and using acquired knowledge.
<b>Materials</b>	The formal of the course does not have special requirements, while the on-line part of the course requires <i>Moodle</i> platform.