

# **Final workshop**Sarajevo, 19 - 20 September 2016

Programme in Higher Education, Research and Development in the Western Balkans (HERD) – Agriculture

University of Sarajevo, Faculty of Agriculture and Food Science

Sarajevo, 19 - 20 September 2016





### Project

 Antioxidant activity and stability of bioactive compounds during processing of certain raw materials of plant origin in Bosnia and Herzegovina

# Lead institutions and project leaders

- Norwegian University of Life Sciences/NLH,
  Department of Chemistry, Biotechnology and Food Science (IKBM) - *Roland Kallenborn*, Ph.D
- 2. Faculty of Agriculture and Food Sciences, Sarajevo/FAFS, Department of Food Technology – Sanja Oručević Žuljević, Ph.D

## General objectives

1

The possibility of using forest plant fruits in food industry and to establish the stability of their biologically active components, depending on processing and storing methodology.

2

**Examination general** quality and bioactive components in some cereal (spelt, barley, common and tataric buckwheat) products depending on flour extraction rate and processing.

# Bioactive components

Examine antioxidant activities

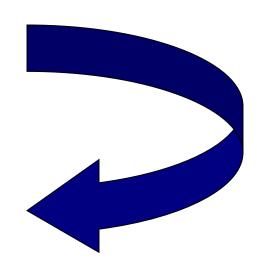
**Stability** 

Row material

**Producing** 

**Products** 

Iniversity of Sarajevo, Faculty of



### Synergy with other HERD projects

#### There were a continuous collaboration with projects:

- Evaluation of fruit genetic resources in B&H with the aim of sustainable, commercial utilization
- Manufacture of Traditional B&H Cheeses with Selected Indigenous Bacterial Cultures and Technological Parameters as Basis for Industrial Production .

#### Collaboration reflected in:

- Using same facilities and instruments (instrument for texture and consistency measurement on TMS- Pro Texture analyzer) on Faculty of agriculture and food sciences, University of Sarajevo.
- Some colleagues were engaged on two projects (exchange experience and close cooperation).

#### Education – PhD and Master students

- PhD student Amela Đafić
- Master students who were planned to finalize their master thesis research in frame of the Project
  - Munevera Begić
  - Aldin islamović
- Additional MA students who successfully finalized their Master thesis - 11

- 1. Nermin Omerhodžić
- 2. Tanja Melezović
- 3. Filip Šehovac
- 4. Sabina Nukić
- 5. Inda Cetin
- 6. Melita Smajić
- 7. Asmira Alekić -Sivac
- 8. Emina Fetić
- 9. Merjem Mlaćo
- 10. Selma Isić
- 11. Ahmed Golić

### Training of students and technical staff

- PhD students have transferred their knowledge received in partner institution to the staff and students of the Faculty of Agriculture and Food Sciences in Sarajevo.
- Improved laboratory technics (equipment and methodology)

# Publications and dissemination activities

- Peer-reviewed publications: 11 and several in preparation
- Dissemination activities:
  - 11 Symposiums and congresses
  - 3 workshops

#### Dissemination activities

- Our experiences have been presented at several fruit fairs (Čelić, Goražde and Gradačac) and expert symposiums throughout Bosnia and Herzegovina (and internationally).
- The cooperation (advising, consulting, recommending) also has been presented in direct communication to farmers, the industry partners, and small producers (Bosnaplod Brčko; Frozen Berries Bugojno; Aspek Sarajevo)

#### Increasing income in rural area through fruit processing on traditional way

Author: Akagić A.,

Location: Goražde, Kakanj, Konjic, Sarajevo

Dissemination year: 2013, 2014, 2015, 2016

Audience/Recipient(s): small producers

Type of dissemination: presentations, lectures and practical works

Comments: Workshops in Goražde, Konjic, Kakanj, Sarajevo 2013, 2014, 2015 and 2016; Progress and the results of the projects were presented annually to local producers at the training courses.

#### Dissemination activities











#### Dissemination activities

# Buckwheat production and processing in Bosnia and Herzegovina – Experiences and future challenges

Author(s): Sanja Oručević Žuljević and Drena Gadžo

Location: Maribor, Slovenia

Dissemination year: 2015

Audience/Recipient(s): Researches, food processing technologists and farmers

Type of dissemination: presentation

Comments: Workshop (*Delavnica »Ajda med tradicijo in inovacijo*«) <u>www.fvz.upr.si</u> was organized in Maribor, Slovenia in the frame of TRAFOON - Traditional Food Network to improve the transfer of knowledge for innovation inthe region.

### Academic collaboration in the region

- Banja Luka University and Genetic Resources Institute in Banja Luka (B&H)
- Biotechnical faculty University of Bihać (B&H)

# The most important research findings and results in the project

- A number of different wild fruits (woodland strawberry, cornelian cherry, rose hip and wild blueberry) and some cereal (wheat, barley, spelt and common and tatary buckwheat) were collected from B&H and great differences in terms of technological properties of them were found.
- According to analyzed characteristic both fruit and cereals, showed suitable for the use by the fruit and baking processing industry.
- Based on these row materials, traditional ways of production were improved through various laboratory experiments.

#### Leasons

# A stronger cooperation with partners institutions such as:

- Continually Skype sessions;
- Workshops two or three per years
- Design web page of project
- Annually informative bulletins, brochures and so on,
- Stronger linking projects with similar objectives

More communications and transparency

# Thank you for your attention!