

Agricultural value chains, entrepreneurship and user aspects, Sarajevo, 01.October 2013

**DEVELOPMENT OF EDUCATION AND
TRANSFER OF KNOWLEDGE IN THE AREA OF
FOOD TECHNOLOGY – **EDUFOOD****

Prepared by

- **Nils Jul, project leader**
- **Midhat Jasic, balkan coordinator**

Partners

- **Balkan partners:**
 - **University of Tuzla,**
Faculty of Technology
 - **(UNTZ; main Balkan partner)**
 - **University of Novi Sad,**
Faculty of Technology (**UNNS**)
- **Lead institution in Norway:**
 - **Sør-Trøndelag University College,**
Faculty of Technology (**HiST**)

EDUFOOD main goals

To build capacity and competence of Western Balkan Universities to be resources for **local producers and processors** of fruit and wild berry through

- **university**
- **enterprise cooperation**

in education and development and by providing **continuing education**.

Focus in this presentation

- The cooperation with industry and other partners
- Building universities competence and capacity

What the Tuzla region industry need from university in their processes of development?

UNTZ has mapped challenges and potentials of improvements in production technology and hygiene as well as needs for continuing education, courses and workshops in industry -

- In October – December 2011: **Written survey answers from industry and organizations**
- A **workshop including 22 participants outside university** as a part of the **Kick-off meeting January 2012**
- Continuously in relevant project activities

Also UNNS has accomplished similar processes with food industry in their region

Project activities based on industry needs as described in the Tuzla mapping processes

- **Student thesis in cooperation with industry;**
- 20 – 30 students and 15 teachers is involved.
- 5 UNTZ-students have in 2012 and -13 (also 4 UNNS-students) made practical thesis work at HiST laboratories in cooperation with Balkan and Norwegian supervisors.



Practical work on Tuzla student thesis at HiST

2012 Bachelor thesis:

1. Mahovac Edin: „**PRODUCTS AND PROCESS DEVELOPMENT BASED ON RAMSONS**“

Mentor: Prof dr. Keran Husejn, Member of commission from HiST: **Nils V. Juul**

2. Senida Subasic: **PRODUCT AND PROCESS DEVELOPMENT BASED ON FRESH AND DRIED PLUM**“

Mentor: Prof dr Amra Odobasic, Member of commission from HiST: **Nils V. Juul**

3. Azem Bašić: **PRODUCT AND PROCESS DEVELOPMENT BASED ON WILD BERRIES AND BERRIES**

Mentor: Prof dr Snjezana Maric, Member of commission from HiST: **Nils V. Juul**



Practical work on Tuzla student thesis at HiST

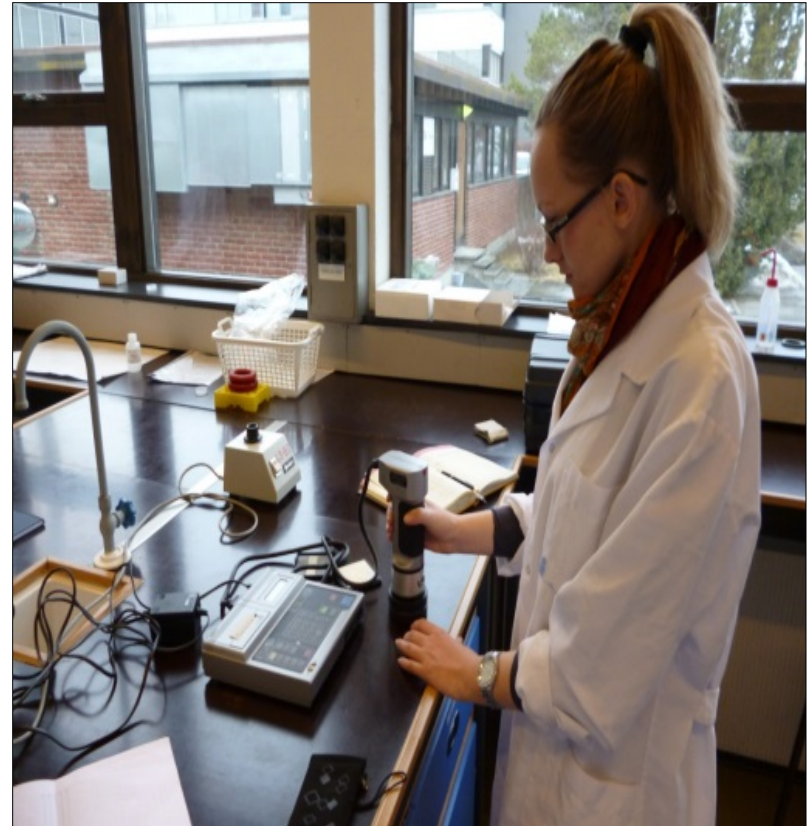
2013 Master thesis:

1. Azra Begović: **INFLUENCE OF PROCESSING TO KEEPING OF BIOACTIVE COMPOUNDS FOR SIGNIFICANT SPECIES OF FRUIT IN BIH**

Mentor: Doc dr Ramzija Cvrk

2. Jasmina Mehic: **DERETMINATION OF BIOACTIVE COMPONENTS OF SOUR CHERRY AS SIGNIFICANT FRUITS SPECIES IN BOSNIA AND HERZEGOVINA**

Mentor: Doc dr Zahida Ademović



Practical work on Tuzla student thesis at HiST

HiST professors taking part in defence of thesis at UNTZ



Practical work on Tuzla student thesis at HiST

Abstract from student thesis
presented on Tuzla international
symposium With Food to Health
(September 19 2012 and October 16
2013) and in

BOOK OF PROCEEDINGS



A joint platform for disseminating the results of the projects will be formed together with the participants of another HERD project
“**EVALUATION OF FRUIT GENETIC RESOURCES IN BOSNIA-HERZEGOVINA WITH THE AIM OF SUSTAINABLE, COMMERCIAL UTILIZATION**”

Project activities based on industry needs as described in the Tuzla mapping processes

Courses for industry

– September 18 and 19 2012 (20 participants):

- **QUALITY AND FOOD ANALYSIS**
- **PRACTICAL ACTIVITIES OF FOOD ANALYSIS**

– October 2013 (as planned; (20 participants):

- **FOOD SENSORY ANALYSIS**
- **DEVELOPMENT OF FOOD PRODUCTS**

Example of documentation in course for industry

Workshops with industry

Workshops title:

**PRACTICAL ACTIVITIES OF
FOOD ANALYSIS**

Workshop Leader: Remzija Cvrk

date: **19.09.2012.**



EDUFOOD
TRAINING PROGRAM FOR THE FOOD INDUSTRY
PROGRAM EDUKACIJE ZA PREHRAMBENU INDUSTRIJU

Univerzitet u Tuzli
i Univerzitet HiST

Izdaju ovaj

Certifikat

Rijadu Arnautoviću

Za uspješno završen kurs pod nazivom:
Kvalitet i analiza hrane

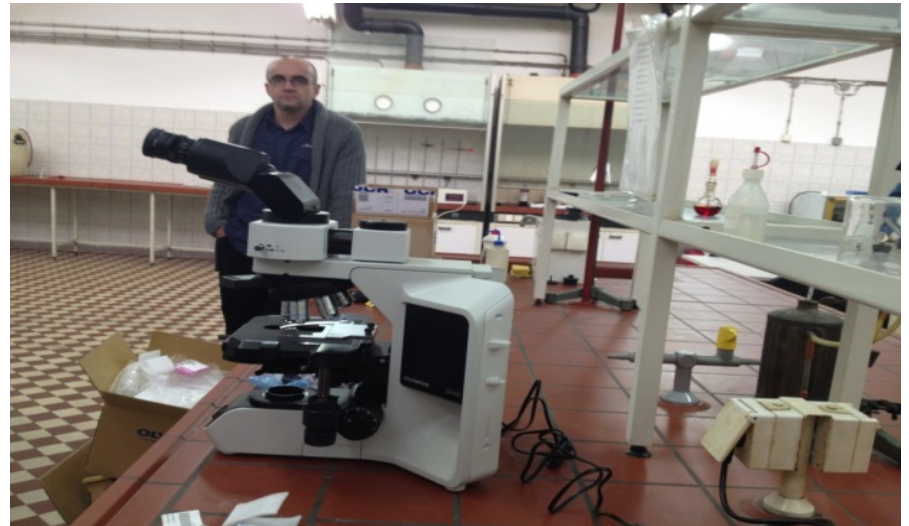
Tuzla 18. i 19. septembar 2012.

Tehnološki fakultet
Univerziteta u Tuzli
Regionalni voditelj projekta:
Prof.dr.Jašić Midhat

HiST Sør-Trøndelag University
College, Norveška
Voditelj projekta:
Niis V Jul

Project activities based on industry needs as described in the Tuzla mapping processes

- **Upgrading lab equipment at UNTZ 2012**
 - **Spectrophotometer** (Identification food colour, biological active food components; also for students laboratory exercises)
 - **Microscope** (Identification of plant origin, pollen identification, research structure of plant and animals tissue)



Project activities based on industry needs as described in the Tuzla mapping processes

New sensory lab at UNNS 2012

- For student courses, courses and paid tasks for industry in Novi Sad region and for the UNNS-UNTZ-cooperation.
- Sensory work for HERD project on lamb carcasses **(September 2013)**



Project activities based on industry needs as described in the Tuzla mapping processes

Lab investments in 2013

Not yet Completed

- UNTZ: Water activity measurement, refractometer, upgrading of equipment for texture measurements
- UNNS: Upgrading of equipment for rheological measurements

Project achievements

Practical use of knowledge

- Contribution to developing the commercial use of Bosnian fruit and berries
- Developing competence on analyses important for determining important quality details in fruit and berries

Project achievements

- **Institutional development and sustainability**

- Institutional agreements (HiST-UNTZ and HiST-UNNS; quite detailed) was worked out late 2011
- A project steering committee (faculty leaders from the cooperating institutions) is meeting twice a year discussing results and plans for the EDUFOOD project.
- Developing – (as well as developing tools for -) for university – enterprise cooperation in the area of food technology
- A few strategic investments in laboratory equipment at the Balkan Universities makes possible research and teaching activities on new sectors at the Universities as well as making new possibilities within the universities' cooperation for industrial innovation.

Ultimate project goal in Tuzla

- **Establish Centre for knowledge transfer**
 - **The Industry – University** cooperation in the mapping processes and the following project activities on courses for industry, work on student thesis' and laboratory investments makes fundamentals for this ultimate project goal in Tuzla
 - Preliminary strategies, plans were discussed at a **workshop and Project Steering Committee meeting in Trondheim in June 2013.**
 - **Drafts for business plan** will be discussed and evolved in the months to come. **Workshop for development of «centre ownership» in industry?**

THANKS FOR YOUR ATTENTION