

INNOVATIVE APPROACH TO HULL-LESS SPRING CEREALS AND TRITICALE USE FROM HUMAN HEALTH PERSPECTIVE

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Project consortium



**Latvia University of Agriculture
Faculty of Food Technology**



**Norwegian Institute
for Agricultural and
Environmental
Research (Bioforsk)**



**State Priekuli Plant
Breeding Institute
(SPPBI)**



**Rīga Stradiņš University
(RSU)**

Project implementation period

22 months

1 March 2015 – 31 December 2016

Project overall aim is to increase a knowledge on impact of triticale and hull-less spring cereal species on human health potential.

Indirect aim is to strengthen collaboration between Latvian and Norwegian researchers.

Project objectives

- **to form multidisciplinary group of Latvian and Norwegian researchers for study of triticale and hull-less spring cereals and their products for food;**
- **to select and evaluate triticale and hull-less spring cereal species grown under different management and climatic conditions;**
- **to investigate the effect of germinating on chemical composition of triticale, hull-less spring cereals bred in Latvia/Norway;**
- **to assess quality of selected grains, germinated grains and developed products;**
- **to carry out clinical studies for evaluation glycemic index (GI) of triticale and hull-less spring cereals grown in Latvia/Norway comparing to traditional cereal products.**

WP1 Site-specific evaluation of triticale and hull-less spring cereals

to evaluate the performance of local varieties of triticale, hull-less spring cereals under site-specific conditions for potential benefits for human diets



**Key expert - Dr. Arta Kronberga (SPPBI)
e-mail: arta.kronberga@priekuliselekcija.lv**

WP1 Site-specific evaluation of triticale and hull-less spring cereals

- internationally refereed scientific publication – 1 (22nd month);**
- scientific publications co-authored together with researcher from Norway – 2 (12th and 22nd month);**
- scientific publications – 1 (20th month);**
- seminars – 1 (20th month (cereal producers));**
- presentations at scientific events – 4 (1 - 6th month; 1 – 10th month; 2 – 18th month);**
- scientific and other reports – 2 (12th and 24th month).**

WP2 Development of germinated cereal flakes production technology

to investigate the effect of germinating on chemical composition of triticale, hull-less barley, hull-less oat, rye and wheat grain bred in Latvia / Norway and germinated grain use in production of breakfast cereals



**Key expert - Dr. Tatjana Rakcejeva (LLU)
e-mail: tatjana.rakcejeva@llu.lv**

WP2 Development of germinated cereal flakes production technology

- internationally refereed scientific publication – 1 (20th month);**
- scientific publication co-authored together with researcher from Norway – 1 (16th month);**
- scientific publications – 1 (16th month);**
- seminar – 1 (7th month (food producers and consumers));**
- presentations at scientific events – 4 (1 – 6th month; 1 – 12nd month; 1 – 17th month; 1 - 20th month).**

WP3 Quality and safety evaluation of breakfast cereals made from triticale and/or hull-less spring cereals

to evaluate quality and safety of breakfast cereals made from triticale and/or hull-less spring cereals selected in WP1 and quality changes occurring during product storage time.



**Key expert - Dr. Dace Klava (LLU)
e-mail: dace.klava@llu.lv**

WP3 Quality and safety evaluation of breakfast cereals made from triticale and/or hull-less spring cereals

- internationally refereed scientific publication – 1 (20th month);**
- scientific publications – 2 (1 – 12nd month; 1- 17th month);**
- presentations at scientific events – 2 (1 – 10th month; 1 – 18th).**

WP4 Assessment of glycemic index of grain products

assessment of GI of different triticale and hull-less spring cereals grown in Latvia and Norway comparing to traditional cereal products



**Key expert - Dr. Laila Meija (RSU)
e-mail: laila@meija.lv**

WP4 Assessment of glycemic index of grain products

- internationally refereed scientific publication – 1 (22nd month);**
- scientific publications – 2 (1 – 16th month; 1 – 21th month);**
- seminars – 2 (1- 14th month (medical doctors and assistants); 1- 18th month (nurses));**
- presentations at scientific events – 3 (1 – 10th month; 1 – 12nd month; 1 – 18th month).**

WP5 Publicity and dissemination

to disseminate results from project to the wider scientific society, industry, and consumers



**RĪGAS STRADIŅA
UNIVERSITĀTE**

**Key expert - Dr. Zanda Kruma (LLU)
e-mail: zanda.kruma@llu.lv**

WP5 Publicity and dissemination

- **publications in popular farming magazines, daily newspaper - 2 (1 – 12nd month; 1- 24th month)**

Project synergy with other initiatives

- **Scholarship Activity programme – LLU and RSU;**
- **NOVA-BOVA Master course 2015/2016 - qualitative and quantitative parameters of hull-less spring cereals and triticale and possibilities of their use in healthy food production (Agricultural University of Iceland, Norwegian University of Life Science, and Lithuanian University of Health Science).**

**Thank you for
attention!**