2 ZERO HUNGER

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

## LEARNING AND STUDENTS

### Organic Biodegradable Tableware

A second year student at INRTU School of High Technologies proposes the use of disposable tableware with an environmentally friendly composition. Within the framework of the university contest "Avant-garde of Science," the student received grant support for the project amounted to 30 thousand rubles.

INRTU student major in Foodstuffs from vegetable raw materials conducts research under supervision of Associate Professor of INRTU Department of Chemistry and Food Technology named after V. V. Tuturina.

The main goal of the student is to propose a "recipe" for disposable tableware with ecological composition. The development has a number of advantages: safety, renewability of resources, a short period of recycling without releasing toxic substances into the environment.


The student also considers the economic factor. Today manufacturers of disposable tableware have few competitors because more than 90% of enterprises specialize in production of convenient and cheap plastic.

The student continues research of physical and chemical properties of vegetable raw materials, to estimate appearance and firmness of finished goods from pear pulp, and plans to make laboratory samples and determine the ways of utilization.

### Study Programs

Sustainable courses within undergraduate and graduate study programs on Industrial Biotechnology; Food Engineering; and Food Biotechnology are available for INRTU students.

55 graduates in 2021

### Phytotesting on Plant Seeds

Employees and students of the Department of Industrial Ecology and Life Safety of INRTU School of Subsoil Use are developing systems to clean up the environment of the Baikal region.

The research is carried out at the initiative of the scientific school "Technogenic Risks of the Baikal Region". The project was created together with the East Siberian Institute of Medical and Biological Research (Angarsk).

"Method of phytotesting on plant seeds" is work on assessing the toxicity of antibiotics.

## RESEARCH

### Publications

SDG 2 key publications of INRTU academic staff in SCOPUS on current topics such as

Physiological responses to water deficiency in bread wheat (Triticum aestivum L.) lines with genetically different leaf pubescence;

Network landscape representation: Ecosystem services context;

Food Stamps as a Method of the Parallel Government Support.

### INRTU Forum Issues on Food and Water Resources

INRTU first-year students conduct experimental research using bacteria to recycle food waste. The students believe that introduction of such methods will help solve the problem of recycling food waste that is generated in food processing areas (cafeterias, canteens, snack bars, etc.). The owners of these establishments will collect them in special containers and take them for recycling instead of throwing them into landfills. Decaying waste emits methane and carbon dioxide, which contributes to the greenhouse effect. The idea is based on the development of foreign colleagues who ferment substrate from garbage (watermelon and citrus peels). The polytechnics propose to replace fruit peels with vegetable peels, which are more common in Siberia.

## PUBLIC ENGAGEMENT

### Charity Actions

The university participates in charity actions, helping children from orphanages and the elderly. In October, INRTU joined the campaign dedicated to the International Day of the Elderly. The INRTU Food Complex staff collected food baskets for the elderly. The baskets included vegetable oil, cereals, sausages, canned goods, sugar, milk, etc.

In November, within joint charity action for children of Rehabilitation Center, the Dobroe Delo Fund sent warm clothes, office supplies, literature, and INRTU organized a tea party with sweet pies.


### Eco Drinks Cooked by Pupils at INRTU

INRTU held master classes in cooking functional eco drinks for pupils from Baikalsk who were engaged in the technological club. The young technologists were offered to select a recipe and brew non-alcoholic gluhwein based on birch, apple juice and herbs.

## OPERATIONS

### Sustainable Food Production

INRTU food complex offers a healthy diet menu to students and staff at all food canteens. The menu gives priority to steamed meals, vegetables and sugar-free desserts. All menu dishes are developed due to recommendations of Rospotrebnadzor. Meals and meal complexes are balanced in composition of proteins, fats and carbohydrates, as well as fiber. In this case, the availability of dishes to students and their low cost is the most important criterion to include complex dishes in the menu at the serving.