



UPSCALING THE MEAT, DAIRY AND BREWERY PILOT PLANTS AT THE FACULTY OF FOOD SCIENCE AND ENGINEERING- AN INFRASTRUCTURE PROJECT DEVELOPED BY DUNAREA DE JOS UNIVERSITY OF GALATI

25th of May 2012
Novi Sad, Serbia



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POR Axa 3.4. "Dunarea de Jos" University of Galați



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Galati

Faculty of Food Science and Engineering



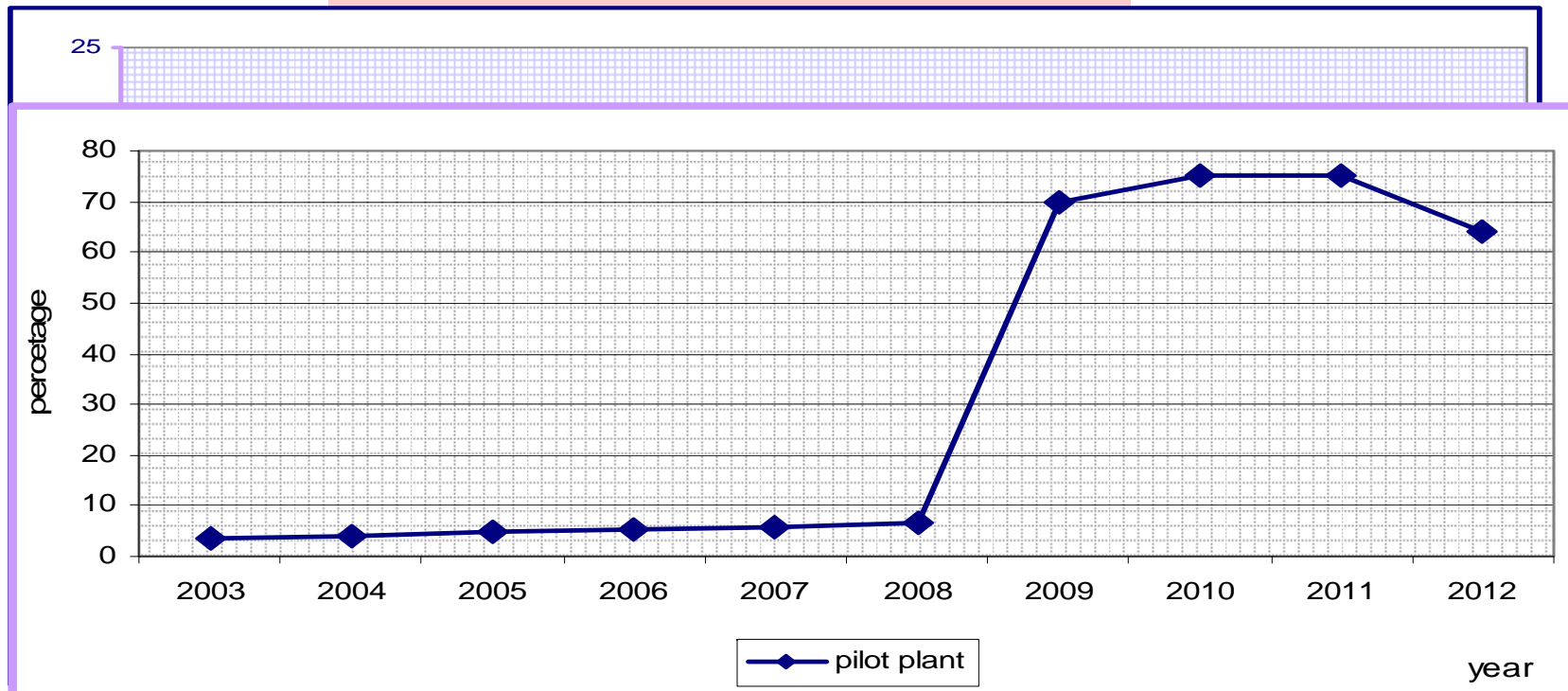
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Evolution of key topics

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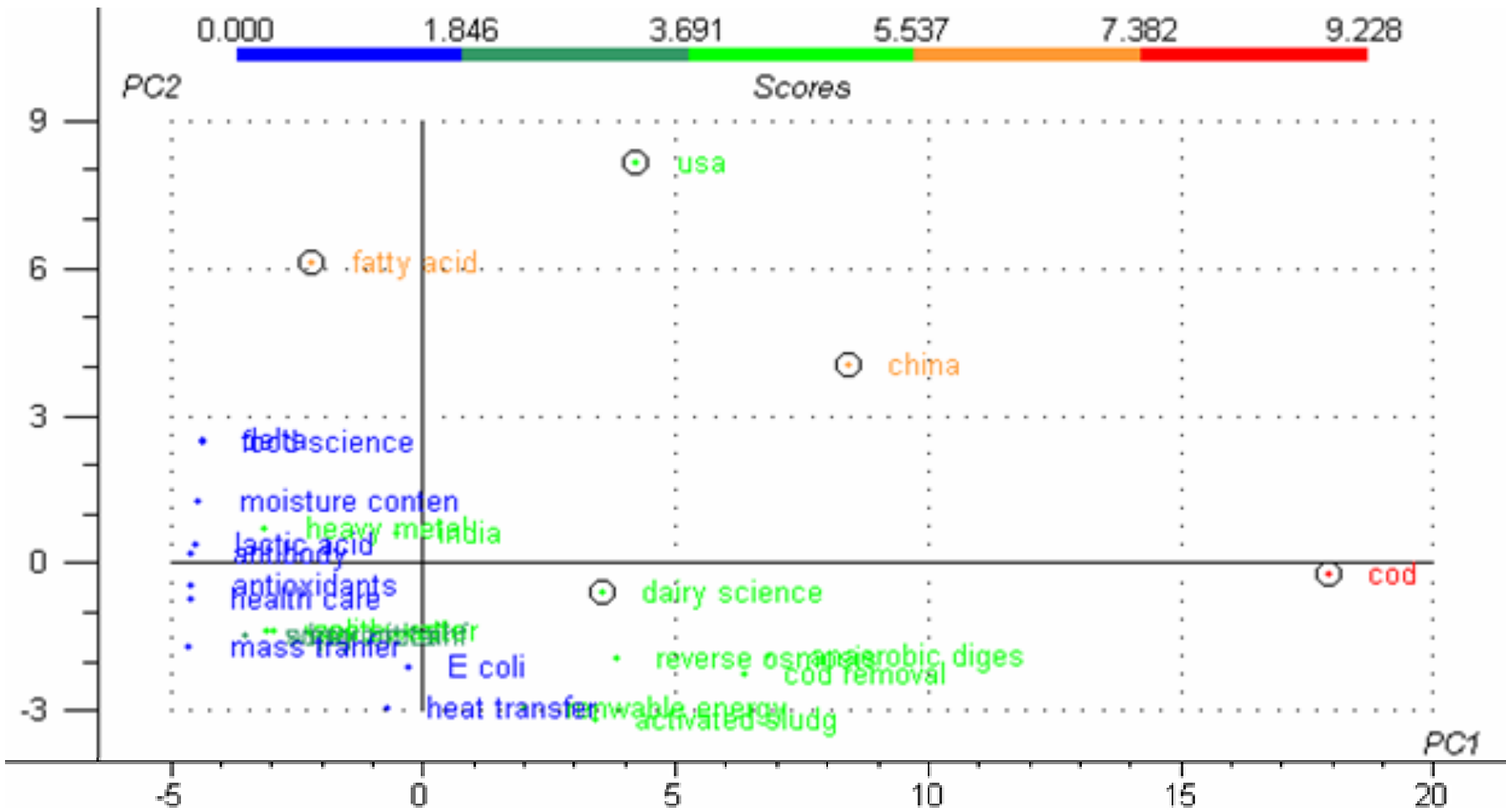


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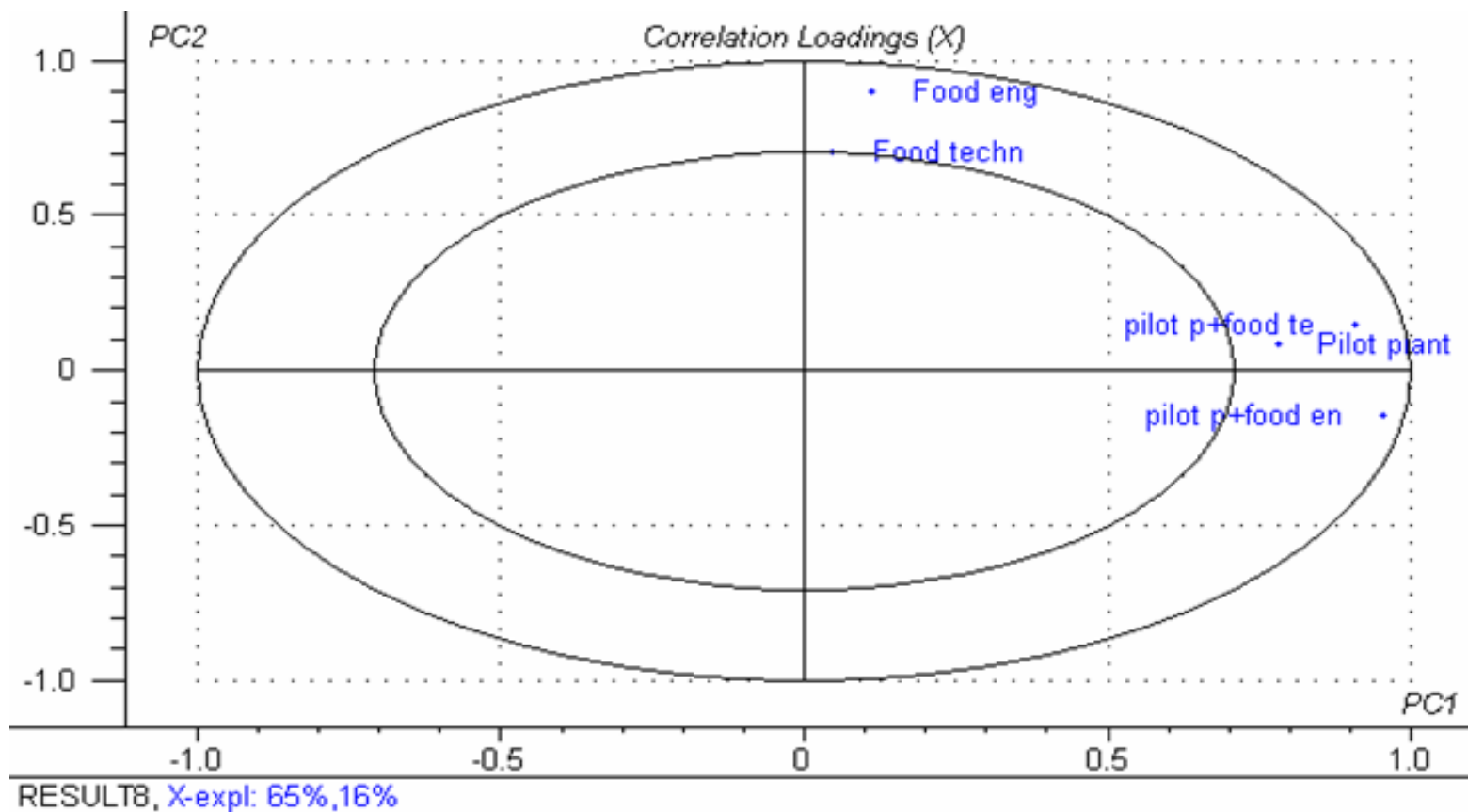
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Instrumente Structurale
2007-2013



RESULT8, X-expl: 65%,16%





Priority 3 – Infrastructure

Specific objective is the improvement of the quality of the **educational infrastructure** in training centers, schools and **universities**.



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General objective improvement of the applied research infrastructure at the Faculty of Food Science and Engineering in Galați, Dunărea de Jos University

Development of a food engineering training center in the South East region to help the development of the sustainable economical growth in the food sector



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Project Budget 2010-2013

NR. CRT.	FUNDING SOURCE	Cost (euro)
I	Total value of the project	3.273.252
a.	Other costs	2996
b.	Total eligible costs	2.747.636
c.	VAT	522620
II	Contribution:	57.949
a.	Contribution of the University (2%)	54.953
b.	Other contributions to the project	2996
c.	Project income*	0.00
III	VAT	2.247.266,61
IV	EU funding-Structural contribution	2.692.683



No	Team members	Responsability
1	Conf dr. ing. Daniela Borda	General manager / Dairy pilot plant
2	Prof dr. ing. Popa Corneliu	Scientific advisor / Technological lab.
3	Prof. dr. ing. Alexe Petru	Economic director / Meat pilot plant
4	Șef lucr. dr. ing. Gitin Liliana	Executive Director / Minimal processing
5	Sef lucr. dr. ing. Stanciuc Nicoleta	Quality management
6	Prof dr. ing. Hopulele Traian	Brewery
7	Prof dr. ing. Nicolau Anca	Dissemination
8	Conf. dr. ing. Stanciuc Silviu	Purchasing
9	Conf. dr. ing. Banu Iuliana	Specialist
10	Sef lucr. dr. ing. Vasile Aida	Specialist
11	Șef lucr dr. ing. Aprodu Iuliana	Specialist
12	Asis. drd. ing. Bleoanca Iulia	Specialist
13	Asis. drd. ing. Neagu Corina	Specialist

14	Asis dr. ing. Constantin Oana	Specialist
15	Prep. dr. ing. Bonciu Camelia	Specialist
16	Prep. drd. ing. Dumitrașcu Loredana	Specialist
17	Prep. drd. ing. Mocanu Dănuț	Specialist
18	Prep. drd. ing. Andronoiu Doina	Specialist
19	Drd. ing. Ciuciu Ana-Maria	Specialist
20	Drd. ing. Manțoc Livia	Specialist
21	Drd. Ing. Cotârleț Scantee Mihaela	Specialist
22	Drd. ing. Coman Gigi	Specialist
23	Dr. ing. Stanciuc Violeta	Specialist
24	Sef lucr dr Drăgan Aurelian	Specialist
24	Ing. Diaconu Georgian Gabriel	Engineer



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Section 1

Technological & Educational Research Laboratory

- purchasing applied research equipment
- upscaling the existing structure with equipment intended for educational purposes



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Instrumente Structurale
2007-2013



**Supplier: NATEX Prozesstechnologie
GesmbH, Ternitz, AUSTRIA**

Characteristics:

- maximum pressure 550 bar
- pressure in separator 1: 250 bar, separator 2: 100 bar
- total volume of extractor 2 litri
- extraction temperature: 40 - 60°C

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Supplier: Resato International, The Netherlands

Technical characteristics:

- max. pressure 10000 bar
- four vessels of 100 cc
- temperature -20-120°C

Studies:

- Enzyme inactivation studies : inactivation of PPOs and PODs from peach puree using PATP
- Characterization of the multi-polymeric packaging material used for HPP treated foods
- inactivation kinetics of different microorganisms PATP (*Penicillium*)



Integrated approach



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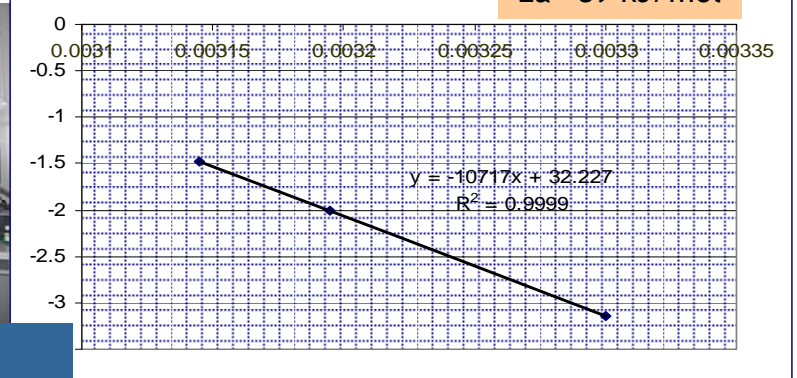
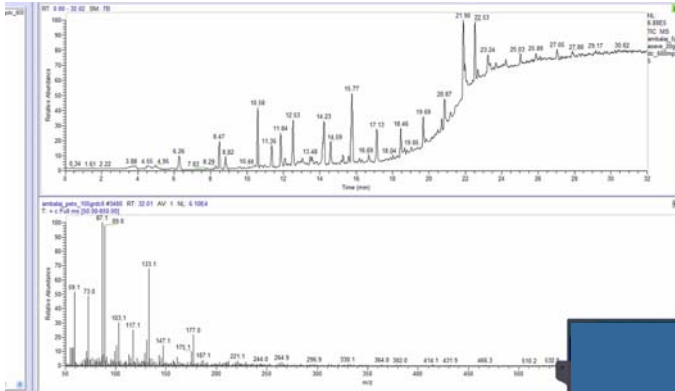


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Instrumente Structurale
2007-2013



Integrated approach

Molecular composition

Kinetics

P/T	26			30			35			40			45		
	Al	As	k	Al	As	k	Al	As	k	Al	As	k	Al	As	k
200				1653	-1640.5	0.000241				109.9	-108.5	0.000324	3.0695	0.1945	0.223
300	49.178	-47.9197	0.000218	1.6787	-0.6809	0.0431	220.3	-218.5	0.000349	0.9335	0.0279	0.1349	0.9709	0.03	0.2279
400	0.7658	0.2355	0.3532	0.8301	0.1619	0.2895	1.0247	-0.0101	0.258	0.6539	0.3407	0.5534	0.6819	0.3181	0.849
500	0.9481	0.0519	2.9612				0.7501	0.2499	1.8978	0.7384	0.2583	0.5228			
600	0.8535	0.1465	0.6372												



Texture



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Section II

Equipment for

- dairy pilot plant
- meat pilot plant
- brewery pilot plant



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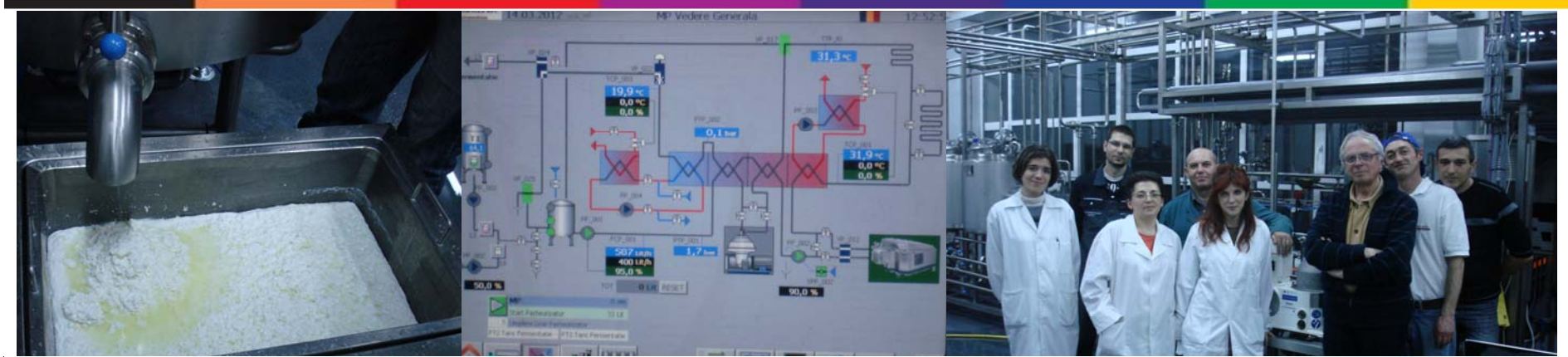


Dairy pilot plant: construction work for the rooms and the hygienic flow



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Meat pilot plant

- *upscaling the supplying system of all the utilities (energy, water);*
- *equipment to replace the old ones dating from 1985;*
- *purchasing new equipment for specific operations.*

Wolf, Cutter, Chain Saw, Stuffing machine, Pickle injector, Smoking room, Slicing machine, Vacuum Packaging, Thumbler, Colloidal mill



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To be brew pilot plant

- ✓ *construction work in the existant rooms - 172 m²*
- ✓ *purchasing brewery equipment*

Microbrewery unit of 2.5 hl/batch



Malt mill
Brew system
Whirlpool
Fermentation tank
Cooler
Filter
Bear tank
Cleaner
Filling machine
Pasteurizer



TARGET GROUPS

✓ *improvement of the educational system and increase the attractiveness of food engineering training for students;*

✓ *better trained students for the labor market ;*

✓ *development of the applied research themes in partnership with the local SMEs;*



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TARGET GROUPS

- ✓ *obtaining new products and development of students` entrepreneurial skills;*
- ✓ *organizing short training programs for teachers working in high schools or for the industry*



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Thank you for your attention !

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