

# Experimental development of new organic plant-based burgers

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**Network to innovate: Plant proteins and new food products**

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# Experimental development organic plant-based burgers

- Cooperation project:
  - Aloja Starkelsen
  - Latvia University of Life Sciences and Technologies Faculty of Food Technology
  - Grow Bite
  - Gusts Apinis
  - BioGus
- Duration: May 1, 2020 – May 11, 2022 / 2 years





# Project brief

- Target: experimental development of organic plant-based burger

- Specifications:

- Organic
- Gluten-free
- Plant-based

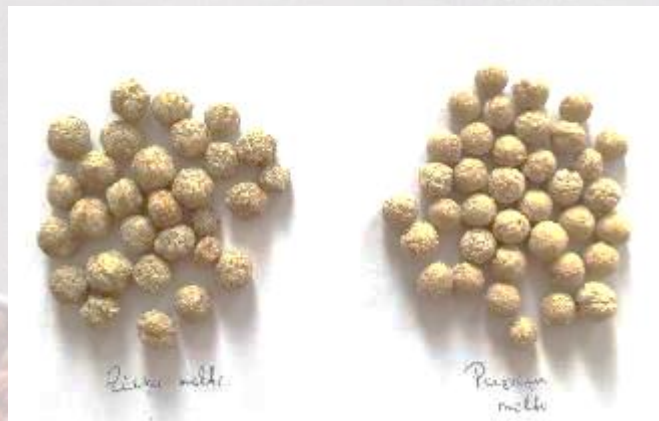
- Activities:

- Texturization test of organic brown pea and beans flour (protein sourcing, isolation, texturization)
- Mixture and processing of protein source with fats and oils and other ingredients (e.g. binders, flavoring, coloring)
- Other activities according to project specification



# Challenges

- Texturization
- No artificial additives/taste enhancers
- Healthy food





# Process





# Tests by students



# Interim result



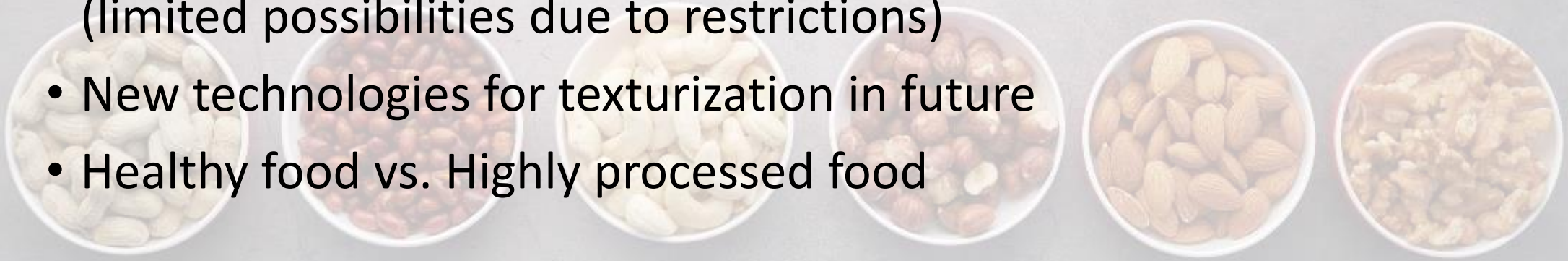
Test	Method	Unit	Result
* Protein (N*6,25)	PB-116 ed. II of 30.06.2014	g/100g	16,0
* Dietary fiber	AOAC 991.43:1994	g/100g	5,8
* Sugars profile	PB-265 ed. II of 27.11.2020		
Glucose		g/100g	<0,2 (0,2±0,1)
Fructose		g/100g	<0,2 (0,2±0,1)
Sucrose		g/100g	1,4
Maltose		g/100g	<0,2 (0,2±0,1)
Lactose		g/100g	<0,2 (0,2±0,1)
Galactose		g/100g	<0,2 (0,2±0,1)
Total sugars		g/100g	1,4
* Ash	PN-A-82100:1985 with modification in p. 2.8	g/100g	2,69
* Fat	PN-A-82100:1985	g/100g	6,5
* Energy value	Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011		
Energy value		kcal/100g	174
Energy value		kJ/100g	727
* Carbohydrates	Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011	g/100g	9,9





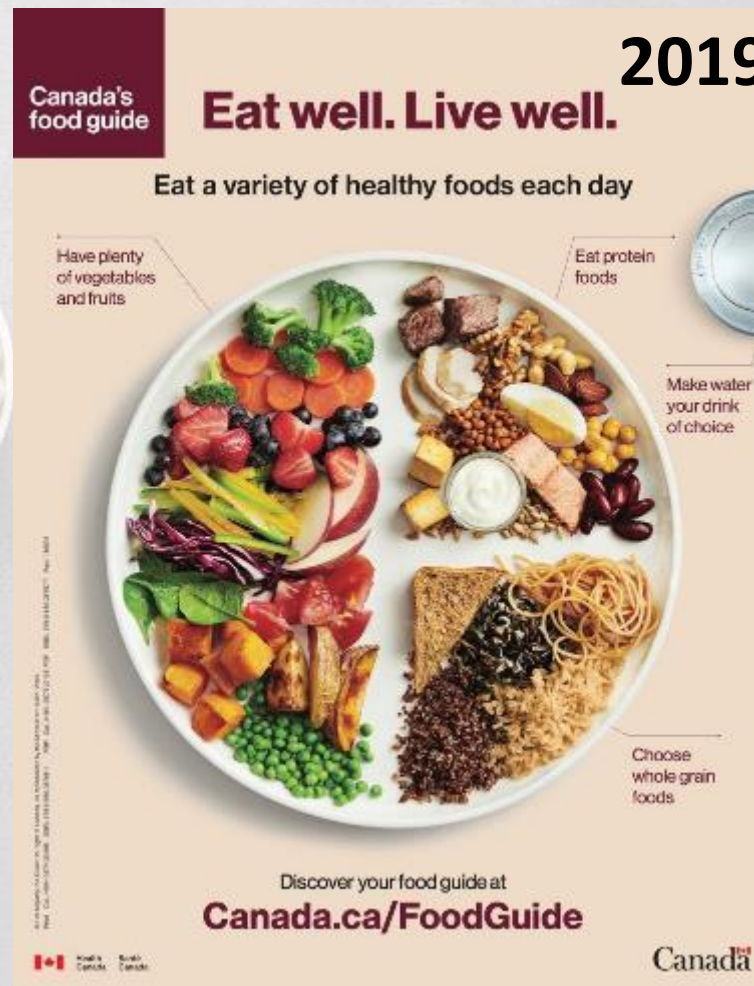
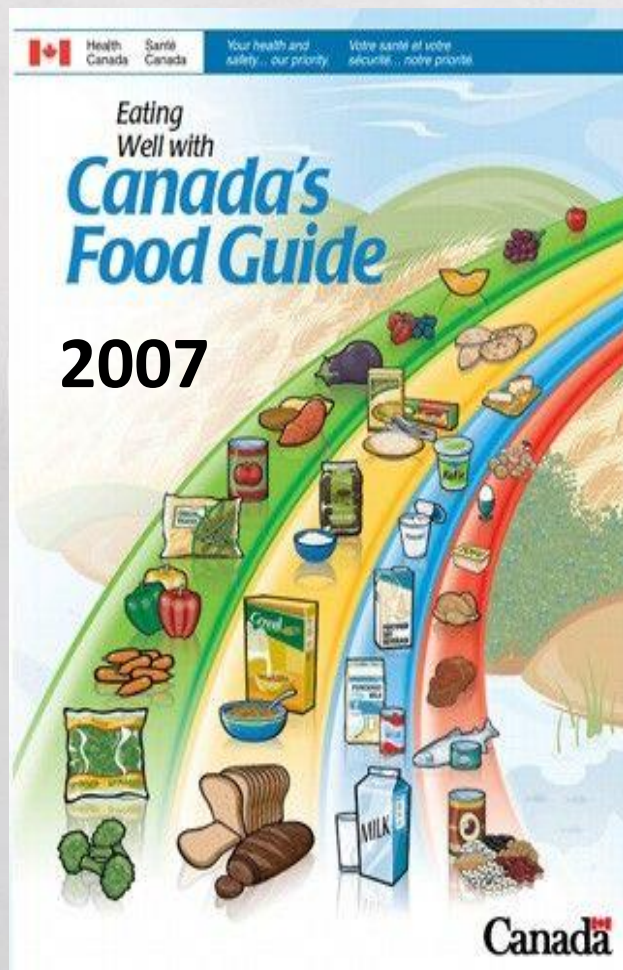
# Looking back and to the future

- More product testing for end consumers for different feedback (limited possibilities due to restrictions)
- New technologies for texturization in future
- Healthy food vs. Highly processed food





# Looking back and to the future





# Thank you!



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LLU PTF, Aloja Starkelsen, Grow Bite, BioGus, Gusts Apinis  
JAUNU BIOLOĢISKĀS LAUKSAIMNIECĪBAS  
PRODUKTU AUGU BURGERU AR DAŽĀDĀM  
PIEDEVĀM EKSPERIMENTĀLĀ IZSTRĀDE

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