

Variety Testing in Slovenia and introduction of organic VCU



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17th EU-VCU EXPERTS' GROUP MEETING
May 13th to 15th 2023 – Korsør, Denmark

Agricultural Institute of Slovenia

1898 – Agricultural-Chemical Testing Station of Carniola

1922 – Agricultural Research and Control Station in Ljubljana

1946 – Government of the Peoples' Republic of Slovenia

founder of KIS by law

1996 – KIS becomes Public Research Institution under the
auspices of Slovenian government



KIS
Kmetijski inštitut Slovenije
Agricultural Institute of Slovenia

About Us

Public research institution =
governmental nonprofit institution with
defined activities in the sense of public
service

Staff: 258

Researchers: 97

- PhD: 62

- MSc: 35

Other staff: 161

- professional staff: 149

- technical and administrative staff: 12

Main activities

- Crop Science
- Plant Protection
- Animal Production
- Fruit Growing, Viticulture and Oenology
- Agricultural Economics
- Agricultural Engineering and Energetics
- Agricultural Ecology and Natural Resources,
Soil science

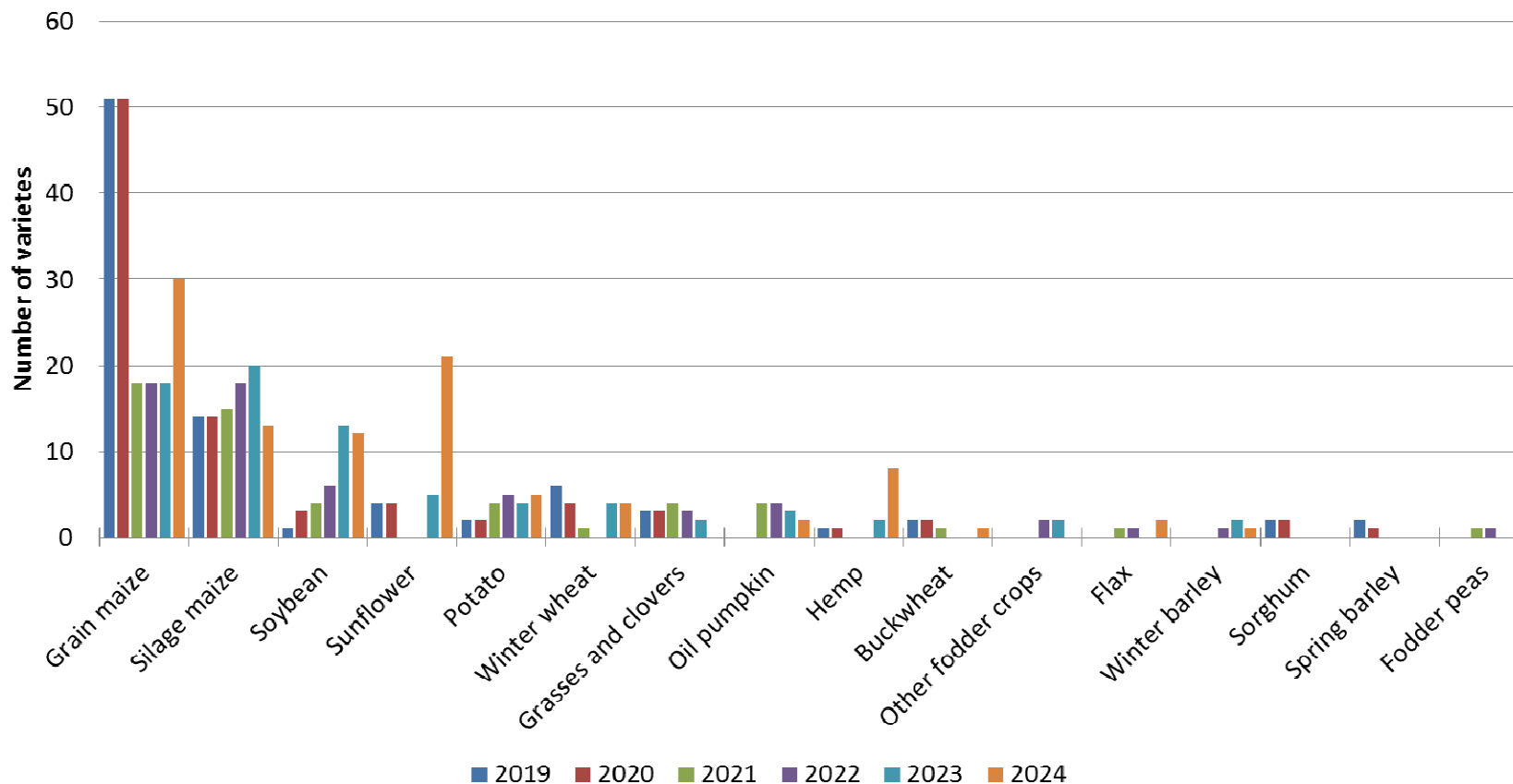
Crop Science Department

- Introducing New Varieties and Ecological Zoning
- Physiology Research for Stress Tolerance
- Preserving Genetic Diversity: The Slovenian Plant Gene Bank
- Production Techniques
- Plant Breeding and Genetics
- Seed Science and Seed Technology



VCU testing program at KIS

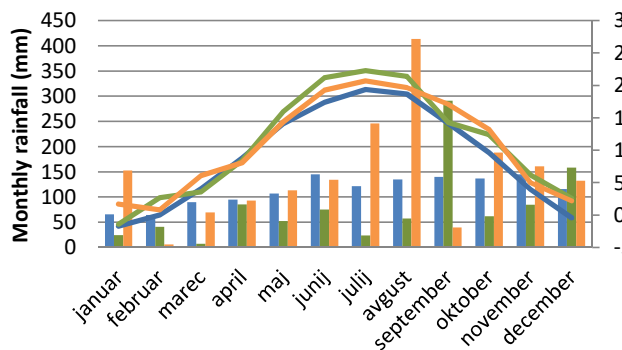
VCU testing in Slovenia (2019-2024)



Testing locations

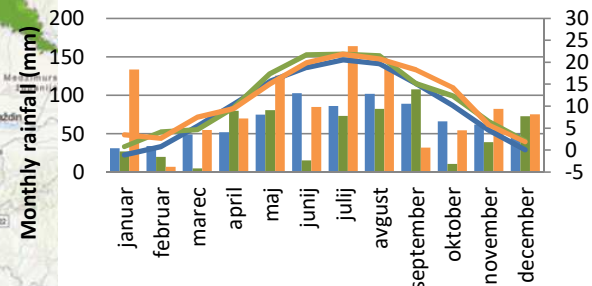


Ljubljana - letališče



■ 81-2010 P (mm) ■ 2022 P (mm) ■ 2023 P (mm)
— 81-2010 T (°C) — 2022 T (°C) — 2023 T (°C)

Rakičan



■ 81-2010 P avr ■ 2022 P avr ■ 2023 P avr
— 81-2010 T avr — 2022 T avr — 2023 T avr



Equipment



Target research programme (national) (1. 11. 2020 – 31. 10. 2023)

Development of methods and establishment of systems for official testing of organic varieties of selected crops and vegetables in Slovenia



Protocol development for official organic testing of varieties of selected crops for registration purposes (VPU methods).



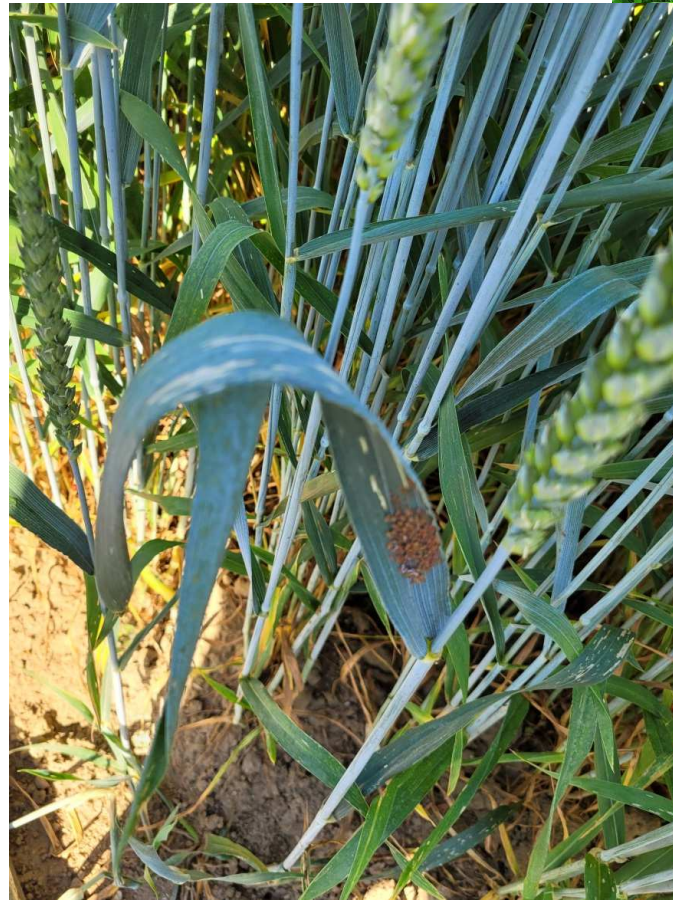
Development of protocols and system for official organic testing of varieties for organic agriculture (post-registration testing), and establishment of recommended variety lists of selected crops and vegetables



Establish a system of official organic testing for registration of organic varieties and post-registration testing.

Focus traits for organic VPU testing

- Greater attention in monitoring resistance or tolerance to diseases and pests
- Quality and quantity
- Added ratings for the variety's competitive ability against weeds
- Plasticity/ adaptability to different pedoclimatic conditions, i.e. stability of the variety

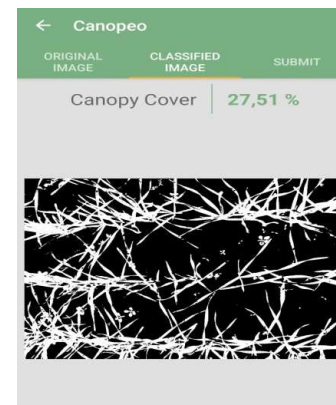
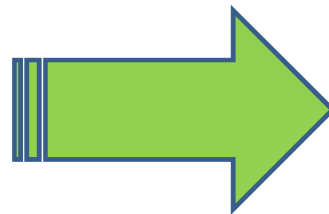


Specific approach in organic experiments and lessons learned

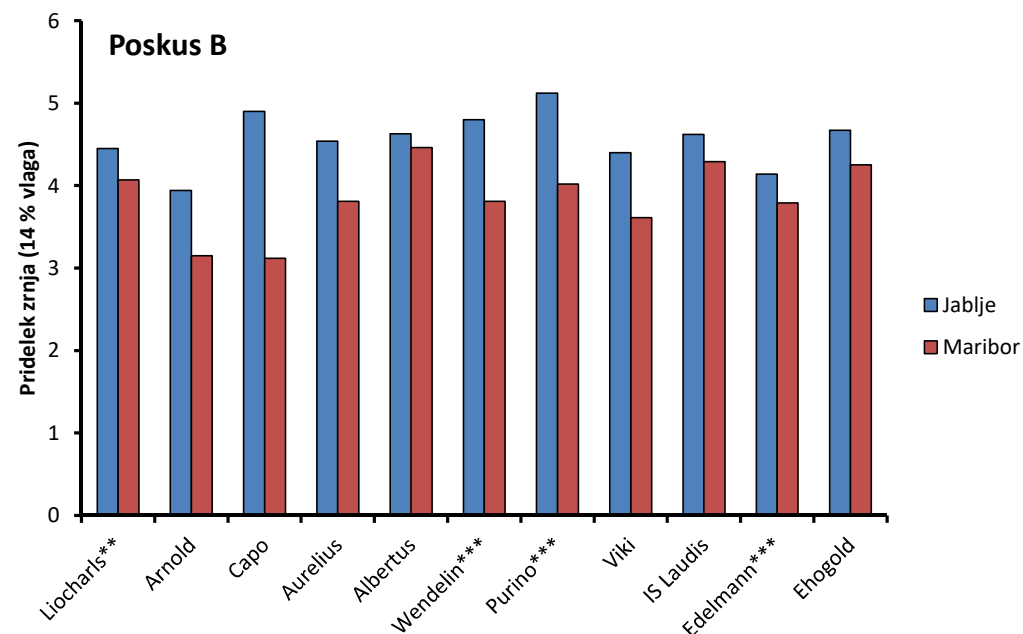
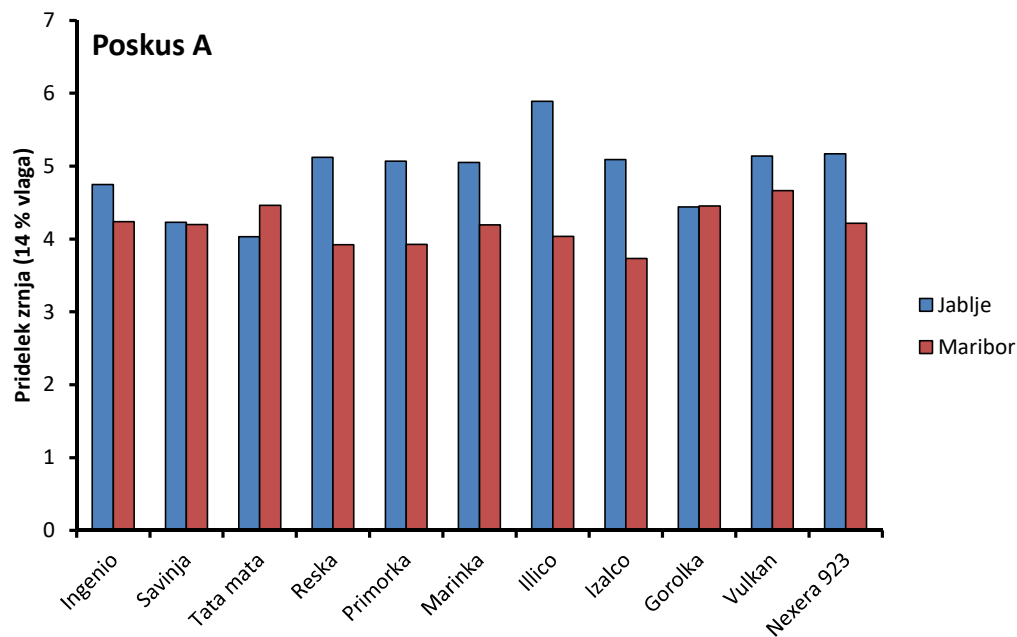
- Certified organic fields
- Different trial design (more replications)
- Agrotehnic with the ecological principles listed in EU Regulation 2018/848



- Additional measurements



Results of testing winter wheat varieties in the 2022/2023



Conclusions

- **Developed Protocols:** We've created and tested protocols for organic VCU testing of organic varieties under regulation (EU) 2018/848. Additionally, protocols were created for organic post-registration testing of varieties.
- Protocols were created for **winter and spring wheat, winter and spring barley, winter spelt, maize, potato, soybean, buckwheat, hemp and oil seed pumpkins.**
- **Partial Equipment & Training:** We've acquired some necessary equipment and trained personnel for the testing process. **Network Established:** We've built a network and proposed a system to facilitate official organic variety testing.



Future challenges

Cost Considerations: Verifications have shown that organic testing is more expensive than conventional methods due to several factors:

- Increased Labor: Organic trials require more time for conducting, maintaining, and evaluating experiments.
- Organic Fertilizers: Organic fertilizers tend to be more expensive than conventional options.
- Standard Varieties: Organic-compliant standard varieties may be costlier to obtain.

We need to acquire specialized tools and additional training to optimize the implementation of testing protocols.

Next steps:

- evaluation and „fine-tuning“ with extensive EU regulations – Ministry of Food, Agriculture and Forestry
- financing... (post registration is proposed to be included in the future Public service in field crops and vegetables, for VPU partial financing by the ministry is in the discussion)



Next meeting...

- Second half of May 2025
- Goal: present the great diversity of agriculture in Slovenia
- Open for suggestions regarding main topics of the meeting

Next meeting...





Thank you for your attention!

