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D 8.3

# Report on field-based demonstration events



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## D 8.3\_Report on field-based demonstration events

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## D 8.3\_Report on field-based demonstration events

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## D 8.3\_Report on field-based demonstration events

### 1. Executive summary

ECOBREED partners organised 52 demonstration events across 11 countries (Austria, Czech Republic, Germany, Hungary, Italy, Poland, Romania, Serbia, Slovakia, Slovenia, UK). The demonstration events were visited by more than 1000 participants.

Demonstration events were distributed on all four crops, but the majority of events were held on wheat trials.

The demonstration events were usually based on Farmer Participatory field trials. So “real life” situations could be shown. Most participants were farmers, but also advisers, researchers, seed industry and policy makers attended the events.

The demonstration events were a successful dissemination tool in the ECOBREED project to give information and discuss choice of varieties for organic farming, organic plant breeding, populations vs. pure lines etc. Some trials on seed treatments and organic production management gave additional information.

Although it was not easy to collect questionnaires at a field day many questionnaires were filled out.

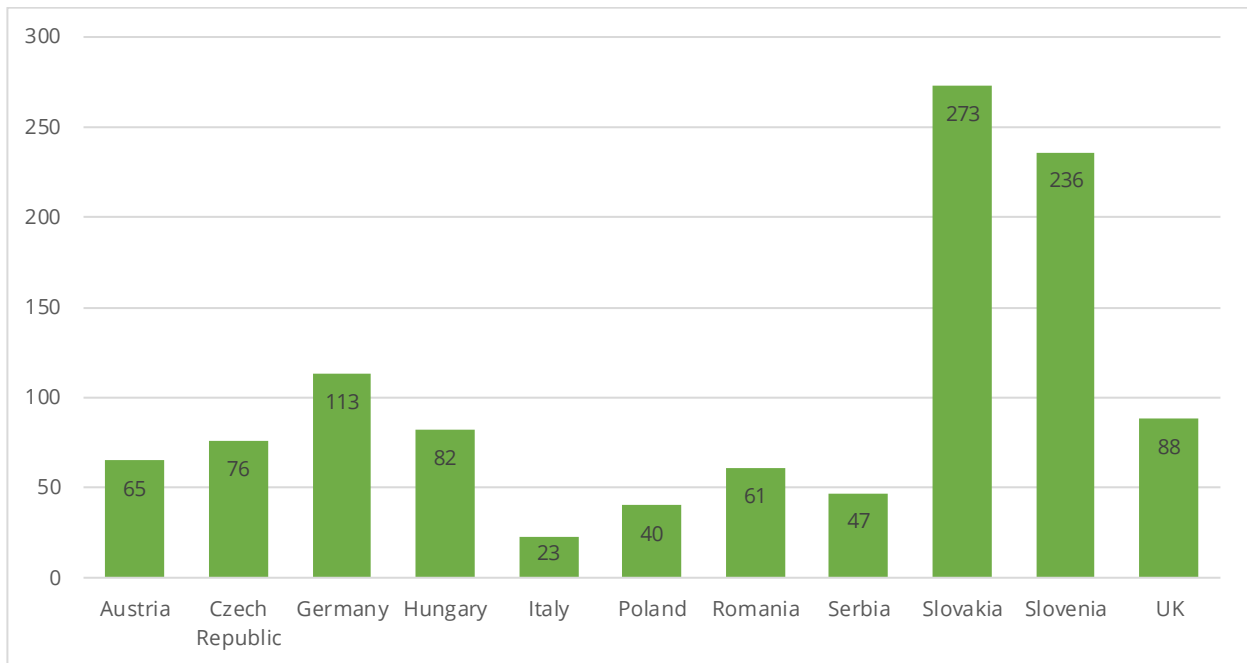


## D 8.3\_Report on field-based demonstration events

### 2. Introduction

The demonstration events were one of the most important tools for dissemination in the ECOBREED project. They were based on the Farmers Participatory field trials.

ECOBREED partners organised 52 demonstration events across 11 countries (Austria, Czech Republic, Germany, Hungary, Italy, Poland, Romania, Serbia, Slovakia, Slovenia, UK). The demonstration events were visited by more than 1000 participants.



**Fig. 1:** Number of participants at ECOBREED demonstration events according to country.

Demonstration events were distributed on all four crops. Most events were held on wheat trials (44%), followed by soybean (23%), potato (17%) and buckwheat (15%) trials.

The situation on dissemination of topics about organic seeds and organic plant breeding was very different in the different countries. Some countries already had a network of official organic variety trials, others did not. Even if there was an already existing network the ECOBREED demonstration events gave the opportunity for additional trials in different regions, new crops and different soils/climatic conditions.

The Covid-19 pandemic made the start of the demonstration events difficult. Even after removal of restrictions people were unsure whether they should meet, and therefore it was difficult to plan and organise the events.

Many of the ECOBREED partners were lacking skills to organise events, especially in countries for which demonstration events were important. Even so, with the collaborative work within WP8, the events reached new interested groups and individuals and created new networks. Not only farmers attended the events. So, the demonstration events were successful to promote organic plant breeding and organic seeds.



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### 3. Demonstration events at KIS

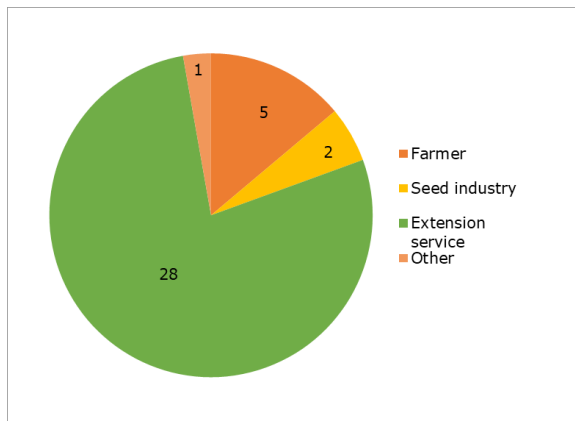
#### 1<sup>st</sup> Organic potato day

<i>Organiser:</i>	<b>Agricultural institute of Slovenia (KIS), Slovenia</b>
<i>Date:</i>	22 July 2020
<i>Location:</i>	Experimental fields of Agricultural Institute of Slovenia in Mengeš and Jablje and on the field of the organic farm Kozina, Matej Konc, Hrastje near Kranj
<i>Varieties:</i>	<p>The programme started with the Introduction and short presentation of the ECOBREED project and the Kozina organic farm. ECOBREED WP6 leader Werner Wogt-Kaute attended the Organic potato day and give a presentation on the importance of farmers participation in research and other ECOBREED activities.</p> <p>The introduction was followed by presentation of organic field experiment of organic and late blight resistant potato varieties on Kozina farm and organic seed field of KIS Kokra variety.</p> <p>In the field experiment 14 varieties were presented: Otolia, Salome, Levante, Alouette, Colomba, Tinca, Twister, Twinner, KIS Tamar, Delila, Botond, KIS Kokra, Carolus and Kelly.</p> <p>On organic field of KIS IC Jablje on Mengeško polje a working collection of 65 varieties were presented within the organic potato phenotyping trial (Task 3.1) and Colorado potato beetle control strategies trial were presented. They were followed by presentation of Potato late blight susceptibility experiment, Potato wireworm experiment with compounds suitable for organic farming and presentation of organic potato breeding programme at KIS Infrastructure Center Jablje.</p>
<i>Participants:</i>	50 people attended the event: farmers, extension service, researchers, seed industry and media.
<i>Survey:</i>	On the Organic potato day, a Questionnaire on how to improve the supply of organic seeds was delivered among all 50 attendees. 37 of them returned the questionnaire and 36 of them wrote down their profession. The majority were from extension service, but also 5 farmers and 2 from the industry.



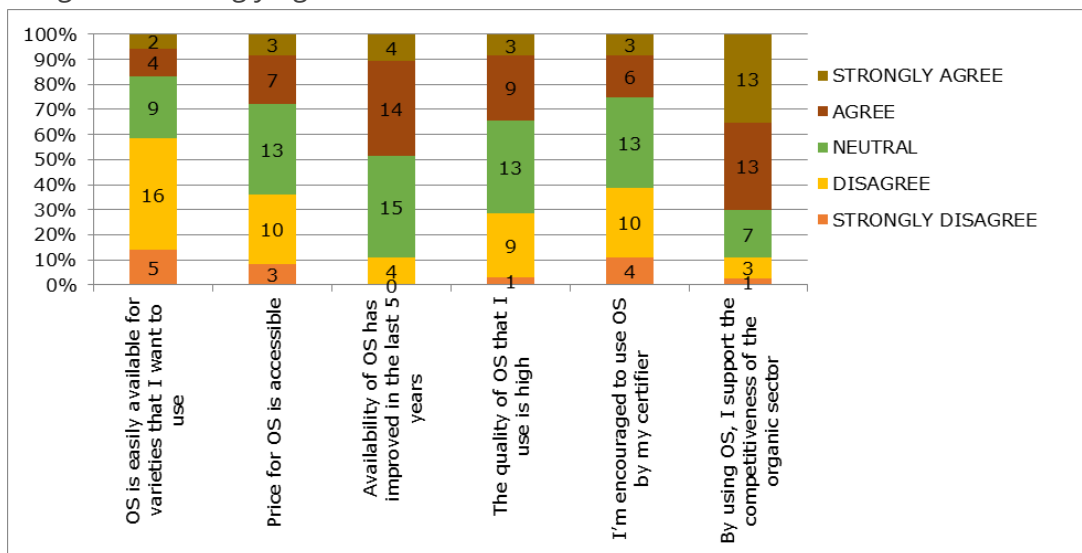
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Profession of the attendees:



Below we sum up some most interesting results of the questionnaire. The survey respondents ranked their answers to the specific questions on seed potato into 5 possible answers. The number and percentage of all respondents affiliated to certain options can be seen from the figures.

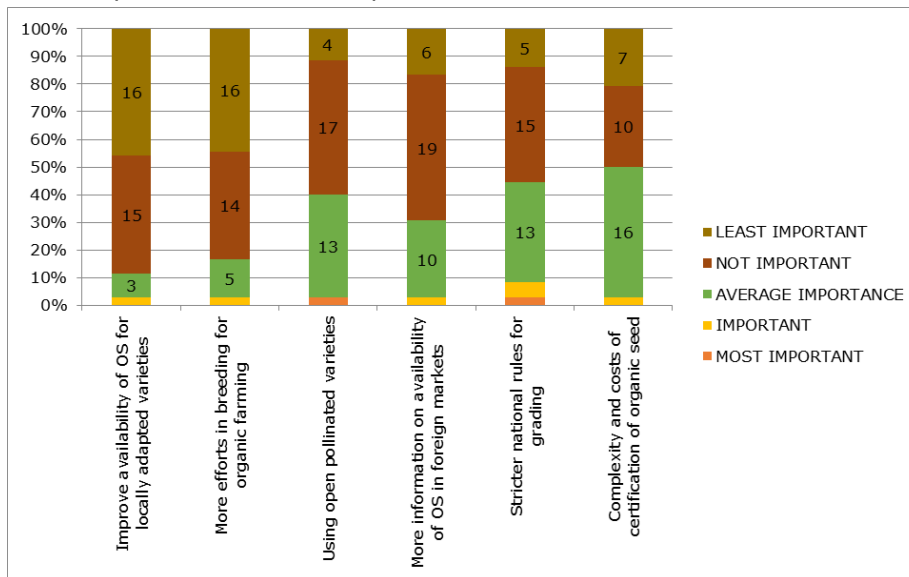
*Attitudes towards organic seed (OS) ranked on a five-point scale from 'Strongly disagree' to 'Strongly agree':*



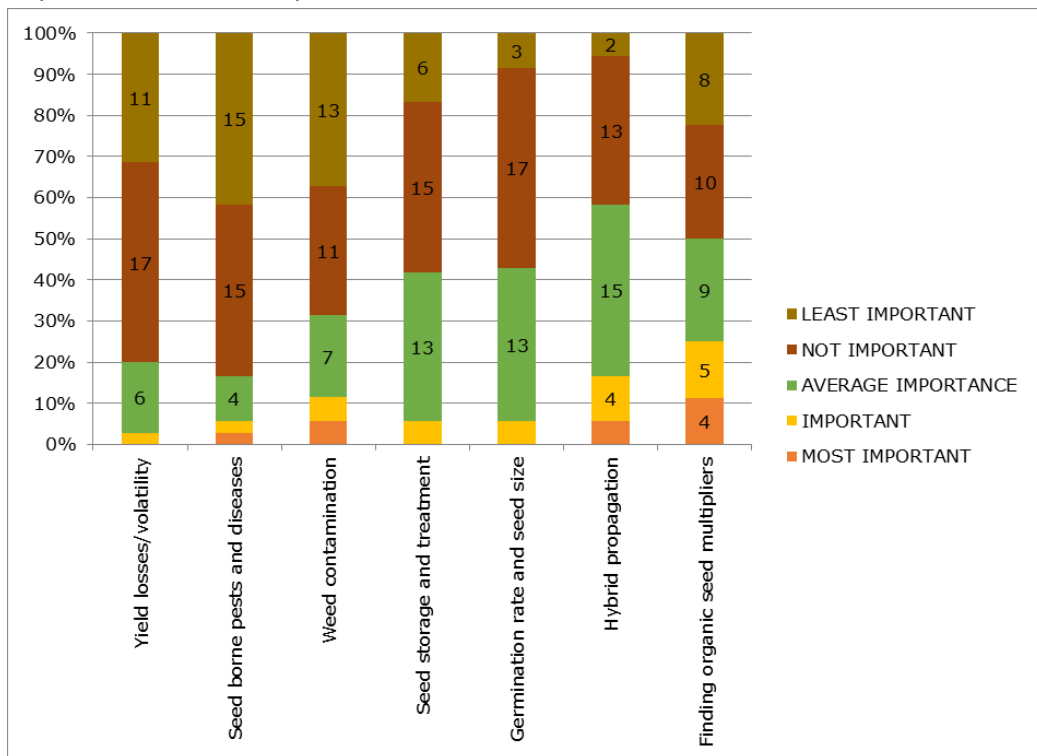


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Ranking of different actions to boost the use of organic seed on a five-point scale from 'Most important' to 'Least important':

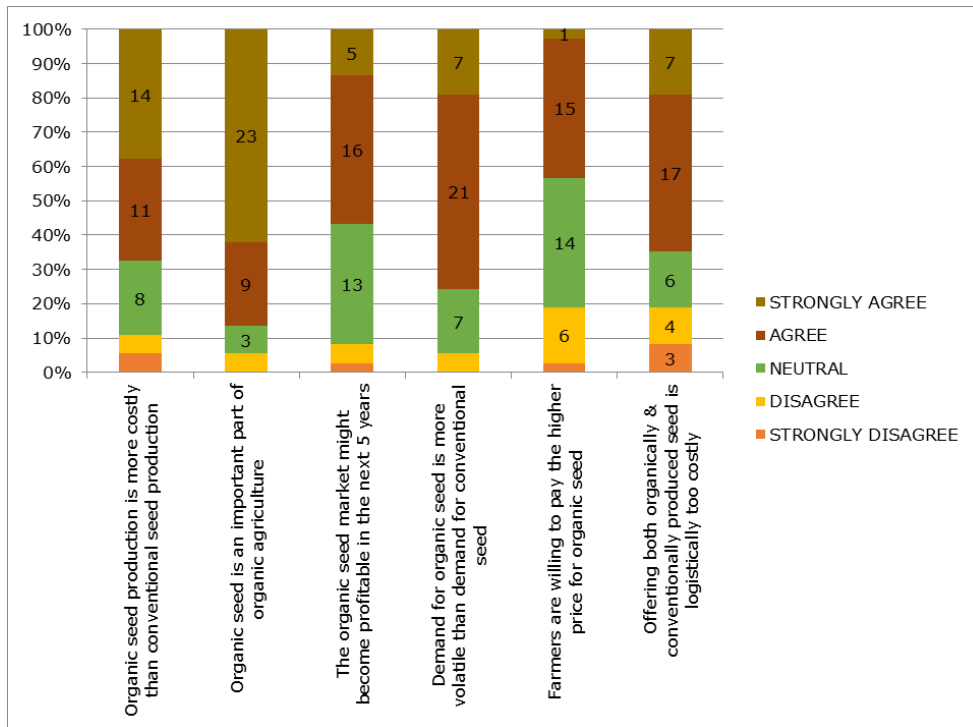


Technical Challenges in Organic Seed Production on a five-point scale from 'Most important' to 'Least important':

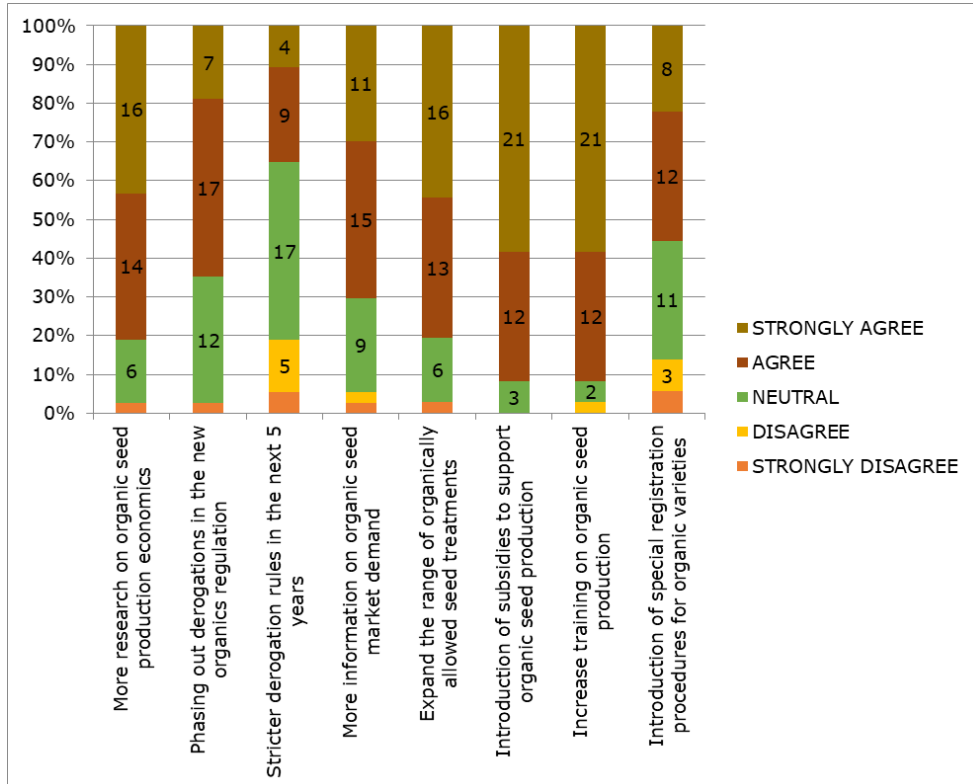


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Marketing Issues with Organic Seed on a five-point scale from 'Strongly disagree' to 'Strongly agree':

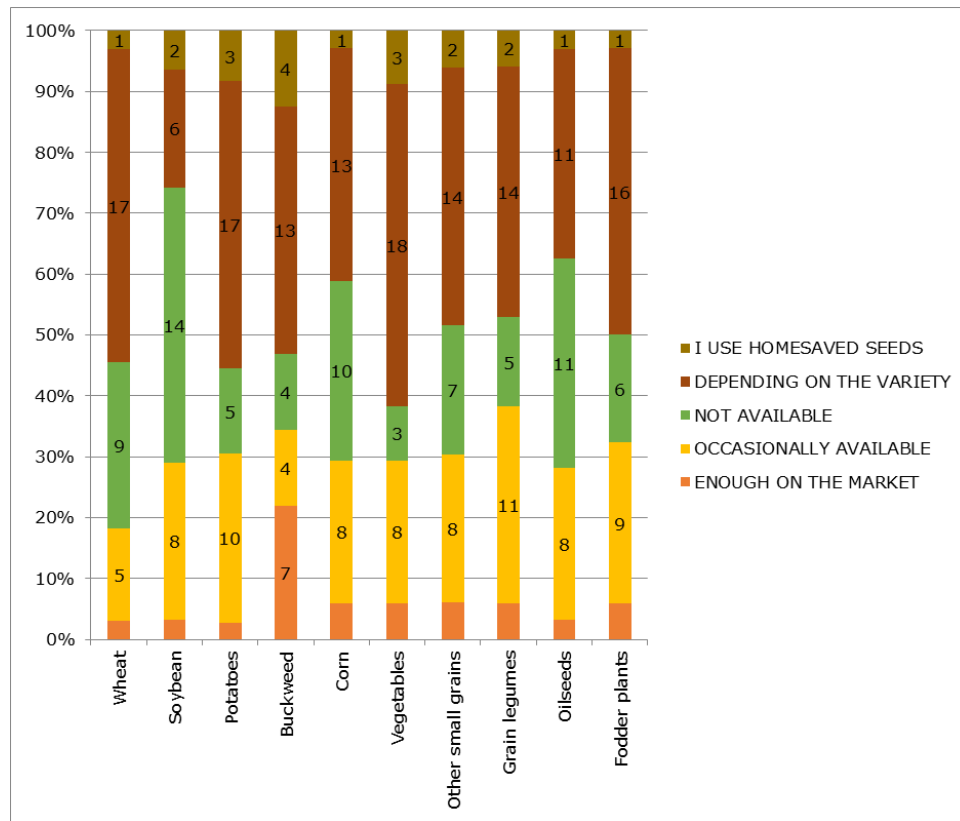


Policy Measures to Enhance Organic Seed Production on a five-point scale from 'Strongly disagree' to 'Strongly agree':



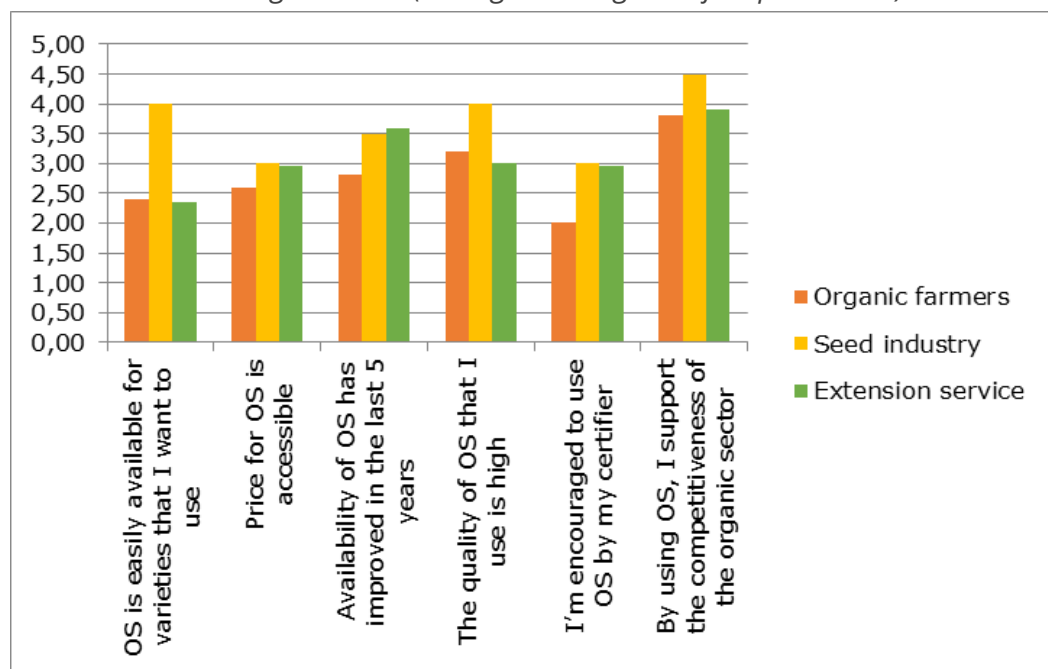
## D 8.3\_Report on field-based demonstration events

Organic seed availability on a five-point scale:



For the first and the last group of questions we compared the answers of the respondents belonging to different professions (Fig. 8 and 9). The average score of each group was compared for each question.

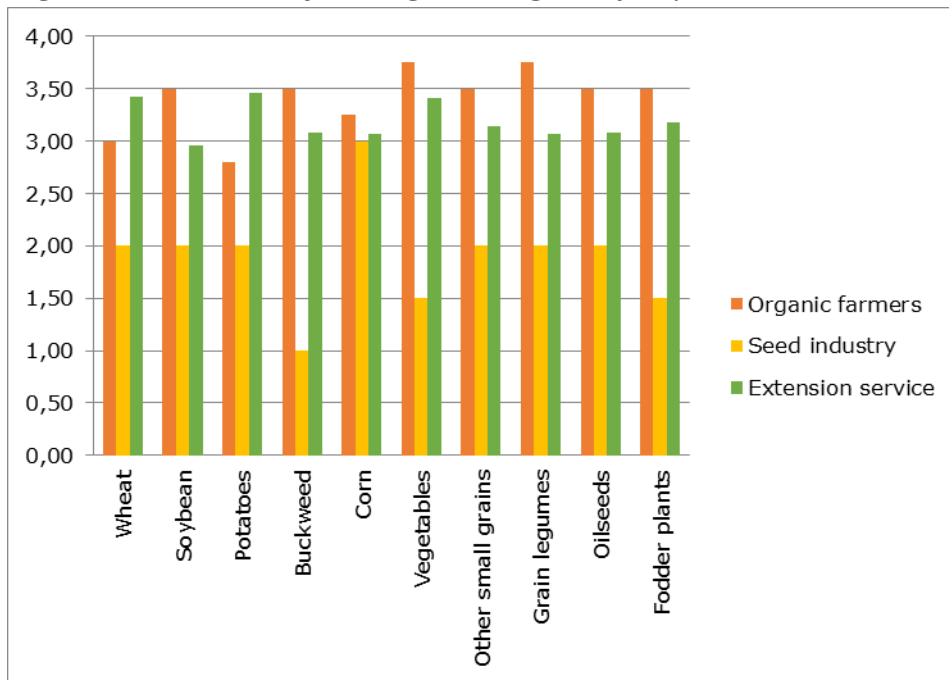
Attitudes towards organic seed (average ranking on a five-point scale):



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Seed industry ranked the highest, followed by extension service and farmers.

*Organic seed availability (average ranking on a five-point scale):*



Seed industry ranked the lowest of all questions, followed by extension service and farmers.

Photos:



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## D 8.3\_Report on field-based demonstration events

### 2<sup>nd</sup> Organic potato day of ECOBREED project

**Organiser:** Agricultural institute of Slovenia (KIS), Slovenia

**Date:** 30 July 2021

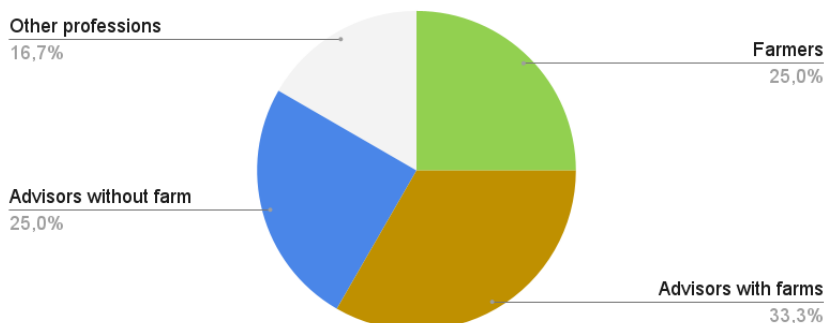
**Location:** Organic farm Zdolšek fields near Celje (Slatina pri Ponikvi 26, 3232 Ponikva)

**Varieties:** The programme started with the introduction from Chamber of Agriculture from Celje, which helped with organisation of the event. We continued with a short presentation of the ECOBREED project, short description of the state of organic agriculture in Slovenia and the Zdolšek organic farm.

The introduction was followed by presentation of organic field experiment on Zdolšek farm of 13 organic potato varieties which are late blight resistant. The description of each variety was illustrated with fresh samples of 3 plants for each variety. Participants had appreciated possibilities to see the state of crops in the field at the end of July, the visual characteristics of potato tubers of each variety and description of technical properties for cultivation and organoleptic characteristics.

**Participants:** On the Organic potato day, the questionnaire on how to improve the supply of organic seeds was given to all 14 attendees. 12 of them returned the questionnaire: 3 farmers, 7 persons working for extension service as agricultural advisors for a public chamber of agriculture whose 4 of them are also farmers), and 2 participants did not write down their profession.

**Profession of participants**



Of the 7 participating farmers, 5 of them are certified organic and 2 others are planning conversion to organic agriculture, one in the next year and the other in the near future.



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Is your farm organic?

Not yet but maybe ...

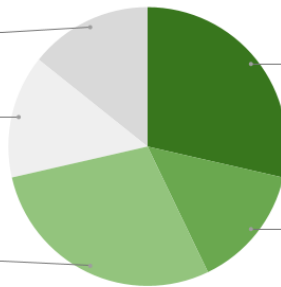
14,3%

Not yet but probably ...

14,3%

Yes, we are in the first 5 years

28,6%



Yes, more than 20 years already

28,6%

Yes, more than 6 years already

14,3%

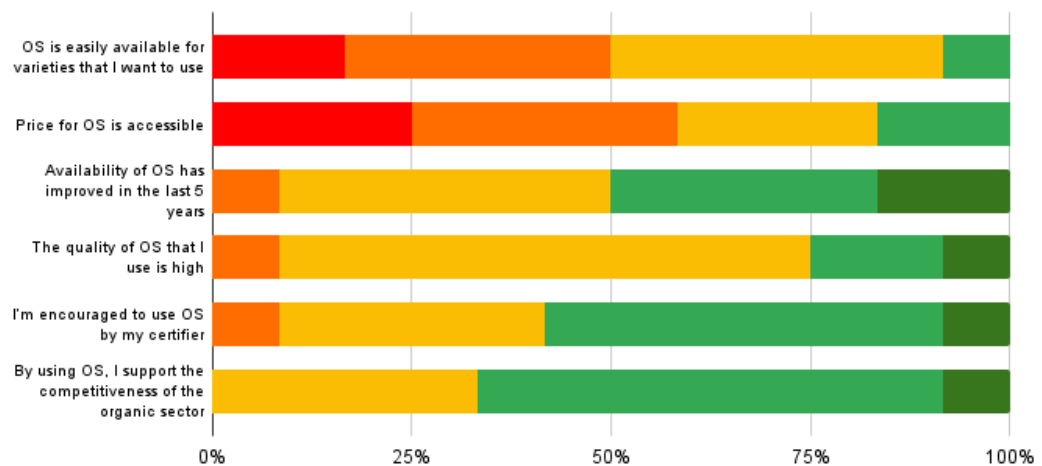
The sample of interviewees in 2021 was not the same as the previous year with 50% of participants being farmers compared with only 10% in the previous year.

Survey:

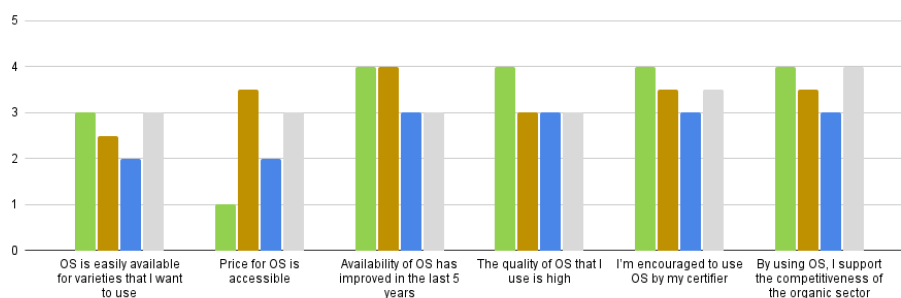
Attitudes towards Organic Seed (OS):

- Half of participants **disagreed** with "OS is easily available for varieties that I want to use" even if the situation of organic seed' availability seems to be better according to farmers.
- Majority of participants **disagreed** with "Price for OS is accessible".
- Farmers principally agreed with the use of high quality of OS.
- Two thirds of participants agreed with: "By using OS, I support the competitiveness of the organic sector".

■ STRONGLY DISAGREE 
 ■ DISAGREE 
 ■ NEUTRAL 
 ■ AGREE 
 ■ STRONGLY AGREE



■ farmers 
 ■ advisors with farms 
 ■ advisors without farm 
 ■ participant without indication of profession



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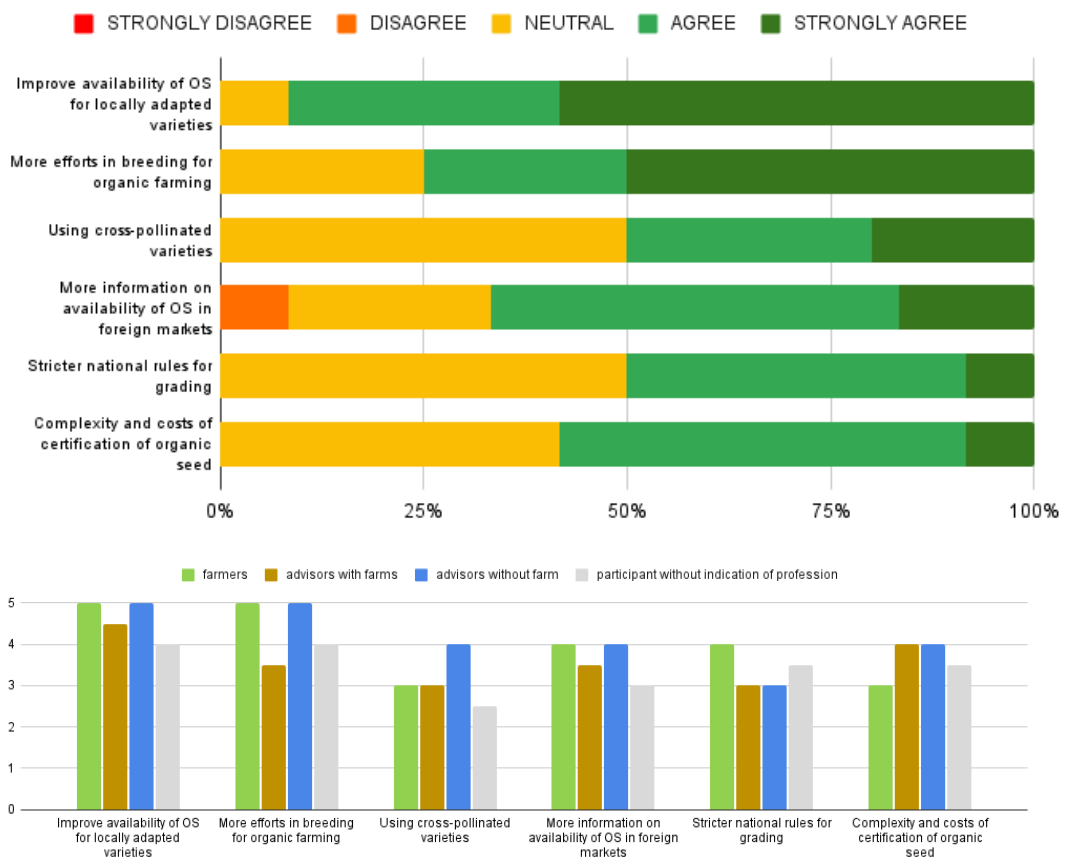


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Different actions to boost the use of organic seed:

- “Improving availability of OS for locally adapted varieties” should boost the use of organic seed according **90% participants**.
- Majority of participants **agreed** with the following **affirmations which can boost the use of OS** “More efforts in breeding for organic farming” and “Complexity and costs of certification of organic seed” boost the use of organic seed.
- **Half of participants agreed** with “Using cross-pollinated varieties” and “Stricter national rules for grading” to boost the use of organic seed.



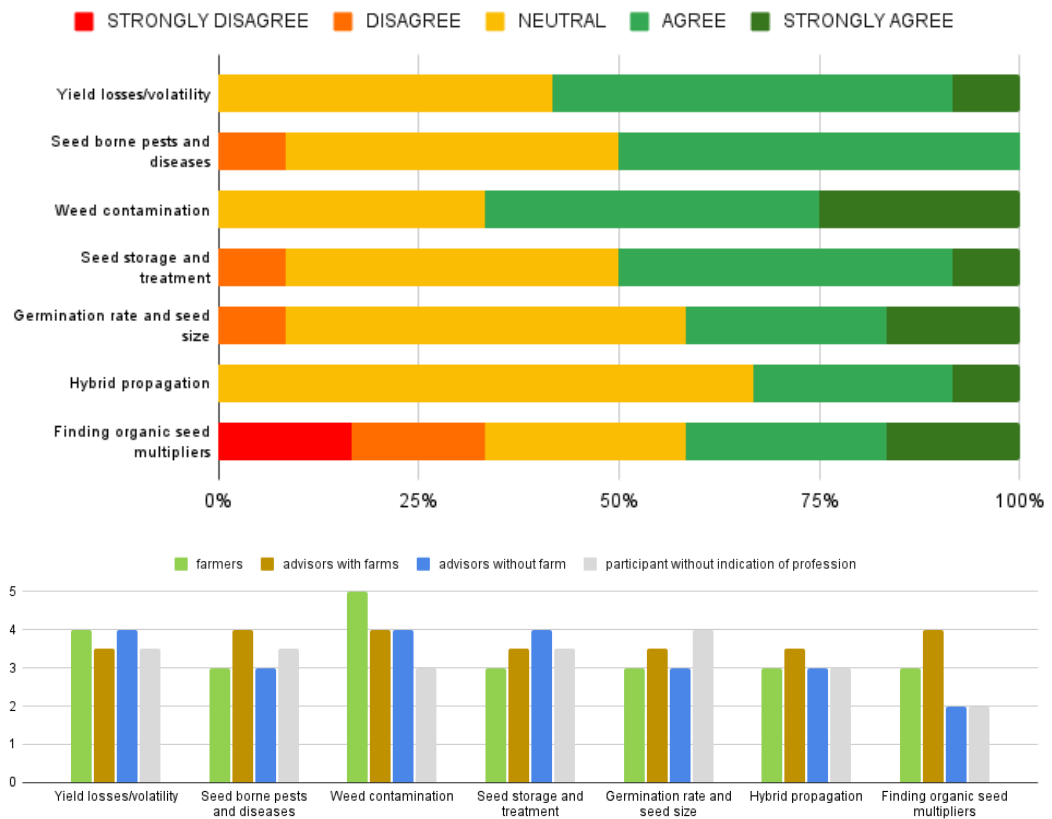
Technical challenges for organic seed production:

- The rank of technical challenges in organic seed production from the most challenging to the least challenging:
  - “Weed contamination”
  - “Yield losses/volatility”
  - Ex Aequo “Seed borne pests and diseases” and “Seed storage and treatment”



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- (d) Ex Aequo “Germination rate and seed size” and “Finding organic seed producers/multipliers”
- (e) “Hybrid propagation”
- The opinions about “Finding organic seed multipliers” was the most mixed with 33% in disagreement, 25% neutral and 40% in agreement.



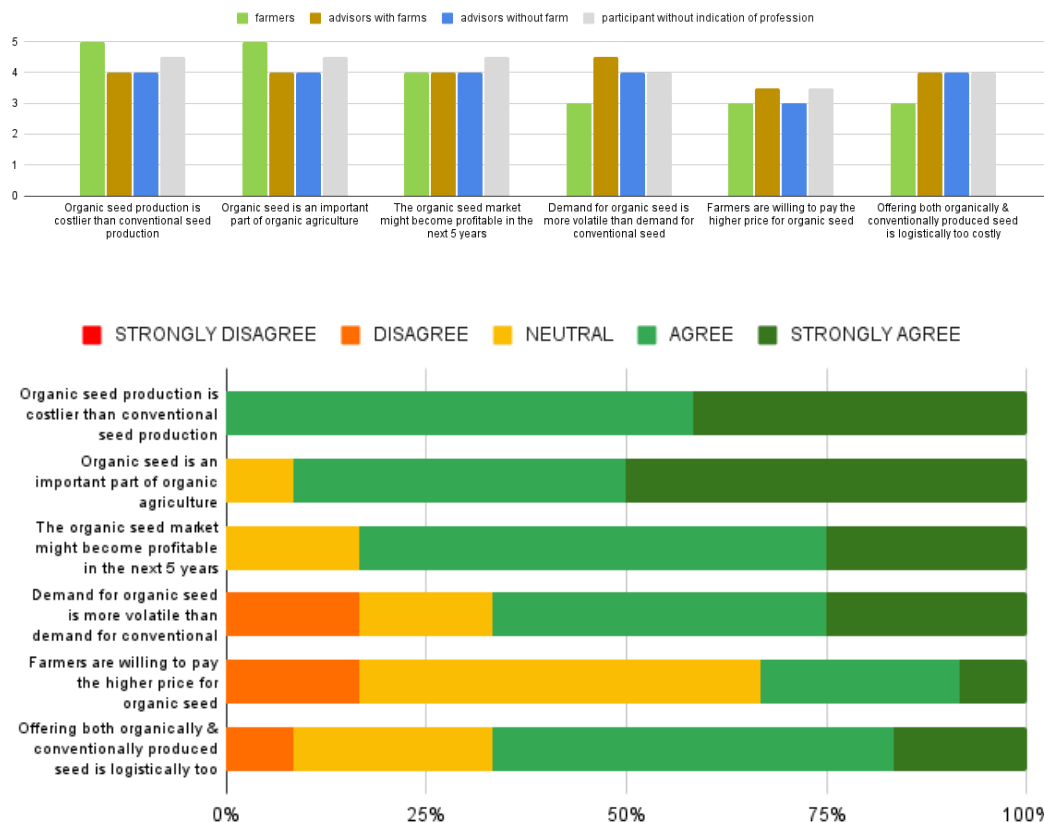
### Marketing issues with organic seed:

- The rank of Marketing issues with Organic seed affirmations from the most approved to the least approved:
  - (a) “Organic seed production is costlier than conventional seed production”
  - (b) “Organic seed is an important part of organic agriculture”
  - (c) “The organic seed market might become profitable in the next 5 years”
  - (d) Ex Aequo “Demand for organic seed is more volatile than demand for conventional seed” and “Offering both organically & conventionally produced seed is logistically too costly”
  - (e) “Farmers are willing to pay the higher price for organic seed”





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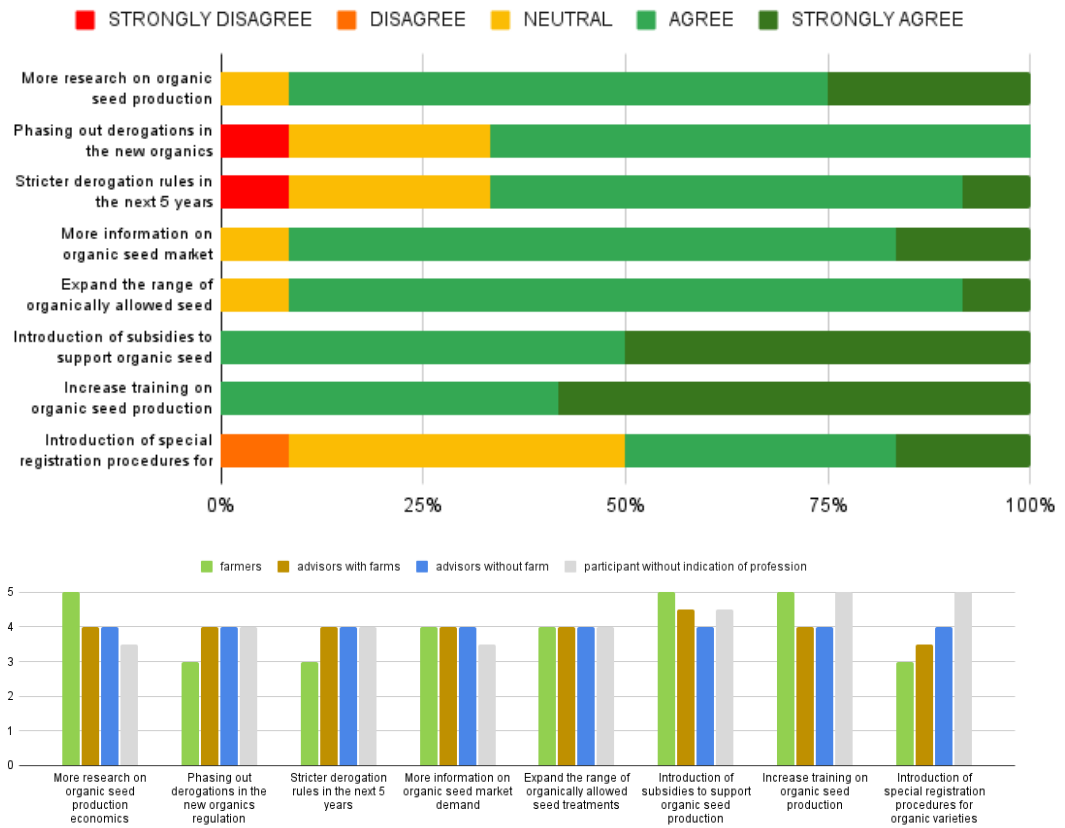


### Policy Measures to Enhance Organic Seed Production:

- **Participants agreed** with “Introduction of subsidies to support organic seed production” and “Increase training on organic seed production” to enhance organic seed production
- **More than 90% agreed** with “More research on organic seed production economics”, “More information on organic seed market demand” and “Expand the range of organically allowed seed treatments”.
- All other affirmations were approved by the **majority of participants**.

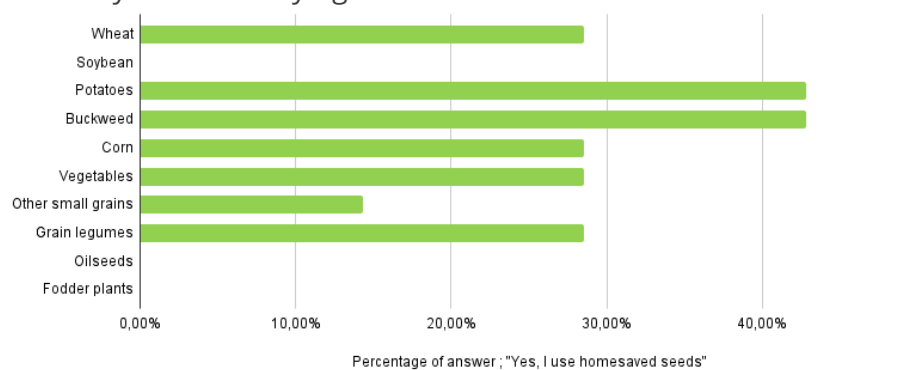


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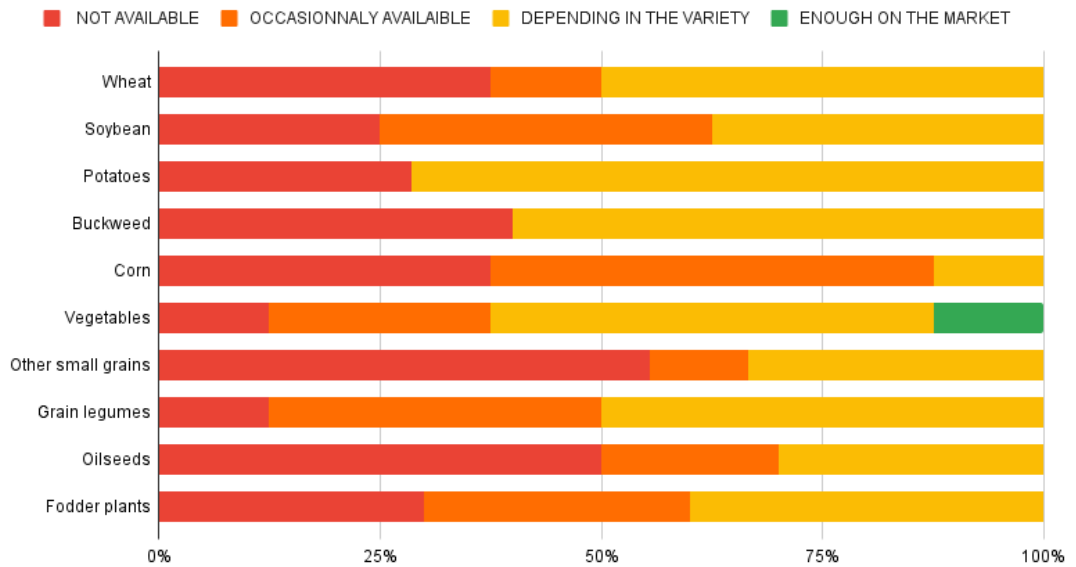


Availability of organic seed and use of home saved seed by participants:

- Minority of farmers are using home saved seed
- Home saved seed of buckwheat and potatoes' tubers are more often used by participant farmers
- Availability for every organic seed for these 10 categories of crops seems to be a problem for all participants. Lack of availability of corn seeds is major concern followed by oilseeds, soybean, and fodder plants.
- Opinions about "Organic seed availability of vegetables" are more mixed with 38% judging that OS are not available or occasionally, 50% that it depends on variety and 12% saying that OS are available.



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According to this survey the availability and price of organic seed are real concerns even if their availability seems to have improved in the last 5 years. In Slovenia 1374 derogations were allowed for non-organic seed in 2018 and 994 in 2019 for crops/cereals it was 44.968,4 kg in 2018 and 29.274 kg in 2019. Oat is the most represented cereal used for derogations (Ministry of Agriculture, Forestry and Food of Slovenia, 2018; 2019).

Participants unanimously advocated for availability of locally adapted varieties to boost use of organic seed. Main technical challenges for organic seed production are: 1) Weed contamination, 2) Yield losses/volatility, 3) Ex aequo: Seed-borne pests and diseases and Seed storage and treatment.

Among participants the introduction of subsidies and increased training period for organic seed production seem to be the most popular policies to increase the production of organic seed.

If farmers and advisors were well represented, we can regret the lack of profession diversity and the absence of seed companies.



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Photos:



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### 3<sup>rd</sup> Organic potato day of ECOBREED project

<i>Organiser:</i>	<b>Agricultural institute of Slovenia (KIS), Slovenia</b>
<i>Date:</i>	9 September 2021
<i>Location:</i>	Organic farm Pucihar (Jani Pucihar), Žalna near Grosuplje
<i>Varieties:</i>	<p>The event took place under special conditions to curb the spread of Covid-19 virus infection and followed the recommendations of the National Institute of Public Health (NIPH). Despite extensive advertising of the event among organic farmers and farmer organisations, only a few farmers attended. We believe that due to Covid-19 restrictions in September 2021 most of farmers felt that a visit to the potato day would pose too big threat for them.</p> <p>The programme started with the Introduction and short presentation of the ECOBREED project by Marion Champailler and of the Pucihar organic farm by Jani Pucihar.</p> <p>Potato, soybean and buckwheat trials were presented in the field. 14 varieties were described by Dr Peter Dolničar: Otolia, Salome, Levante, Alouette, Colomba, Tinca, Twister, Twinner, KIS Tamar, Delila, Botond, KIS Kokra, Carolus and Kelly. They were already harvested so tubers were shown to the audience.</p> <p>Soybean trial was presented before harvest by Dr Aleš Kolmanič showing 8 soybean varieties: GL Melanie, Obelix, NS Mercury, Lenka, Xonia, Ezra, NS Atlas and Galina.</p> <p>Buckwheat trial was sown on the second field close to the farm. A total of eight buckwheat varieties (Kora, Panda, Zita, Zoe, Čebelica, Billy, Bamby, La Harpe) were planted and exhibited.</p>
<i>Participants:</i>	There were 22 participants. Majority of participants were personnel of extension service working directly with farmers and extension specialists for organic agriculture, who will deliver the messages of the demonstration event to the farmers during their regular work. There were also two attendees presenting FKBV University of Maribor.
<i>Survey:</i>	Participants did not fill out the survey.



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## D 8.3\_Report on field-based demonstration events

### Testing of winter wheat varieties for organic production

*Organiser:* **Agricultural institute of Slovenia (KIS), Slovenia**

*Date:* 2 June 2022

*Location:* Agricultural Institute of Slovenia, IC Jablje, Mengeš

*Varieties:* Andrej Zemljič briefly presented the ECOBREED project and its importance for Slovenian organic farmers and emphasised the importance of the production of quality grains. Simon Ograjšek followed by discussing the purpose of organic trials with cereals and demonstration of trials with winter wheat varieties for organic production.

Two trials with 22 wheat varieties were established in the autumn of 2021 on the organic field of the Agricultural Institute of Slovenia. Statistically, trials were designed as completely randomised block trials, with four replications, each plot measuring 15 m<sup>2</sup>. The sowing density was the same for all varieties, at 420 seeds/m<sup>2</sup>. During vegetative growth morphological characteristics, tolerance to diseases, pests, and abiotic factors, competition with weeds, grain yield, and quality of the grains were monitored. The collected data enabled evaluation of the suitability of varieties for organic production and, above all, increase the potential and quality of organically produced grain. Similar experiments were established in some of the partner countries with a common protocol, a common set of varieties, and a selection of nationally relevant varieties.

Varieties included in trials are presented in Table 1. The first trial includes the varieties selected by Slovenian experts based on results from conventional testing, their prevalence in less intensive cultivation methods, and their phenological and morphological characteristics suitable for organic cultivation. The second trial includes varieties selected by experts of the ECOBREED project based on their prevalence in organic production in Europe; yields and grain quality from organic trials and tolerance to biotic stress.



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Table 1. List of winter wheat varieties included in the organic testing at the Agricultural Institute of Slovenia in growing season 2021/22

	Trial 1	Trial 2
1.	CCB INGENIO	LIOCHARLS <sup>1</sup>
2.	SAVINJA	ARNOLD
3.	TATA MATA	CAPO
4.	RESKA	AURELIUS
5.	PRIMORKA	ALBERTUS
6.	MARINKA	IS LAUDIS
7.	ILLICO	PURINO
8.	IZALCO	VIKI
9.	GOROLKA	WENDELIN
10.	VULKAN	EDELMANN
11.	NEXERA 923	EHO GOLD

<sup>1</sup> heterogeneous material

Among the tested varieties, 'Liocharls' (heterogeneous material), 'Purino', 'Wendelin', and 'Edelmann' attracted the public attention. The participating public at the event noted that the varieties in the second experiment (ECOBREED selection) were taller, later maturing, and more attractive for *Oulema melanopus* L. They further note that the varieties in both experiments were in excellent condition, with the number of spikes, weeds present, health status, and yield potential above-average for organic cultivation. A similar pattern was observed in the 2020/2021 season, where ECOBREED selected varieties outperformed domestic varieties in terms of yield. After the presentation questions were answered, followed by the questionnaires, which those with an interest filled out.

At the demonstration, the participants learned about the innovations being introduced at the Agricultural Institute of Slovenia in organic wheat production within the Ecobreed project, as well as the first practical results. The common conclusion was that science and expertise can effectively solve the challenges and problems of growers if the work goes hand in hand and in close cooperation with the Public Agricultural Advisory Service and farmers.

**Participants:** The public attending the event were experts from the Public Agricultural Advisory Service, colleagues of the Agricultural Institute, farmers, seed traders, project participants, and other interested public.

**Survey:** 29 participants filled out the survey, of these, 22 were farmers, 5 were from extension services and 2 participants were from some other general category.

Attitudes towards Organic Seed (OS):

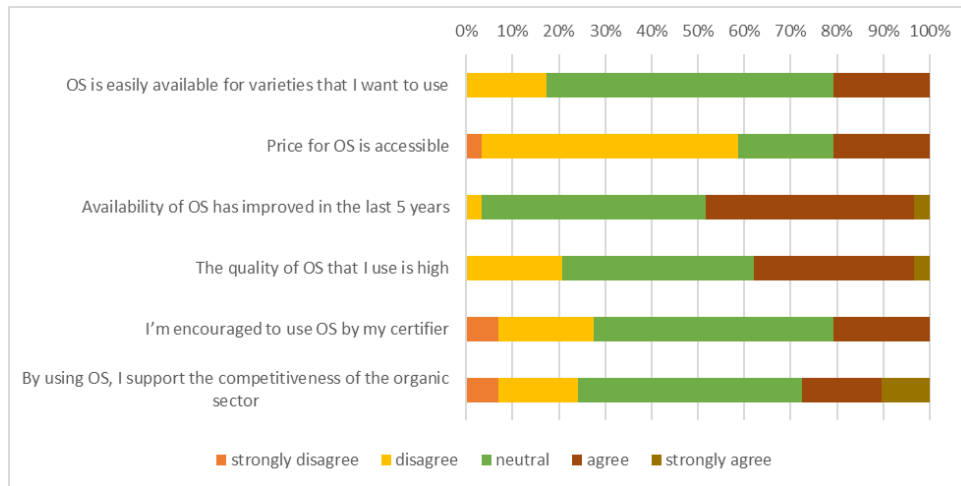
- Majority of participants **disagreed** with "Price for OS is accessible".





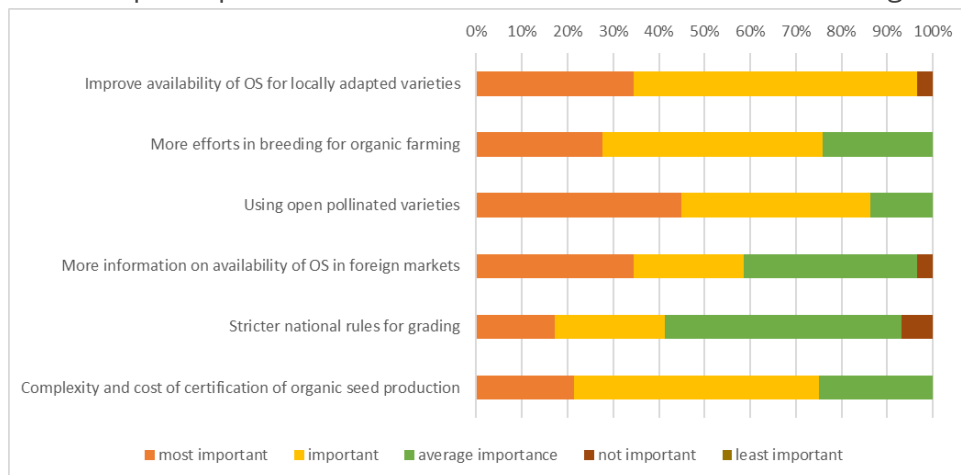
## D 8.3\_Report on field-based demonstration events

- Farmers principally agreed with the use of high quality of OS and the availability of OS in the last 4 years.
- Participants were mostly neutral on the other statements regarding attitudes towards OS.



Different actions to boost the use of organic seed:

- "Improving availability of OS for locally adapted varieties" should boost the use of organic seed according to more than **95% participants**.
- Majority of participants **agreed** with most of the other statements.
- Most participants were neutral on "Stricter national rules for grading".



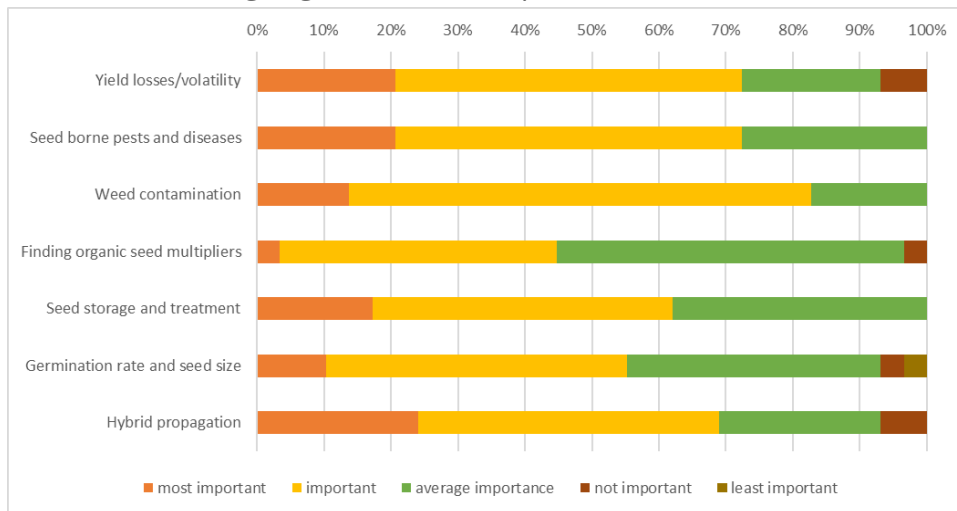
Technical challenges in organic seed production:

- The rank of technical challenges in organic seed production from the most challenging technical challenge to the least challenging:
  1. "Weed contamination"
  2. "Seed-borne pests and diseases" and "Yield losses/volatility" equally
  3. "Hybrid propagation"



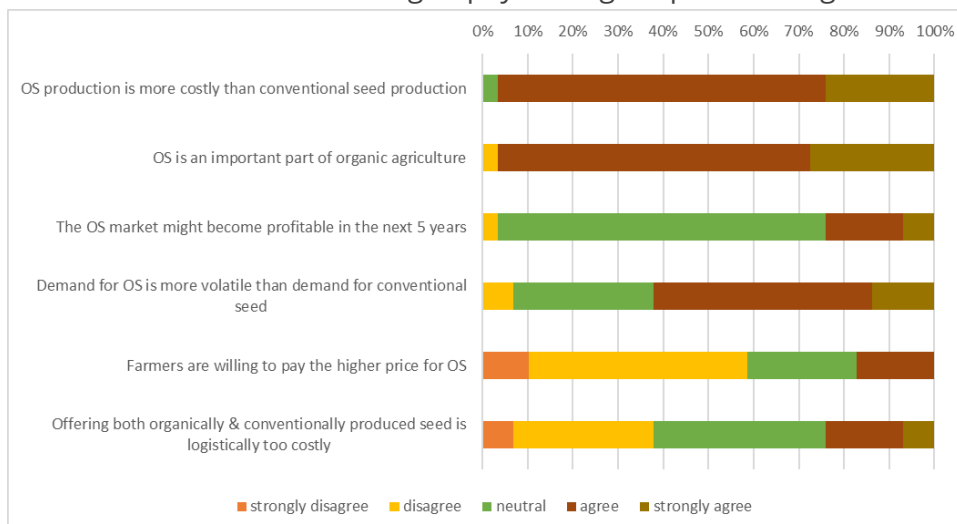
## D 8.3\_Report on field-based demonstration events

4. "Seed storage and treatment"
5. "Germination rate and seed size"
6. "Finding organic seed multipliers"



Marketing issues with organic seed: the rank of marketing issues with Organic seed affirmations from the most approved to the least approved:

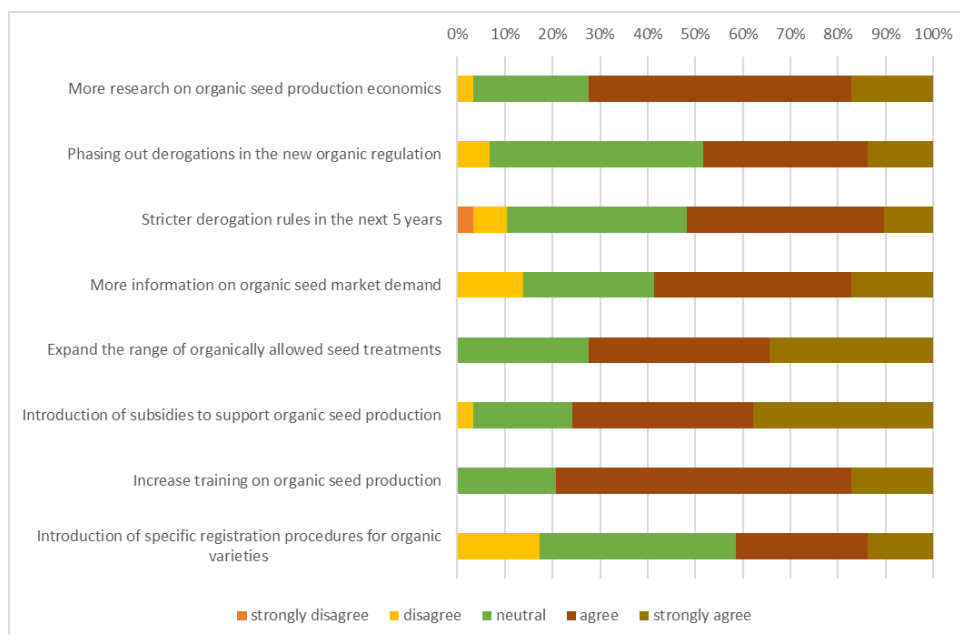
1. "Organic seed is an important part of organic agriculture"
2. "Organic seed production is more costly than conventional seed production"
3. "Demand for organic seed is more volatile than demand for conventional seed"
4. "The organic seed market might become profitable in the next 5 years"
5. "Offering both organically & conventionally produced seed is logistically too costly"
6. "Farmers are willing to pay the higher price for organic seed"



## D 8.3\_Report on field-based demonstration events

### Policy Measures to Enhance Organic Seed Production:

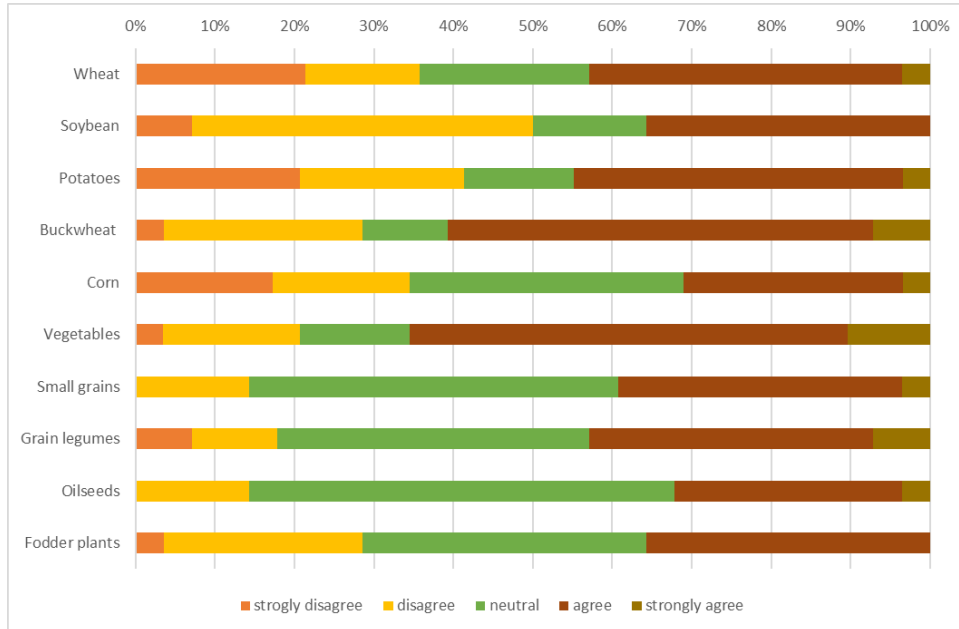
- **More than 70% agreed** with “Introduction of subsidies to support organic seed production” and, “Increase training on organic seed production”, “More research on organic seed production economics” and “Expand the range of organically allowed seed treatments” to enhance organic seed production.
- **More than half agreed** with “More information on organic seed market demand” and “Stricter derogation rules in the next 5 years”.
- Less than half agreed with “Phasing out derogations in the new organic regulation” and “Introduction of specific registration procedures for organic varieties”.



Availability of organic seeds – participants’ ranking of the availability of crops: buckwheat, vegetables, potatoes, grain legumes, wheat, small grain, fodder plant, soybean, oilseeds and corn.



## D 8.3\_Report on field-based demonstration events



Most participants also stated that they would be willing to grow CCPs on their farms (mostly wheat).

Photos:



## D 8.3\_Report on field-based demonstration events

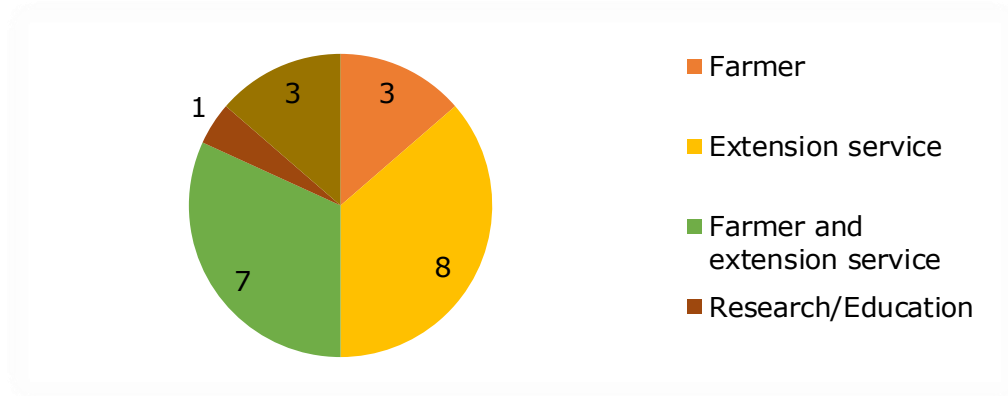
### Organic potato and buckwheat production field day

<i>Organiser:</i>	<b>Agricultural institute of Slovenia (KIS), Slovenia</b>
<i>Date:</i>	21 July 2022
<i>Location:</i>	Organic farm Zdolšek, Anton and Rok Zdolšek, Slatina near Ponikva
<i>Varieties:</i>	<p>The programme started with the Introduction and short presentation of the ECOBREED project and the Zdolšek organic farm.</p> <p>The introduction was followed by presentation of organic potato field experiments of buckwheat and potato.</p> <p>Peter Dolničar made a presentation of late blight resistant potato varieties from Farmer Participatory Trials. The presentation included 13 varieties: Alouette, Botond, Carolus, Delila, Kelly, KIS Kokra, Levante, Magnolia, Otolia, Salome, Tinca, Twinner, Twister. Morphology traits of foliage and tubers at the time of the demonstration event were evaluated.</p> <p>As part of Participatory Plant Breeding strategies 14 new potato clones from the KIS breeding programme were planted in the field of Zdolšek organic farm, some of them resistant to late blight. One plant per clone was harvested at the demonstration event and describer by Peter Dolničar from KIS.</p> <p>Also, the buckwheat variety experiments at the organic farm Zdolšek were presented by Aleš Kolmanič, KIS. The presentation included 6 varieties: Kora, Panda, Zita, Zoe, Čebelica, Billy, Bamby and La Harpe. Morphological and psychological traits were discussed, as well as the possibilities for use of the varieties (for food, cover crops etc).</p>
<i>Participants:</i>	26 participants (farmers, extension service, researchers and others)
<i>Survey:</i>	On the Organic potato and buckwheat production field day a Questionnaire on how to improve the supply of organic seeds was delivered among all 26 attendees. 22 of them returned the questionnaire and 19 of them wrote down their profession. 8 of them were from extension service. It was interesting that 7 of them defined themselves as farmer and extension service. Also 3 farmers attended the demonstration event.



## D 8.3\_Report on field-based demonstration events

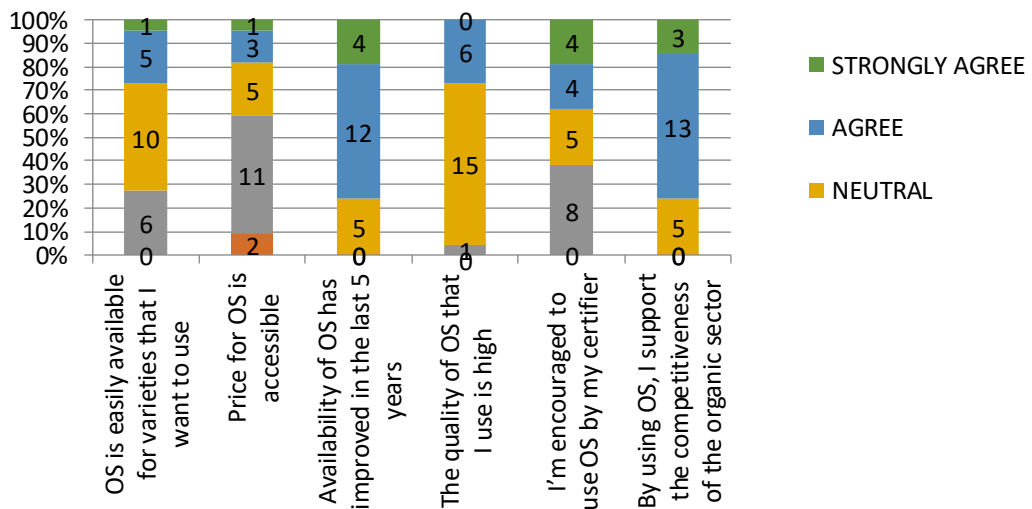
Profession of the attendees:



Below we sum up some of the most interesting results of the questionnaire. The survey respondents ranked their answers to the specific questions how to improve the supply of organic seed into 5 possible answers. The number and percentage of all respondents affiliated to a certain option can be seen from the figures.

We can see that most of the attendees agreed that organic seed is accessible, but too expensive. They agreed that its availability has improved in the last five years and is of acceptable quality. More than half were encouraged to use organic seed by the certification authority and most of them agree that the use of organic seed improves the competitiveness of the organic sector.

Attitudes towards organic seed (OS) ranked on a five-point scale from 'Strongly disagree' to 'Strongly agree':

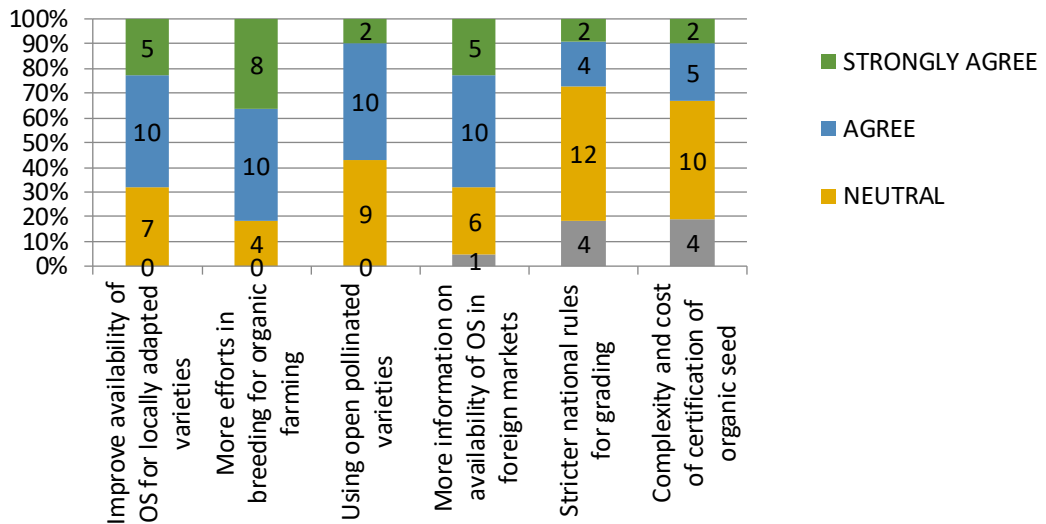


Attendees in order to boost organic sector supported breeding for the organic sector, together with the use of local and open pollinated varieties. They also need more information on availability of organic seed in foreign markets.



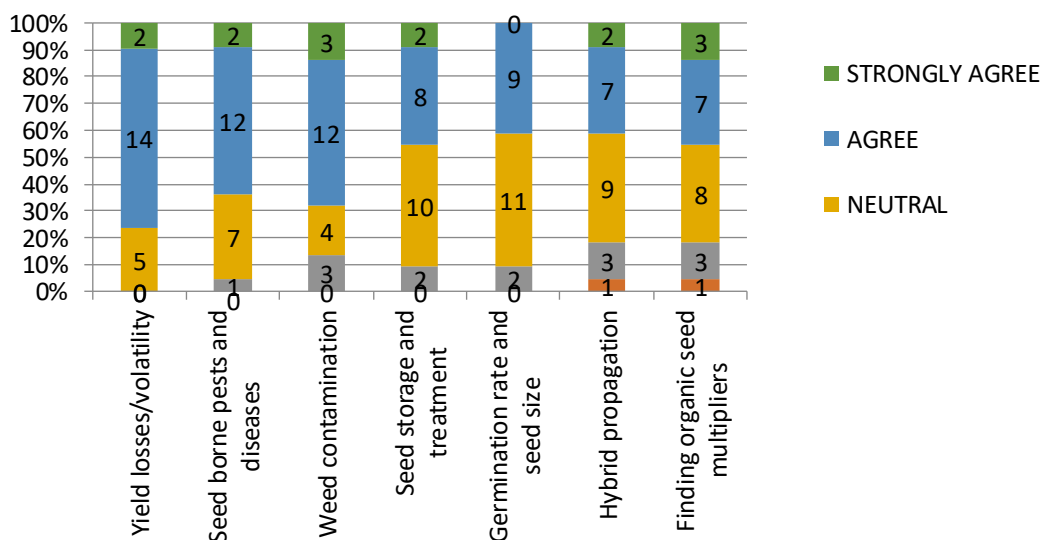
## D 8.3\_Report on field-based demonstration events

Ranking of different actions to boost the use of organic seed on a five-point scale from 'Strongly disagree' to 'Strongly agree':



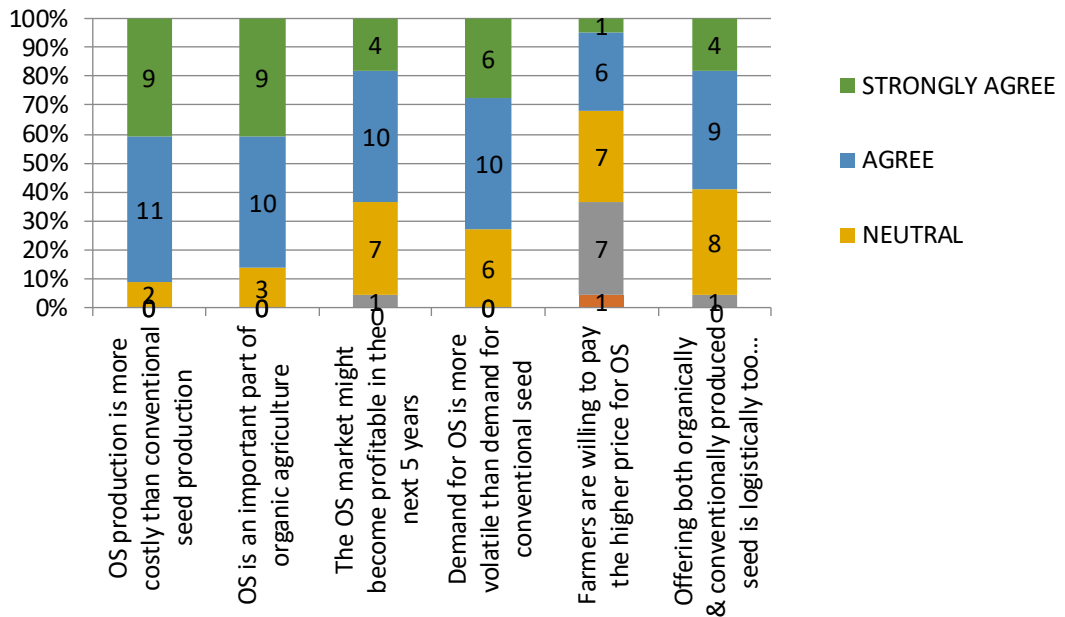
We see that they are aware of technical challenges of organic seed production such as yield losses, pests and weeds. Similar they are aware of problems with seed storage and treatment, seed germination and size. Only four persons disagree that hybrid propagation and finding organic seed multipliers might be a problem.

Technical Challenges in Organic Seed Production on a five-point scale from 'Strongly disagree' to 'Strongly agree':



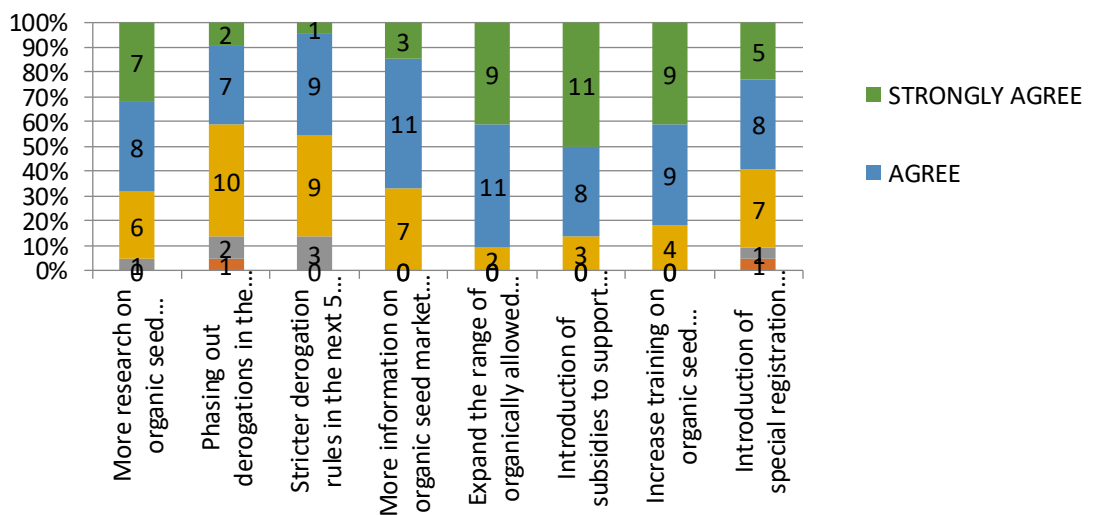
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Marketing Issues with Organic Seed on a five-point scale from 'Strongly disagree' to 'Strongly agree':



Regarding marketing issues, most of attendees agreed that OS production is an important part of organic agriculture, but more costly and demand is more volatile. There were different opinions on willingness of farmers to pay more for OS.

Policy Measures to Enhance Organic Seed Production on a five-point scale from 'Strongly disagree' to 'Strongly agree':



Looking at policy measures only a small number of attendees disagree or strongly disagree with proposed policy measures. Among others they support

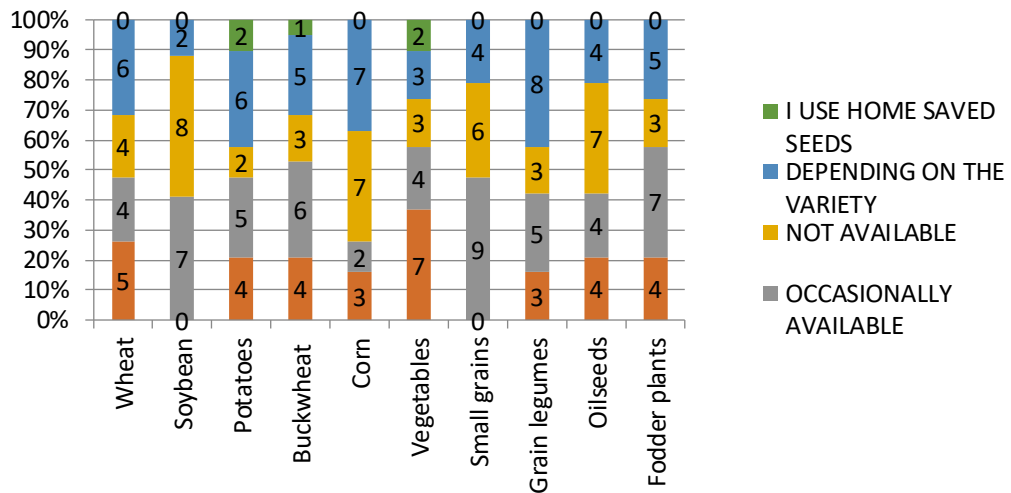




## D 8.3\_Report on field-based demonstration events

training on organic seed production and special registration procedures for organic varieties.

*Organic seed availability of different crops on a five-point scale:*



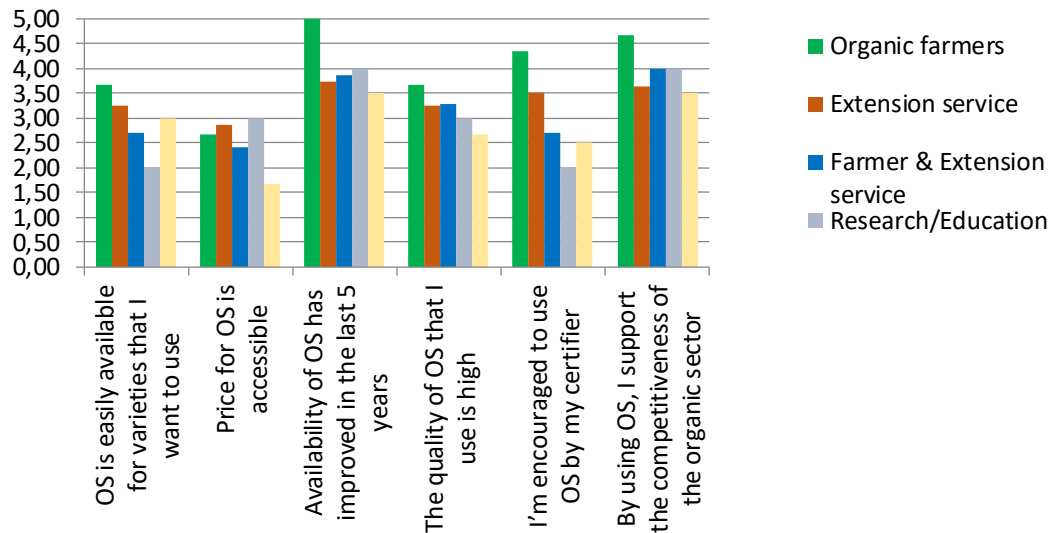
Organic seed availability of different crops was estimated by attendees. The least available is soybean and small grain organic seed. The highest score for class “enough on the market” was reached for vegetables, followed by wheat, potatoes, buckwheat and oilseeds. There were some attendees that use home saved seed in potatoes, vegetables and buckwheat.

For the first and the last group of questions we compared the answers of the respondents belonging to different groups of profession. The average score of each group was compared for each question.



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Attitude towards organic seed (average of ranks on a five-point scale: 1 - STRONGLY DISAGREE, 2 - DISAGREE, 3 - NEUTRAL, 4 - AGREE, 5 - STRONGLY AGREE):



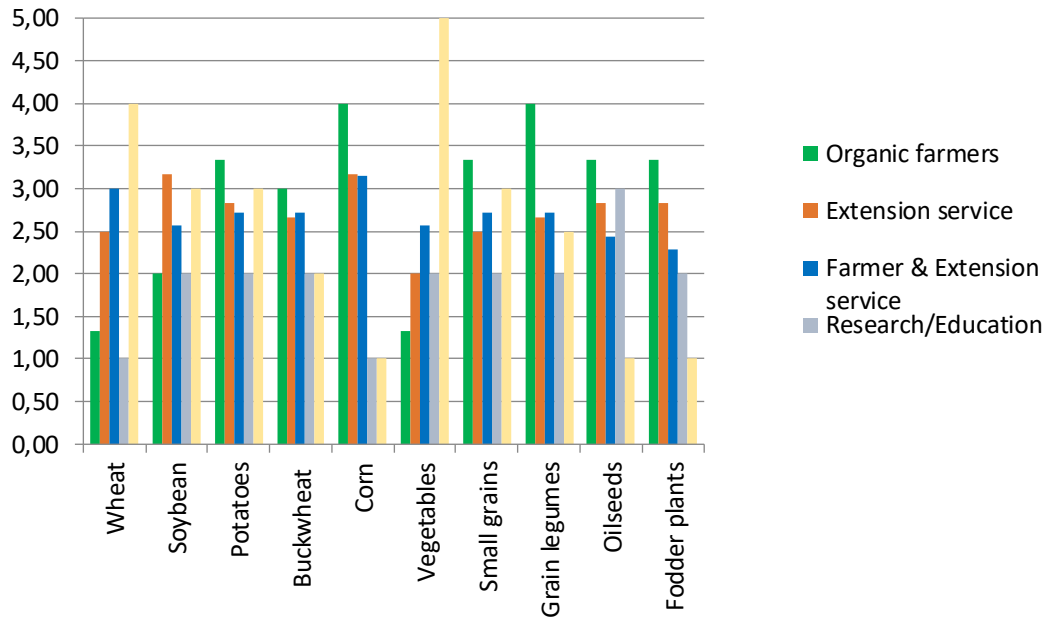
Looking at attitudes toward organic seed among different groups, organic farmers ranked Agree for most of the questions, except for the “price of OS” which was ranked between neutral and disagree. There were only small differences between the extension people and those who marked them as “extension and farmer”.

At seed availability among different groups, there were large differences among opinions of different groups for different crops. For example, the group farmers and the group others voted completely differently for corn and vegetables, which likely reflects their differing levels of background knowledge with respect to different crops. On the other hand the extension group and group extension + farmers scored very similar on several occasions. Farmers, who most likely know the situation of seed availability in local markets, scored the lowest for wheat, soybean and vegetables, while they scored the highest for all other crops



## D 8.3\_Report on field-based demonstration events

Organic seed availability (average of ranks on a five-points scale: 1 - ENOUGH ON THE MARKET, 2 - OCCASIONALLY AVAILABLE, 3 - NOT AVAILABLE, 4 - DEPENDING ON THE VARIETY, 5 - I USE HOME- SAVED SEEDS):



Photos:



## D 8.3\_Report on field-based demonstration events



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## D 8.3\_Report on field-based demonstration events

### Potato production day

**Organiser:** Agricultural institute of Slovenia (KIS), Slovenia

**Date:** 23 June 2023

**Location:** Agricultural Institute of Slovenia - Vodice Experimental Field and organic experimental field of the centre of Jablje, Slovenia.

**Varieties:** Two organic trials located on organic experimental field of the centre of Jablje, Slovenia.

First trial tests 8 varieties in 4 repetitions in the framework of the T3.1 of WP3 of ECOBREED project. The varieties are: ALOUETTE, LEVANTE, KIS BLEGOŠ, KIS KOKRA, TWISTER, MARABEL, KIS TAMAR, OTOLIA. Growing conditions are intentionally close to those of farmers and therefore not irrigated.

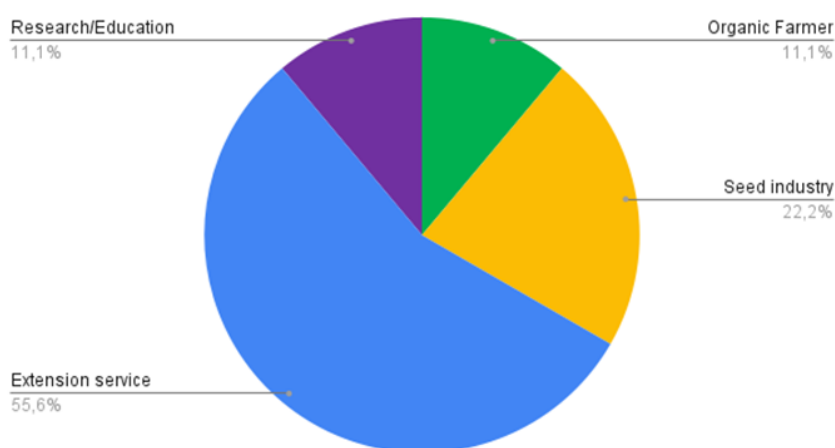
In the organic breeding programme of T 3.5 of WP3 94 potato clones of crossing years from 2013 to 2018 were tested under organic conditions. All of them were PVY resistant and 23 late blight resistant. 4 standard varieties (KIS SORA; KIS MANGART, ADORA, KIS KOKRA) were planted in repetition.

In the pyramiding R genes of T3.6 of WP3 28 potato clones of crossing year 2017 are tested in organic conditions. All of them are late blight resistant. 4 standard varieties (KIS SORA; KIS MANGART, ADORA, KIS KOKRA) were planted in repetitions.

In addition to the ECOBREED project, other projects and equipment for flailing potato foliage were also presented.

**Participants:**

Questionnaire completed by:



A total of 44 participants attended the event. Each attendee of the 2nd part of event was provided with a questionnaire focused on the topic of "enhancing the availability of organic seeds." Of these 9 completed and returned the



## D 8.3\_Report on field-based demonstration events

### Survey:

questionnaire. The breakdown of respondents is as follows: 1 organic farmer (who is also advisor), 5 individuals employed as agricultural advisors within an extension service associated with a public chamber of agriculture, 2 representatives from seed industry, 1 researcher.

The questionnaire was composed of 5 closed questions.

The questions number 1, 3 and 4 are affirmations that they had to evaluate according to their experiences, uses or opinions. They were asked to evaluate on graduated scale (Likert scale) between “1= strongly disagree” to “5= strongly agree” (ordinal qualitative variables).

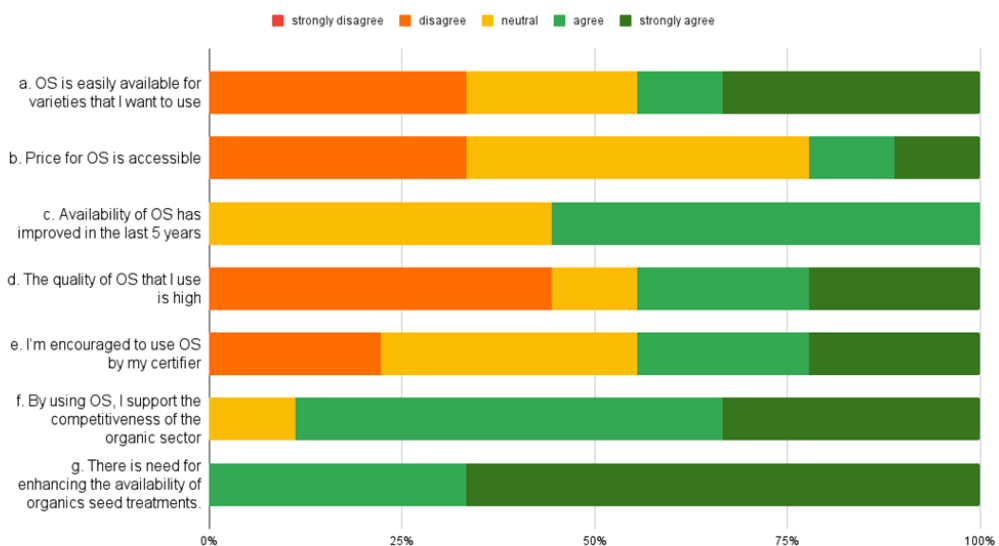
The 2nd question is about the situation of market of seed and practices on farms about home-saved seed. This question is composed of ordinal qualitative variables from “1=enough on market” to “4=not available on market” and nominal qualitative variable about using of home-saved seed.

The 5th question is about participants’ profession.

The summary of some most interesting results of the questionnaire is highlighted below . All answers are presented with a graduated coloured scale. The median score of answers is presented according to profession of participants.

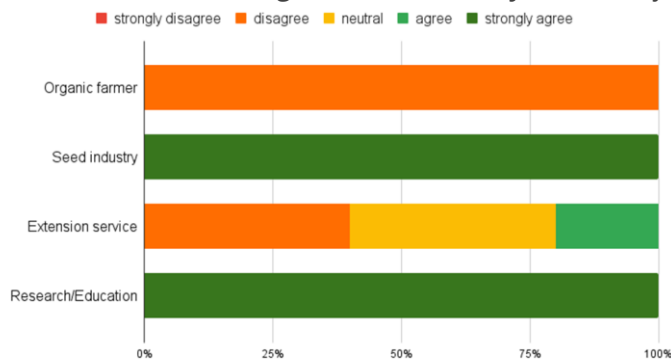
The results to the first question are presented for all participants and by profession. Results are not discussed / compared between professional categories due to the over-representation of “Extensions Services” and the low number of answers.

*Attitudes towards organic seed ranked on a five-point scale:*

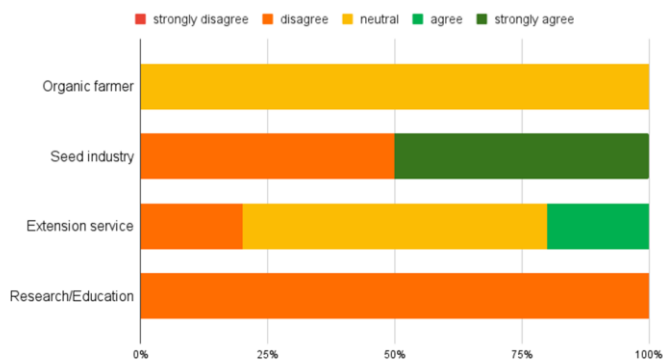


## D 8.3\_Report on field-based demonstration events

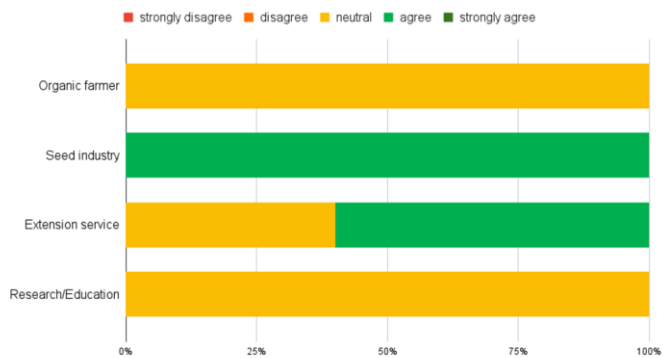
Attitude about "1.a. Organic Seed is easily available for varieties that I want to use":



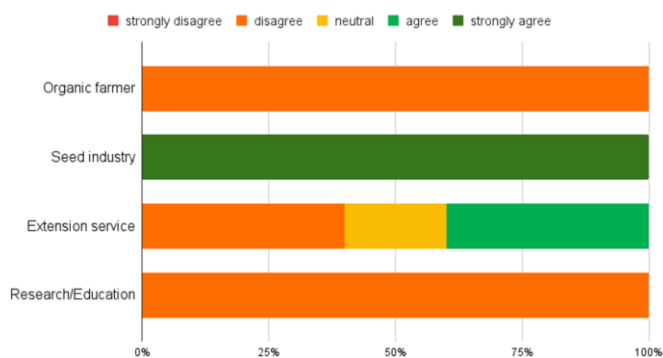
Attitude about "1.b. Price for OS is accessible":



Attitudes about "1c - Availability of OS has improved in the last 5 years":

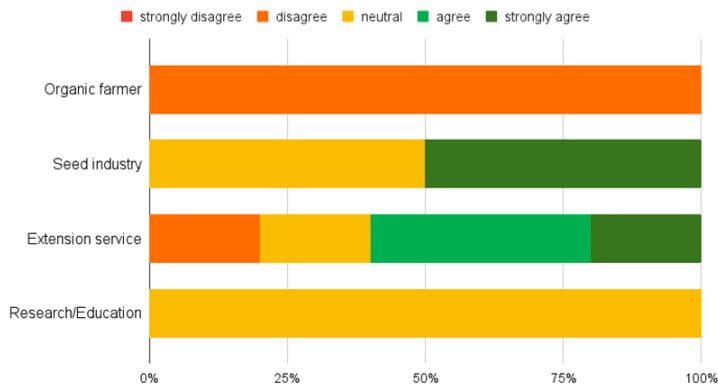


Attitudes about "1d - The quality of OS that I use is high"

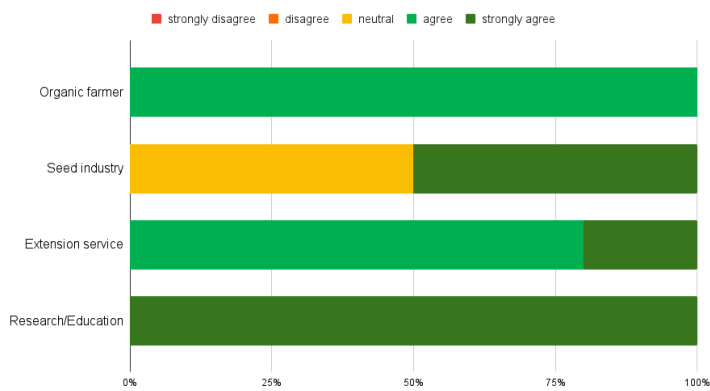


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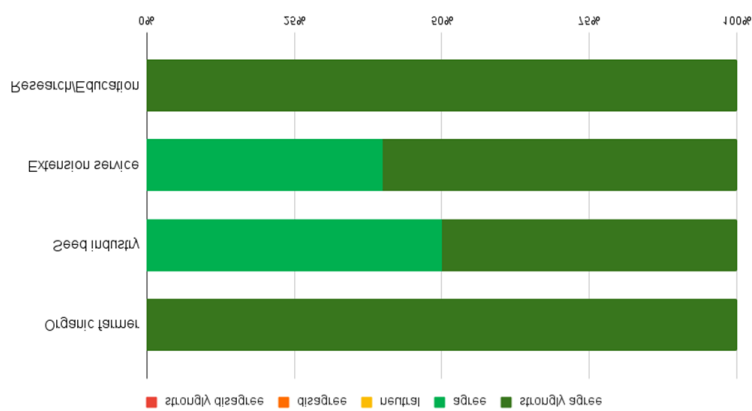
Attitudes about "1e - I'm encouraged to use OS by my certifier":



Attitudes about "1f - By using OS, I support the competitiveness of the organic sector":



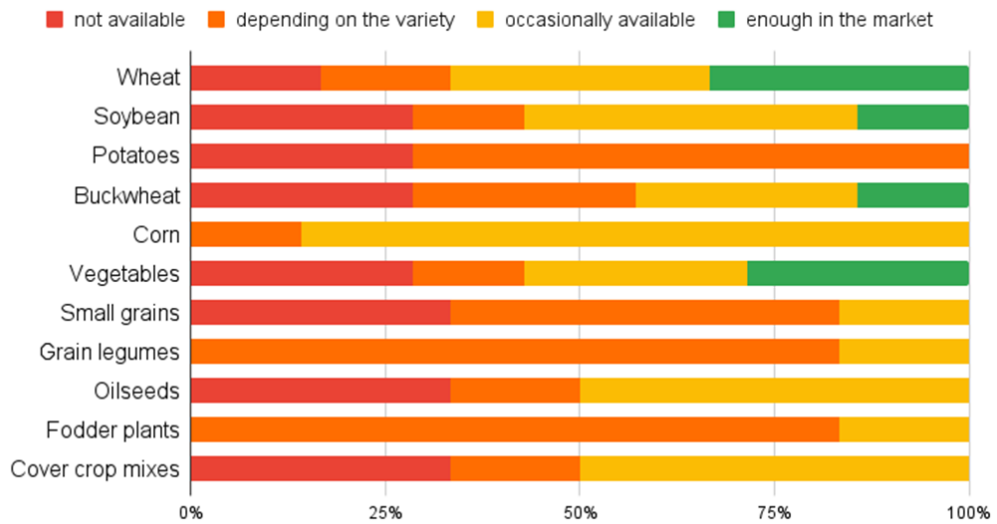
Attitudes about "1g - There is need for enhancing the availability of organic seed treatments.":



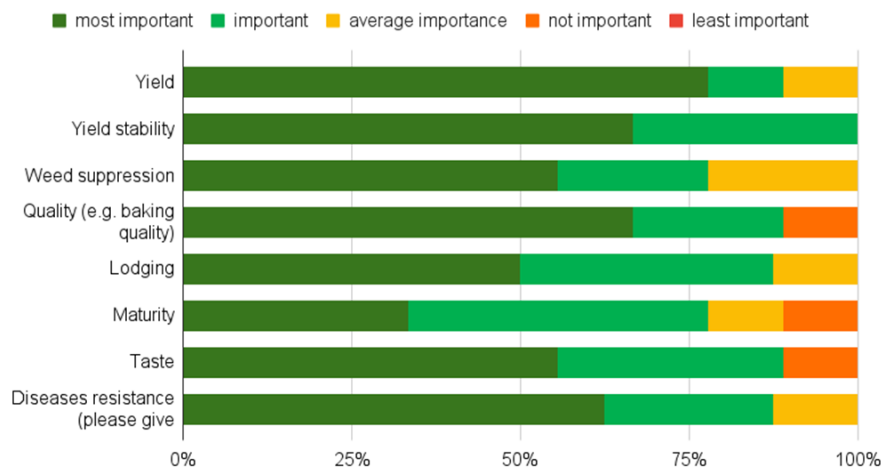


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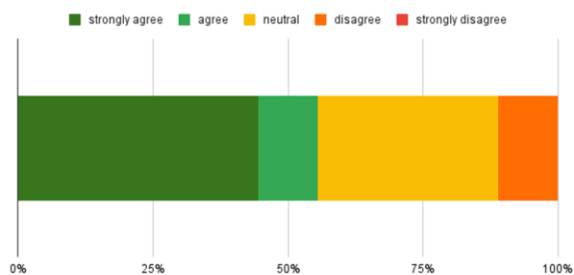
Organic seeds availability for 11 field crops:



What are important traits for an organic variety?



Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm:



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Photos:



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## D 8.3\_Report on field-based demonstration events

### Demonstration event on organic production

*Organiser:* **Agricultural institute of Slovenia (KIS), Slovenia**

*Date:* 5 July 2023

*Location:* Agricultural Institute of Slovenia - Center Jablje, Grajska cesta 1, Mengeš

*Varieties:* A total of 22 varieties of winter wheat were showcased during the event as part of the WP6 trials. Two distinct trials were planted for this purpose. The first trial encompassed varieties that are presently cultivated organically in Slovenia (referred to as the EKO1 trial). In contrast, the second trial comprised varieties chosen through the ECOBREED selection process (designated as the EKO2 trial). Notably, a special emphasis was placed on organic varieties that were registered through the organic VCU trials. The event featured the presentation of ecological testing results, encompassing the pest assessments conducted throughout the 2021/22 season. Additionally, varietal indices from the past two years were highlighted, covering key metrics such as yield, plant height, protein content, hectolitre weight, sedimentation, yield stability and ground cover performance.

LIOCHARLS stands out as a diverse biological material with heterogeneous characteristics. On the other hand, PURINO, WENDELIN, and EDELMANN are varieties that have already gained organic registration in other countries. The impressive performance of these varieties across metrics like speed of ground cover/shading, protein content, and yield strongly affirms their suitability for organic farming practices also in Slovenian conditions.

Other trials were presented:

- 5 Mixtures of cereals with legumes:

MIX 1 (153kg/ha): 90% rye, 5% winter, vetch, 5% Pannonian vetch)

Mix 2 (133kg/ha): 75% rye, 15% ryegrass, 5% winter vetch, 5% Pannonian vetch

Mix 3 (135 kg/ha): 30% rye, 40% triticale, 15% ryegrass, 9% winter pea, 3% winter vetch, 3% Pannonian vetch

Mix 4 (120kg/ha): 72% rye, 17% ryegrass, 6% red clover, 3% crimson clover, 2% white clover

Mix 5 (140kg/ha): 38% rye, 29% triticale, 14% ryegrass, 19% winter pea,

- 8 Mixture of cereals and protein crops:



## D 8.3\_Report on field-based demonstration events

Mixture 1 (207 kg/ha): wheat (100 %)

Mixture 2 (153 kg/ha): wheat (100 %)

Mixture 3 (273 kg/ha): wheat (76 %), winter pea (24%)

Mixture 4 (220kg/ha): wheat (70%), winter pea (30%)

Mixture 5 (223kg/ha): wheat (93%), winter vetch (7%)

Mixture 6 (169kg/ha): wheat (91%), winter vetch (9%)

Mixture 7 (147kg/ha): winter pea (100%)

Mixture 8 (97kg/ha): winter vetch (100%)

- Assortment of legumes (project EUKI)

- Plasma seed treatment

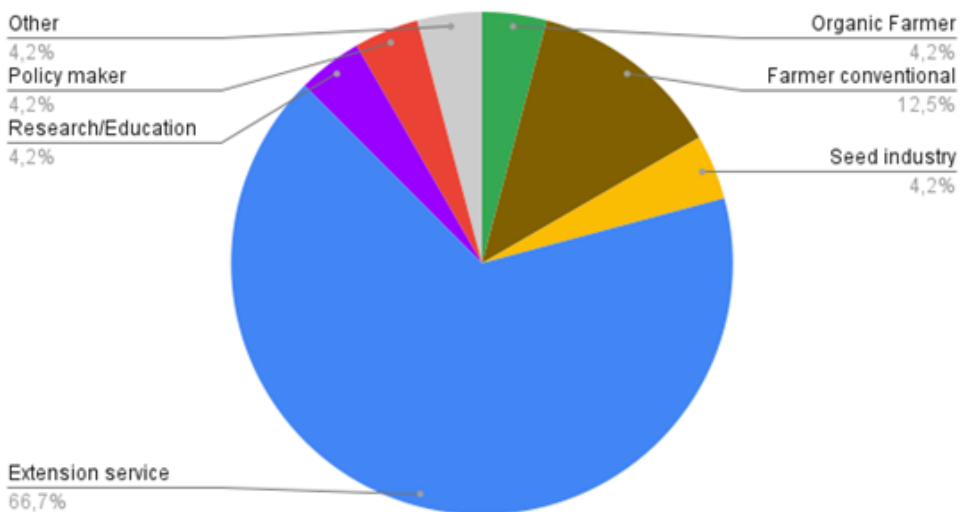
- Organic fertilisation trial: Azocor Standard, Home Garden Organic Garden (NPK 5:3:3), Utrisha, Kompost, Slurry, Slavol, Fertildung Stallatico, Biogrena, Pelleted Soyabean, Pelleted Pea, Pelleted Alfalfa.

Various projects were presented alongside the ECOBREED project:

LIVSEEDING, Interreg CE-Carbon farming, EUKI, CRP V4 2007 national project.

### Participants:

#### Questionnaire completed by:



A total of 42 participants attended the event. Each attendee was provided with a questionnaire focused on the topic of "enhancing the availability of organic seed." Of these, 24 participants completed and returned the questionnaire. The breakdown of respondents is as follows: 1 individual identified as an organic farmer and advisor, 3 participants engaged in conventional farming (among



## D 8.3\_Report on field-based demonstration events

whom one also serves as an advisor), 16 individuals employed as agricultural advisors within an extension service associated with a public chamber of agriculture, 1 representative from the seed industry, 1 representative from the ministry, and 1 researcher. One participant did not specify their profession.

### Survey:

The questionnaire was composed of 5 closed questions.

The questions number 1, 3 and 4 are affirmations that they had to evaluate according to their experiences, uses or opinions. They were asked to evaluate on graduated scale (Likert scale) between “1= strongly disagree” to “5= strongly agree” (ordinal qualitative variables).

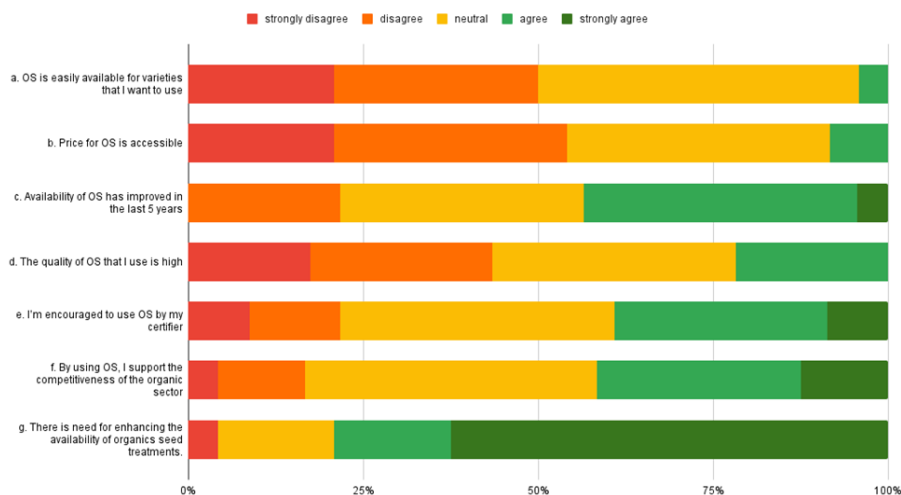
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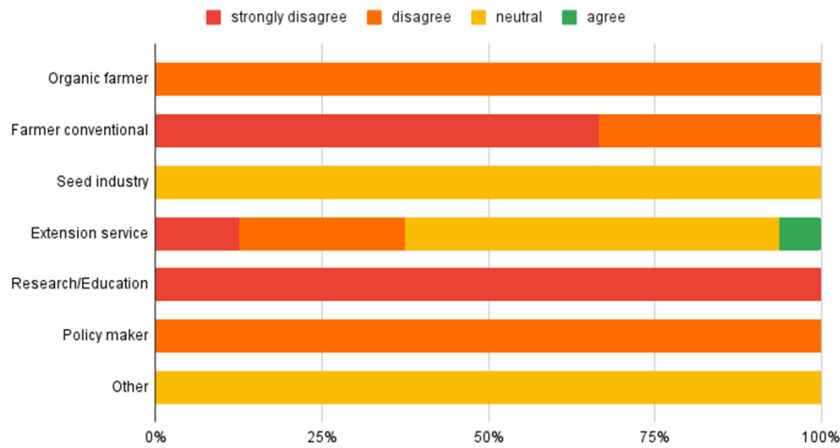
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*Attitudes towards organic seed ranked on a five-point scale:*

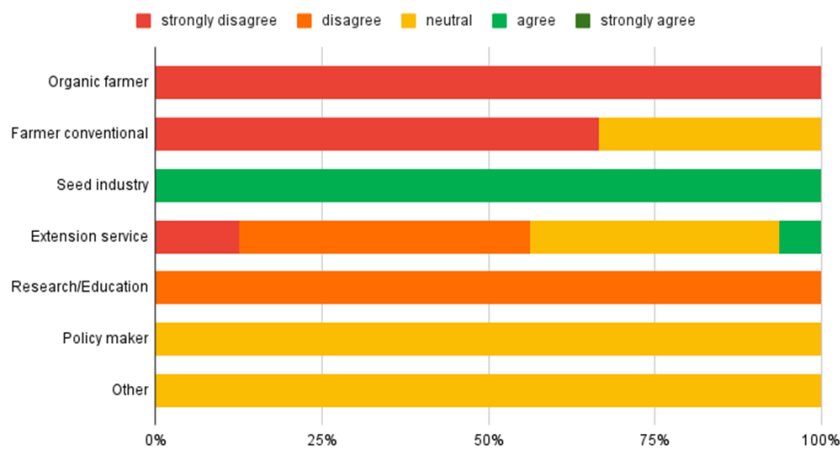


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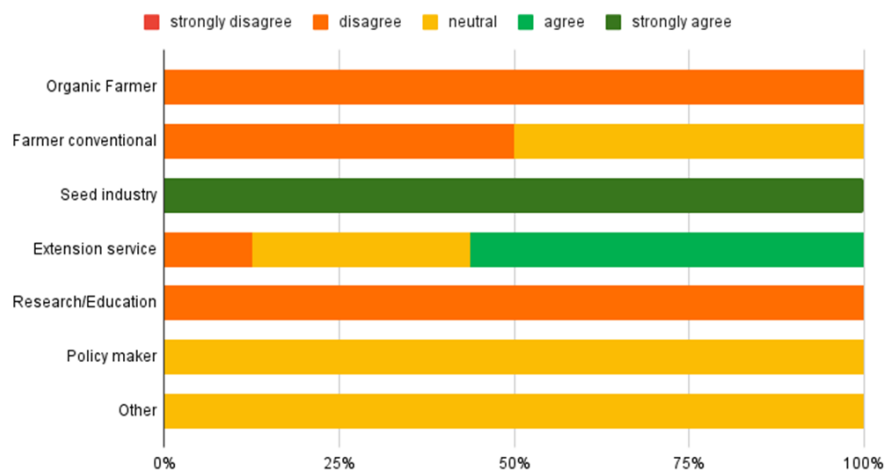
Attitude about "1.a. Organic Seed is easily available for varieties that I want to use":



Attitude about "1.b. Price for OS is accessible":

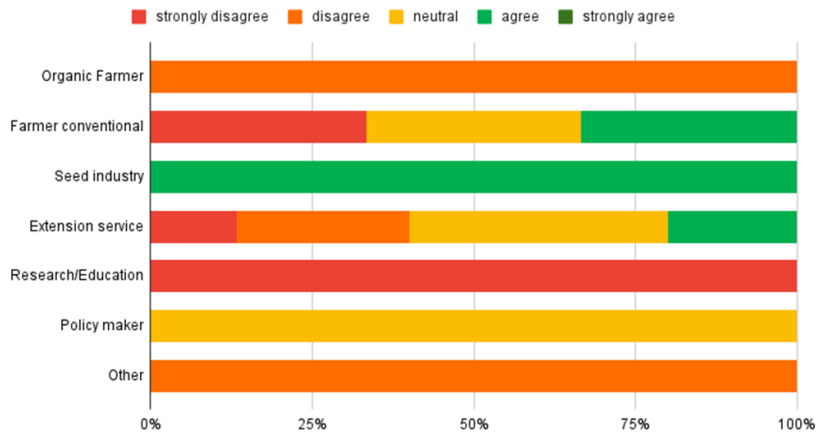


Attitudes about "1c - Availability of OS has improved in the last 5 years":

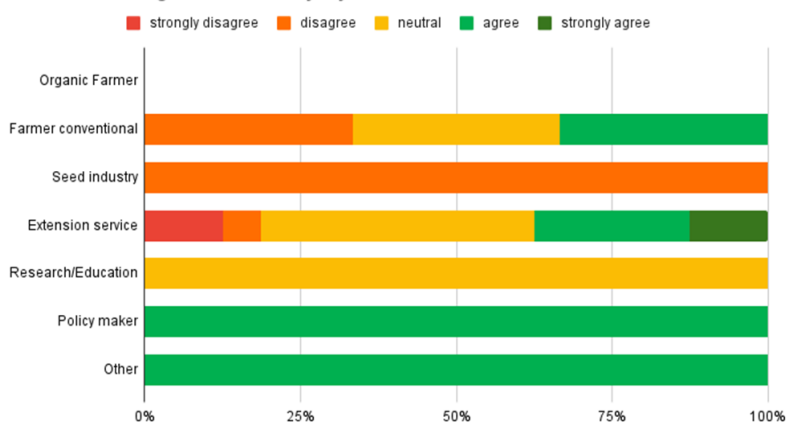


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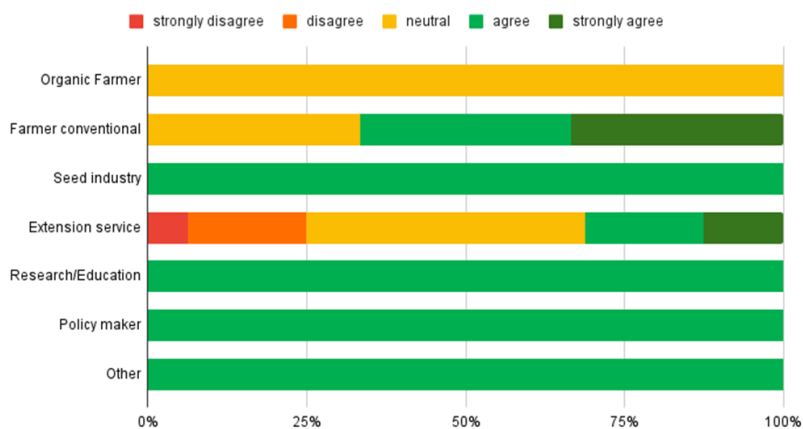
Attitudes about "1d - The quality of OS that I use is high":



Attitudes about "1e - I'm encouraged to use OS by my certifier":

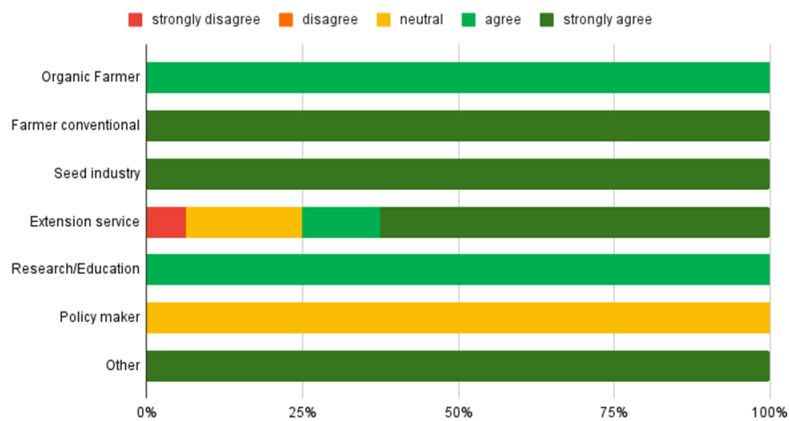


Attitudes about "By using OS, I support the competitiveness of the organic sector":

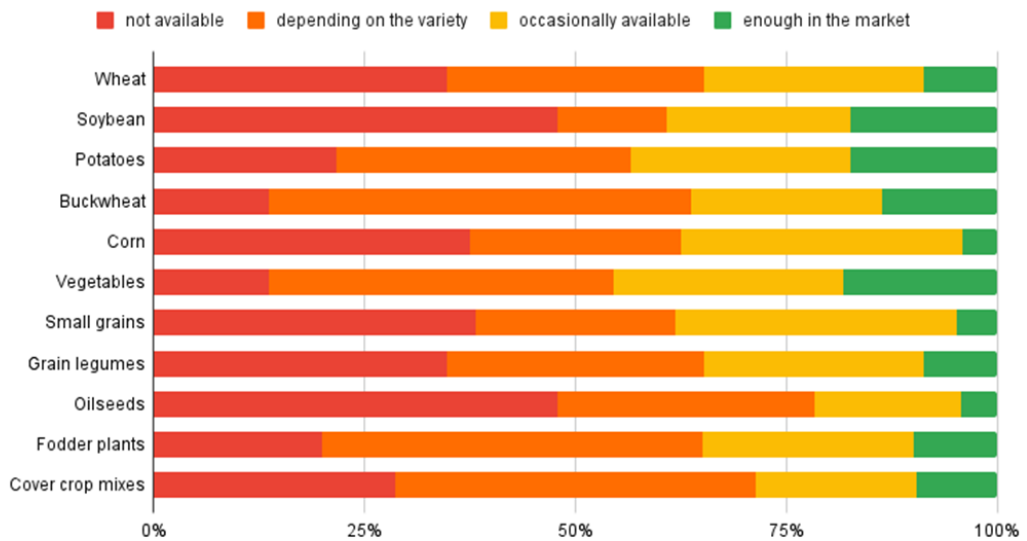


## D 8.3\_Report on field-based demonstration events

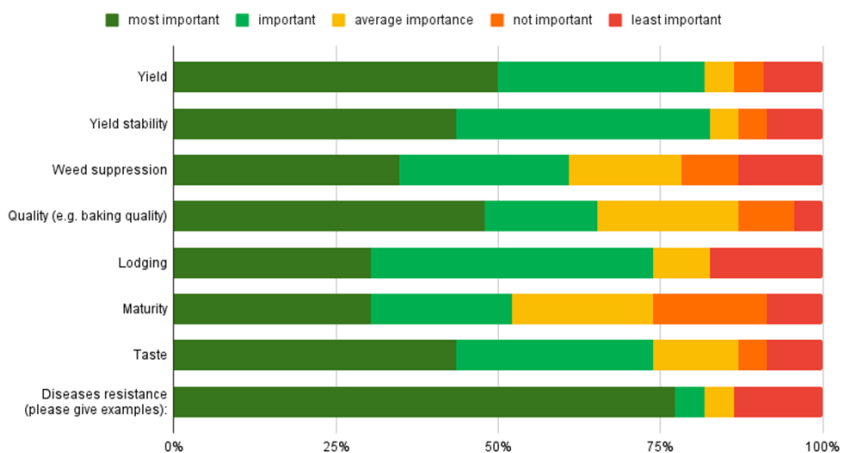
Attitudes about "There is need for enhancing the availability of organic seed treatments.":



Organic seed availability for 11 field crops:



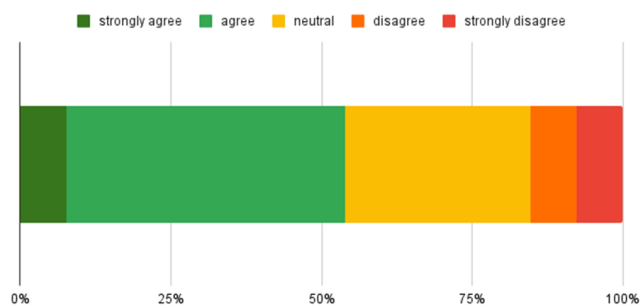
What are important traits for an organic variety?





## D 8.3\_Report on field-based demonstration events

Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm:



Photos:



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## D 8.3\_Report on field-based demonstration events

### 4. Demonstration events at BOKU

#### Winter wheat farmers participatory trial demonstration event

<i>Organiser:</i>	<b>University of Natural Resources and Life Sciences (BOKU), Austria</b>
<i>Date:</i>	15 June 2021
<i>Location:</i>	Aspersdorf and Starnwörth, Austria
<i>Varieties:</i>	The event was organised by ECOBREED partner BOKU together with the farmers Andreas Patschka and Hermann Schwarzl. The demonstration trials included 11 varieties in Aspersdorf (i.e., Alessio, Arnold, Capo, Edelmann, Ehogold, IS Laudis, Lennox, Liocharls Population, Mv Elit CCP, Mv Kolompos, Purino) and 7 varieties in Starnwörth (i.e., Alessio, Arminius, Capo, IS Laudis, Liocharls Population, Mv Elit CCP, PS Dobromila).
<i>Participants:</i>	The event was attended by farmers and a representative of the national VCU testing authority (AGES).
<i>Survey:</i>	Besides the presentation of the individual varieties and their positive and negative traits with respect to organic cultivation, the main topics of discussion was the suitability of CCPs for organic wheat production. The farmers acknowledged that the strict uniformity as present in the current modern varieties is not absolutely necessary from their side, however, that variation in some key traits such as maturity and breadmaking quality is not welcomed. Moreover, variation in plant height should not lead to increased lodging in the crop stand. Friedrich Platz from AGES informed the participants that they are currently testing some wheat populations from Switzerland, Germany, Hungary and Italy within the INVITE project ( <a href="https://www.h2020-invite.eu/">https://www.h2020-invite.eu/</a> ). The new regulations on the marketing of populations (organic heterogeneous material) are expected to enter into force from January 2022. A second major interest of the farmers was the current status about the resistance level against common bunt in the present wheat germplasm. All farmers said that they hitherto had no problems but that they are aware of infected fields in their neighbourhood. Friedrich Platz informed that besides BOKU also AGES is carrying out trials with artificial infection and that the varieties Tilliko, Tillstop and Tillexus which were registered as bunt resistant some years ago are meanwhile susceptible to some <i>Tilletia</i> isolates.



## D 8.3\_Report on field-based demonstration events

Photos:

ECOBREED winter wheat farmers participatory trial demonstration event in Aspersdorf and Starnwörth, Austria:



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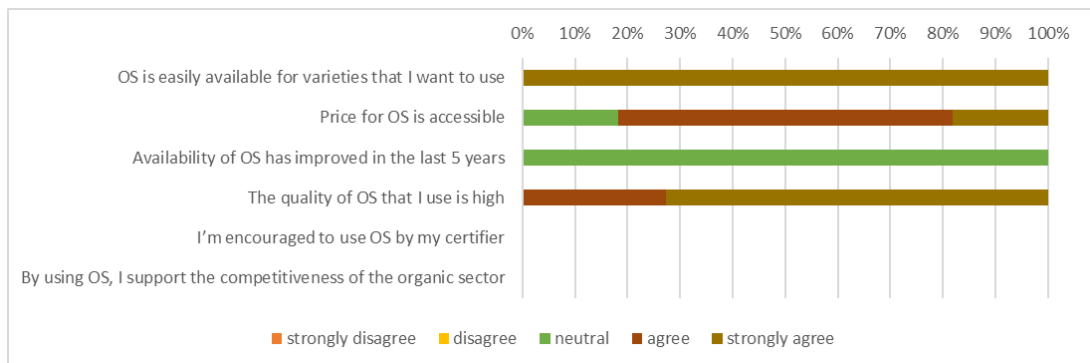


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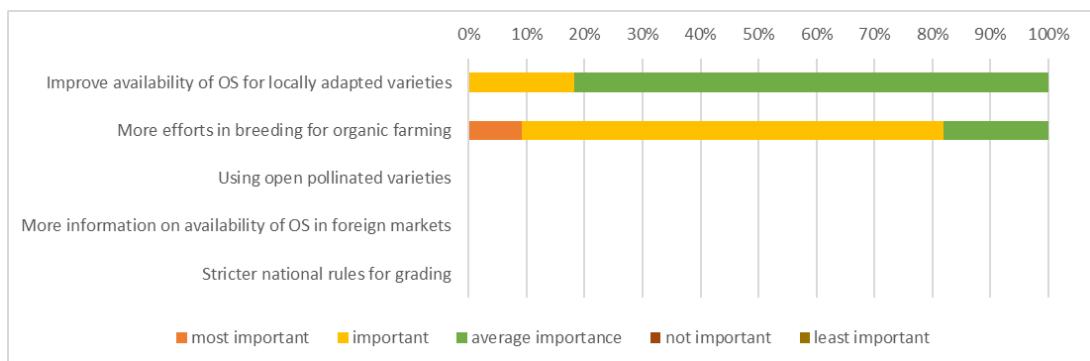
## D 8.3\_Report on field-based demonstration events

### Bionet winter wheat variety trial demonstration event

<i>Organiser:</i>	<b>University of Natural Resources and Life Sciences (BOKU), Austria</b>
<i>Date:</i>	3 June 2022
<i>Location:</i>	Wallern im Burgenland, Austria
<i>Varieties:</i>	The event was organised by Bio Austria Burgenland in co-operation with ECOBREED partner BOKU. Both winter common ( <i>Triticum aestivum</i> ) and spelt wheat ( <i>T. spelta</i> ) were shown. The common wheat demonstration plots included 15 varieties which were either recently released, are popular in organic wheat growing in Austria or are included in ECOBREED WP2 nurseries (i.e. Alicantus, Arminius, Arnold, Aurelius, Blickfang, Capo, Christoph, Edelmann, Ehogold, Energo, Izalco CS, Mandarin, Mv Elit CCP, Mv Pantlika, Tillsano).
<i>Participants:</i>	The event was attended by farmers, policy makers (representatives from extension services) and traders (representatives from seed companies).
<i>Survey:</i>	<i>Attitudes towards organic seed (OS) in Austria:</i>

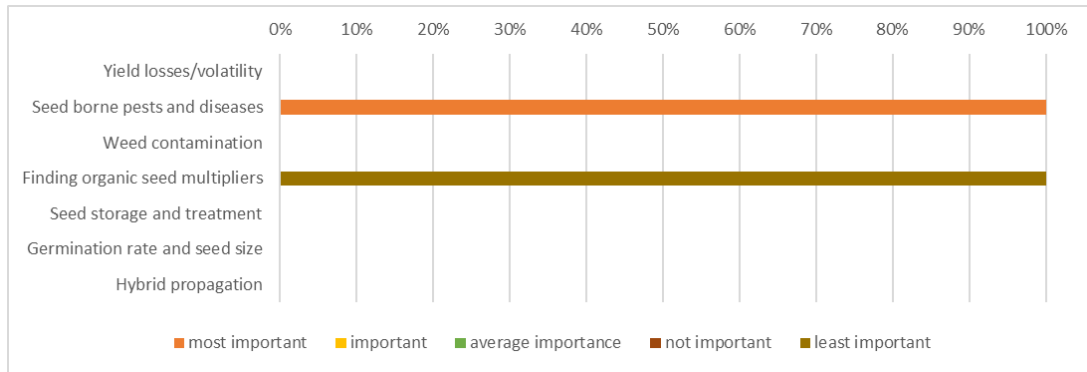


#### Ranking of different actions to boost the use of organic seed (OS) in Austria:

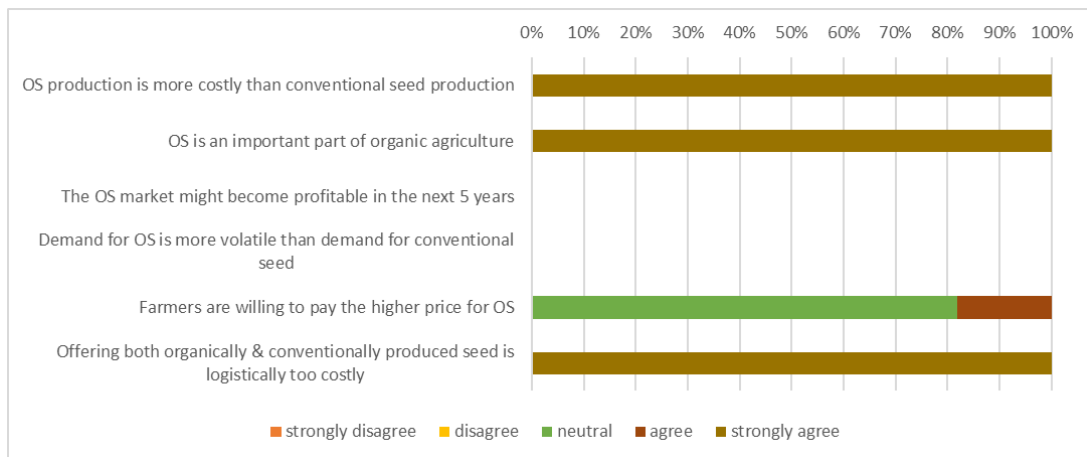


## D 8.3\_Report on field-based demonstration events

### Technical challenges in organic seed production:



### Marketing issues with organic seed (OS):



### Photos:

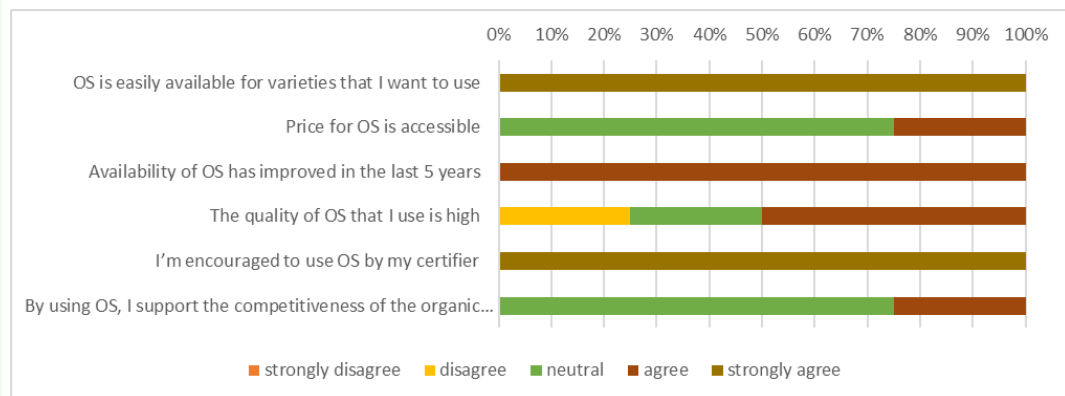


## D 8.3\_Report on field-based demonstration events

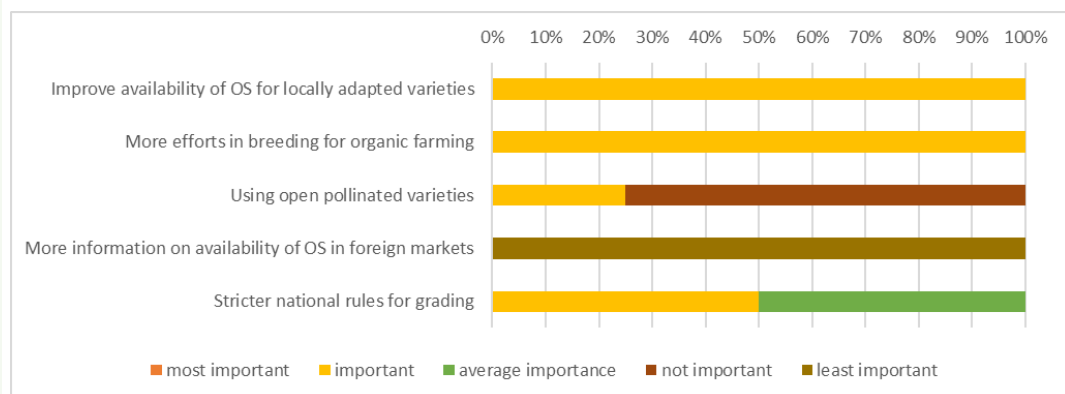
### 1st ECOBREED winter wheat farmers participatory trial demonstration event

- Organiser:** University of Natural Resources and Life Sciences (BOKU), Austria
- Date:** 9 June 2022
- Location:** Aspersdorf, Austria
- Varieties:** The event was organised by ECOBREED partner BOKU together with the farmer Andreas Patschka. The common wheat demonstration plots included 9 varieties (i.e. Aristaro, Arminius, Blickfang, Capo, Edelmann, Lennox, Liocharls Population, Mandarin, Wendelin).
- Participants:** The event was attended by farmers and a representative of the national VCU testing authority (AGES). The number of attendees was limited and below the pre-registration due to rainfall before and during the beginning of the event.
- Survey:** Due to the rainfall the participants did not want to fill the questionnaire (also because of the many questions). We discussed the main issues together – with the outcomes summarised below.

#### Attitudes towards organic seed (OS) in Austria:

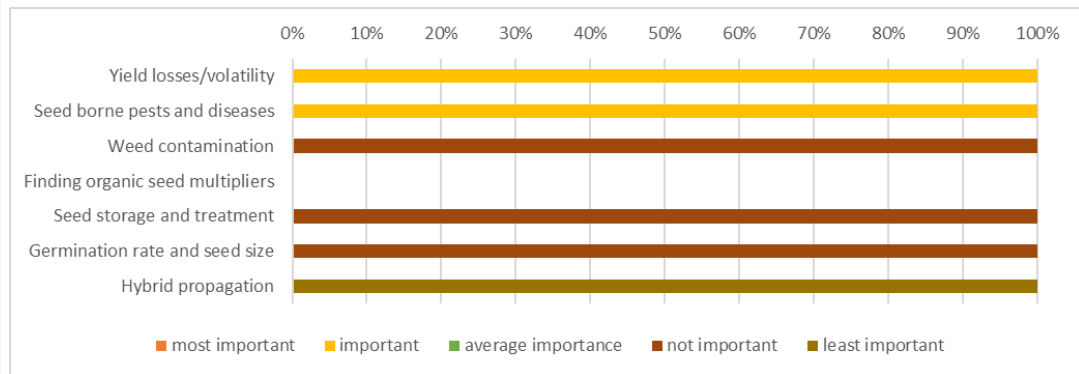


#### Ranking of different actions to boost the use of organic seed (OS) in Austria:

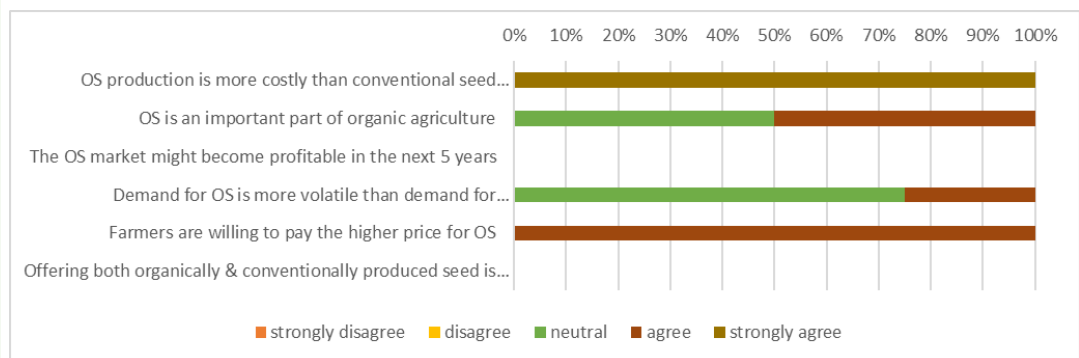


## D 8.3\_Report on field-based demonstration events

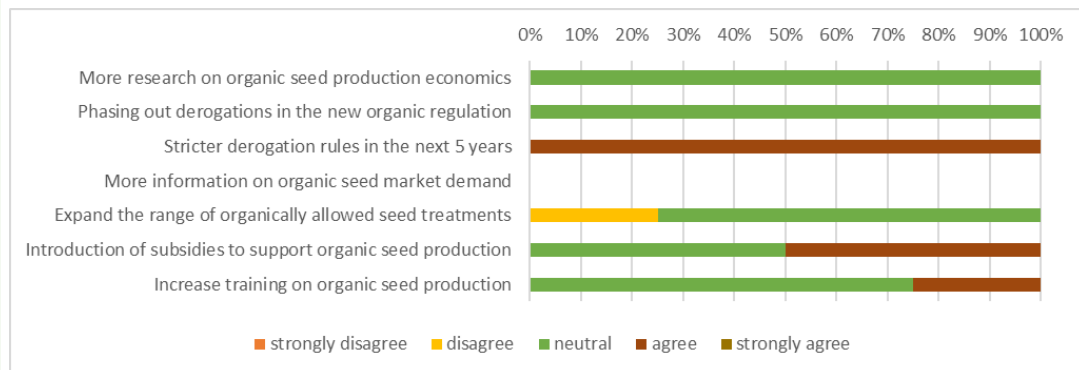
### Technical challenges in organic seed production:



### Marketing issues with organic seed (OS):



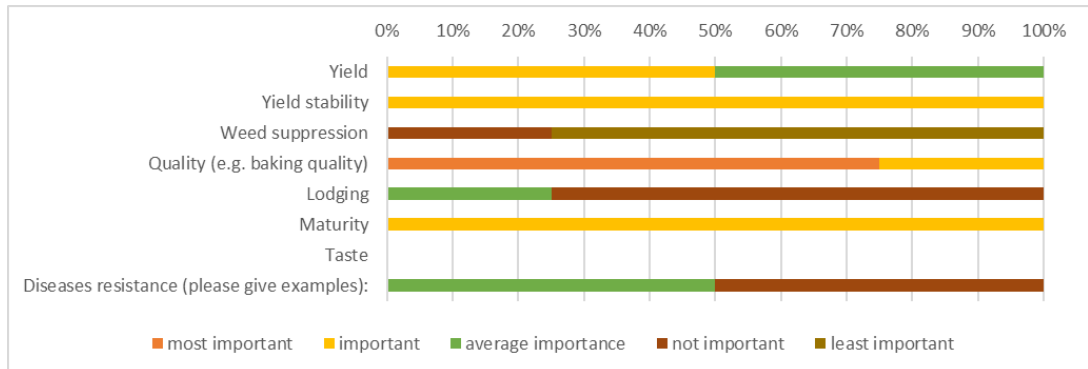
### Policy measures to enhance organic seed (OS) production:



## D 8.3\_Report on field-based demonstration events

Organic seeds availability: the following seeds are available – wheat, soybean, potatoes, oilseeds; availability depends on variety.

*What are important traits for an organic variety in your region?*



Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm: farmers are interested in growing CCP of wheat. In soybean only if maturity of all included genotypes is the same and the major quality traits (required by the processors) are guaranteed (i.e. high protein content; yellow hilum). No ideas on most other crops as not grown.

Photos:





## D 8.3\_Report on field-based demonstration events

### 2<sup>nd</sup> ECOBREED winter wheat farmers participatory trial demonstration event

<i>Organiser:</i>	<b>University of Natural Resources and Life Sciences (BOKU), Austria</b>
<i>Date:</i>	17 June 2022
<i>Location:</i>	Gaspoltshofen, Austria
<i>Varieties:</i>	The event was organised by ECOBREED partner BOKU together with the farmer Anton Berger. The common wheat demonstration plots included 8 varieties (i.e., Arminius, Blickfang, Liocharls Population, Lukullus, Purino, Rübzahl, Tobias, Wendelin).
<i>Participants:</i>	The event was attended by only 4 farmers despite that the invitation was distributed by the regional Bio Austria office. The reason for the low number of participants was most probably the good weather and therefore the intense hay-making activities of farmers in the neighbourhood.
<i>Survey:</i>	<p>Participants did not want to fill the long questionnaire but were more interested in discussing specific issues (see comments in questionnaire).</p> <ol style="list-style-type: none"><li>1. Attitudes towards organic seed (OS) in Austria: Farmers use not regularly certified seed, approximately every 3-4 years; main reason is the price and the feeling that breeding progress is not that fast to change every year the variety and therefore buy new (certified) seeds; the "quality" issue is of secondary importance as the harvest is almost exclusively used for feeding livestock; common bunt was not a problem for the last 20 years.</li><li>2. Ranking of different actions to boost the use of organic seed (OS) in Austria: Hybrid vs. OP varieties is generally no topic; OP varieties are not available in maize, for rye (grown on limited scale), hybrid varieties are too expensive and OP varieties work well. The professional beekeepers argued that many modern sunflower hybrids produce a lot of pollen but not enough nectar for the bees.</li><li>3. Technical challenges in organic seed production: Participants are not professional seed producers; for their farm-saved seed "strategy" the main problem is a certain grade of "impurity" due to mechanical mixing in the combine or at home during cleaning and storage; it is believed that the weed contamination is of minor importance due to the farm-saved seed than due to the distribution by the professional combines going from one field to the other without cleaning in between.</li></ol>



## D 8.3\_Report on field-based demonstration events

4. Marketing issues with organic seed (OS): Price of seed is an important issue; no idea on the economics of the seed companies.

5. Policy measures to enhance organic seed (OS) production: Farmers complain that the extension service for organic crop production is not very good in the region - the focus lies more in animal husbandry. Hence, farmers often don't know about latest results in research on organic breeding or crop management.

6. Organic seed availability: Availability of organic seed for the crops which are grown is good; for some crops/varieties organic seed is organised also via BayWa (Bavaria) as the Austrian-German border is not that far.

7. What are important traits for an organic variety in your region? As most of the grain is feed to livestock, yield is a major issue besides lodging. Disease resistance is not important at all as there is not really a problem with any disease. Weed suppression was believed to be of no major importance, the ECOBREED trial and the different weed competitiveness of the tested variety has, however, shown that there is a clear varietal difference in this trait.

8. Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm: The farmer was interested in using CCPs of wheat in the future. From the other listed crops, he only grows potatoes. Here he cannot think about CCPs as his clients are traditionally fixed to specific varieties which stand for a specific end-use quality.

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## D 8.3\_Report on field-based demonstration events

### Demonstration day on ECOBREED organic wheat trials

<i>Organiser:</i>	<b>University of Natural Resources and Life Sciences (BOKU), Austria</b> <b>Saatgut, Austria</b>
<i>Date:</i>	2 June 2023
<i>Location:</i>	Raasdorf, Austria
<i>Varieties:</i>	<ul style="list-style-type: none"><li>• 10 durum varieties from the DURUM nursery</li><li>• 12 old landraces from the CRETE panel</li><li>• 4 additional landraces from the Mediterranean Basin (2 Greece, 1 Italy, 1 Spain)</li><li>• 25 common wheat varieties with specific quality traits (i.e. white/purple/blue seed colour; yellow endosperm pigmentation)</li><li>• 8 common wheat check varieties from AT &amp; HU</li><li>• 2 notified OHMs from Germany and Hungary</li><li>• 9 CCPs from BOKU</li><li>• 24 BOKU advanced organic breeding lines</li><li>• 30 lines with/without Gpc-B1</li></ul>
<i>Participants:</i>	16 participants - farmer, breeder, researcher, policy maker, extension service, NGO
<i>Survey:</i>	Participants did not fill out the questionnaire.



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## D 8.3\_Report on field-based demonstration events

### 5. Demonstration events at CRI

#### Demonstration day of common buckwheat

<i>Organiser:</i>	<b>Crop Research Institute (CRI), Czech Republic</b>
<i>Date:</i>	23 September 2022
<i>Location:</i>	Biofarma Sasov – Josef Sklenář, Sasov 32, 586 01 Jihlava
<i>Varieties:</i>	During the event, 12 buckwheat varieties were presented (Devyatka, Eskalar, Darja, Hajnalka, Drushina, Smuga, Korona, Oberon, Kora, Zita, Lifago, Lileja) with the highlight/focus on phenotypic evaluation:
<i>Participants:</i>	11 participants
<i>Survey:</i>	<p>All participants received information about the origin, main morphological and phenological characteristics, cultivation specifics and main uses of these 12 varieties. The advantages and disadvantages of buckwheat as a main, second or cover crop in farmers' crop rotations were discussed. Options on where to purchase these varieties were also mentioned. Farmers, researchers and NGO representatives attended the event. Some people used the chance of individual consultation, while filling up the questionnaires.</p> <p>Three attendants filled the questionnaires: 2 farmers and 1 NGO.</p> <p>Participants rated the availability of organic seed from medium good to medium hard and they noted an improvement in availability over the past five years. Organic seed prices tend to be unfavourable for farmers. They are satisfied with the quality of organic seed but would like to have seed treatment available. The most important characteristics for these farmers are yield, yield stability, weed suppression, quality, lodging, and resistance to biotic factors. Taste is not as important to them. Very good or good availability of organic seed is observed in the case of cereals, legumes, and forage crops. Poorer availability of organic seed is observed in vegetables and potatoes.</p>



## D 8.3\_Report on field-based demonstration events

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## D 8.3\_Report on field-based demonstration events

### Demonstration day of common buckwheat

<i>Organiser:</i>	<b>Crop Research Institute (CRI), Czech Republic &amp; PRO-BIO obchodní společnost, Czech Republic</b>
<i>Date:</i>	16 September 2023
<i>Location:</i>	The event was organised at an organic farm in Southern Moravia – Velké Hostěrádky
<i>Varieties:</i>	Kora, Zita, Lifago, Smuga, Syn 2.1, Syn P1.22.1, Syn P1.22.2, Syn P2.22.3
<i>Participants:</i>	General public (c. 100 participants).
<i>Survey:</i>	Participants did not fill out the survey.
<i>Photos:</i>	



## D 8.3\_Report on field-based demonstration events

### 6. Demonstration events at IFVC

#### Weed competition trial

**Organiser:** Institute of Field and Vegetable Crops (IFVC), Serbia

**Date:** 1 August 2022

**Location:** Rimski šančevi, Serbia

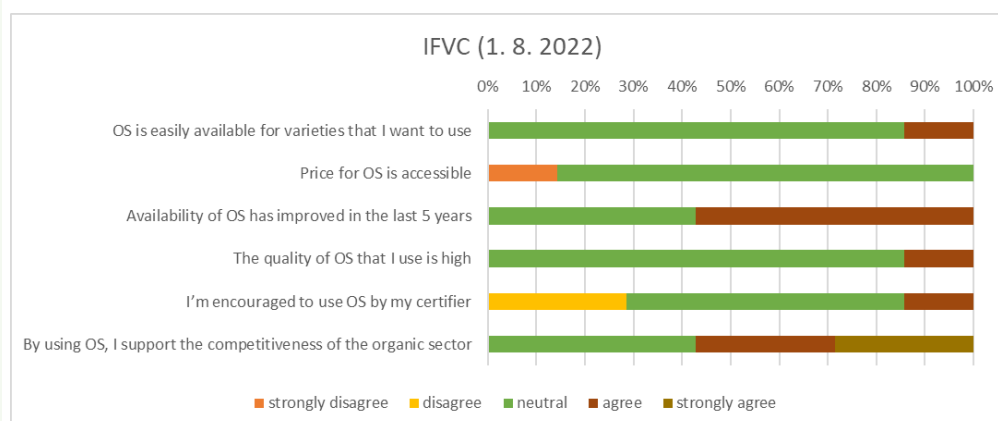
**Varieties:** Trainers: Marjana Vasiljević, Jovana Krstić, Miloš Rajković  
Varieties:  
– NS Apolo,  
– Trijumf,  
– NS-L-510069

The trial for screening of soybean genotypes for competitiveness against weeds was presented.

**Participants:** 9 participants (students, researchers and other participants) and 3 trainers.

**Survey:** 7 participants filled out the questionnaire.

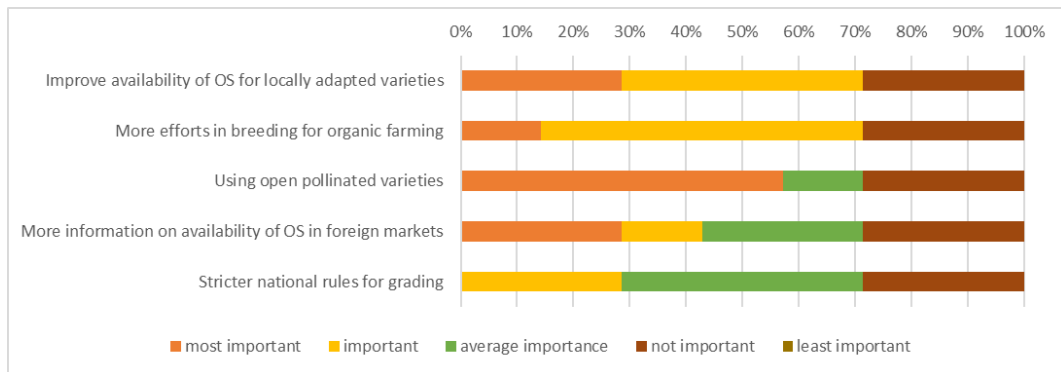
*Attitudes towards organic seed (OS) in Serbia:*



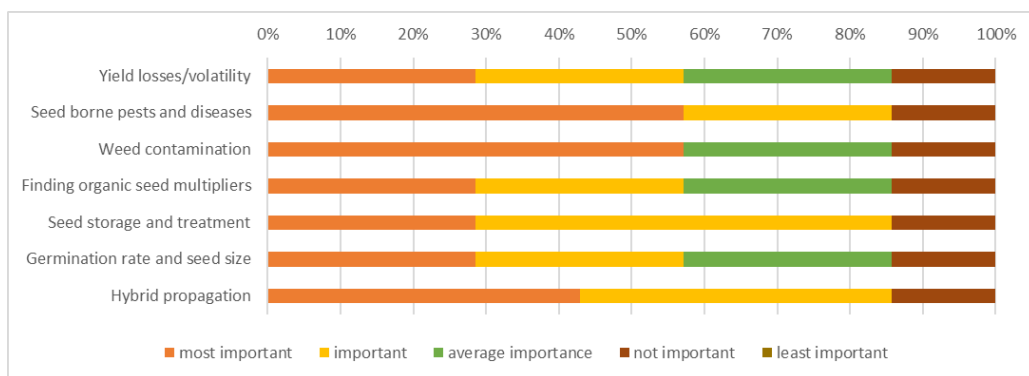


## D 8.3\_Report on field-based demonstration events

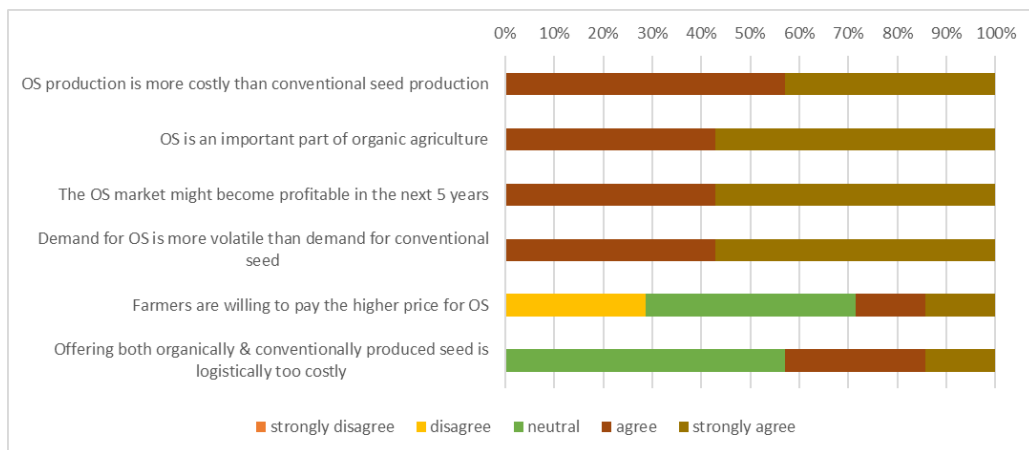
Ranking of different actions to boost the use of organic seed (OS) in Serbia:



Technical challenges in organic seed production:

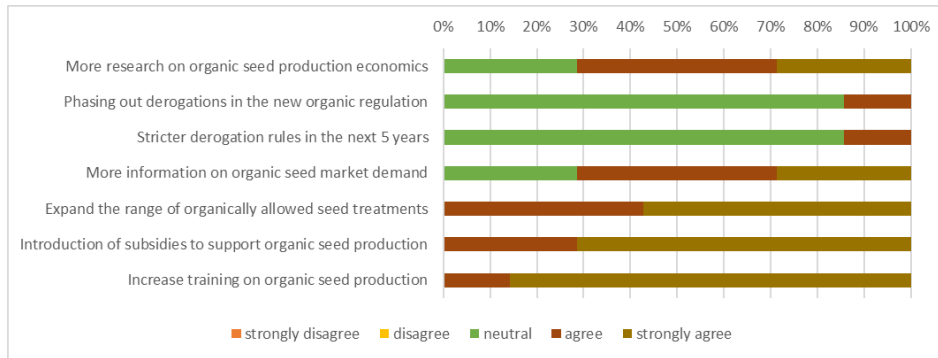


Marketing issues with organic seed (OS):

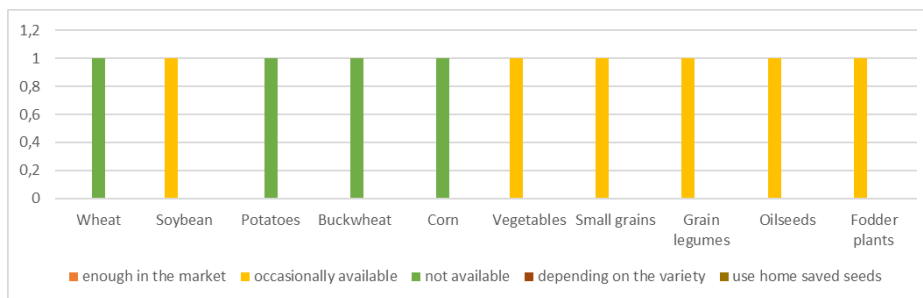


## D 8.3\_Report on field-based demonstration events

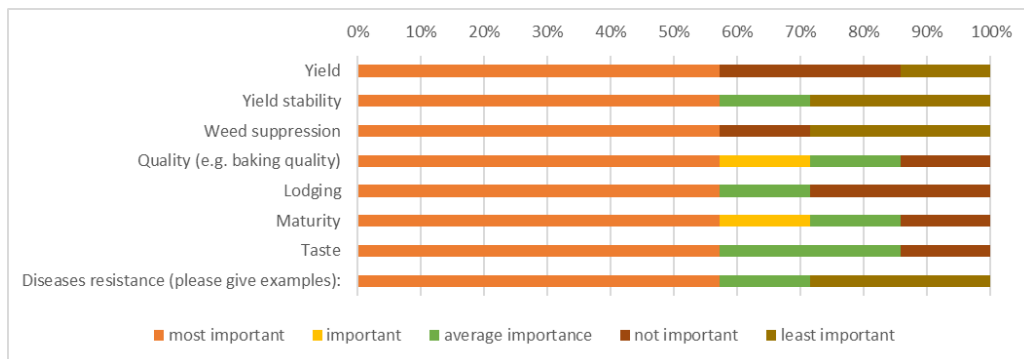
### Policy measures to enhance organic seed (OS) production:



### Organic seed availability:



### What are important traits for an organic variety in your region?



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## D 8.3\_Report on field-based demonstration events

### Farmer participatory soybean field trial

**Organiser:** Institute of Field and Vegetable Crops (IFVC), Serbia

**Date:** 11 August 2022

**Location:** Demonstration event was held in Šuljam, Serbia.

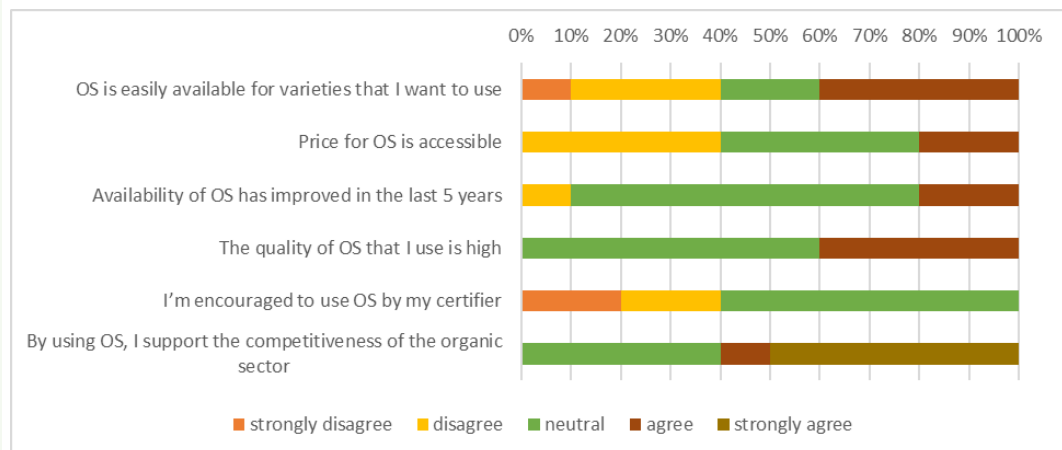
**Varieties:** The following varieties were presented: Xonia, NS Atlas, Favorit, Tajfun Valjevka, NS Apolo, Merkur, Galina, Rubin

**Participants:** Trainers: Marjana Vasiljević, Ignjat Jurišić (farmer)

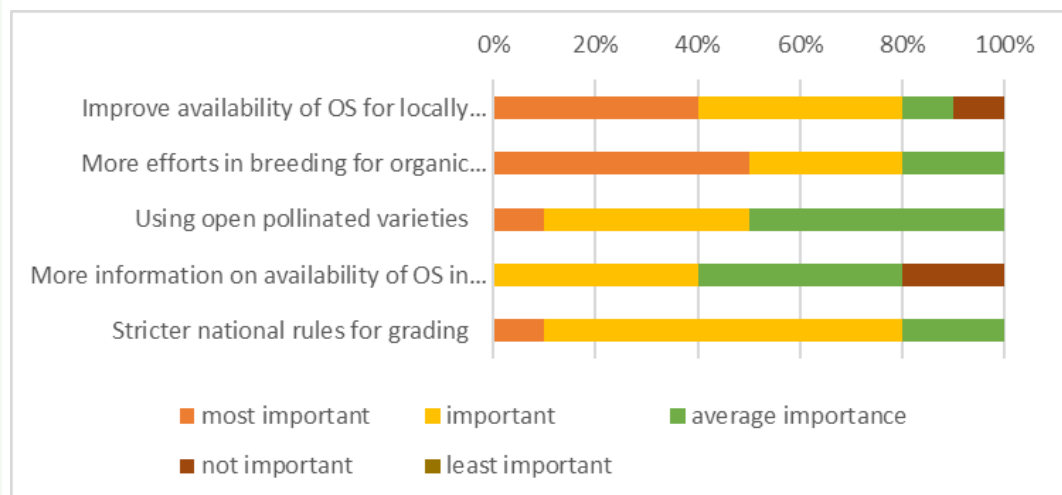
There were 10 participants at this demonstration event: farmers (4), researchers (4), and students (2).

**Survey:** 10 participants filled out the questionnaire.

#### Attitudes towards organic seed (OS) in Serbia:

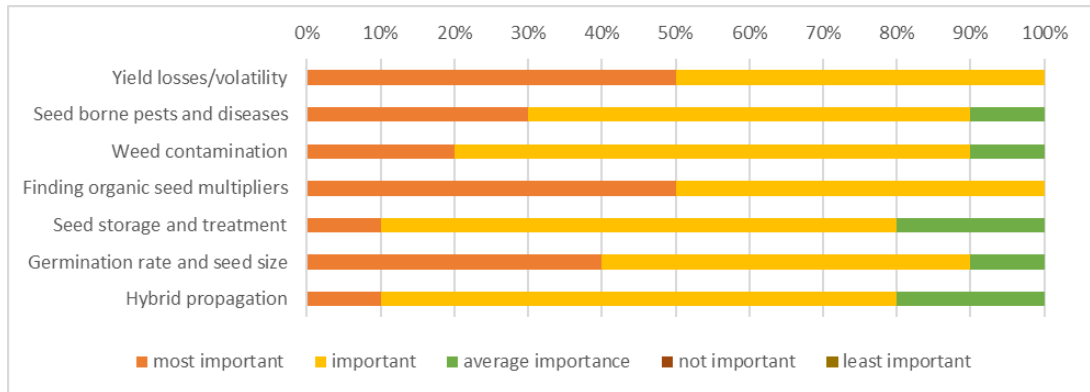


#### Ranking of different actions to boost the use of organic seed (OS) in Serbia:

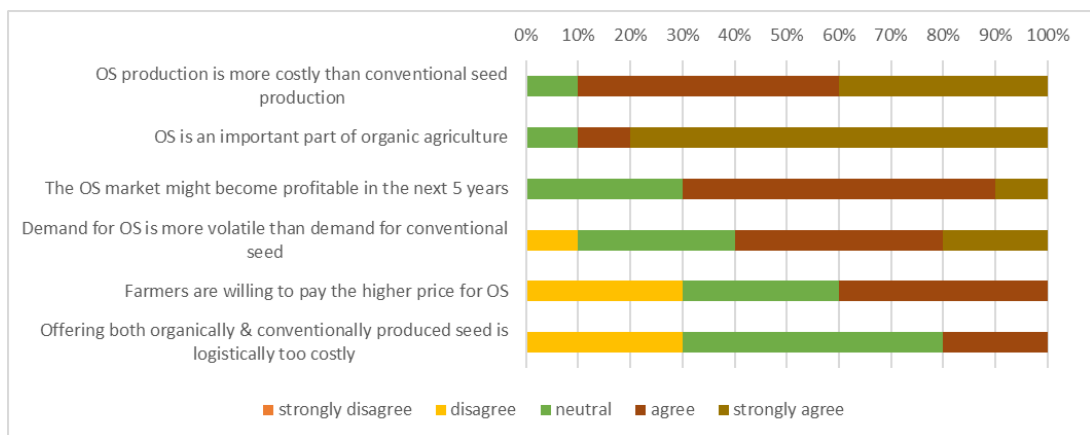


## D 8.3\_Report on field-based demonstration events

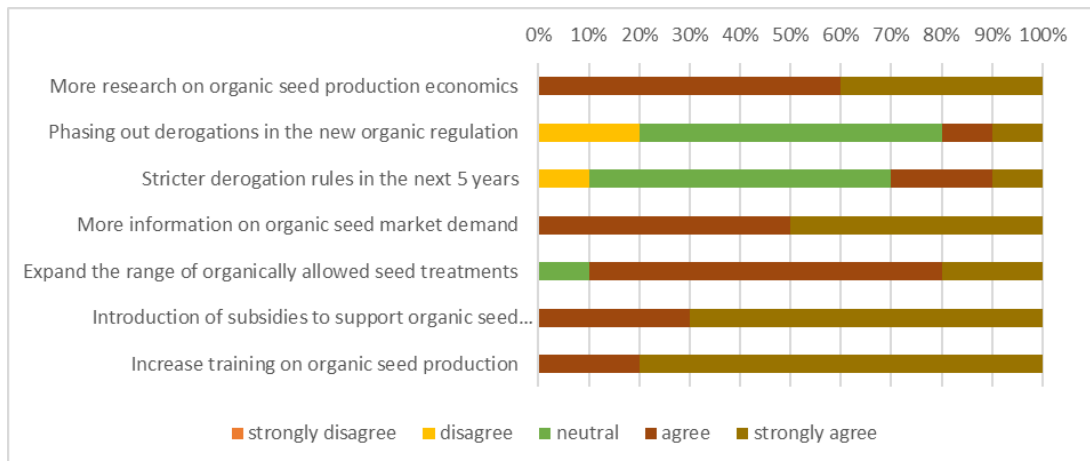
### Technical challenges in organic seed production:



### Marketing issues with organic seed (OS):

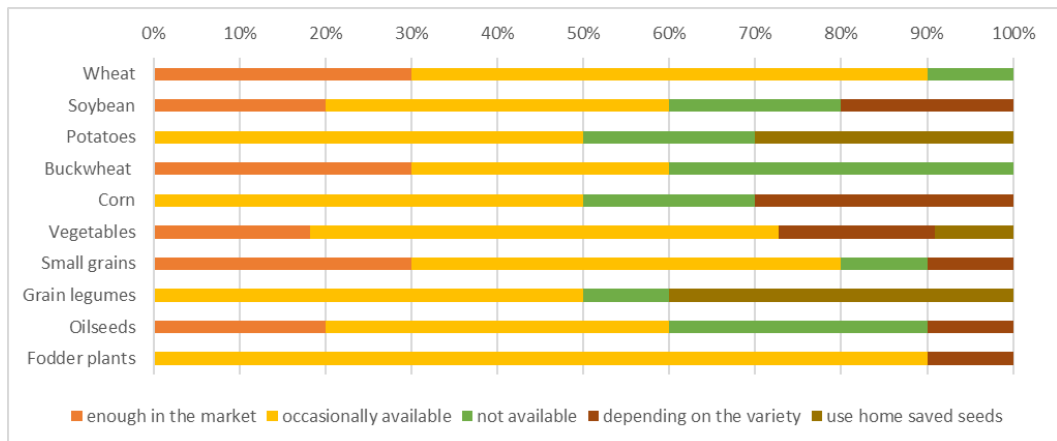


### Policy measures to enhance organic seed (OS) production:

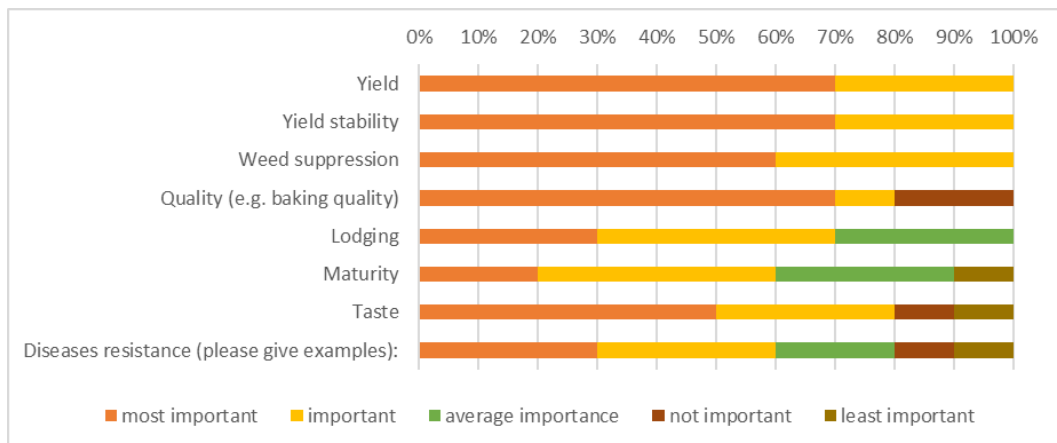


## D 8.3\_Report on field-based demonstration events

### Organic seed availability:



### What are important traits for an organic variety in your region?



### Photos:



## D 8.3\_Report on field-based demonstration events

### 7. Demonstration events at NARDI

#### Testing of winter wheat varieties, for organic production

<i>Organiser:</i>	<b>National Agricultural Research and Development Institute (NARDI; Fundulea), Romania</b>
<i>Date:</i>	6 July 2021
<i>Location:</i>	Organic field at NARDI Fundulea.
<i>Varieties:</i>	During the event were presented performance of the Romanian and foreign winter wheat cultivars tested in the international project ECOBREED.
<i>Participants:</i>	In total 38 participants attended the event, mostly farmers and seed producers, and a few researchers from other research stations.
<i>Survey:</i>	<ul style="list-style-type: none"><li>– Organic seed production is very important for organic farming because in the absence of organically certified seed, the production obtained is not 100% organic;</li><li>– Organic seed is double certified, both as seed (by seed control laboratories) and as organic product (by organic inspection and certification bodies);</li><li>– Ecologically certified seed is produced only on a few ecologically certified agricultural units, for only a few crops - wheat, soybeans and vegetables (see the website <a href="http://madr.ro/agricultura%20ecologica/">madr.ro/agricultura ecologică</a> / organic seeds database);</li><li>– Certified organic seed is very difficult to produce, mainly due to the weeding of crops and the impossibility of completely eliminating weed seeds, especially those of the same shape, size and weight as seeds of the cultivated species;</li><li>– Certified organic seed must be superior to conventional germination, purity and other quality indicators, as well as phytosanitary status;</li><li>– The organic seed market is small and somewhat risky (volatile), mainly due to the derogation allowing the use of untreated conventional seed, but it is hoped that in the next 5-7 years it will become a very successful business.</li></ul> <p>We talked about the project, in the first part of the event, the general objectives and the objectives of WP 2 - wheat, in particular.</p> <p>We presented the technology used in NARDI's organic field (Dr. Ion Toncea) and the behaviour of some Romanian and foreign winter wheat cultivars tested in the project (breeder Cristina Marinciu).</p> <p>Farmers were interested in high-yielding cultivars in drought conditions (2020) and in rainy conditions (2021) particularly with respect to stability of production</p>



## D 8.3\_Report on field-based demonstration events

i.e. the most productive varieties across the differing conditions (for the two years).

Some of them were interested in some new Romanian wheat cultivars but they also liked some cultivars from Martonvásár - Hungary. They asked us for a contact from Martonvásár to find out about seed availability.

An interesting aspect noticed by the farmers was the lack of the weeds inside the plot, but this was mainly due to drought.

Another notable aspect was the lack of disease - the explanation could be the same - drought associated with high temperatures.

*Photos:*



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## D 8.3\_Report on field-based demonstration events

### Demonstration event - soybean

<i>Organiser:</i>	<b>National Agricultural Research and Development Institute (NARDI; Fundulea), Romania</b>
<i>Date:</i>	5 August 2022
<i>Location:</i>	NARDI (INCDA) Fundulea & ECO-Fruct Ștefan cel Mare, Călărași - Romania
<i>Varieties:</i>	ECOBREED soybean varieties studied in WP4 - T4.1 (320 varieties), T4.2 + T4.4 (17 varieties), and WP 6, T6.2 (10 varieties) in 2 locations (NARDI Fundulea and ECO-FRUCT) and T6.3 (4 varieties)
<i>Participants:</i>	Research/Education (28), Farmer (17), Seed industry (4), Policy makers (1), ONG (1) and Others (9) – Organic Certification Bodies (1), Organic Input Suppliers & Distributors (4), and Press (4).
<i>Survey:</i>	<p><i>Summary – questionnaire:</i></p> <ol style="list-style-type: none"><li>1. In Romania, attitudes of farmers and researchers towards organic seed (OS) is quite favourable, because the quality of OS is high, price for OS is accessible, OS is available for varieties wanted and, especially, OS has improved in the last 5 years and by using OS it has supported competitiveness of the organic sector.</li><li>2. Different actions to boost the use of organic seed (OS) in our country are, mostly, for improving availability of OS for locally adapted varieties, and important for more efforts in breeding for organic farming, more information on availability of OS in the foreign markets and for using open pollinated varieties and OHMs, and for stricter national rules for grading.</li><li>3. The technical challenges in organic seed production are very important – yield losses/volatility, weed contamination, germination rate and seed size, seed-borne pests and diseases and seed storage and treatment, as well important - finding organic seed multipliers and hybrid propagation.</li><li>4. The marketing of organic seed (OS) has some problems – OS production is more costly than conventional seed production and Demand for OS is more volatile than demand for conventional seed, as well as more characteristics – OS is an important part of organic agriculture, the OS market might become profitable in the next 5 years, Farmers are willing to pay higher price for OS and Offering both organically &amp; conventionally produced seed is logistically too costly.</li><li>5. The most important policy measures to enhance organic seed (OS) production in Romania are introduction of subsidies to support OS</li></ol>



## D 8.3\_Report on field-based demonstration events

production, more research on organic seed production, expand the range of organically allowed seed treatments, more information on organic seed market demand and training on organic seed production. The Stricter derogation rules in the next 5 years and phasing out derogations in the organic regulation also are important.

6. In Romania, the availability of organic seeds is quite low, just occasionally for wheat, soybean, corn, oilseeds and fodder and it is not available for potatoes, buckwheat, vegetables, small grains and grain legumes.
7. The most important traits for an organic variety in our region are: Yield, Yield stability, Weed suppression, Lodging and Diseases resistance, Maturity, Quality and Taste.
8. Although growing composite populations has many scientific, practical and legislation uncertainties most of participants at the NARDI ECOBREED Soy Demo Event are interested to cultivate composite populations, mainly, of wheat, barley and soybean and maybe buckwheat and potato.

Photos:



## D 8.3\_Report on field-based demonstration events

### 8. Demonstration events at ATK

#### Diversified biological bases and agro-techniques for sustainability

*Organiser:* **Centre for Agricultural Research (ATK), Hungary**

*Date:* 21 June 2022

*Location:* Organic farm of Csoroszlya Farm, Szár, Hungary

*Varieties:* The field day was a co-event of several H2020 projects, including ECOBREED, and was organized by ÖMKi (Hungarian Research Institute of Organic Agriculture) and ATK. The program of Field Day started with field visit, where Centre for Agricultural Research (ATK) presented winter wheat varieties (part of the post registration organic trial), organic breeding lines (selected by ATK) and populations (Mv Elit CCP, Mv Bio2020 Pop) on field in the frame of participatory breeding activity of ECOBREED. The field tour was followed by short presentations about organic projects, variety testing, use of ecosystem services, Hungarian on-farm trials (containing CCPs of ATK). The ECOBREED project was introduced by Péter Mikó (ATK).

*Participants:* The total number of visitors was 23: mainly organic producers, seed merchants, processors and researchers who participated in the event.

*Survey:* Questionnaire about organic seed was filled out only by 3 participants, because most of the participants have already done it in the field day of 2021.

*Photos:*



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### Demonstration event on organic production and how to go on

<i>Organiser:</i>	<b>Centre for Agricultural Research (ATK), Hungary</b>
<i>Date:</i>	21 June 2023
<i>Location:</i>	Organic farm of Csoroszlya Farm, Szár, Hungary
<i>Varieties:</i>	The field day was organised by ÖMKi (Hungarian Research Institute of Organic Agriculture) and Centre for Agricultural Research (ATK). The program started with field visit, where ATK presented winter wheat varieties (part of the post registration organic trial), organic breeding lines (selected by ATK) and populations (Mv Elit CCP, Mv Bio2020 Pop) in the frame of participatory breeding activity of ECOBREED. The field tour was followed by presentations about organic projects, variety testing, soil management, the utilisation of ancient cereals and participatory breeding trials (containing the ECOBREED activity of ATK). Results from the ECOBREED project and the project itself was introduced by Péter Mikó (ATK). It was a successful demonstration event with many useful information and interested participants.
<i>Participants:</i>	31 participants: mainly organic producers, seed merchants, processors and researchers were participated on the event.
<i>Survey:</i>	Questionnaire about organic seed was filled out only by 2 participants, because most of the participants have already done it in our previous field days.

*Photos:*



## D 8.3\_Report on field-based demonstration events

### 9. Demonstration events at UNEW

#### Mixed Farming Systems for the Future

*Organiser:* **Newcastle University, UK**

*Date:* 28 July 2022

*Location:* Nafferton Farm, near Stocksfield, Northumberland, UK

*Varieties:* 20 wheat varieties from Advanced Phenotyping trial (Task 2.1)  
66 potato varieties (Task 3.1)  
7 buckwheat varieties in FPT (Task 6.2)  
4 potato varieties from cover crop trial (Task 3.3)

The event was an all-day event but split into separate arable and livestock tours with attendees being able to book on the individual tours held in the morning and afternoon. The Arable tour (which took place in both the morning and afternoon) was focused entirely on the ECOBREED project and involved visiting the wheat Advanced Phenotyping trial (Fig 1), potato variety trial (Fig 2), potato cover crop trial and the buckwheat Farmer Participatory trial. In addition, there was a bread tasting station where Gilchesters had bread baked from some of the varieties grown in their FPT of 2021. The arable tours in the morning and afternoon were entirely focused on the ECOBREED project looking at the 20 wheat varieties in the Advanced Phenotyping trial, the 66 potato varieties being screened in the variety trial, 7 buckwheat varieties in the FPT and 4 potato varieties being evaluated for post and disease levels in the cover crop trial. In addition, an overview was given of the technologies being used in the advanced phenotyping work i.e. multi-spectral, hyper-spectral, thermal and drone-mounted cameras.

*Participants:* Total of 39 attendees of which 11 were farmers and an additional 6 were agriculture related i.e. supply chain, knowledge exchange (AHDB), Northumbrian Water (catchment advisor), consultancy, local council (environmental analyst), local vegetable grower. Of the 5 farmers, none were organic. However, there was one attendee who had a single field where he grows organic vegetables for a local community association.

*Survey:* 5 completed surveys were returned from the 5 farmer attendees but a number of questions were not answered as they were not relevant to conventional



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growers in attendance. Yield losses, seed-borne pests and disease and weed competition were identified as the biggest technical challenges in organic seed production. Wheat and oilseed rape were identified as the major crops in question 6 but this may have related to the actual crops being grown on those farms. No one answered Q6 on organic seed availability and likewise Q8 on CCPs

Photos:



## D 8.3\_Report on field-based demonstration events

### Demonstration event at Thornton Farm

*Organiser:* **Newcastle University, UK**

*Date:* 5 July 2023

*Location:* Nafferton Farm, near Stocksfield, Northumberland, UK

*Varieties:* 15 wheat varieties/treatments from FPT (Task 6.2)  
6 buckwheat varieties including 3 CCP in the FPT (Task 6.2)  
4 potato varieties from the Cover Crop trial (Task 3.3)

*Participants:* Total of 41 attendees of which only 3 were farmers (all are conventional growers), an additional 7 attendees were Agronomists/Advisors, 3 attendees were connected to Policy (two from DEFRA and one from Northumberland County Council), 11 researchers (of which 8 were internal i.e. Newcastle University and 3 were external), together with 17 Newcastle University members of staff.

*Survey:* 10 completed surveys were obtained/returned from the 3 farmer attendees and the 7 Agronomists/Extension workers but a number of questions were not answered as they were not relevant to the conventional growers/agronomists in attendance (especially Q1 and Q4 were not relevant).

*Photos:*



## D 8.3\_Report on field-based demonstration events

### 10. Demonstration events at SMA

#### Field Day – Smales Organic Seeds

<i>Organiser:</i>	<b>LC Smales &amp; Son Ltd (SMA), UK</b>
<i>Date:</i>	6 July 2021
<i>Location:</i>	Thornton Farm, Berwick-upon-Tweed, Northumberland UK, TD15 2LP
<i>Varieties:</i>	<p>Purino, Wendelin, Locharis Population, Revelation, Roderick, Viki, KWS Extase, Alessio, Wakelyn's Population, Barranco, Royal</p> <p>Two varieties were also included with two different biostimulant seed treatments.</p>
<i>Participants:</i>	21 farmers, 2 traders, 1 agronomist
<i>Survey:</i>	<p>The quality of organic seed was good (4.2), people generally agreed with the statements in question 1 (average score 3.7). They believed that the most important was to increase availability of locally adapted organic seed.</p> <p>They thought the main problem was weed contamination (2.2 average).</p> <p>They felt that organic seed was an important part of organic agriculture, although the participants were mainly farmers and are therefore not involved with marketing seed.</p> <p>They thought more research was required into organic seed production economics (average 4.4).</p> <p>The most important traits were weed suppression, disease control and yield.</p>





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### Organic wheat and buckwheat trials demonstration event

<i>Organiser:</i>	<b>LC Smales &amp; Son Ltd (SMA), UK</b>
<i>Date:</i>	4 July 2022
<i>Location:</i>	Thornton Farm, Berwick-upon-Tweed, TD15 2LP. UK
<i>Varieties:</i>	7 varieties of buckwheat (Kora, La Harpe, Billy, Zoe, Zita, Panda, Cebelica) 11 varieties of wheat, in addition to 2 composite populations and trials of 2 biostimulants (wheat varieties included Theodore, KWS Extase, Alessio, Roderick, Liocharls Population, Viki, Royal, Wendelin, Barranco, Wakelyn's Population, Purino)
<i>Participants:</i>	farmers, 18 participants
<i>Survey:</i>	<p>8 participants filled out the survey. The results show that the quality of organic seed that they use is high, that they are encouraged to use OS by their certifier and that by using OS they support the competitiveness of the organic sector.</p> <p>In boosting the use of organic seed they think that more information on availability is most important, followed by using open pollinated varieties and stricter national rules for grading. More efforts in organic breeding and improve availability of OS for locally adapted varieties were not deemed important.</p> <p>The most important technical challenges in OS production are hybrid propagation, seed storage and treatment and germination rate and seed size.</p> <p>The participants agreed with all marketing issues stated in the survey.</p> <p>They agreed that the following policy measures should be adopted for OS production: more research on OS production economics, more information on OS market demand, expanding range of organically allowed seed treatment, introduction of subsidies to support OS production and increase training on OS production.</p>



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### 11. Demonstration events at SELGEN

#### Testing of winter wheat varieties for organic and common production

*Organiser:* **SELGEN a.s., Czech Republic**

*Date:* 23 May 2023

*Location:* Plant breeding station Uhretice, Czech Republic

*Varieties:* Winter wheat trial ECOBREED (ANNIE, ARNOLD, ATARO, AURELIUS, BRANDEX BUTARO, BUTTERFLY, CAPO, DAGMAR, EHOOGOLD, IBARRA, ILLUSION, KM-78-18, KWS MILANECO, LG MAGIRUS, LIOCHARLS, LISETA, MOSCHUS, PENELOPE, PIRUETA, PIZZA, PRIM, PURINO, RODERIK, SG-S269-09, ST1130/19, ST1214/19, ST1239/19, ST1409/19, ST1518/19, ST1664/19, ST860/20, STUPICKÁ BASTARD, SULTAN, TOBIAS, TURANDOT, VIKI, WENDELIN, WITAL, WIWA)  
Spring wheat Trials ECOBREED (ALICIA, ASTRID, PEXESO, LIBERTINA, KITRI, TERCIE, TOCCATA, REGISTANA, LOTTE, ODETA, HYSTRIX, EPONIA, LEIJONA, SG-S1153-16, CINDY)  
Nurseries YR, FHB, powdery mildew

There was a total of 40 varieties of winter wheat and 19 varieties of spring wheat showcased at the event.

Two Trials: Two distinct trials were conducted for this event:

- First Trial: This trial included varieties that are currently cultivated organically in CZ under ecological conditions. This suggests that these wheat varieties are grown using organic farming methods.
- Second Trial: The second trial was conducted in a classical or conventional way, indicating that conventional agricultural practices were used for these wheat varieties.

Varietal Indices: The event highlighted varietal indices from the past two years. These indices covered various key metrics or characteristics of the wheat varieties, including:

Yield: The amount of wheat produced per unit area, typically measured in bushels per acre or similar units.

Plant Height: The height of the wheat plants, which can vary among different varieties.

Protein Content: The protein content in the wheat grains, an important factor for the quality of wheat used in various products.

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Hectolitre Weight: A measure of the weight/density relationship of wheat grains. It's used to assess grain quality.

Sedimentation: A measure of the sedimentation rate, which can be an indicator of gluten quality in wheat.

Yield Stability: How consistent the wheat varieties' yields are over time and under different conditions.

Ground Cover Performance: How well the wheat varieties provide ground cover, which can be important for weed suppression and soil erosion control.

This event likely served as a platform to showcase and compare the performance of these wheat varieties in different cultivation methods (organic vs. conventional) and assess their qualities based on the mentioned metrics. It would have been valuable for farmers, researchers, and others interested in wheat cultivation and agriculture in the Czech Republic or similar regions.

*Participants:* 19 students and young farmers


*Survey:* The participants did not fill out the survey.

*Photos:*



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### Breeding of wheat varieties for organic production

<i>Organiser:</i>	<b>SELGEN a.s., Czech Republic</b>
<i>Date:</i>	30 May 2023
<i>Location:</i>	Plant breeding station Uhretice, Czech Republic
<i>Varieties:</i>	Winter wheat trial ECOBREED (ANNIE, ARNOLD, ATARO, AURELIUS, BRANDEX BUTARO, BUTTERFLY, CAPO, DAGMAR, EHOOGOLD, IBARRA, ILLUSION, KM-78-18, KWS MILANECO, LG MAGIRUS, LIOCHARLS, LISETA, MOSCHUS, PENELOPE, PIRUETA, PIZZA, PRIM, PURINO, RODERIK, SG-S269-09, ST1130/19, ST1214/19, ST1239/19, ST1409/19, ST1518/19, ST1664/19, ST860/20, STUPICKÁ BASTARD, SULTAN, TOBIAS, TURANDOT, VIKI, WENDELIN, WITAL, WIWA) Spring wheat Trials ECOBREED (ALICIA, ASTRID, PEXESO, LIBERTINA, KITRI, TERCIE, TOCCATA, REGISTRANA, LOTTE, ODETA, HYSTRIX, EPONIA, LEIJONA, SG-S1153-16, CINDY) Nurseries YR, FHB, powdery mildew
<i>Participants:</i>	20 participants (farmers)
<i>Survey:</i>	The participants did not fill out the survey.
<i>Photos:</i>	



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### 12. Demonstration events at UNITUS

#### Demonstration of durum wheat accessions under organic management

<i>Organiser:</i>	<b>University of Tuscia (UNITUS)</b>
<i>Date:</i>	15 June 2022
<i>Location:</i>	Didactical and experimental farm of Tuscia University, located at Viterbo, Italy
<i>Varieties:</i>	<p>A total of 41 varieties and accessions were presented. Among them, 27 varieties/accessions were already evaluated in 4-years field trial. These are: Gammary(55), Iride, Senatore Cappelli, Maamoor(53), Mv-Masnidur, Azeghar2-1(56), MVTD20-19, HFN94n, Miradoux, Simeto2014, Gibraltar, Icajin28(64), Sebatel2(45), Fuego, MVTD22-17, Ousloukos, Aghram(47), MVTD16-19, Saragolla, Levante2014, Vulci, Mv-Vekadur, Lunadur, MVTD15-19, Mv-Makaroni, Mv-Pelsodur, and Sambadur. This season (2021/22), after the leaving of the ECOBREED Greek partner (GEOKOMI) , 14 Greek landraces were added into our field trial; these are 374, 383, 339, 399a, 80, 107, 111, 106, 216, Crete1, Crete4, Crete5, Rovaki, and Mavragano.</p>
<i>Participants:</i>	The event was attended by 10 students, and 2 researchers.
<i>Survey:</i>	<p>A questionnaire was distributed to each participant. It should be mentioned that the discussion taken among the participants probably affected the participants answers, especially for those topics which probably some of the participants have limited specific knowledge (direct or indirect).</p> <p>Attitudes towards organic seed (OS): most participants were neutral on OS being easily available for varieties that they want to use, the improvement of availability in the last 5 years, the quality of OS being high and that they are encouraged to use OS by their certifier. The participants somewhat agreed that the price for OS is accessible and mostly agreed that by using OS they support the competitiveness of the organic sector.</p> <p>To boost the use of OS the participants think that the availability of OS should be improved for locally adapted varieties, that more effort should be placed in to breeding for organic farming and that stricter national rules for grading should be applied. The participants were neutral on the topic of using open pollinated varieties and deemed that more information on availability of OS in foreign markets was not important.</p>



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The technical challenges in OS production that were deemed important are: yield losses/volatility, weed contamination, finding OS multipliers, germination rate and seed size, and hybrid propagation. Less important are seed-borne pests and diseases and seed storage and treatment.

In marketing, the participants were mostly neutral on the topic, but disagreed that the demand for OS is more volatile than demand for conventional seeds and that farmers are willing to pay the higher price for OS.

The following policy measures were recognised as important: more research on organic seed production economics, more information on OS market demand, and increased training on OS production. Phasing out derogations in the new organic regulation is not important to enhance OS production. Most participants were neutral on the topic of stricter derogation rules, expanding the range of organically allowed seed treatments, and introducing subsidies to support OS production.

The participants recognised the following traits as important in organic varieties in their regions (in order of importance): yield, yield stability, taste, quality, diseases resistance, weed suppression, lodging, maturity.

*Photos:*



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## D 8.3\_Report on field-based demonstration events

### Demonstration event on organic plant breeding

*Organiser:* **University of Tuscia (UNITUS)**

*Date:* 5 June 2023

*Location:* Tuscia University's Experimental Farm "Nello Lupori", Viterbo Italy

*Varieties:*

<i>Name</i>	<i>Origin</i>
80	Crete, GR
106	Crete, GR
107	Crete, GR
111	Crete, GR
216	Crete, GR
339	Crete, GR
374	Crete, GR
383	Crete, GR
399a	Crete, GR
Azeghar2-1(56)	Icarda, SY
Crete 1	Crete, GR
Crete 4	Crete, GR
Crete 5	Crete, GR
Icajin 38(64)	Icarda, SY
Mavragano	Crete, GR
Mv-Pelsodur	MTA-ATK, HU
MVTD15-19	MTA-ATK, HU
Rovaki	Crete, GR
Sebatel2-45	Icarda, SY
Vulci	Sonno Agricoltura, IT
Cham1	Icarda, SY
J.K.	Landrace
Mix	Mix of 27 genotypes
HFN	Unknown origin

*Participants:* General public

*Survey:* Most participants agreed that by using organic seed, they support the competitiveness of the organic sector and that there is a need for enhancing the availability of organic seed treatments. They also think that the price of organic seed is not accessible, and that the availability of organic seed has not improved in the last 5 years.

Regarding the availability of organic seed on the market, the participants think that there are enough organic wheat, potato and vegetable seed on the market.



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But organic soybean, corn, grain legumes, oilseeds, fodders plants and cover crop mixtures are not available or only occasionally available on the market.

The most important traits for an organic variety in their region are yield, yield stability, quality and resistance to diseases. Less important are weed suppression, lodging, maturity and taste.

Photos:



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## D 8.3\_Report on field-based demonstration events

### 13. Demonstration events at NATUR

#### Field day of soya farmers participatory field trial

*Organiser:* **Naturland e.V. (NATUR), Germany**

*Date:* 19 August 2021

*Location:* Florian Jobst farm, 84164 Moosthenning, Moosstr. 6

*Varieties:* Presentation of ECOBREED project and Farmer Participatory field trials in ECOBREED project.

10 soya varieties in the trial were presented: Xonia, Lenka, Obelix, NS Mercury, GL Melanie, Tofina, ES Mentor, ES Comandor, Aurelia, Acadia.

*Participants:* There were 18 participants: 3 researchers from Bavarian State Research, one adviser, one representative from a breeder/seed company (Saatbau Linz), the others were organic farmers.

*Survey:* Because of a sudden covid outbreak in the district we were only permitted to meet outside directly at the field. As the farmers could not fill out the questionnaire at the field, I handed out the questionnaire to send later. Only one of the researchers sent back the questionnaire.

*Photos:*



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## D 8.3\_Report on field-based demonstration events

### Field day of soybean farmers participatory field trial 1

<i>Organiser:</i>	<b>Naturland e.V. (NATUR), Germany</b>
<i>Date:</i>	25 August 2022
<i>Location:</i>	Kinding – Kirchanhausen, Germany
<i>Varieties:</i>	FAVORIT OBELIX GL MELANIE ES COMMANDOR ADELFIA TOFINA ES COMPOSITOR ACHILLEA ABACA
<i>Participants:</i>	6 participants and one trainer (W. Vogt-Kaute, NATUR)
<i>Survey:</i>	5 participants filled out the survey: <ul style="list-style-type: none"><li>- Most agreed that OS is easily available for varieties that they want to use, but were mostly neutral on the price being accessible.</li><li>- They all agreed that the availability of OS has improved in the last 5 years and that the quality of OS is high. Most were encouraged to use OS by their certifiers.</li><li>- Organic seeds that are available: wheat, soybean, potatoes, buckwheat, corn, vegetables, small grains, grain legumes, fodder plants and cover crops.</li><li>- Not available or less often available: soybean, grain legumes, oilseeds.</li><li>- Most important traits for an organic variety in their region: yield, yield stability, weed suppression, maturity, taste and disease resistance. Less important: quality, lodging.</li></ul>



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Photos:



### Field day of soybean farmers participatory field trial 2

<i>Organiser:</i>	<b>Naturland e.V. (NATUR), Germany</b>
<i>Date:</i>	26 August 2022
<i>Location:</i>	Ramsthal, Germany
<i>Varieties:</i>	FAVORIT OBELIX GL MELANIE ES COMMANDOR ABACA 17.155 11.965 18.184 22.517 ES COMMANDOR plus Legumo seed treatment ES COMMANDOR plus Legumo seed treatment
<i>Participants:</i>	10 participants and one trainer (W. Vogt-Kaute, NATUR)



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### Survey:

8 participants filled out the survey:

- Most agreed that OS was available for varieties that they want to use, and that the availability has improved in the past 5 years. They also agreed that the quality of OS is high and that they are encouraged to use OS by their certifiers.
- They disagreed that the price of OS is accessible.
- Enough OS in the market: wheat, corn.
- Occasionally available OS in the market: soybean, potatoes, buckwheat, other cereals, grain legumes fodder plants and cover crops.
- Not available OS in the market: vegetables, oilseeds.
- Important traits in organic variety: yield, yield stability, disease resistance, weed suppression, taste, maturity, lodging.
- Less important traits in organic varieties: quality (e.g. baking quality).

### Photos:



## D 8.3\_Report on field-based demonstration events

### Field day of farmers participatory field trials on soybeans

<i>Organiser:</i>	<b>Naturland e.V. (NATUR), Germany</b>
<i>Date:</i>	11 August 2023
<i>Location:</i>	Bütthart, Germany
<i>Varieties:</i>	<p>The event was a joint event from ECOBREED (Naturland e.V., Bioland Erzeugerring Bayern e.V.) and the German Legunet project (LfL Bavarian state research institute).</p> <p>Soybean varieties: GL Melanie, GL Crème, GL Susanna, ES Comandor, Simpol, Cantate PZO, Nessie PZO, Ascada, Alicia</p>
<i>Participants:</i>	<p>The event was attended by 21 persons (5 farmers and 16 advisers/researchers). Many farmers who had registered did not attend because they had to do field work. It was the only day during a rainy period for harvesting and sowing of cover crops.</p>
<i>Survey:</i>	<p>3 participants filled out the survey.</p> <p>They agreed that the organic seeds are mostly available for varieties that they want to use, and their price is accessible and quality of seeds high. They were mostly neutral on the question of improved availability of organic seeds in the past 5 years and that they are encouraged by their certifier to use organic seeds.</p> <p>The organic seeds that are most available on the market are wheat, potato, corn. Less available are soybean, buckwheat, vegetables, small grains, grain legumes. The participants think that oilseeds, fodder plant and cover crops are mostly unavailable as organic seeds.</p>



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Photos:



### Demonstration day of soybean farmers participatory field trial

**Organiser:** Naturland e.V. and Bioland Erzeugerring Bayern e.V., Germany

**Date:** 19 September 2023

**Location:** Pöttmes, Germany

**Varieties:** Oral presentations: Alexander Kögel (Bioland Erzeugerring), Alexander Watzka (Bioland Erzeugerring), Andreas Hopf (Vermarktungsgesellschaft der Bio-Bauern GmbH), Dr. Olena Sabko (Hochschule Weihenstephan-Triesdorf), Werner Vogt-Kaute (NATUR)

On field Trainers: Werner Vogt-Kaute (NATUR), Alexander Kögel (Bioland Erzeugerring e.V.)

Varieties presented: GL Melanie, GL Crème, GL Susanna, ES Comandor, Merlin, Cantate PZO, Nessie PZO, Ascada, Abaca, SY Livius, Achillea, Sussex, Apollina, Royka, Arcardia

**Participants:** The event was attended by about 80 persons, most of them farmers.



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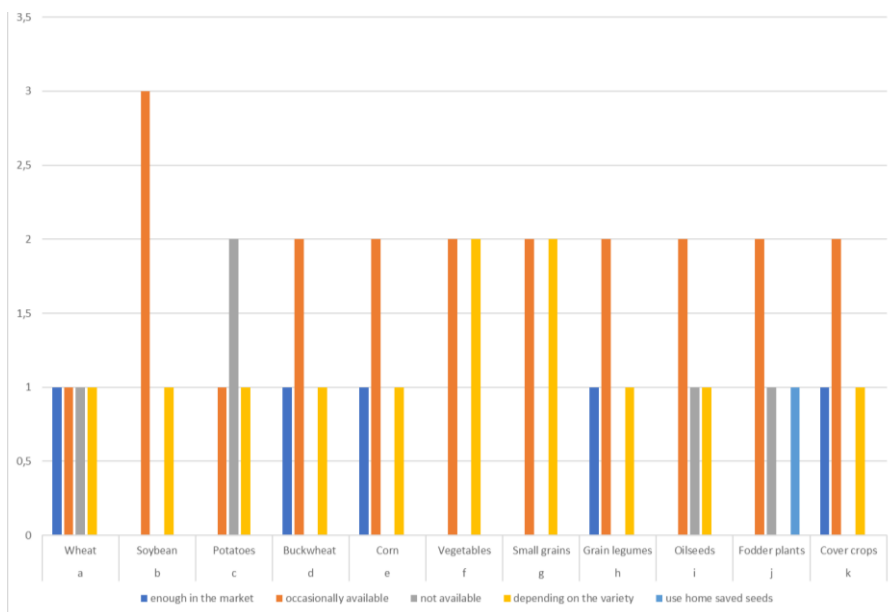
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### Survey:

4 participants responded to the survey



### Photos:



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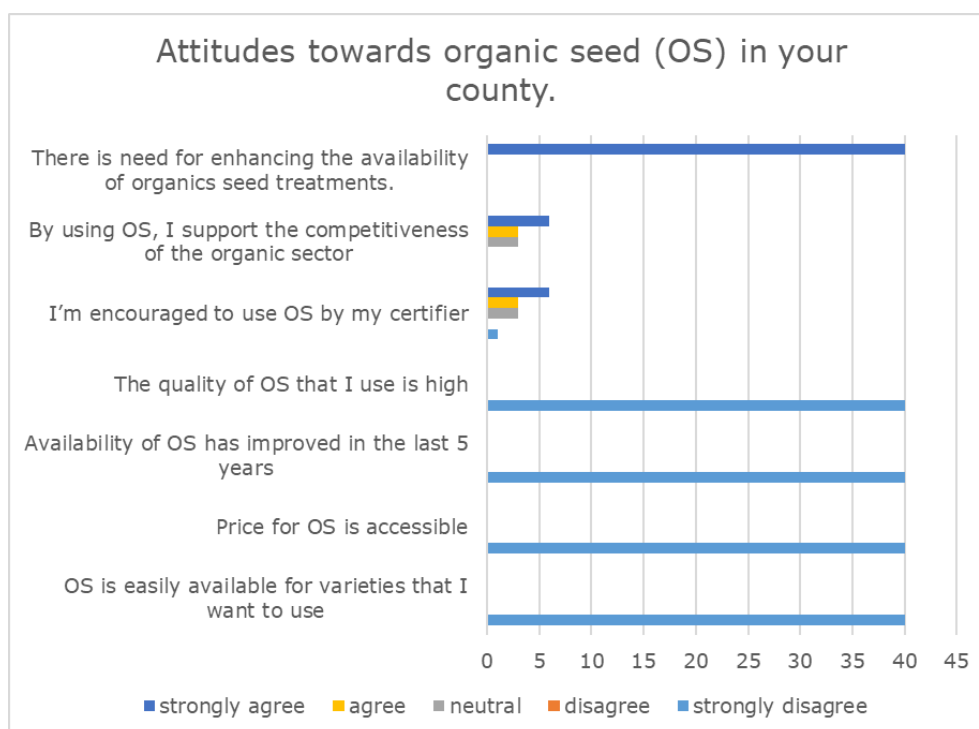
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### 14. Demonstration events at IHAR

#### Demonstration day on results of breeding activities in ECOBREED

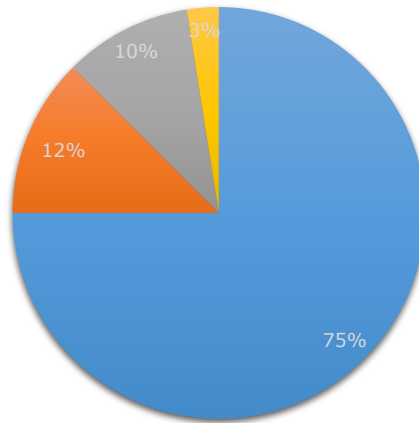
<i>Organiser:</i>	<b>Plant Breeding and Acclimatization Institute (IHAR) - National Research Institute branch in Młochów, Poland</b>
<i>Date:</i>	16 September 2023
<i>Location:</i>	Historic Park in Młochów
<i>Varieties:</i>	Twister, Otolia, Aztec Gold, Colomba, Levante, Alouette, Kokra, Gardena
<i>Participants:</i>	40 participants from Poland: 12 farmers, 8 traders, 3 breeders, 14 researchers, 3 policy makers

*Survey:*



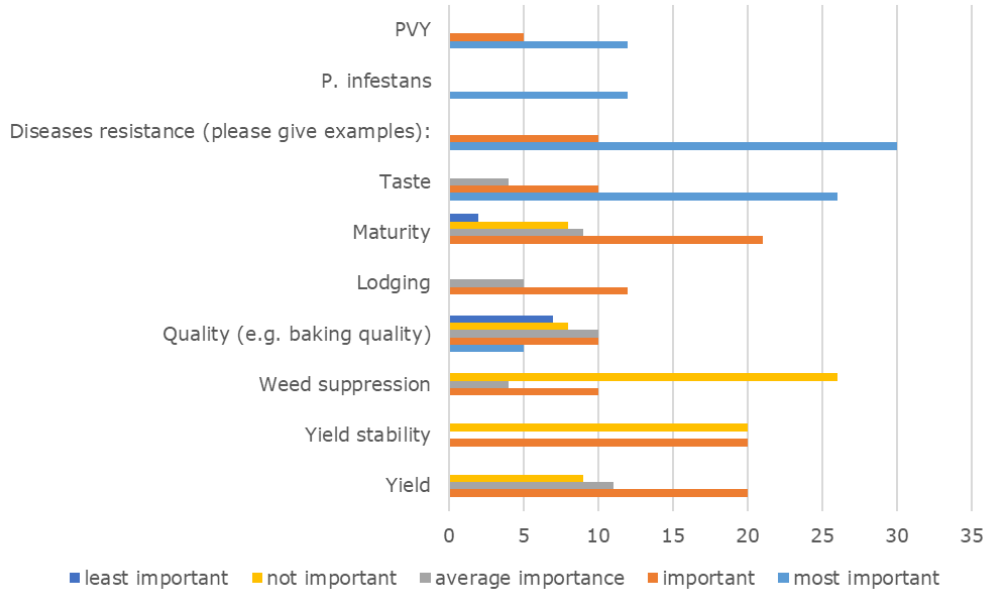
## D 8.3\_Report on field-based demonstration events

### Potatoes - organic seedas availability in Poland



■ occasionally available ■ not available ■ depending on the variety ■ use home saved seeds

### What are important traits for an organic variety in your region?



## D 8.3\_Report on field-based demonstration events

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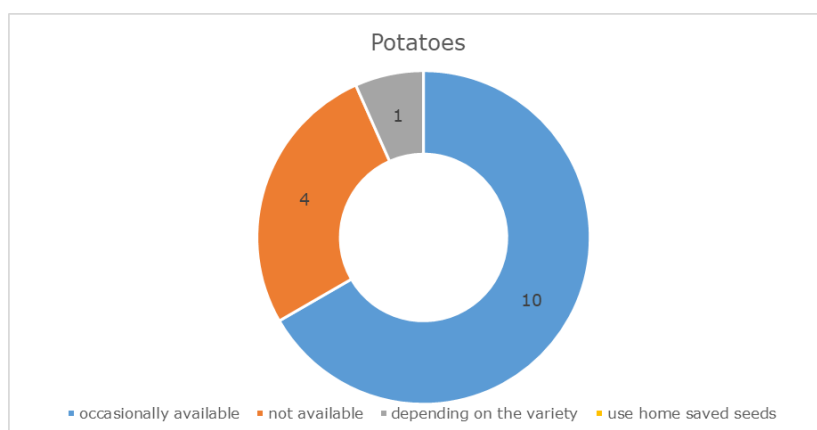
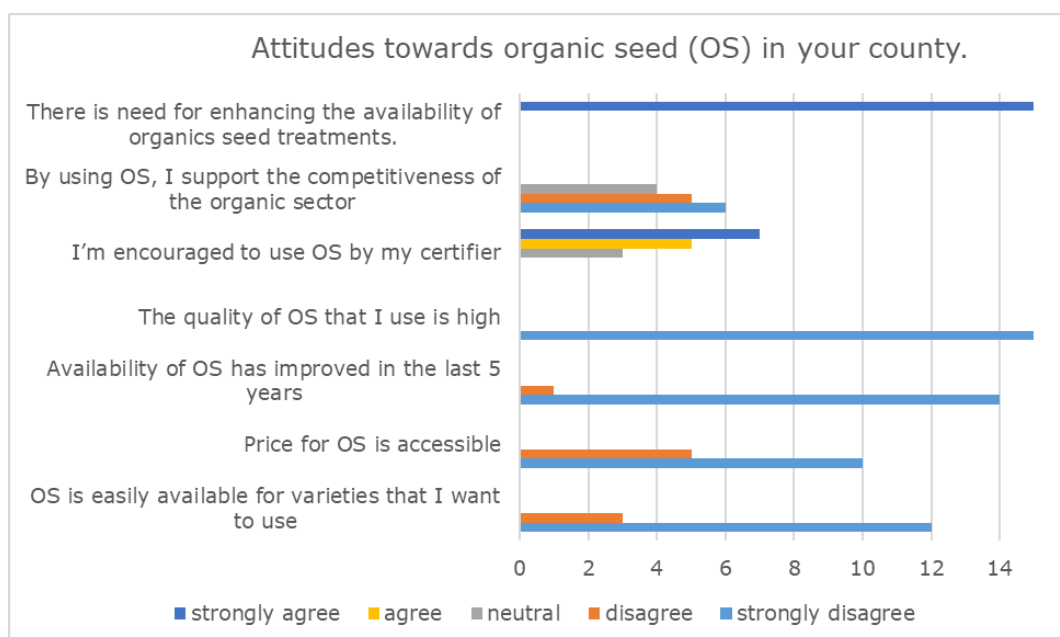


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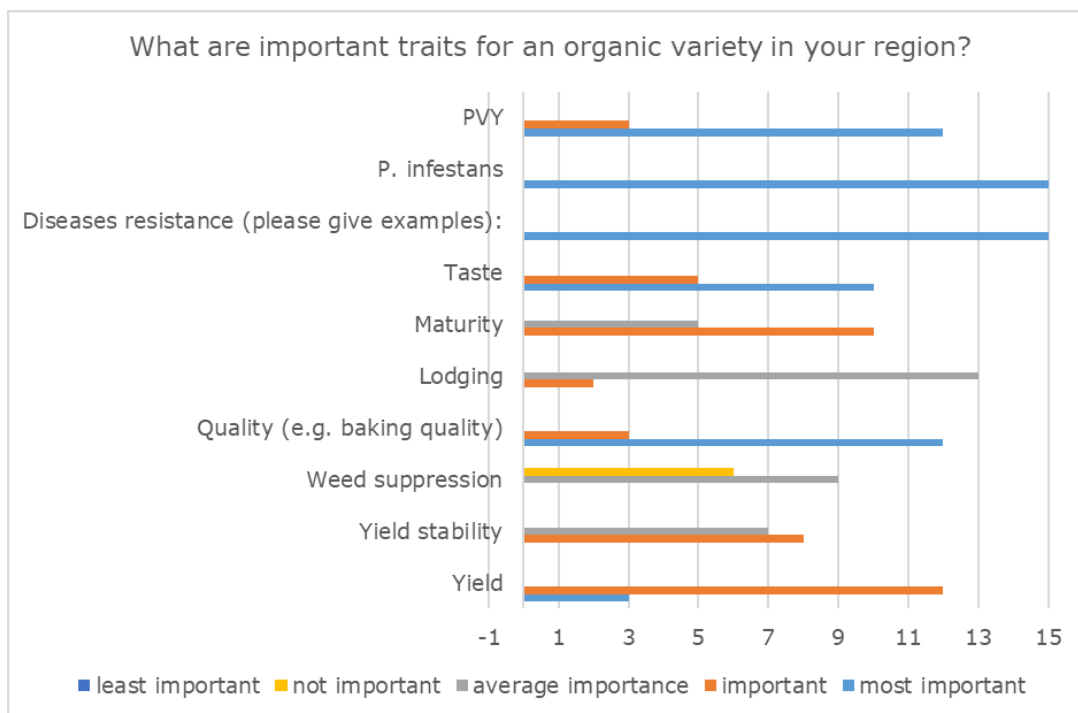
## D 8.3\_Report on field-based demonstration events

### Presentation of the potato collection and breeding lines within ECOBREED

<i>Organiser:</i>	<b>Plant Breeding and Acclimatization Institute (IHAR) - National Research Institute branch in Młochów, Poland</b>
<i>Date:</i>	27 October 2023
<i>Location:</i>	IHAR-PIB, department in Młochów
<i>Varieties:</i>	Twister, Twinner, Otolia, Levante, Alouette, Kokra, Gardena, Provita
<i>Participants:</i>	15 participants from Poland (one from the seed industry, one farmer, 13 researchers)
<i>Survey:</i>	The graphs below show a summary of responses to the three questions from questionnaires "How to improve the supply of organic seeds".



## D 8.3\_Report on field-based demonstration events



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## D 8.3\_Report on field-based demonstration events

### 15. Demonstration events at PROBIO

#### Demonstration event at Tetín

*Organiser:* **PRO-BIO obchodní společnost, Czech Republic**

*Date:* 16 March 2022

*Location:* Tetín, Czech Republic

*Varieties:* A part of the event was held as demonstration event for the ECOBREED project. The main objectives of ECOBREED project were presented, but the remaining part of the presentation strongly focused on buckwheat.

A wide choice of available buckwheat varieties is a key factor for the farmer to choose the suitable varieties for their conditions. For growing buckwheat as a second crop or a substitution crop, it is important to have varieties with short vegetation period and early maturity. This can help the farmers to fit buckwheat in their rotation and lower the post-harvest costs. Results from farmers participatory trials were presented to the audience. Strongly supporting this fact, that new Russian varieties Devyatka and Drushina which have short vegetation period and high yield potential performed very well in Czech conditions. Therefore, it is important to help the introduction of those varieties to Czech market. Demand for buckwheat increases every year. New varieties from Poland, Germany or Lithuania will be tested in Czech conditions in 2022.

Buckwheat was presented at the event as an excellent cover crop option, which is not frost hardy, therefore very suitable as pre-crop for direct drilling or strip-till technologies for spring establishment of summer crops such as corn or soybeans. Buckwheat can mineralise the soil phosphorus, but once again the amount of phosphorus fixed is variety dependent. Results from a study at CRI regarding this topic were presented as well.

Phenotyping results of different buckwheat varieties were presented: Kora, Zita, Devyatka, Drushina, Zamira, Zoe, Billy, Bamby, La Harpe, Čebelica, Panda.

*Participants:* About 30-40 people were present at the Selské forum event organised by the farmers from Tetín. Along with farmers, national park employees attended the event. The national park employees work together with the farmers to find sustainable approaches for land management such as controlled grazing of natural meadows with high biodiversity.



## D 8.3\_Report on field-based demonstration events

### Survey:

Farmers were aware of the advantages that buckwheat can serve once incorporated in their crop rotation - low demanding/input crop, that can help the crop rotation diversification. However, farmers mainly consider buckwheat as a main crop and, in this case, it is hard to justify the costs of production - low yields and high costs for post-harvest handling. It is important to explain to farmers, that buckwheat can serve as an excellent second crop of the year or a substitution crop once a main crop fails.

The questionnaires were filled by 5 attendants: 2 organic farmers, 1 conventional farmer, 2 researchers.

Researchers were mostly neutral towards all the questions.

Organic farmers would like to see an improvement in availability of organic seed, even though they have seen an improvement. They are satisfied with the quality of organic seed but would like to have seed treatments available. Usually wheat, buckwheat, small grains, fodder plants and some cover crop mixes are available with organic certification. The important traits for organic farmers are yield, yield stability, weed suppression, quality, lodging and maturity. Taste and diseases resistance are not that important to them. They are neutral towards CCP.

A conventional farmer feels that the availability of the organic seed is lower compared to conventional. Farmer was neutral towards the price and see an improvement in the availability of the organic seed toward the seed producers. The farmer sees a good offer of winter wheat varieties. As organic farmers, the important traits for the conventional farmer are similar i.e. yield, yield stability, lodging and maturity. The farmer was neutral towards weed suppression and quality. The farmer strongly agreed that disease resistance is an important trait. The attitude toward CCP was neutral.





## D 8.3\_Report on field-based demonstration events

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## D 8.3\_Report on field-based demonstration events

### Demonstration day – Recommended winter wheat varieties for organic system

<i>Organiser:</i>	<b>PRO-BIO obchodní společnost, Czech Republic</b>
<i>Date:</i>	21 June 2022
<i>Location:</i>	EKOFARMA PROBIO s.r.o. Velké Hostěrádky 224, Tetín, Czech Republic
<i>Varieties:</i>	Scaro, Penelope, LG Orlice, Lorien, Poesie, Butterfly, Prim, Wiwa, Tengri, Royal, Centurien, Liocharis population, MV - ELIT - CCP 230 population, Wendelin, Alessio
<i>Participants:</i>	The event was attended mostly by farmers and some traders, but only farmers have filled in the survey. 21 participants attended the event.
<i>Survey:</i>	<p>13 participants have filled in the survey. All of them were identified as farmers – mostly organic.</p> <p>Most of the farmers are neutral or agree that organic varieties are available on the market, 4 of the farmers disagree that the price for organic seed is accessible. Most of the farmers except one agree that the availability of organic seed has improved in the last 5 years and most of them are neutral or agree that the quality is high. All of them agree that they are encouraged by a certifier to use certified organic material.</p> <p>Farmers are neutral about supporting the competitiveness of the organic sector by purchasing organic seed. Most of the farmers agreed that it is important to have more research about organic seed production. Farmers are neutral about phasing out the derogations in the new organic regulation and mostly disagree that stricter derogation rules would help.</p> <p>Farmers have mostly agreed that more information is needed on organic seed market demand and expansion in the range of organically allowed seed treatments is needed. Farmers are neutral to positive about the introduction of subsidies to support organic seed production, and mostly agree about the need to increase the training on organic seed production. Wheat, buckwheat, fodder plants and small grains are mostly accessible at the market in organic quality according to farmers.</p> <p>Farmers have hard time finding organic varieties of potatoes and oilseeds. Corn is occasionally available and soybeans tend to be hard to obtain for farmers. The most important trait for an organic variety according to farmers is weed suppression, but yield, yield stability, quality, lodging, maturity and disease</p>



## D 8.3\_Report on field-based demonstration events

resistance are also very important to farmers. Taste is mostly not important to farmers.

3 farmers are willing to grow CCP on their farms and 2 farmers are neutral about growing CCP.

*Photos:*



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## D 8.3\_Report on field-based demonstration events

### 16. Demonstration event at Biomila

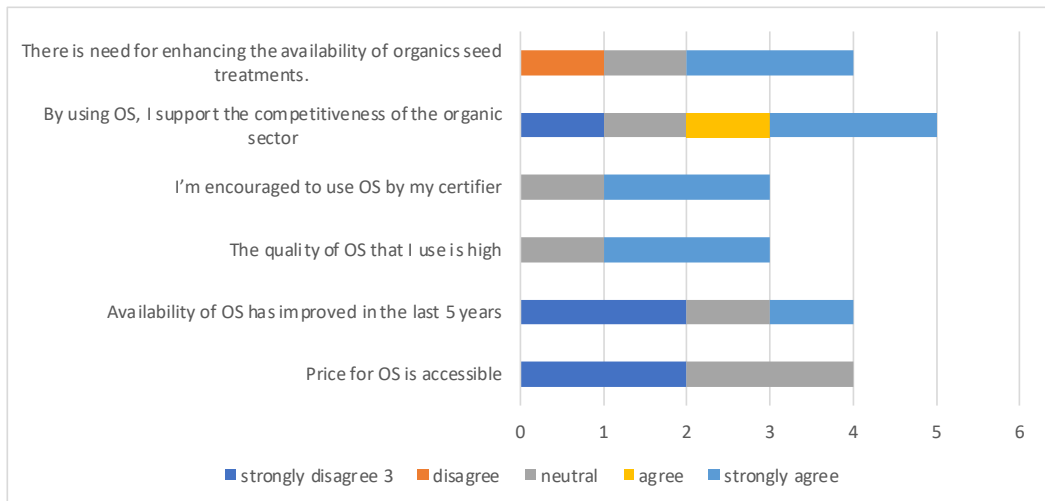
#### Organic farming demonstration day

<i>Organiser:</i>	<b>BIOMILA, Slovakia</b>
<i>Date:</i>	27 June 2023
<i>Location:</i>	Vážec, Slovakia
<i>Varieties:</i>	<p>The visitors had the opportunity to visit the trial plots and see different varieties suitable for organic production.</p> <p>The questionnaire was completed by two organic farmers, two conventional farmers, and one other.</p> <p>Mr. Janoviček, the manager of Biomila also presented ECOBREED project and its objectives, activities and outputs. Mr. Janoviček explained how the project involves various stakeholders, such as breeders, farmers, researchers and consumers, in the development and evaluation of organic varieties. He also highlighted the benefits and challenges of organic farming, such as improving soil health, reducing environmental impact, increasing biodiversity, enhancing food quality and safety. Farmers expressed their appreciation and interest in adopting some of the organic practices they learned. The demonstration event had a success in terms of raising awareness and knowledge among the farmers about organic plant breeding.</p>
<i>Participants:</i>	The event attracted 16 visitors, mainly organic farmers, farmers in conversion, and seed industry representatives.
<i>Survey:</i>	Respondents' answers were neutral in most questions. Organic farmers worry more the lack of organic seeds on the Slovak market. For an organic variety farmers are looking for good yield and stability together with weed suppression, and strong diseases resistance.

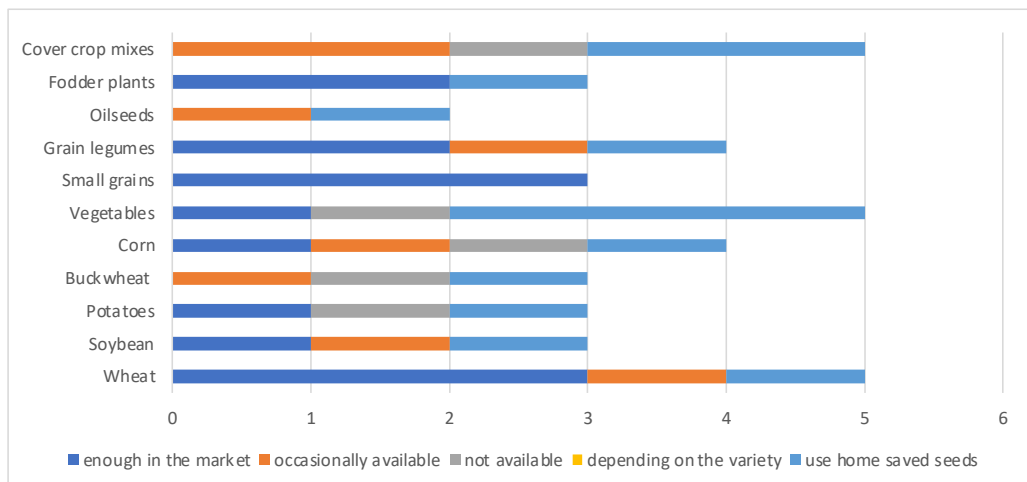


## D 8.3\_Report on field-based demonstration events

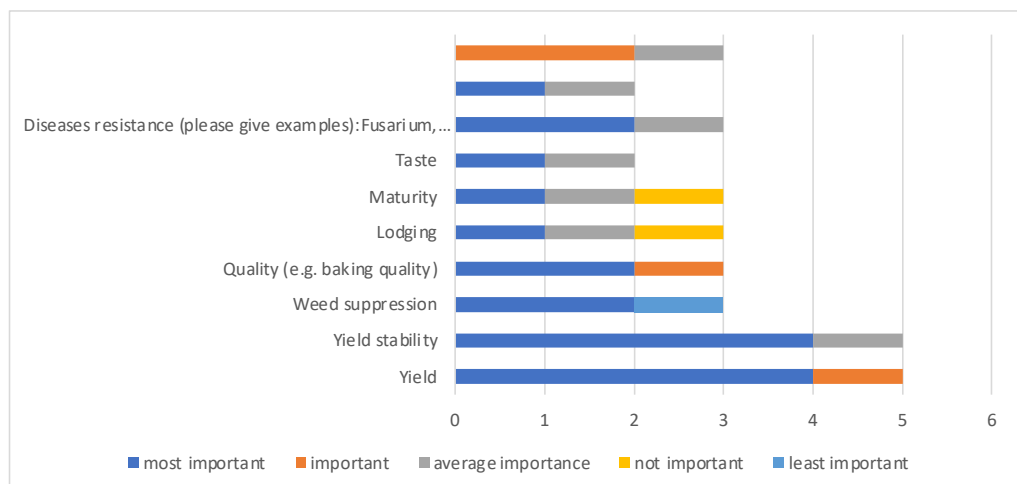
Attitudes towards organic seed (OS) in your county. Rank the five-point scale for each statement.



Organic seeds availability. Rank the five-point scale for each crop.

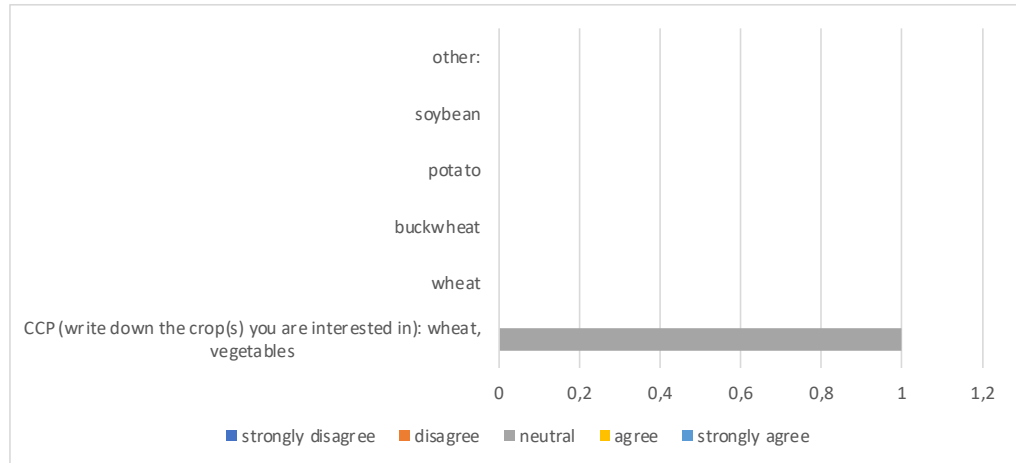


What are important traits for an organic variety in your region?



## D 8.3\_Report on field-based demonstration events

Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm.



Photos:



## D 8.3\_Report on field-based demonstration events

### Demonstration event on organic management

**Organiser:** Biomila, s.r.o., Slovakia

**Date:** 29 September 2023

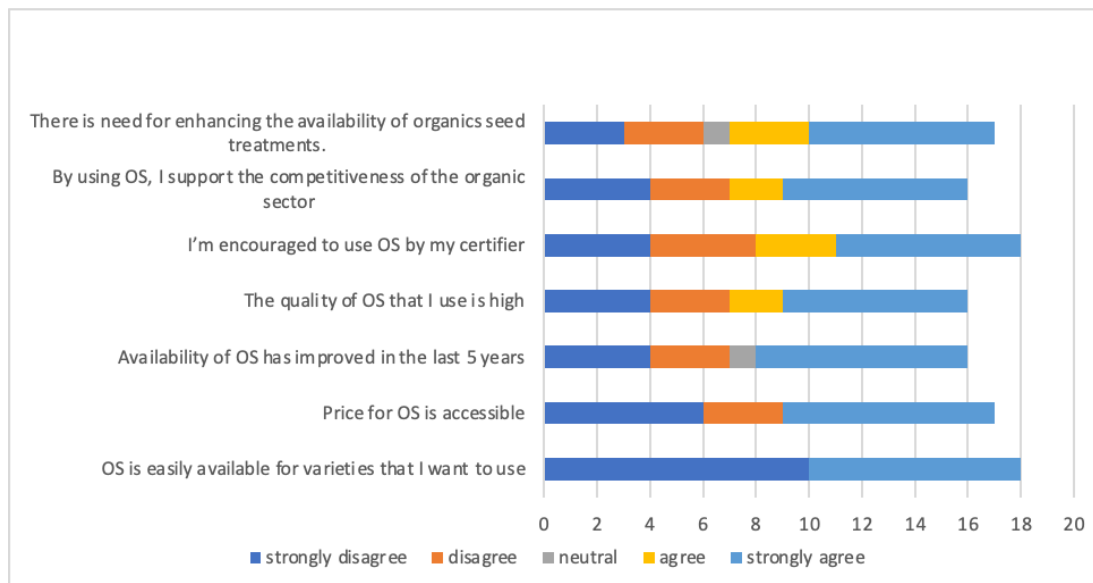
**Location:** Žilina/OC Mirage, Slovakia

**Varieties:** The demonstration event was part of the European Researchers' Night. The event was a great success, with a lot of interest and engagement from the public. Mr. Janovíček gave information about the importance of organic plant breeding and organic agriculture in Slovakia. He explained how his company produces high-quality organic seeds and grains that are adapted to the local climate and soil conditions. He also highlighted the benefits of organic farming for the environment, health, and economy. The audience asked many questions about his work and the ECOBREED project. We received a lot of positive feedback from the public, especially from young students who were interested in our research and products. The event was a great opportunity to promote our project and our mission, and to inspire future researchers.

**Participants:** 18 participants (researchers)

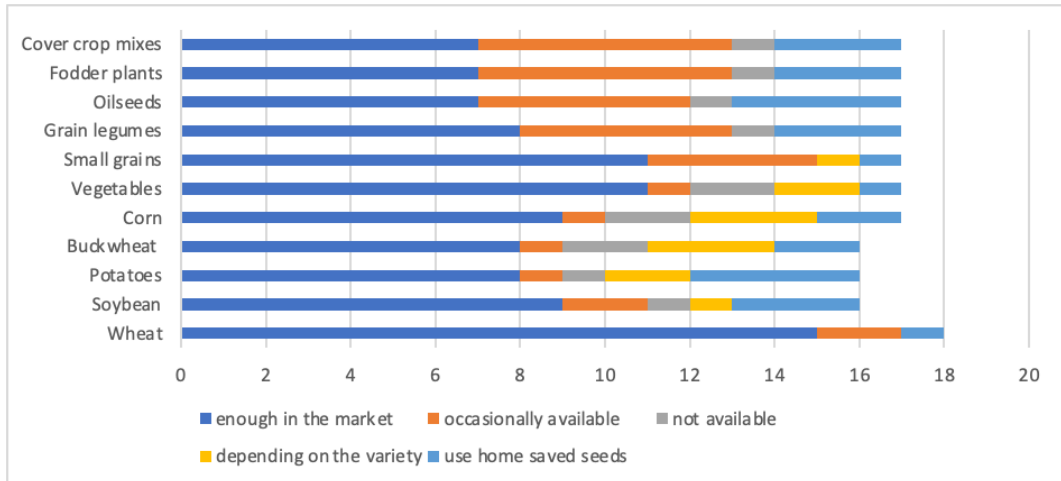
**Survey:** Respondents' answers were neutral in most questions. As crucial traits of an organic variety in the region, they consider yield and yield stability together with weed suppression and management of diseases.

Attitudes towards organic seed (OS) in your county. Rank the five-point scale for each statement.

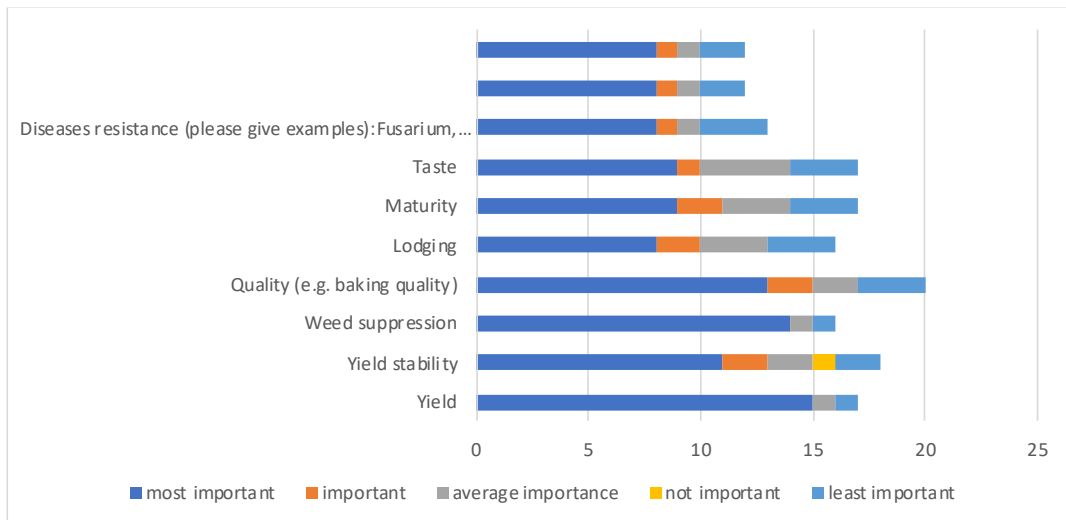


## D 8.3\_Report on field-based demonstration events

Organic seed availability. Rank the five-point scale for each crop.



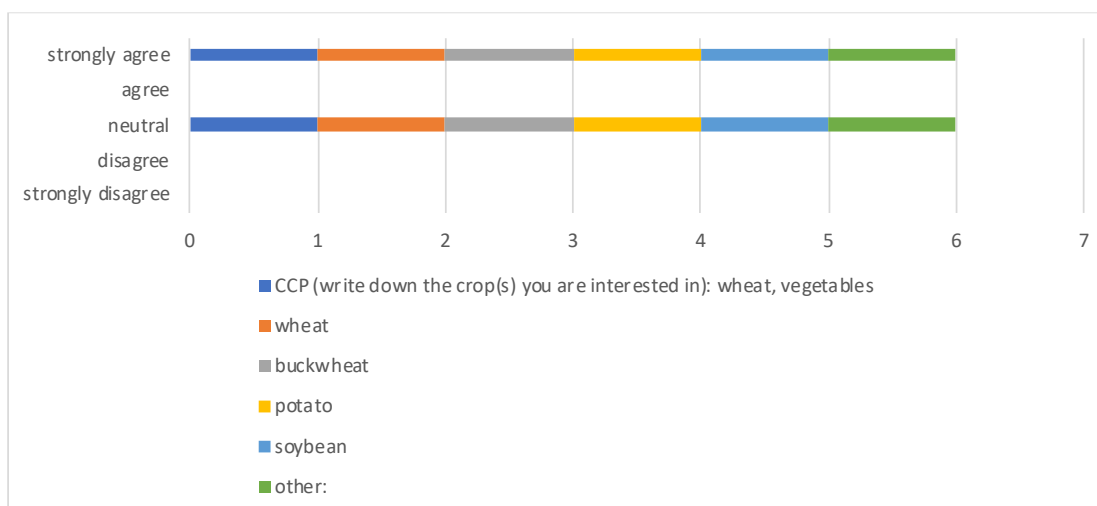
What are important traits for an organic variety in your region?





## D 8.3\_Report on field-based demonstration events

Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm.



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## D 8.3\_Report on field-based demonstration events

### 17. Demonstration event at NPPC

#### Field day of wheat breeding

*Organiser:* **Národné poľnohospodárske a potravinárske centrum (NPPC)**

*Date:* 3 June 2022

*Location:* Research Institute of Plant Production experimental fields Research and Breeding Station at Malý Šariš, Slovakia

*Varieties:*

COL.	REP.	GEN	BREDNAME	ORIGCTY
1	1	Aurelius	SZ DONAU	AT
2	1	Capo	PROBSTDORFER SZ	AT
3	1	Ehogold	LFS EDELHOF	AT
4	1	Viki	SELGEN	CZ
5	1	IS Laudis	ISTROPOL SOLARY	SK
6	1	PS Dobromila	VÍGLAŠ- PSTRUŠA	SK
7	1	Wendelin	SECOBRA	DE
8	1	Arnold	SZ DONAU	AT

*Participants:* The event was attended by farmers and people from the seed industry (100 participants).

*Survey:* 7 participants filled out the survey

Their attitude towards the questions was neutral or agreed.

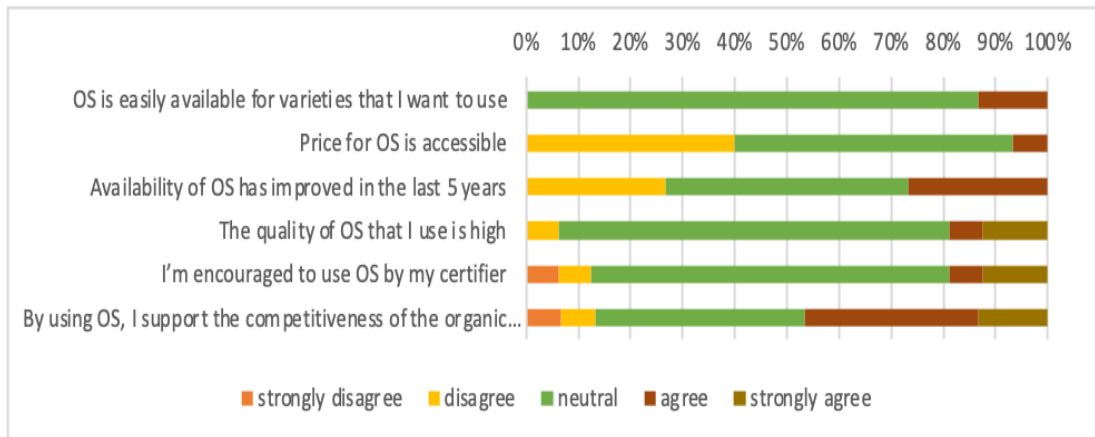
In the Question: Technical challenges in organic seed production. Rank the five-point scale for each statement. All statements were ranked, as most important for the future.

The only exception was the last question Technical challenges in organic seed production. Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important).

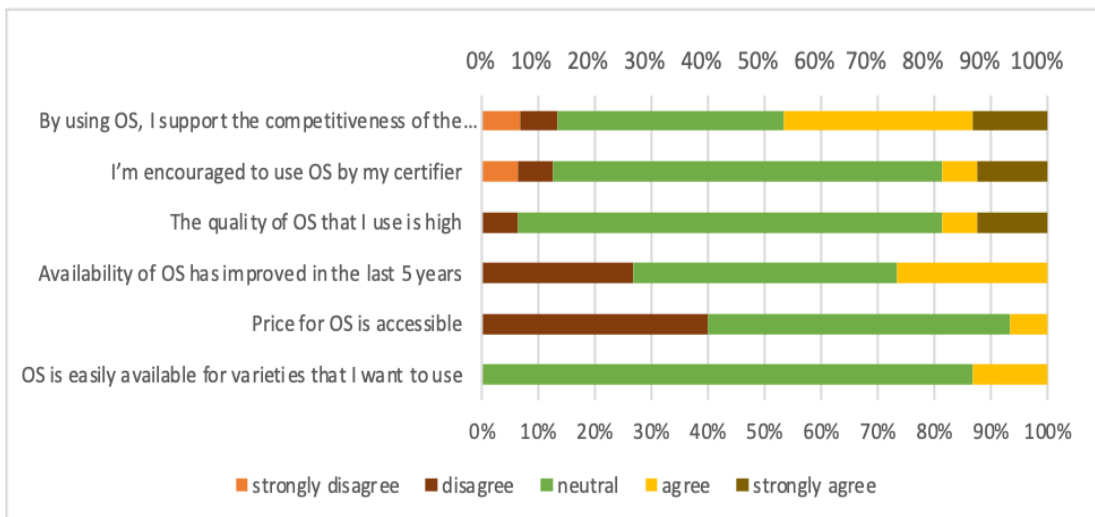


## D 8.3\_Report on field-based demonstration events

Attitudes towards organic seed (OS) in your county. Rank the five-point scale for each statement (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree)

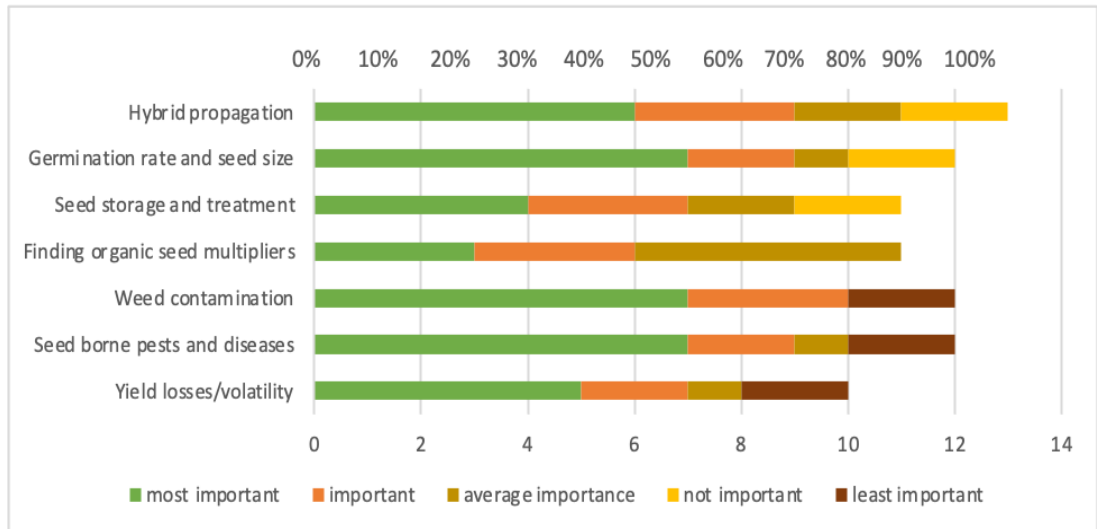


Ranking of different actions to boost the use of organic seed (OS) in your country. Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important)

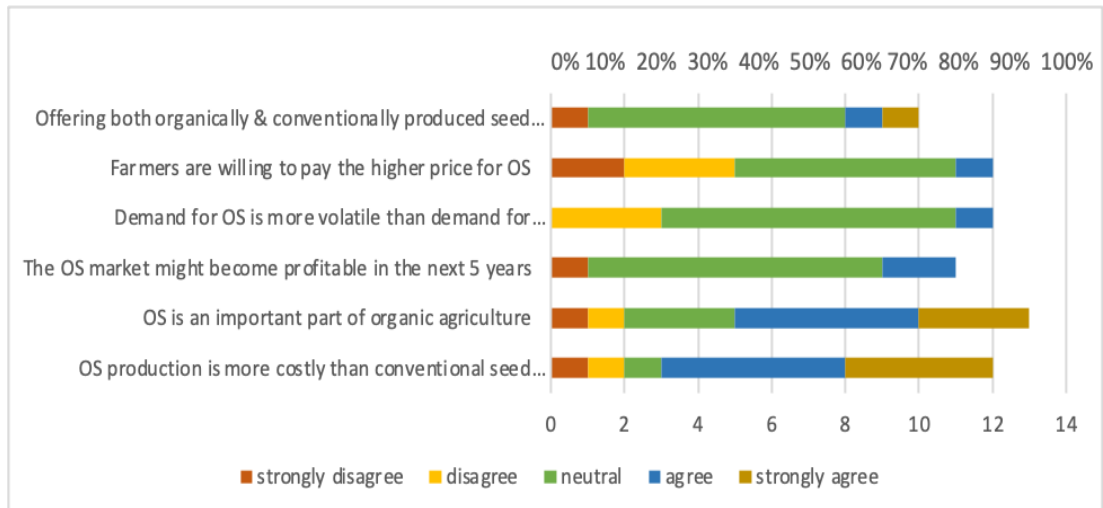


## D 8.3\_Report on field-based demonstration events

*Technical challenges in organic seed production. Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important)*

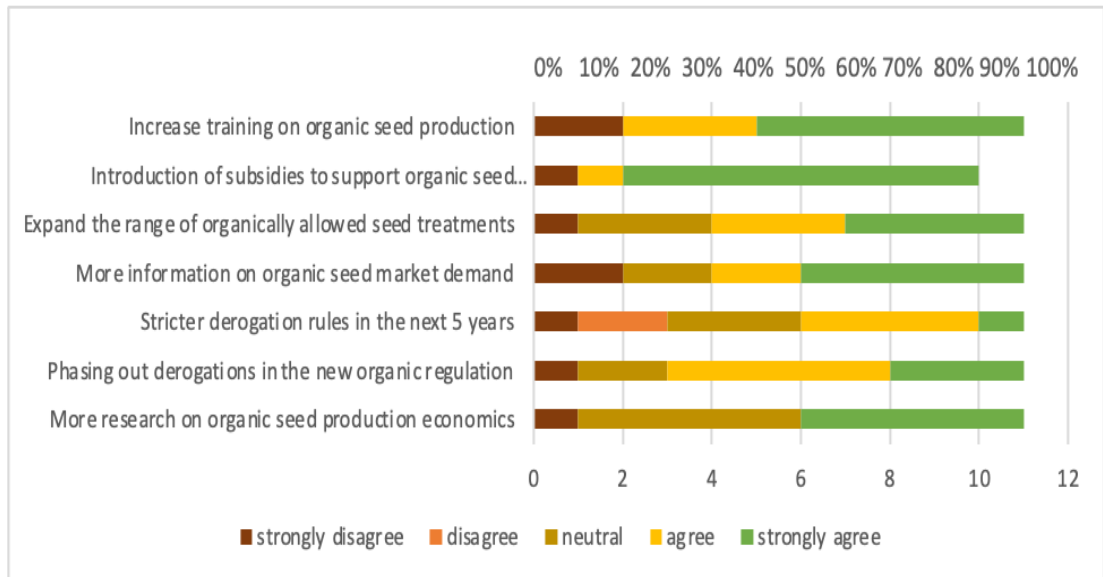


*Marketing issues with organic seed (OS). Rank the five-point scale for each statement (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree)*

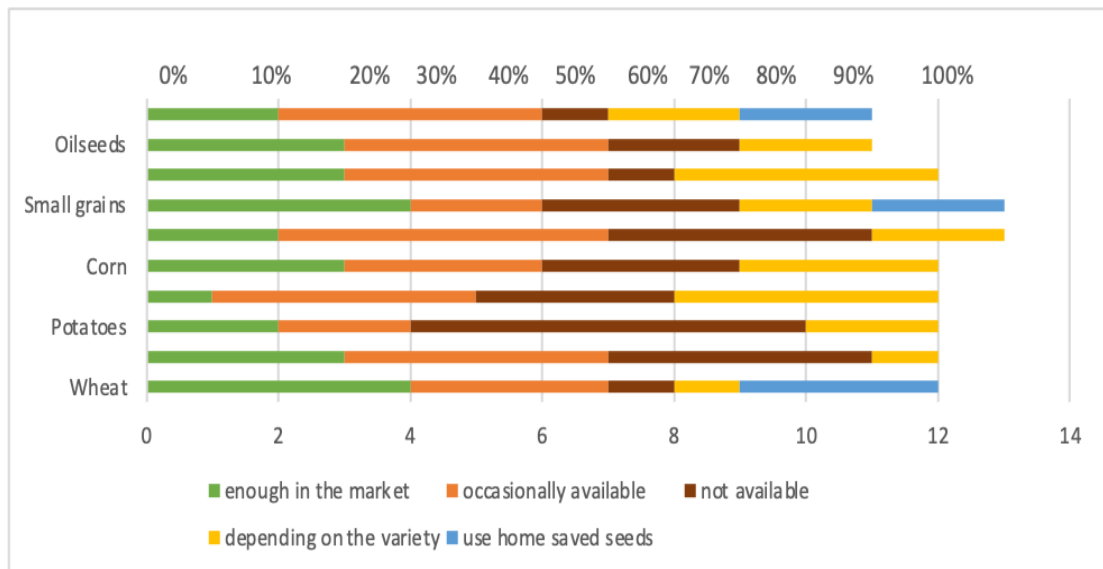


## D 8.3\_Report on field-based demonstration events

Policy measures to enhance organic seed (OS) production. Rank the five-point scale for each statement (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree)

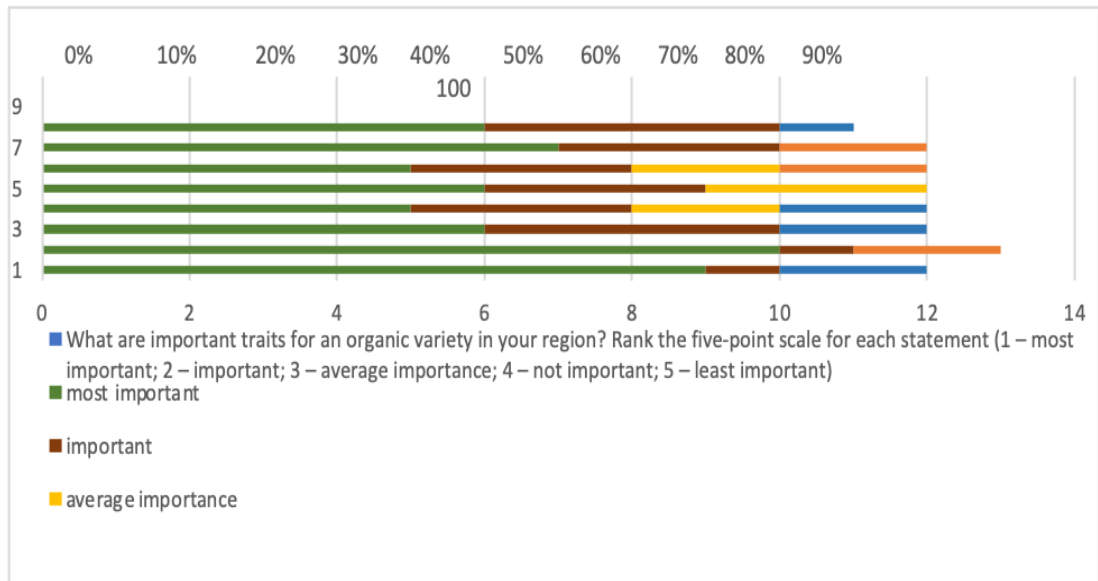


Organic seed availability. Rank the five-point scale for each crop (1 – enough in the market; 2 – occasionally available; 3 – not available; 4 – depending on the variety; 5 – I use home saved seeds). Multiple choices possible.

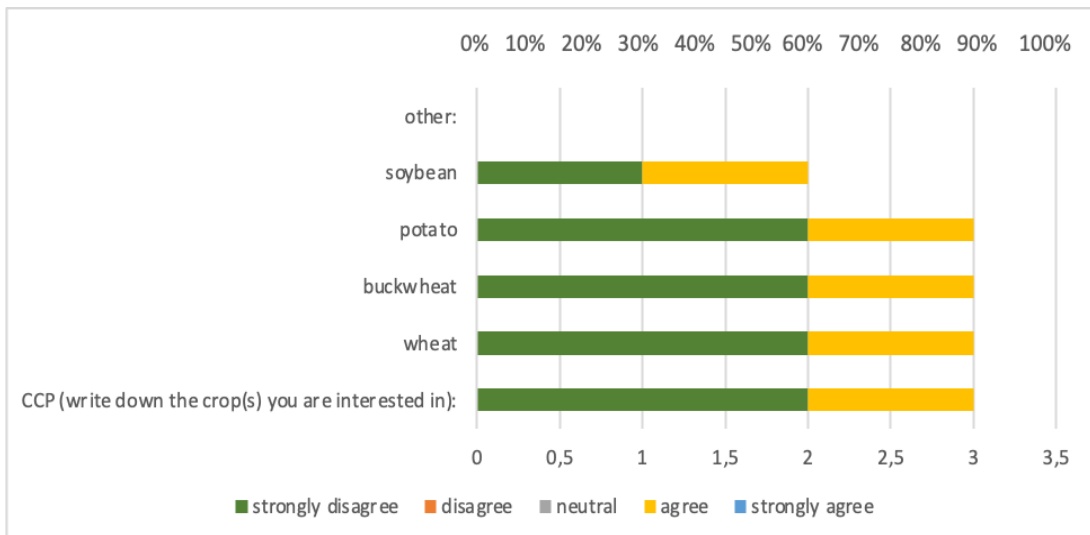


## D 8.3\_Report on field-based demonstration events

What are important traits for an organic variety in your region? Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important)



Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree)



## D 8.3\_Report on field-based demonstration events

Photos:



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## D 8.3\_Report on field-based demonstration events

### Demonstration event of participatory plant breeding and organic management

**Organiser:** **Národné poľnohospodárske a potravinárske centrum (NPPC)**

**Date:** 6-7 June 2023

**Location:** Oponice, Slovakia

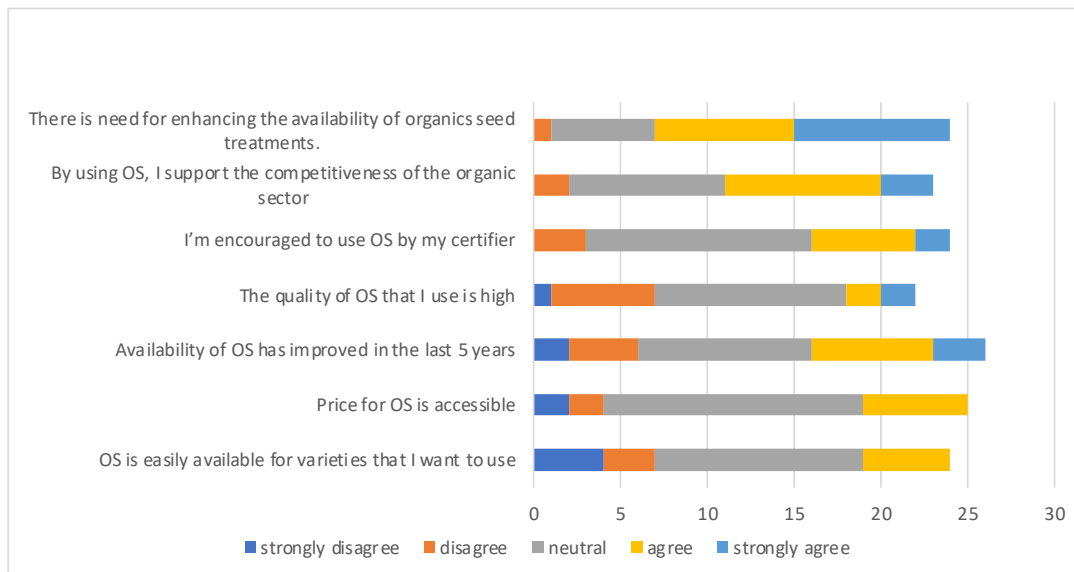
**Varieties:** The visitors had the chance to see different varieties, and to learn about breeding, agronomic, and quality aspects of each variety.

**Participants:** Our trials attracted 191 visitors, mainly farmers and seed industry representatives, who visited the trial plots.

The first demonstration event was a successful and valuable experience for both the project team and the visitors. The event helped to disseminate the project results and achievements. The event also provided useful feedback and insights for planning and improving future events.

**Survey:** The questionnaire was completed by 21 visitors. The respondents represented various backgrounds and interests, such as organic, conventional and conversion farmers, seed industry, extension services, researchers, and others. Respondents' answers were neutral in most questions. As crucial traits for an organic variety in the region, they consider yield and yield stability together with weed suppression and management of diseases.

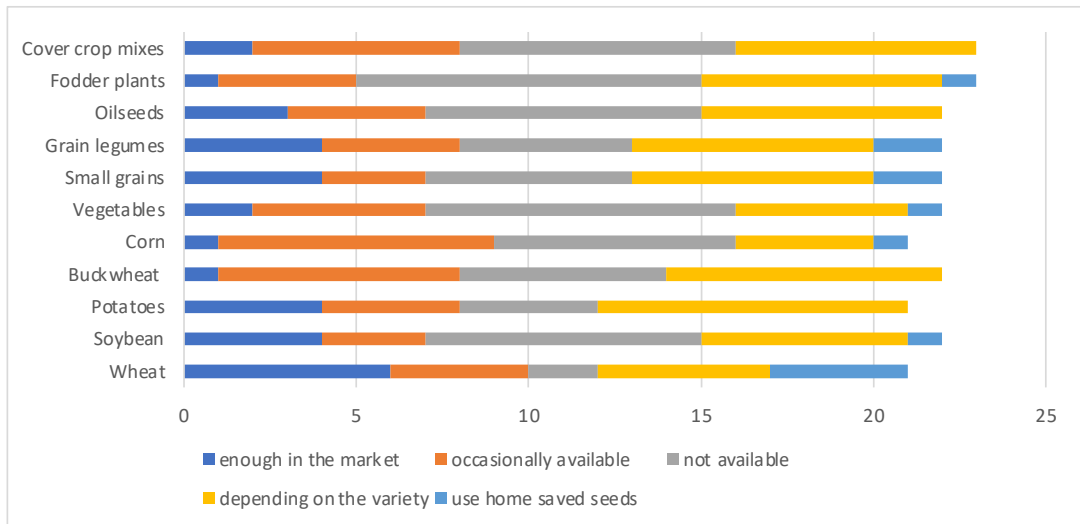
*Attitudes towards organic seed (OS) in your county. Rank the five-point scale for each statement.*



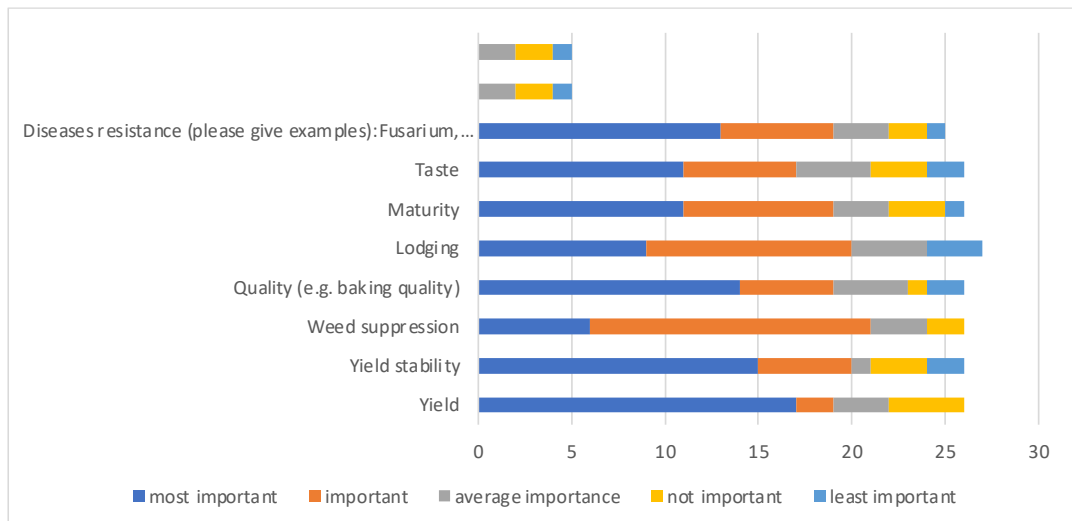


## D 8.3\_Report on field-based demonstration events

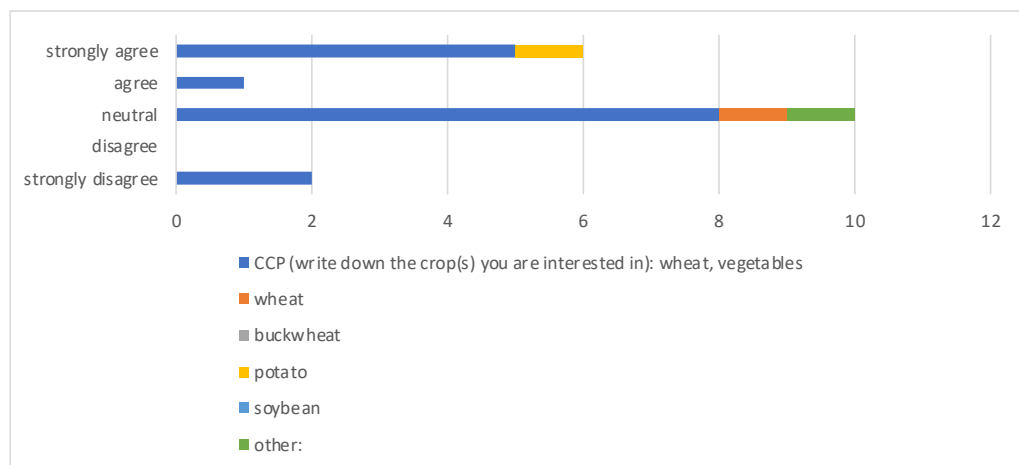
Organic seed availability. Rank the five-point scale for each crop.



What are important traits for an organic variety in your region?



Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm.



## D 8.3\_Report on field-based demonstration events

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## D 8.3\_Report on field-based demonstration events

### Management of genebanks and plant genetic resources for ecological agriculture

**Organiser:** Národné poľnohospodárske a potravinárske centrum (NPPC)

**Date:** 28 June 2023

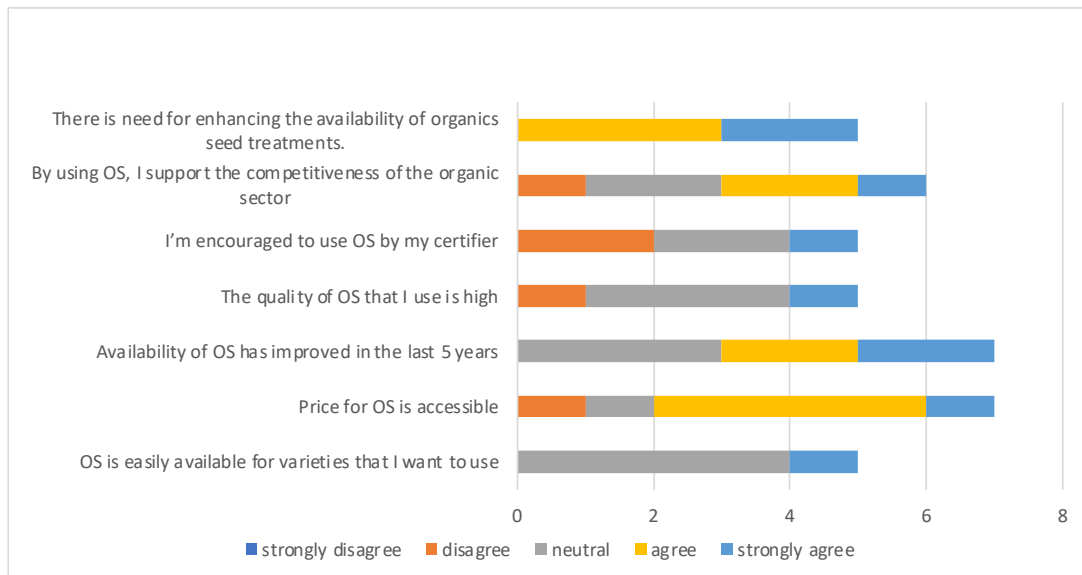
**Location:** NPPC - VÚRV Piešťany, Bratislavská cesta 122, Piešťany, Slovakia

**Varieties:** The NPPC staff explained the methods and criteria used for collecting, conserving and evaluating plant genetic resources, as well as for selecting and breeding varieties suitable for organic farming. The visitors also learned about the importance and benefits of plant genetic diversity for organic agriculture, such as enhancing adaptability, resilience, quality and productivity.

**Participants:** The event attracted 63 visitors, mainly researchers, and educators.

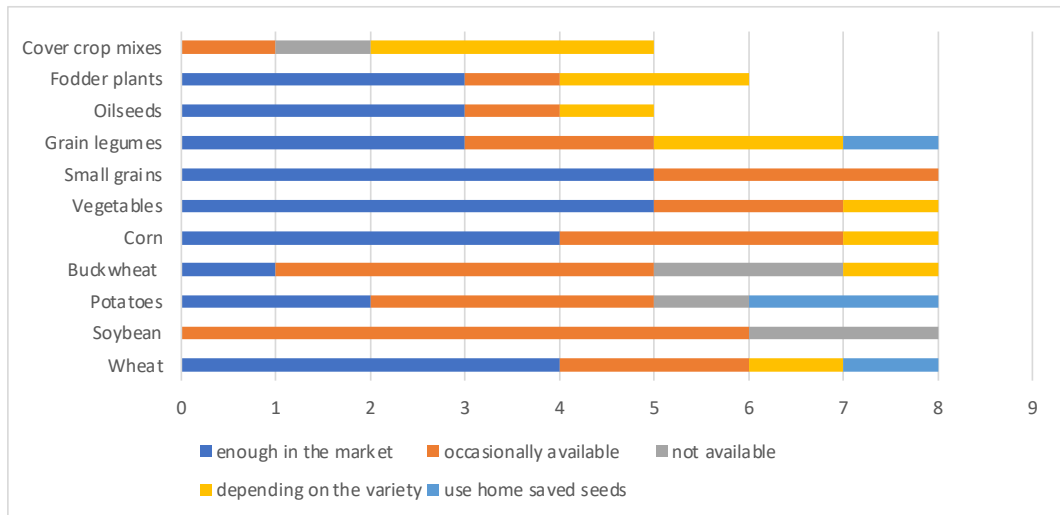
**Survey:** The questionnaire was completed by three researchers and four others.

*Attitudes towards organic seed (OS) in your county. Rank the five-point scale for each statement.*

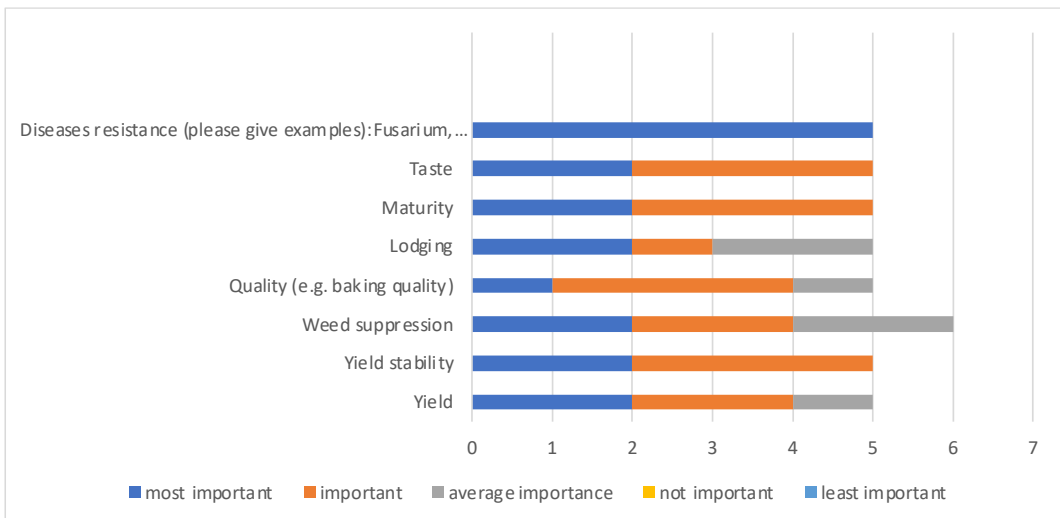


## D 8.3\_Report on field-based demonstration events

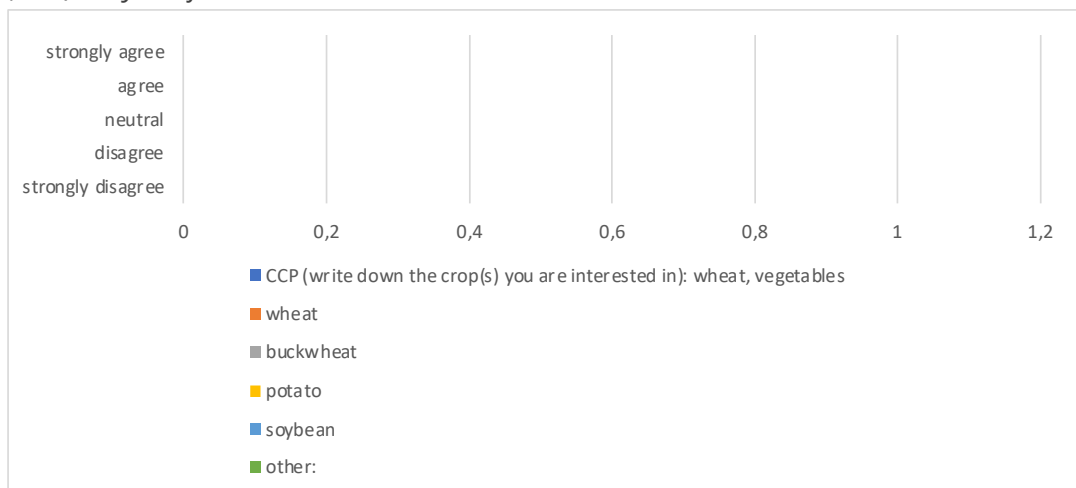
Organic seed availability. Rank the five-point scale for each crop.



What are important traits for an organic variety in your region?



Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm.



## D 8.3\_Report on field-based demonstration events

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## D 8.3\_Report on field-based demonstration events

### 18. Demonstration event at RGA

#### Testing of winter wheat varieties for organic production

<i>Organiser:</i>	<b>RGA, research genetics and agrochemistry, Ltd., Slovenia</b>
<i>Date:</i>	14 June 2023
<i>Location:</i>	Rakičan near Murska Sobota, Krog near Murska Sobota
<i>Varieties:</i>	22 "classical" and 16 CCPs with increased male sterility, perennial wheat wide crosses (( <i>Tr. aestivum</i> × <i>Th. intermedium</i> ) × <i>Tr. aestivum</i> , ( <i>Tr. aestivum</i> × <i>Th. intermedium</i> ) × <i>Th. intermedium</i> , <i>Th. intermedium</i> × <i>Tr. aestivum</i> )
<i>Participants:</i>	In total 36 persons (farmers, scientific community, policy makers)
<i>Survey:</i>	All the participants filled out the survey. They disagreed with the statements that organic seeds are easily available for varieties that they want to use, that the price for OS is accessible, that the availability of OS has improved in the last 5 years and that the quality of OS that they use is high. Organic seeds which are occasionally available on the market: potatoes, small grains, grain legumes, cover crop mixes. For soybean, wheat, corn, vegetables, oilseeds and fodder plants the OS availability depends on the variety. The most important traits for organic varieties are: yield, yield stability, weed suppression, and quality, followed by maturity, taste and disease resistance. Lodging is considered of average importance.

*Photos:*



## D 8.3\_Report on field-based demonstration events

### Testing of buckwheat varieties for organic production

**Organiser:** RGA, research genetics and agrochemistry, Ltd., Slovenia

**Date:** 23 October 2023

**Location:** Logarovci (company Cornus), Krog near Murska Sobota

**Varieties:** Buckwheat wide crosses (reciprocal crosses of *F. esculentum* and *F. homotropicum*.) and common buckwheat elite germplasm. In total 93 accessions.

**Participants:** In total 15 persons (farmers, scientific community, policy makers)

**Survey:** Only 3 participants filled out the survey.

In the question about the attitudes towards organic seed (OS) in Slovenia, most agreed that seed is easily available for varieties that they want to use, that the availability of OS has improved in the past 5 years, that by using OS they support the competitiveness of the organic sector and that there is a need for enhancing the availability of organic seed treatments.

The participants disagreed that the price of OS is accessible and were mostly neutral on the question about the encouragement to use OS by certifiers.

Regarding the availability of organic seed – participants think that for wheat, soybean, corn, vegetables, small grains, grain legumes, oilseeds, fodder plants and cover crop mixtures the availability depends on the variety. For potatoes and buckwheat, they mostly use home-saved seed.

The most important traits for an organic variety are: yield, yield stability, weed suppression, quality. Less important are: lodging, maturity, taste and disease resistance.

The CCPs the participants are interested in: buckwheat; mostly neutral about wheat, potato and soybean CCPs.



## D 8.3\_Report on field-based demonstration events

Photos:



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## D 8.3\_Report on field-based demonstration events

### 19. Demonstration event at SZG

#### Soybean farmers participatory field trial

<i>Organiser:</i>	<b>Saatzucht Gleisdorf GmbH, Austria</b>
<i>Date:</i>	8 September 2022
<i>Location:</i>	Güssing, Burgenland, Austria
<i>Varieties:</i>	Soybean varieties: GL Melanie, Xonia, GL Judith, Svelte, GL Leonie, GL Valerie, NS Mercury, Galina ES Commandor, Achillea, Altona, Atacama, Alvesta, ES Director, Angelica, Kristian, Sonali
<i>Participants:</i>	30 persons in total; farmers, breeders, representatives of seed companies, researchers (Agricultural Chamber of Burgenland), policy makers, students of FS Güssing
<i>Survey:</i>	15 participants filled out the survey (farmers). They agreed with the statements that organic seeds are easily available for varieties that they want to use, that the price for OS is accessible, that the availability of OS has improved in the last 5 years and that the quality of OS that they use is high. They are also encouraged to use OS by their certifier.  They also stated that organic seed for most plants are available in the market – with the exception for buckwheat and vegetables.



## D 8.3\_Report on field-based demonstration events

Photos:



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## D 8.3\_Report on field-based demonstration events

### ECOBREED project at the Festival of agriculture in Austria

*Organiser:* Saatzucht Gleisdorf GmbH, Austria

*Date:* 17 June 2023

*Location:* Kalsdorf bei Ilz, Steiermark, Austria

*Varieties:* Wide-ranging program for organic farming

- Presentation of the ECOBREED project and results at Saatzucht Gleisdorf GmbH's booth
- Die Saat variety presentation with current top varieties for organic cultivation
- Bio-Austria information booth
- Advice and demonstration plots on organic fertilisers and plant protection
- Advice stands for the marketing and trading of organic cereals
- Periodic organic field tours
- Innovation demonstrations

*Participants:* Ca. 10,000 persons in total; primarily farmers, representatives of companies, policy makers, stakeholders, students

*Survey:* Participants did not fill out the survey.

*Photos:*



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## D 8.3\_Report on field-based demonstration events

### 20. Demonstration event at Global Seed

#### Selection of soybean varieties for organic production, trial experience (FPT)

**Organiser:** Global Seed, Serbia

**Date:** 18 May 2023

**Location:** Čurug, Gospođinačka 1a, Serbia

**Varieties:** The following varieties were presented: NS MERCURY 00, NS ALTIS 0, NS KOLOS II, NS CCP

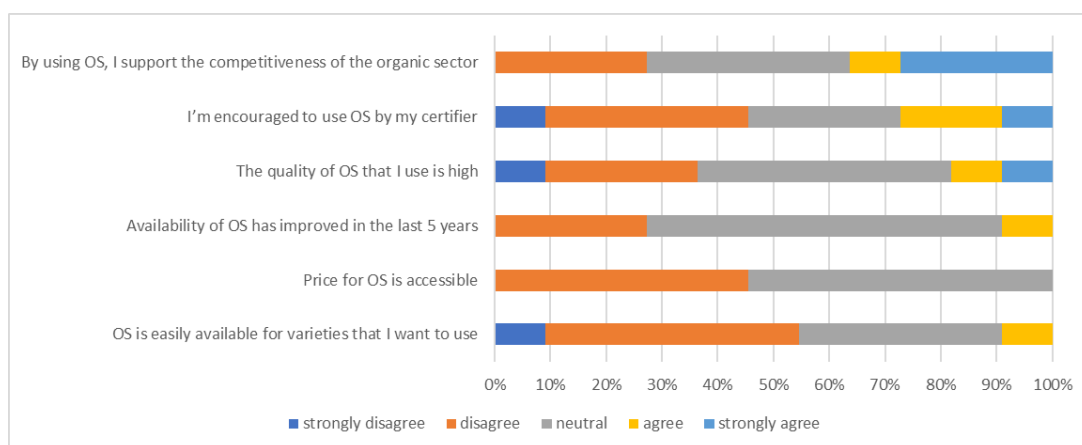
Varieties were presented by Marjana Vasiljevic, Institute of Field and Vegetable Crops.

In addition to the presentation of varieties, Žarko Ristić also announced the next event that will be held on 6th of June will be dedicated to mechanical weeding measures in soybean production. Due to a rainy day, the event moved indoor whereby machinery that will be demonstrated at the next event was shown.

**Participants:** 14 participants (farmers, industry representative, researchers)

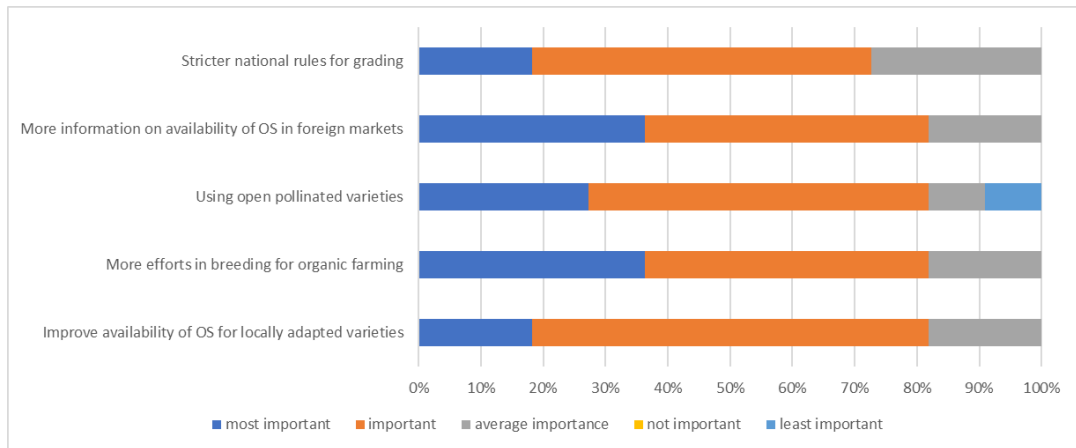
**Survey:** 11 participants filled out the survey.

*Attitudes towards organic seed (OS) in your county:*

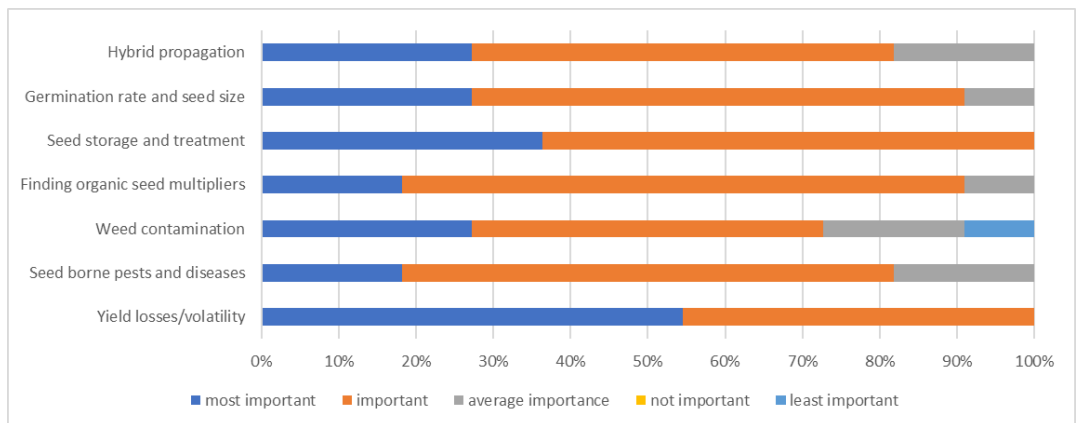


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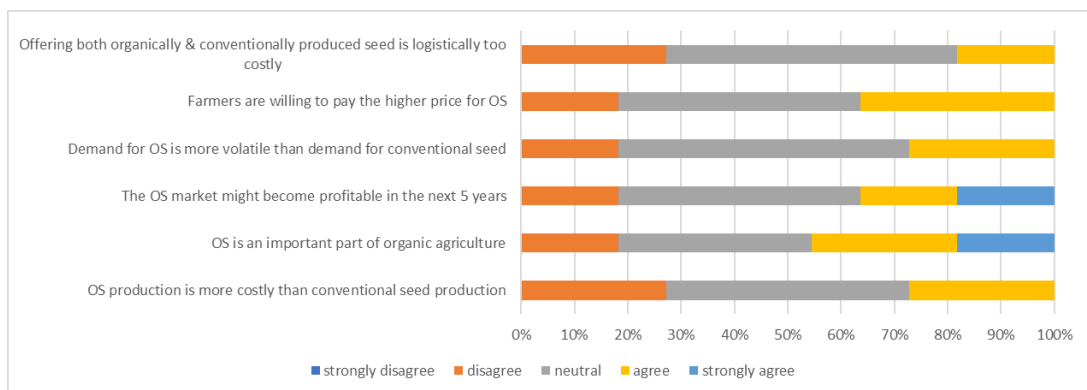
*Ranking of different actions to boost the use of organic seed (OS) in your country:*



*Technical challenges in organic seed production:*

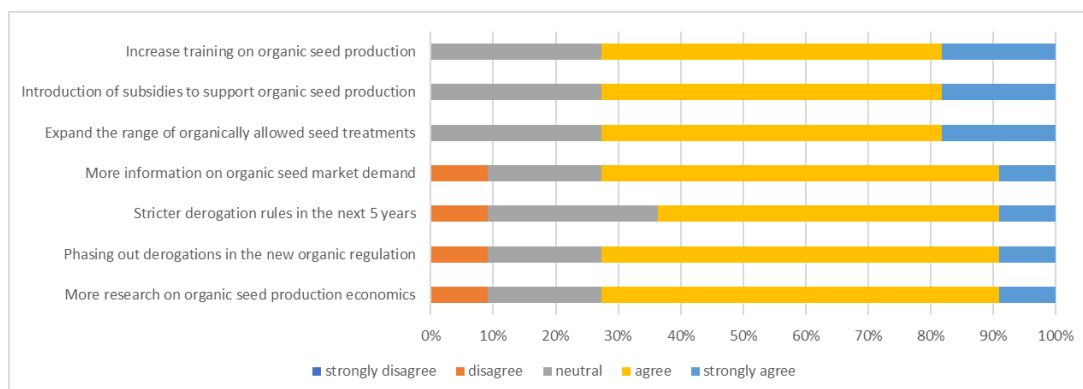


*Marketing issues with organic seed (OS):*



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*Policy measures to enhance organic seed (OS) production:*



*Photos:*



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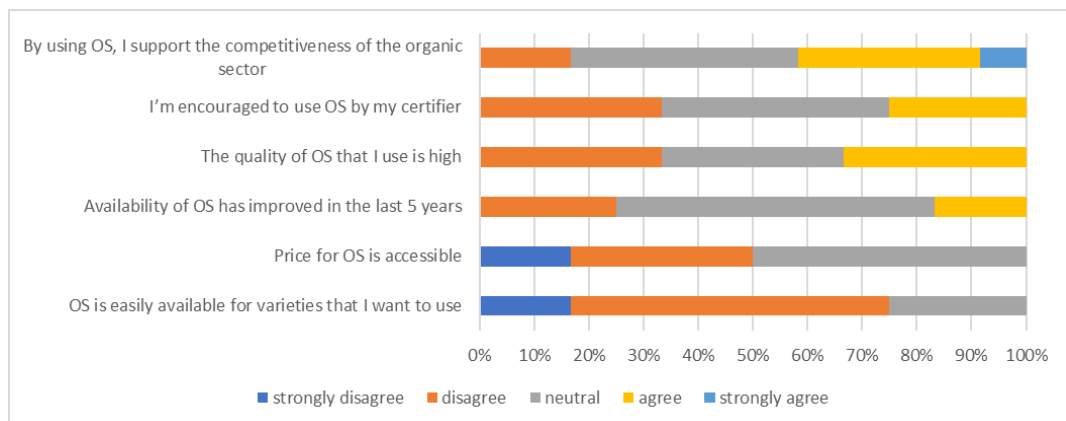
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## D 8.3\_Report on field-based demonstration events

### Demonstration event on soybean varieties and mechanical weed control in organic production

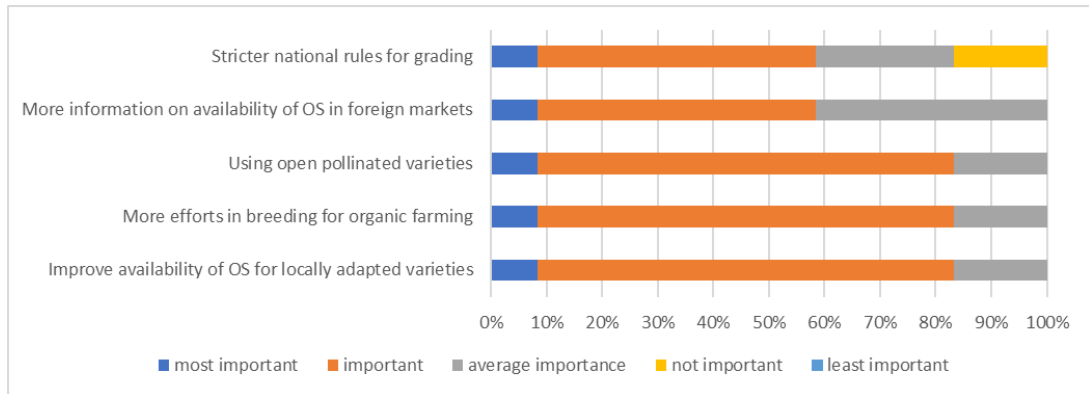
- Organiser:** Global Seed, Serbia
- Date:** 8 June 2023
- Location:** Čurug, Gospođinačka 1a, Serbia
- Varieties:** Following varieties were presented: NS MERCURY 00, NS ALTIS 0, NS KOLOS II, NS CCP
- In addition of varieties presentation, also Žarko Ristić, Milorad Josimović and Nikola Ikić presented mechanical weeding measures in soybean production and explained production technology and know-how learned from ECOBREED project (cover crop trials).
- Participants:** 16 participants (farmers, students, professors, researchers, industry representatives)
- Survey:** 12 participants filled out the survey.

#### Attitudes towards organic seed (OS) in your county:

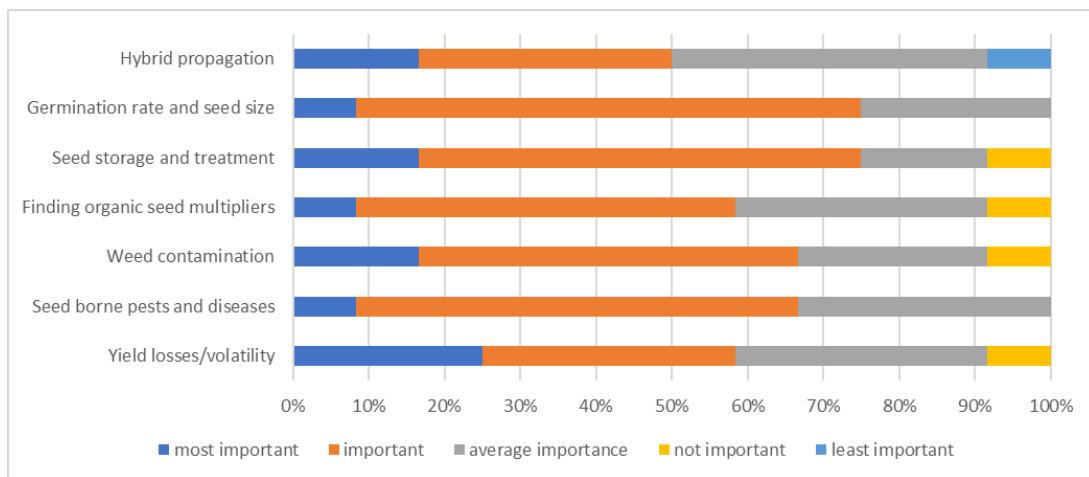


## D 8.3\_Report on field-based demonstration events

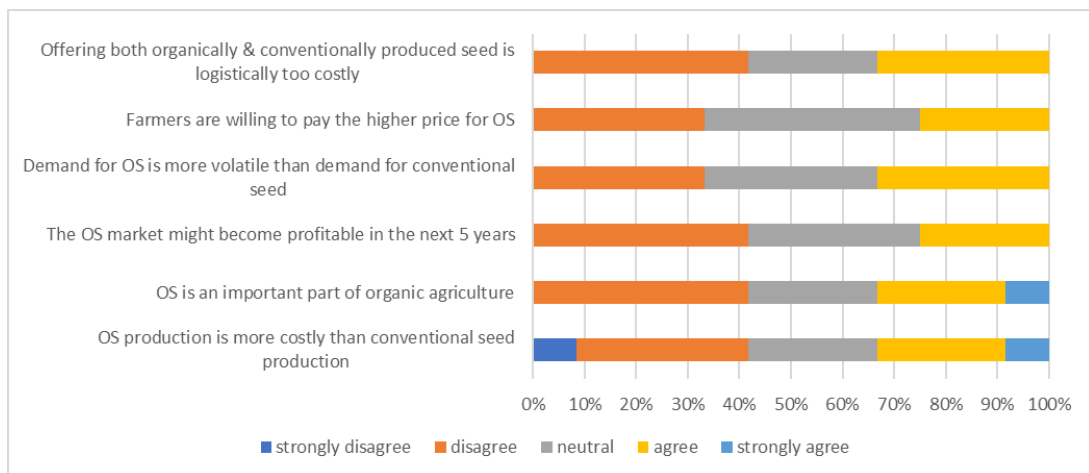
Ranking of different actions to boost the use of organic seed (OS) in your country:



Technical challenges in organic seed production:



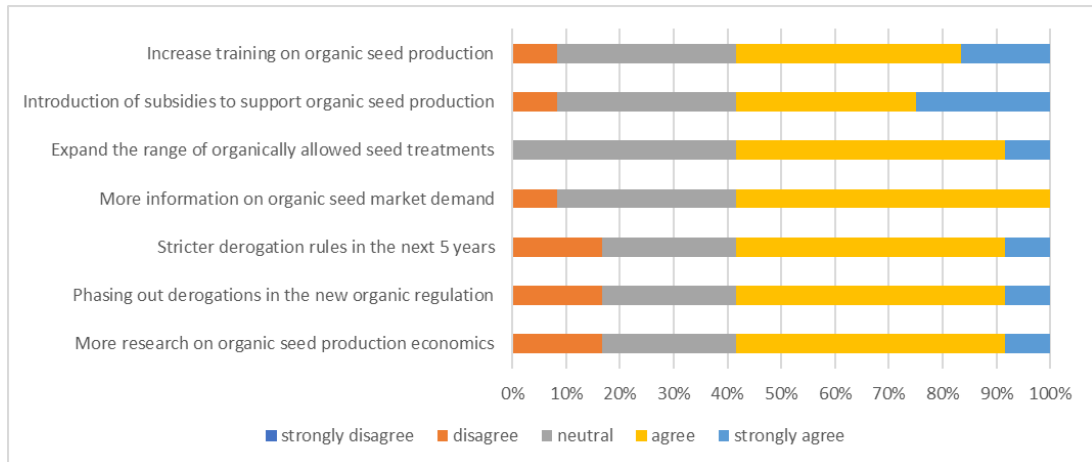
Marketing issues with organic seed (OS):





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Policy measures to enhance organic seed (OS) production:



Photos:



## D 8.3\_Report on field-based demonstration events

### 21. Demonstration event at SECOBRA

#### Demonstration event of the ECOBREED project at Feldkirchen

*Organiser:* **SECOBRA Saatzucht GmbH, Feldkirchen, Germany**

*Date:* 17 June 2021

*Location:* Feldkirchen, Moosburg a.d. Isar. The event was organised by Dr. Josef Holzapfel, SECOBRA Saatzucht GmbH.

*Varieties:* The ECOBREED winter wheat trial including all 60 varieties of the trial were presented.

NUM	QUALITY	VARIETY
1		261-05z 1-2
2	Pop	BRANDEX
3	C	ELIXER
4	E	CURIER
5	E	ATARO
6		BTX279-L1-R4520G.19
7	A	ILLUSION
8	B	GRAZIARO
9	E	WIWA
10		SEC 121-11-2
11	E	AURELIUS
12	E	PURINO
13	E	VIKI
14		VLASTA
15		IBARRA
16	E	JULARO
17		STUPICKÁ BASTARD
18	E	ANNIE
19		DAGMAR
20		BUTTERFLY
21	A	ASORY
22		SG-S269-09
23	E	ROYAL
24	B	ARGUMENT
25		PENELOPE
26		TENGRI
27		KM-78-18
28	E	BUTARO
29	E	BARRANCO
30	A	RODERIK



## D 8.3\_Report on field-based demonstration events

31	E	ARNOLD
32	E	ARMINIUS
33	E	AXIOMA
34		SULTAN
35	A	TURANDOT
36	E	MOSCHUS
37		SG-S1004-18
38		LISETA
39		PIRUETA
40	A	290-08-1a
41	Pop	LIOCHARLS
42	E/A	TOBIAS
43	A	SPONTAN
44	E	ARISTARO
45	E	GENIUS
46	E	THOMARO
47		KM-72-18
48		PRIM
49	E	SALUDO
50		PHILARO
51	E	POESIE
52	E	PIZZA
53	E	CAPO
54		WITAL
55		BTX428-R4521K.19
56	E/A	EHOGOLD
57	E	WENDELIN
58	B	BLICKFANG
59	E	KWS MILANECO
60	A	NATURASTAR

*Participants:* Farmers, breeders, traders and policy makers attended the event.

*Survey:* Only one person wanted to answer the questionnaire. The result is:

1. Attitudes towards organic seeds in your country. Rank each statement on the five-point scale (1 - strongly disagree; 2 - disagree; 3 - neutral; 4 - agree; 5 - strongly agree).

- Eco seed is readily available for varieties I want to use: 2
- The price of organic seed is reasonable: 2
- The availability of organic seed has improved in the last 5 years: 4
- The quality of the organic seed I use is high: 4
- I am encouraged by my certifier to use organic seed: 5
- By using organic seeds, I support the competitiveness of the organic sector: 4



## D 8.3\_Report on field-based demonstration events

2. Classification of different measures to promote the use of organic seeds in your country. Rank each statement on the five-point scale (1 - most important; 2 - important; 3 - average importance; 4 - not important; 5 - least important).

- Improve the availability of organic seed for locally adapted varieties: 4
- More effort/effort in breeding for organic farming: 3
- Use of open pollinated varieties: 3
- More information on the availability of organic seed in foreign markets: 4
- Stricter national rules for classification: 3

3. Technical challenges in organic seed production. Rank each statement on the five-point scale (1 - most important; 2 - important; 3 - average importance; 4 - not important; 5 - least important).

- Crop losses/ volatility/ susceptibility to fluctuations: 2
- Seed-borne diseases and pests: 1
- Contamination with weeds: 2
- Detection of organic seed multipliers: 4
- Seed storage and handling: 4
- Germination and seed size: 4
- Spread of hybrids: 4

4. Marketing problems of organic seeds. Rank each statement on the five-point scale (1 - strongly disagree; 2 - disagree; 3 - neutral; 4 - agree; 5 - strongly agree).

- Organic seed production is more expensive than conventional seed production: 3
- Organic seed is an important component of organic agriculture: 4
- The organic seed market could become profitable in the next 5 years: 2
- Demand for organic seed is more volatile than demand for conventional seed: 4
- Farmers are willing to pay the higher price for organic seed: 2
- Offering both organic and conventional seed is too costly logistically: 4

5. Policy measures to improve the production of organic seeds. Rank each statement on the five-point scale (1 - strongly disagree; 2 - disagree; 3 - neutral; 4 - agree; 5 - strongly agree).

- More research on the economics of organic seed production: 4
- Phasing out exemptions in the new organic regulation: 5
- Stricter derogations in the next 5 years: 2
- More information on organic seed market demand: 4
- Expanding the supply of organically approved seed treatments: 4
- Introduction of subsidies to support organic seed production: 2
- Improving training on organic seed production: 5

Questionnaire answered by Seed Industry.



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## D 8.3\_Report on field-based demonstration events

### Organic field day at SECOBRA

**Organiser:** SECOBRA Saatzucht GmbH, Feldkirchen, Germany

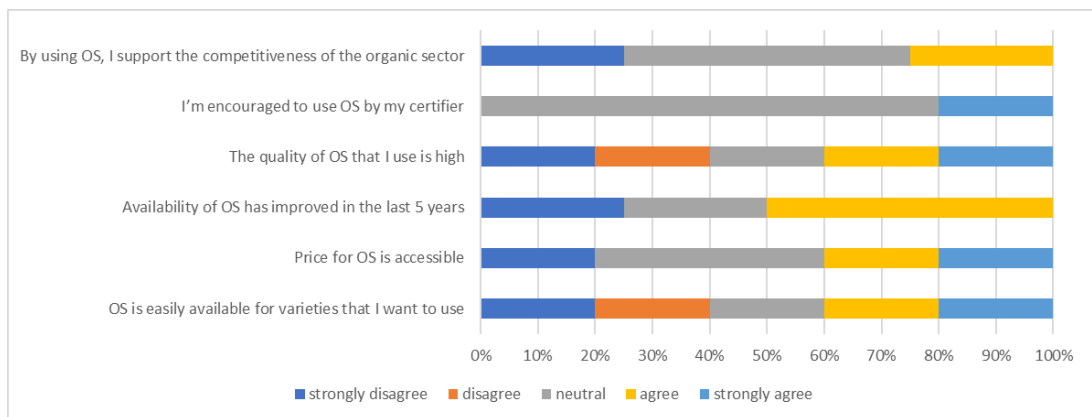
**Date:** 6 July 2023

**Location:** Feldkirchen 3, Moosburg an der Isar

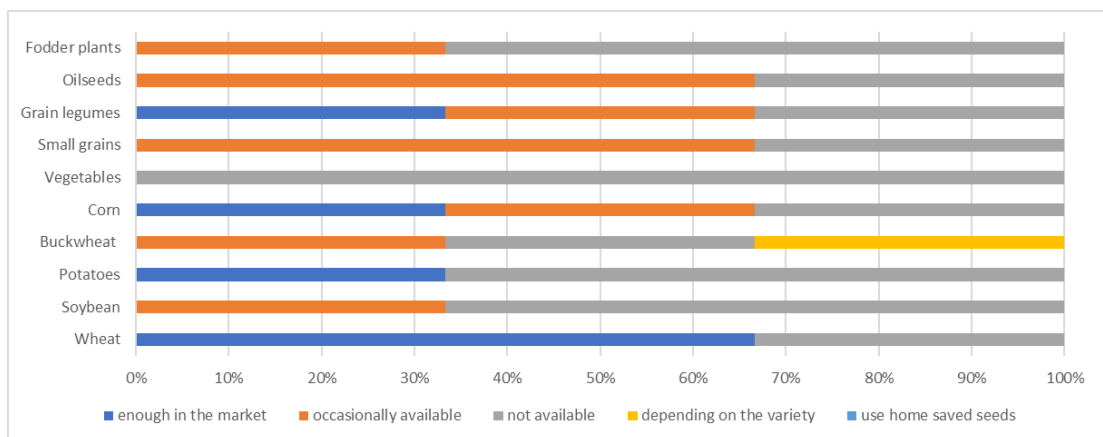
**Varieties:** Winter wheat: Wendelin, R bezahl  
Gpc-B1 Population trial

**Participants:** 2 farmers, 3 traders, 5 breeders, 5 researchers, 1 policy maker

**Survey:** Attitudes towards organic seed (OS) in your county.

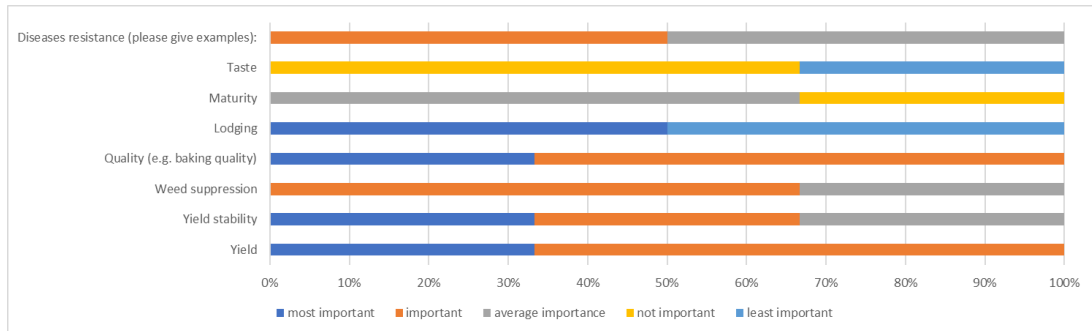


#### Organic seed availability.



## D 8.3\_Report on field-based demonstration events

What are important traits for an organic variety in your region? Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important):



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## D 8.3\_Report on field-based demonstration events

### 22. Demonstration event at MATE

#### Demonstration event on late blight resistant potato varieties

**Organiser:** Hungarian University of Agriculture and Life Sciences (MATE), Hungary

**Date:** 29 June 2023

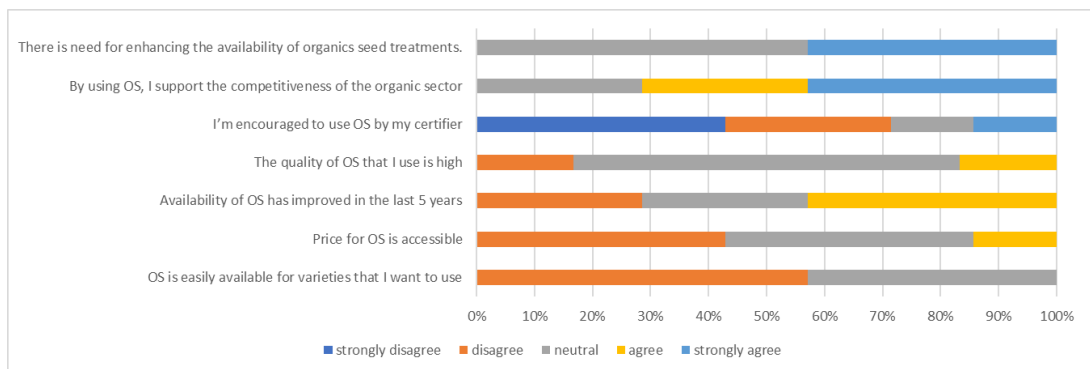
**Location:** Keszthely

**Varieties:** Potato (late blight and virus resistant candidates and their parent lines like White Lady, Sarpo Mira, Balatoni Rózsa, Botond)

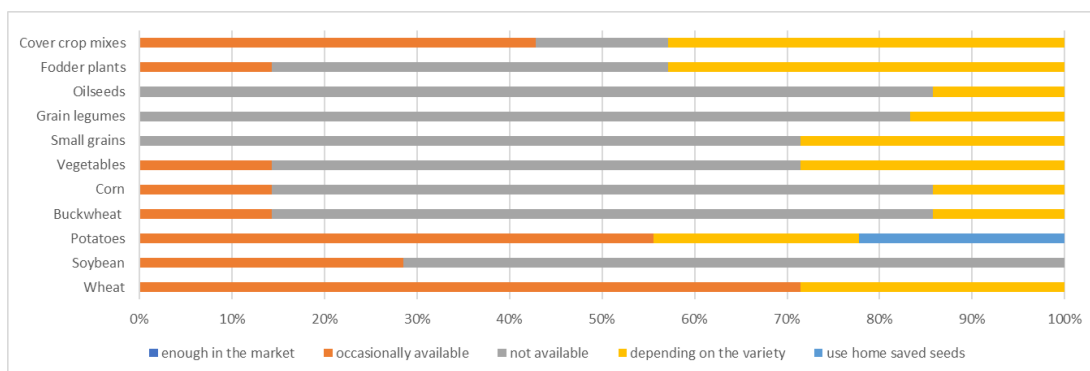
**Participants:** 7 participants

**Survey:** 7 participants filled out the survey.

#### Attitudes towards organic seed (OS) in your county:



#### Organic seed availability:

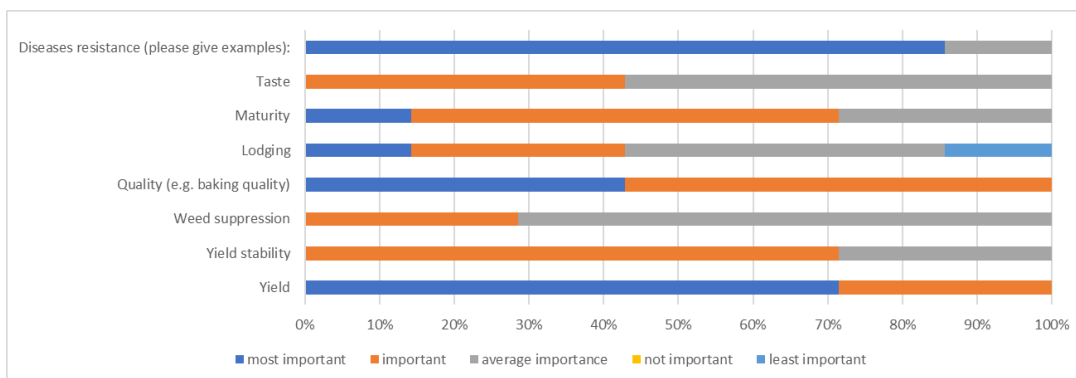


What are important traits for an organic variety in your region? Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important):





## D 8.3\_Report on field-based demonstration events



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## D 8.3\_Report on field-based demonstration events

### Demonstration event on organoleptic and quality assessment of potato varieties

**Organiser:** Hungarian University of Agriculture and Life Sciences (MATE), Hungary

**Date:** 31 October 2023

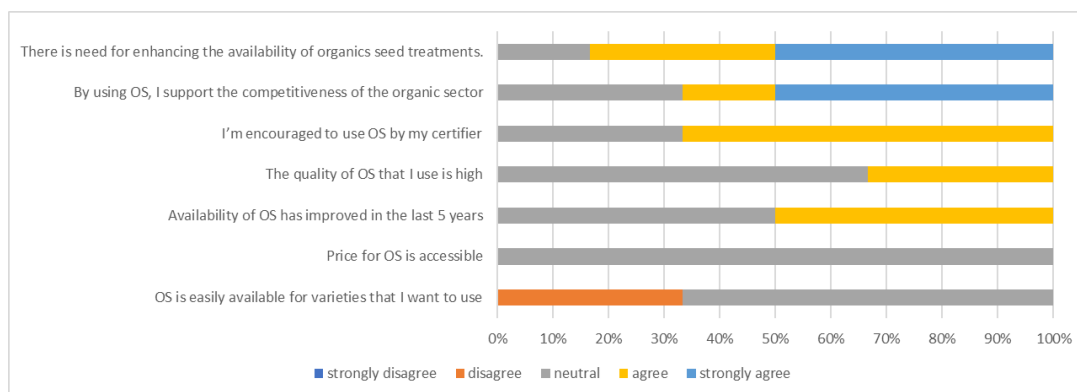
**Location:** Keszthely

**Varieties:** Potato (late blight and virus resistant candidates and varieties)

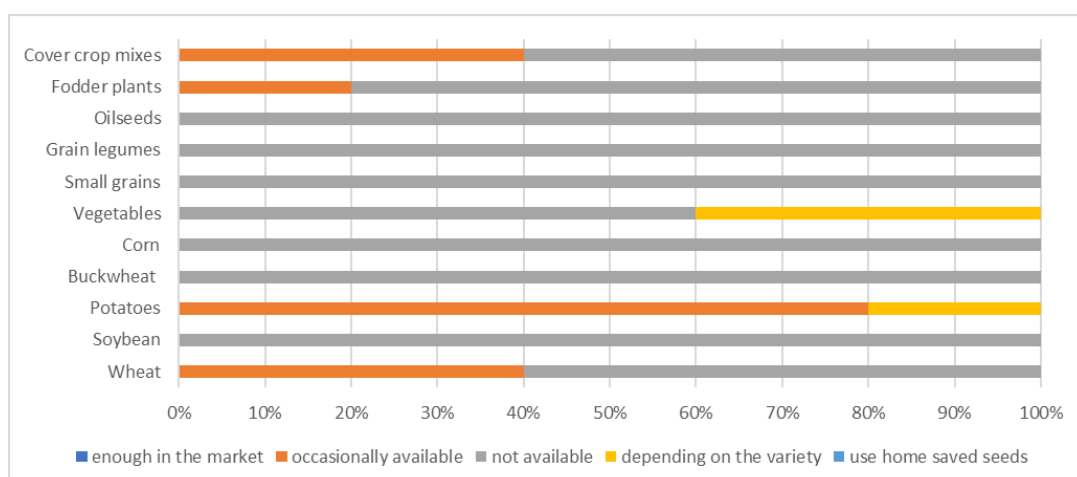
**Participants:** 6 participants

**Survey:** 6 participants filled out the survey.

*Attitudes towards organic seed (OS) in your county:*

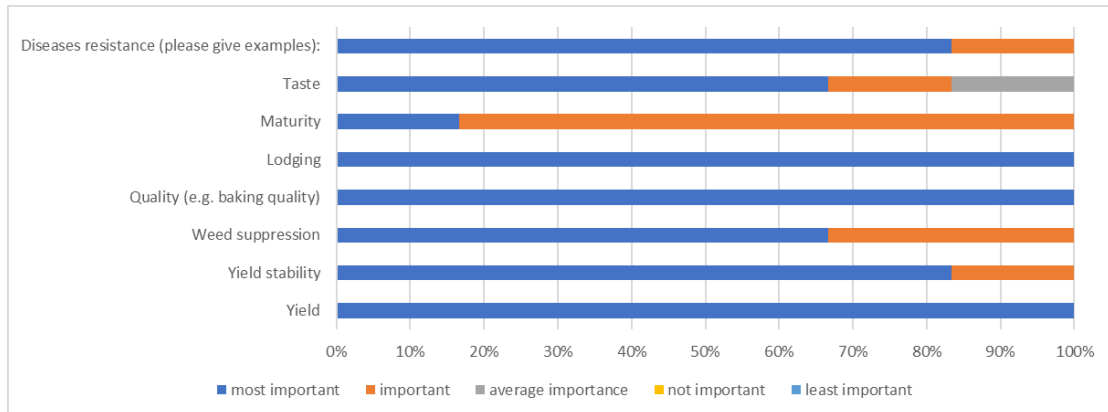


*Organic seed availability:*



## D 8.3\_Report on field-based demonstration events

What are important traits for an organic variety in your region? Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important):



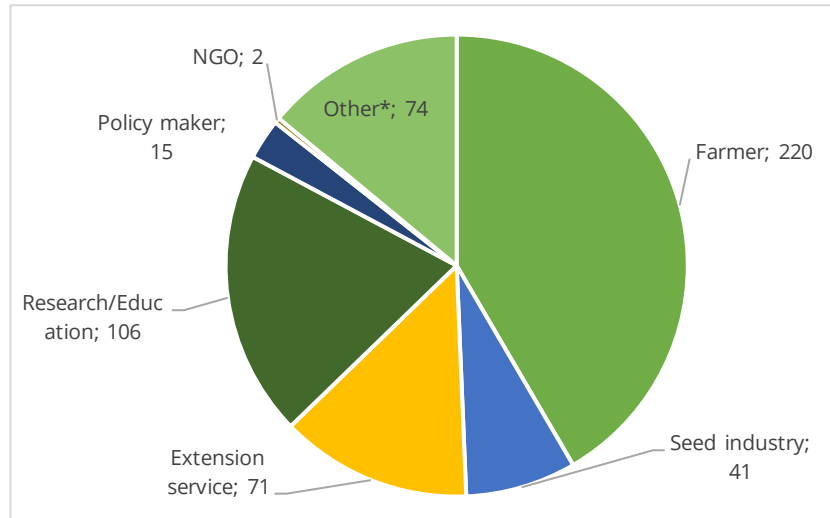
Photos:



## D 8.3\_Report on field-based demonstration events

### 23. ECOBREED Questionnaire: How to improve the supply of organic seeds

At all demonstration events, the organisers handed out questionnaires that were prepared and translated into all national languages of participating countries. The questionnaires were filled out by more than 480 participants at the demonstration events, i.e. more than 45% of all participants.



**Fig. 2:** The participants that filled out the ECOBREED questionnaires.

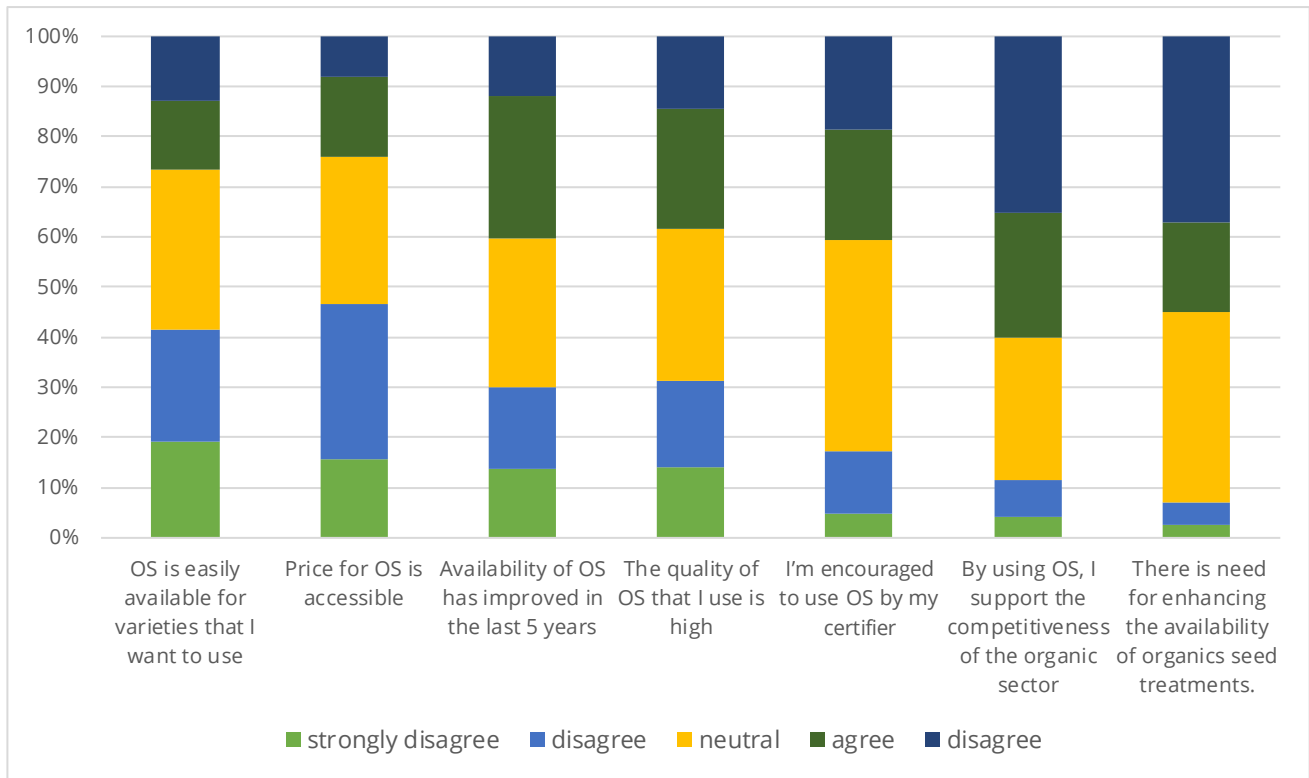
The questionnaire was divided into 8 main questions. The main questions were regarding the attitudes of participants towards organic seed in their country, the ranking of different actions to boost the use of organic seed in their country, on technical challenges in organic seed production, on marketing issues regarding organic seed, on policy measures to enhance organic seed in their country, and on organic seed availability, important traits in organic varieties in their regions or country as well as on their willingness to grow composite cross populations (CCP) on their farms.

The questionnaire proved to be too complex for most participants and was therefore significantly shortened in 2022 to only 4 questions which included the attitudes towards organic seed within a participating country, the availability of different types of organic seed (wheat, soybean, potato, buckwheat, corn, vegetables, small grains, grain legumes, oilseeds, fodder plants and cover crop mixtures), the importance of certain traits for an organic variety (e.g. yield, yield stability, weed suppression, quality, lodging, maturity, taste, disease resistance). The participants also ranked their willingness to grow CCPs on their farms.



## D 8.3\_Report on field-based demonstration events

### Attitudes toward organic seed



**Fig. 3:** Attitudes towards organic seed (OS) in your county. Rank the five-point scale for each statement (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree).

We asked the participants about their attitudes towards organic seed in their country and to rank each statement in the questionnaire. This question was included in both versions of the ECOBREED questionnaire at demonstration events.

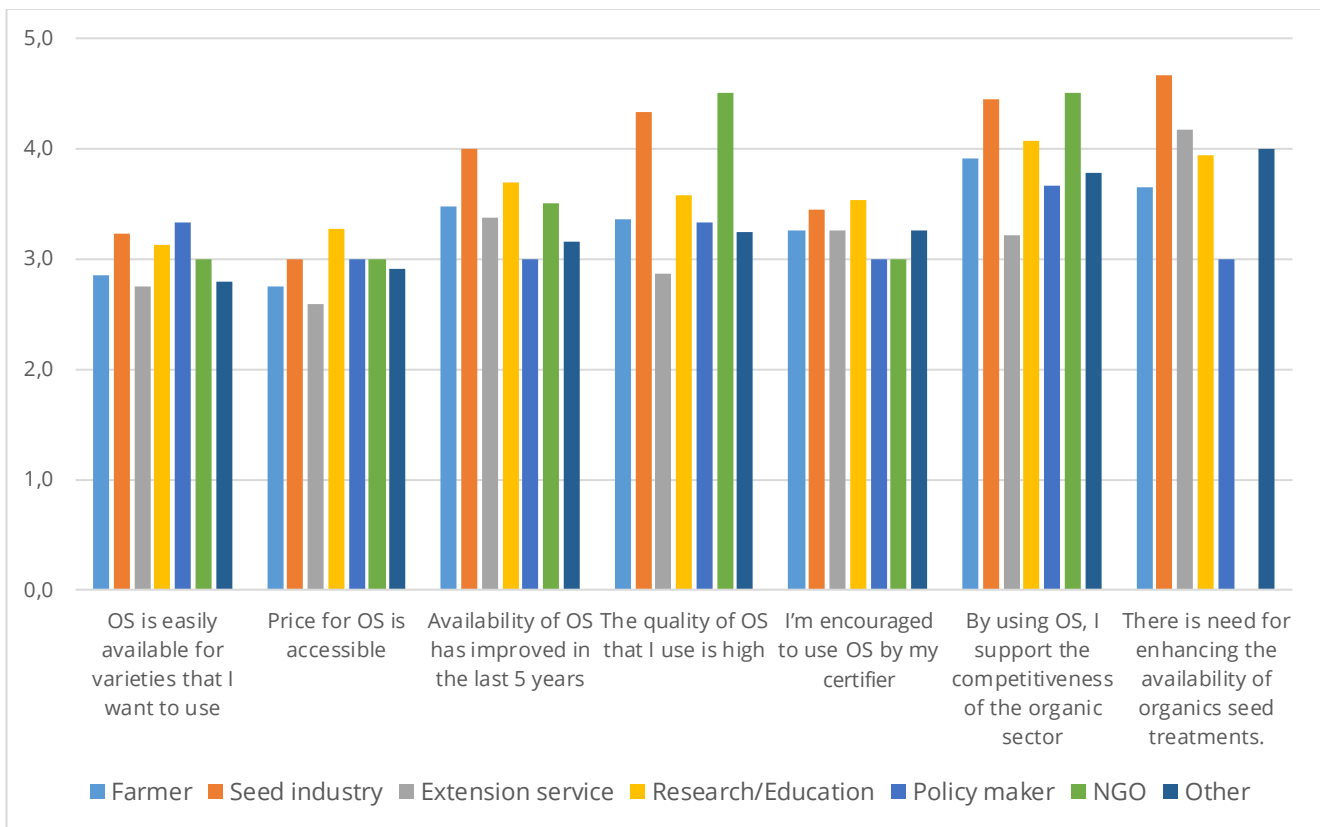
In the attitudes towards organic seeds, the participants mostly disagreed that organic seed is easily available for the varieties that they want to use (41.5%) and they mostly disagreed that the price for organic seed is accessible (46.5%). The participants mostly agreed that the availability of organic seed has improved in the past five years (40.4%) and that the quality of organic seed that they use is high (38.3%). They also agreed that they support the competitiveness of the organic sector by using organic seed (60.2%) and that there is a need for enhancing the availability of organic seed treatment (54.9%). The participants were mostly neutral on the statement that they are encouraged to use organic seed by their certifier.

In Austria, the farmers do not regularly use certified seed, approximately every 3-4 years. The main reason for this is the price and the feeling that breeding progress is not that fast to change every year the variety and therefore buy new (certified) seeds; the issue of quality is of secondary importance as the harvest is almost exclusively used for feeding livestock. The Austrian farmers also do not see the connections between using organic seed and supporting the competitiveness of the organic sector.

## D 8.3\_Report on field-based demonstration events

In the Czech Republic, organic farmers would like to see an improvement in the availability of organic seed. They are satisfied with the quality of organic seed but would like to have seed treatments available. Usually wheat, buckwheat, small grains, fodder plants and some cover crop mixes are available with organic certification. The important traits for organic farmers are yield, yield stability, weed suppression, quality, lodging and maturity. Taste and diseases resistance are not that important to them. They are neutral towards CCP.

In the UK, yield losses, seed-borne pests and disease and weed competition were identified as the biggest technical challenges in organic seed production. Wheat and oilseed rape were identified as the major crops, but this may have related to the actual crops being grown on those farms.



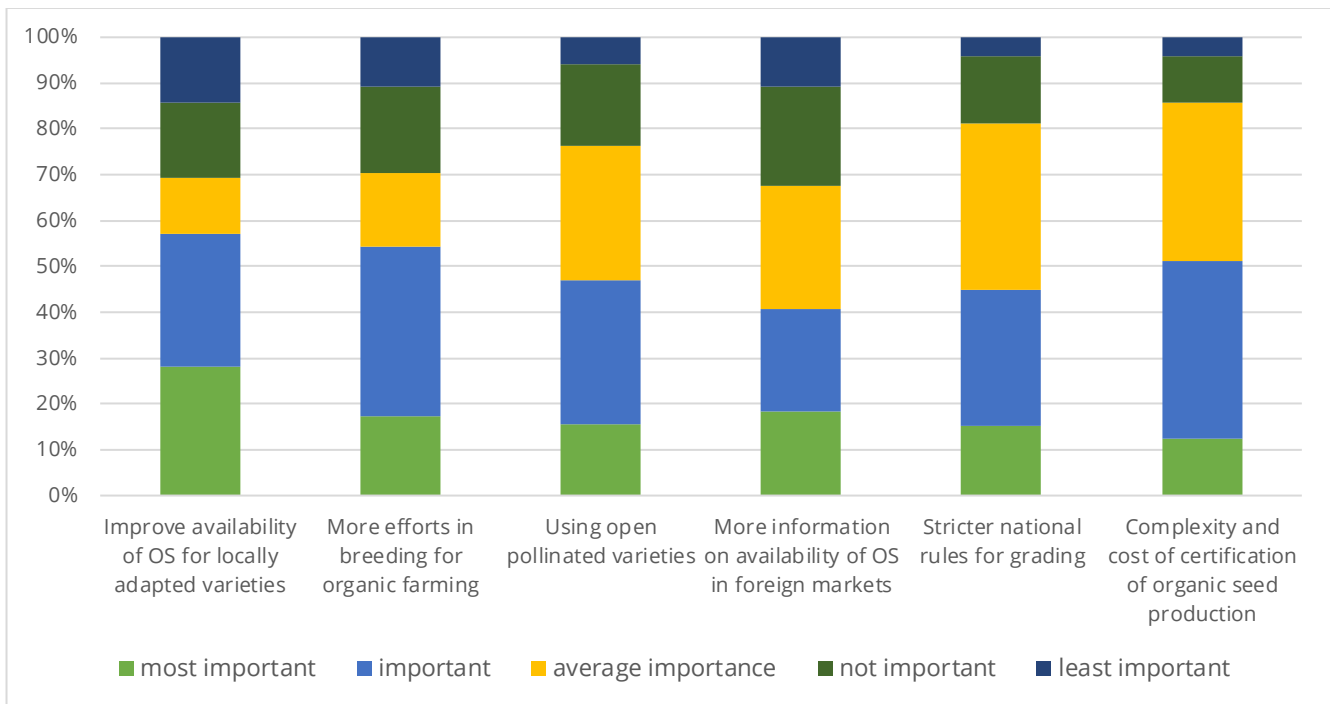
**Fig. 4:** Attitudes towards organic seed (OS) in your county – according to who filled out the questionnaire. Rank the five-point scale for each statement (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree).



## D 8.3\_Report on field-based demonstration events

### Actions to boost use of organic seed

Participants were also asked to rank different actions to boost the use of organic seed (OS) in their country (from most to least important).



**Fig. 5:** Ranking of different actions to boost the use of organic seed (OS) in your country. Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important).

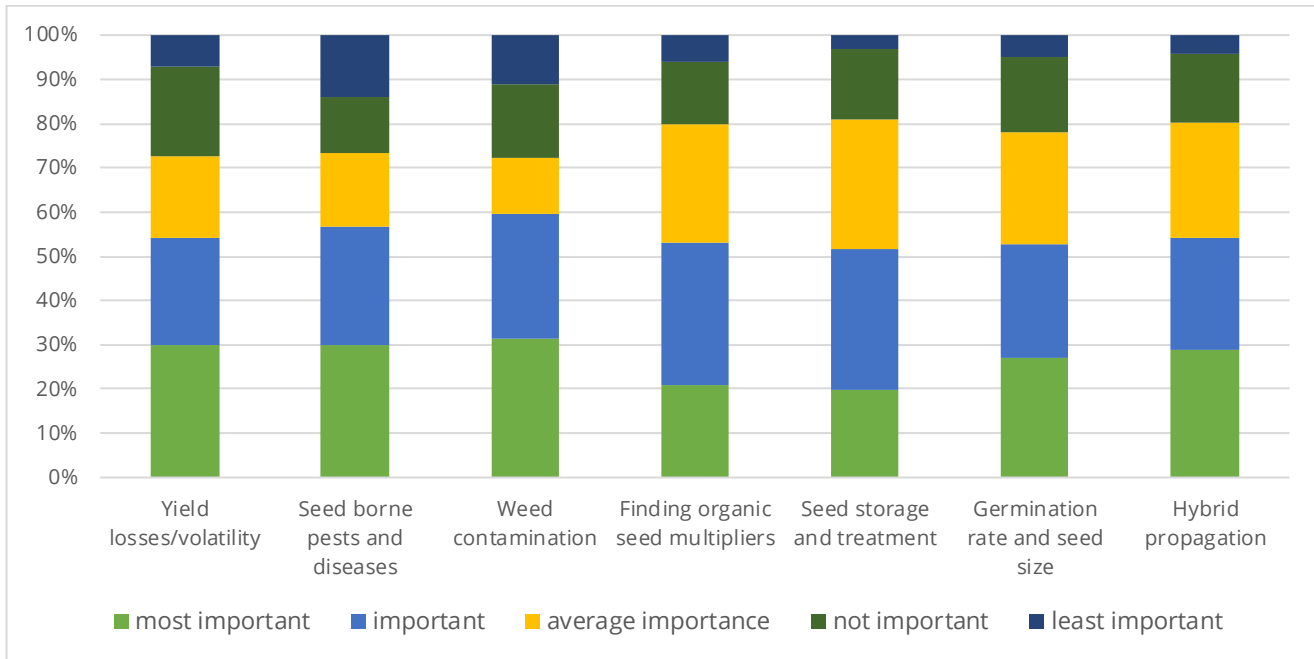
The results show that actions such as improving the availability of OS for locally adapted varieties, more efforts in breeding for organic farming and complexity and cost of certification of organic seed production are the most important. Less than half of the participants think that the use of open pollinated varieties, stricter national rules for grading and more information on availability of organic seed in foreign markets are important actions to boost the use of organic seed.



## D 8.3\_Report on field-based demonstration events

### Technical challenges in organic seed production

Participants ranked the technical challenges in organic seed production (from most important to least important). The results show that weed contamination, seed-borne pests and diseases, hybrid propagation and yield losses/volatility were ranked as most important. Participants think that finding organic seed multipliers, seed storage and treatment and germination rate and seed size are less important or they were mostly neutral on these statements.



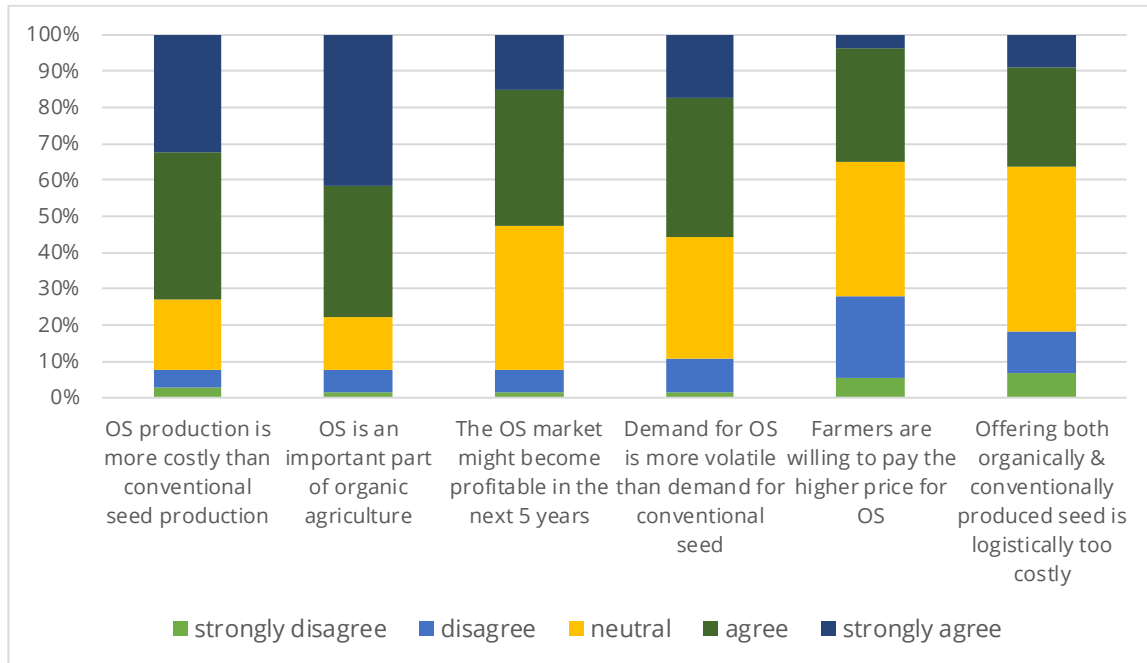
**Fig. 6:** Technical challenges in organic seed production. Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important).



## D 8.3\_Report on field-based demonstration events

### Marketing issues with organic seed

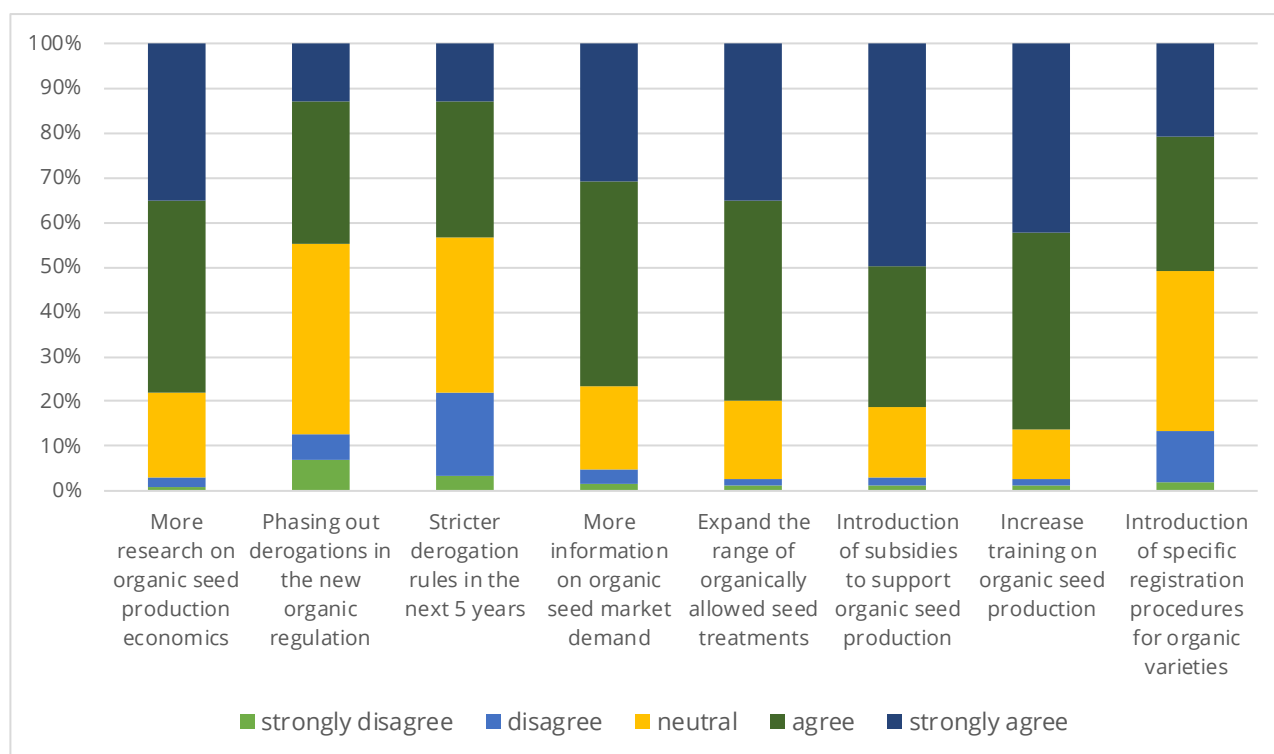
The participants were asked about their opinion in marketing issues with organic seed. Most of them agreed that production of organic seed is more costly than conventional seed production (73.0%) and that organic seed is an important part of organic agriculture (77.6%). They also agreed that the organic seed market might become profitable in the next 5 years (52.4%) and that the demand for organic seed is more volatile than the demand for conventional seed. The participants were mostly neutral on the statement that farmers are willing to pay the higher price for organic seed and that offering both organically & conventionally produced seed is logistically too costly.



**Fig. 7:** Marketing issues with organic seed (OS). Rank the five-points scale for each statement (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree).

## D 8.3\_Report on field-based demonstration events

### Policy measures



**Fig. 8:** Policy measures to enhance organic seed (OS) production. Rank the five-point scale for each statement (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree).

We asked the participants also about various policy measures and whether they agreed or disagreed with these measures. Most of the participants (more than 75%) agreed with the policy to increase training on organic seed production, to introduce subsidies to support organic seed production, to expand the range of organically allowed seed treatments, to have more research on organic seed production economics and to have more information on the organic seed market demand. More than 40% also agreed that the introduction of specific registration procedures for organic varieties, phasing out derogations in the new organic regulation and stricter derogation rules in the next 5 years are also important policy measures for organic seed regulation.

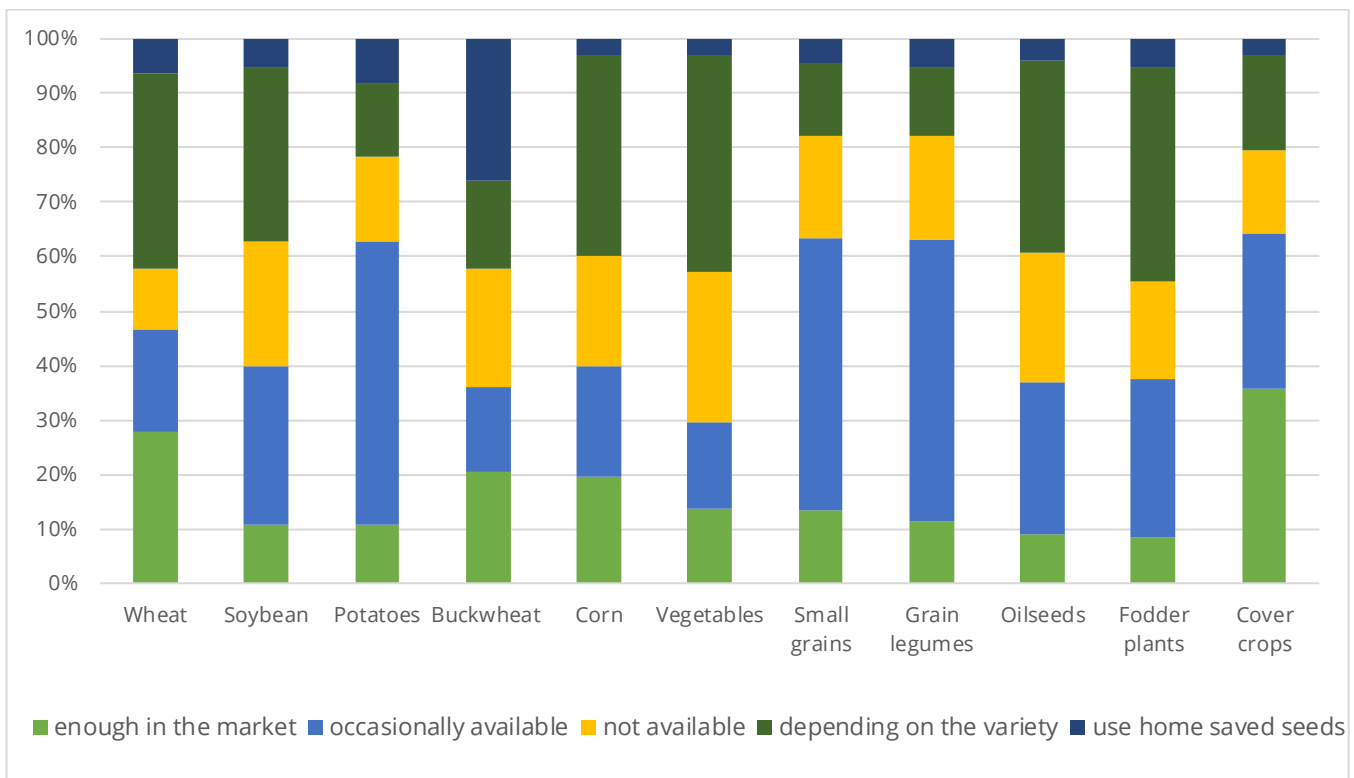


## D 8.3\_Report on field-based demonstration events

### Organic seed availability

The participants were asked to rate the availability of organic seed of different crops. This question was included in both versions of the ECOBREED questionnaire at demonstration events.

The results show that for wheat, soybean corn, vegetables, oilseeds and fodder plants, the availability of organic seed depends on the variety that the farmers want to use. For potatoes, small grains and grain legumes, organic seeds are only occasionally available. For buckwheat, farmers mostly use home-saved organic seeds. Generally, the farmers think that there is enough organic seed available for the crops they want to grow. However, the portfolio of varieties is significantly limited compared to conventional seeds.



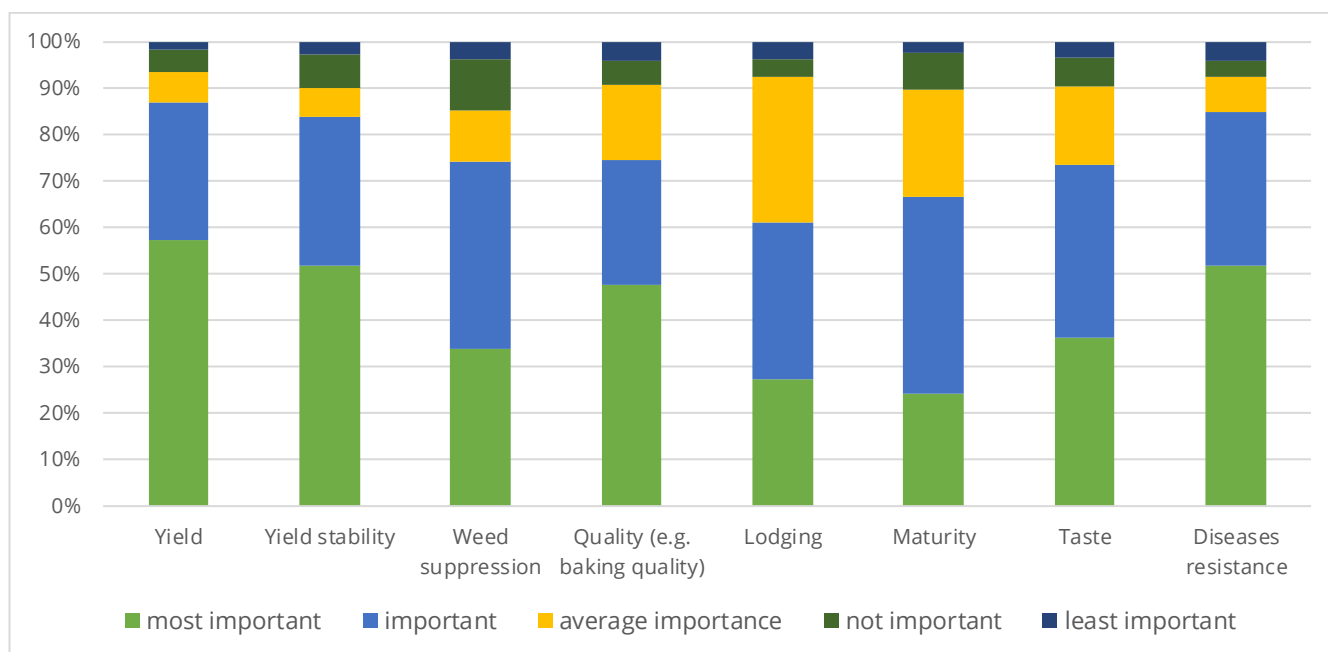
**Fig. 9:** Organic seed availability. Rank the five-point scale for each crop (1 – enough in the market; 2 – occasionally available; 3 – not available; 4 – depending on the variety; 5 – I use home saved seeds). Multiple choices possible.

## D 8.3\_Report on field-based demonstration events

### Important traits for organic varieties

The participants also ranked various traits for organic varieties from most important to least important. This question was included in both versions of the ECOBREED questionnaire at demonstration events.

The results show that the most important traits for organic varieties are yield, disease resistance, yield stability, quality (e.g. baking quality), weed suppression, taste, maturity and lodging.



**Fig. 10:** What are important traits for an organic variety in your region? Rank the five-point scale for each statement (1 – most important; 2 – important; 3 – average importance; 4 – not important; 5 – least important).

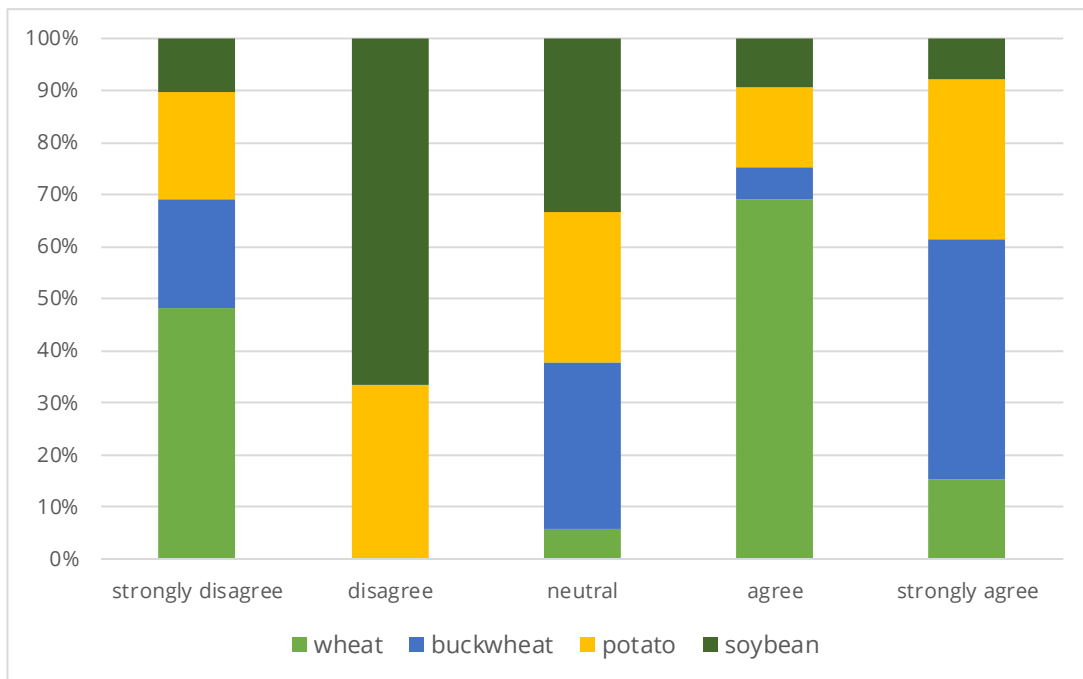


## D 8.3\_Report on field-based demonstration events

### Composite cross populations (CCP)

We asked the participants to rank their willingness to grow composite cross populations (CCP) on their farms. This question was included in both versions of the ECOBREED questionnaire at demonstration events.

The results show that most farmers are neutral on this question, regardless of the crop. Only for wheat, the participants mostly agreed that they would be willing to grow CCP on their farms. They also suggested that they would be willing to grow CCP for other crops, e.g. rye and different types of beans. Farmers in Austria also commented that they would be willing to grow CCP on their farms if it would mean having comparable yields as check cultivars and the quality would be stable.



**Fig. 11:** Rank the five-point scale for your willingness to grow composite cross populations (CCP) on your farm (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; 5 – strongly agree).