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Consumer preferences
(WP1 - Deliverable 1.5)

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v.01	15/10/2018	First draft version	Bernd Pölling (SWUAS)
v.02	18/10/2018	Final version	Bernd Pölling (SWUAS)

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1. Introduction WP 1 „Needs Analysis“: General description and objectives

WP 1 „Needs Analysis“ aims to deliver important information to design new curricula and lifelong learning (LLL) modules based on existing and new data from both, WB and EU. Additionally, it aims to provide an appropriate infrastructure for teachers‘ training on urban agriculture within Bosnia and Herzegovina, Montenegro, and Kosovo. In terms of education resources WP 1 defines skills and competences required to design teaching and learning environments supporting urban agriculture entrepreneurship. Thus, WP 1 is an essential requirement for BUGI’s downstream WPs. Within WP 1 data collection embraces different levels in terms of materials and methods to define knowledge, skills, and competences needed for (new) entrepreneurship in urban agriculture. The surveys address practitioners and actors in urban agriculture (farmers, start-ups, but also actors in the food value chain) (Deliverables 1.3 and 1.4), different stakeholder groups, like NGOs, HEIs, public authorities, and SMEs including farmers (Deliverable 1.2), and consumers (Deliverable 1.5). The findings of the Deliverables 1.2-1.5 are going to be synthesized in Deliverable 1.6 „City-adjusted farm strategies in Bosnia and Herzegovina, Montenegro, and Kosovo“.

2. Consumer preferences survey

This report on consumer preferences relies on a survey, which has been conducted within all the three BUGI Western Balkan countries Kosovo, Montenegro, and Bosnia and Herzegovina. The questionnaire, which had been used, is attached to this report (Appendix 1). The following instructions have been given:

Within Deliverable 1.5 “Consumer preferences” we ask all three partner countries to reach at minimum 100 interviews with consumers (s. Table 1). In Bosnia and Herzegovina and Kosovo it is up to the two partner countries to share tasks. National partners are responsible for finding consumers living in cities of Bosnia and Herzegovina, Montenegro, and Kosovo. It is up to the partner countries to decide on the survey mode (written/mail, phone, face-to-face, internet/web survey). The WP leaders recommend translating the questionnaire into national language(s) and distribution it via email and/or upload on a website for consumers’ self-administered completion. However, please feel free to conduct personal interviews via phone or face-to-face. Every partner has to pay attention to cover national socio-demographic characteristics, like age, gender, and social stratum.

The consumer preferences survey consists of in total 243 usable replies from Kosovo (102), Bosnia and Herzegovina (63), and Montenegro (78) (s. Figure 1).

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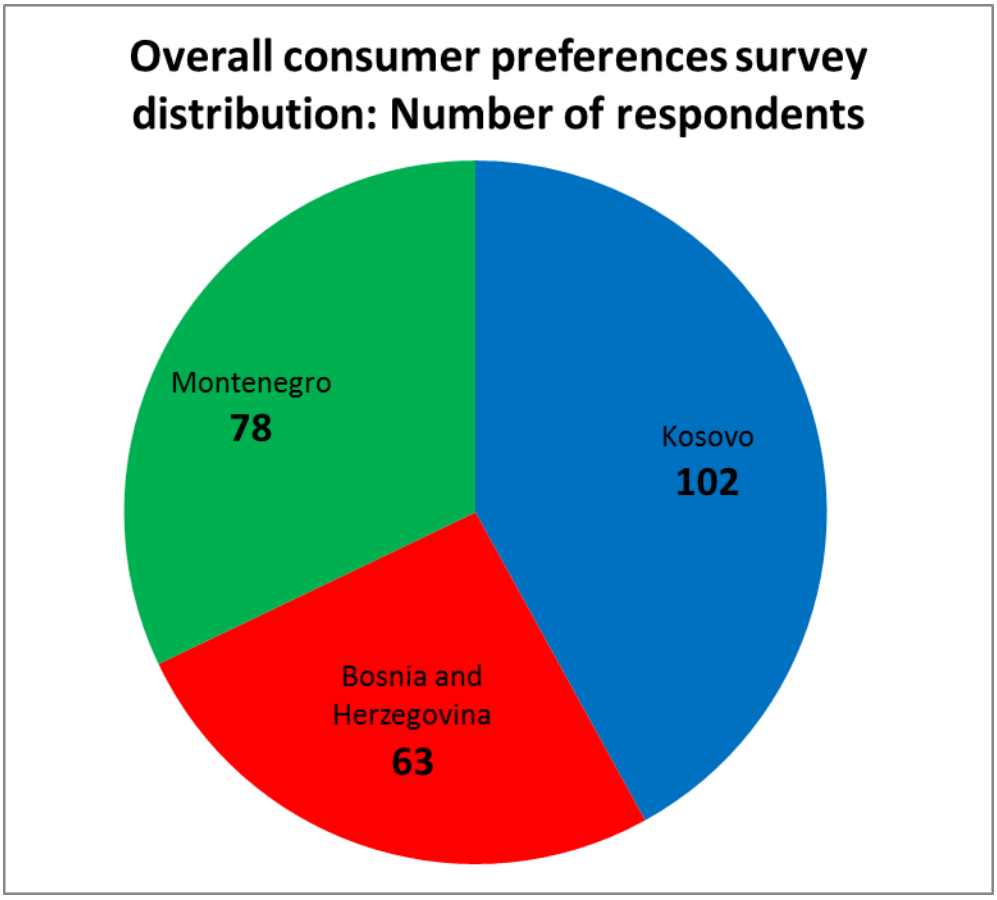

Figure 1: Overall consumer preferences survey distribution among countries

The overall gender ratio is 50:50 (s. Figure 2). While the majority of Kosovan respondents are male, most respondents from Bosnia and Herzegovina and Montenegro are female. The overall age distribution is comparable young and younger than the three countries' total populations (s. Figure 3). The average age is 35 years. All three countries have average values in the 30s.

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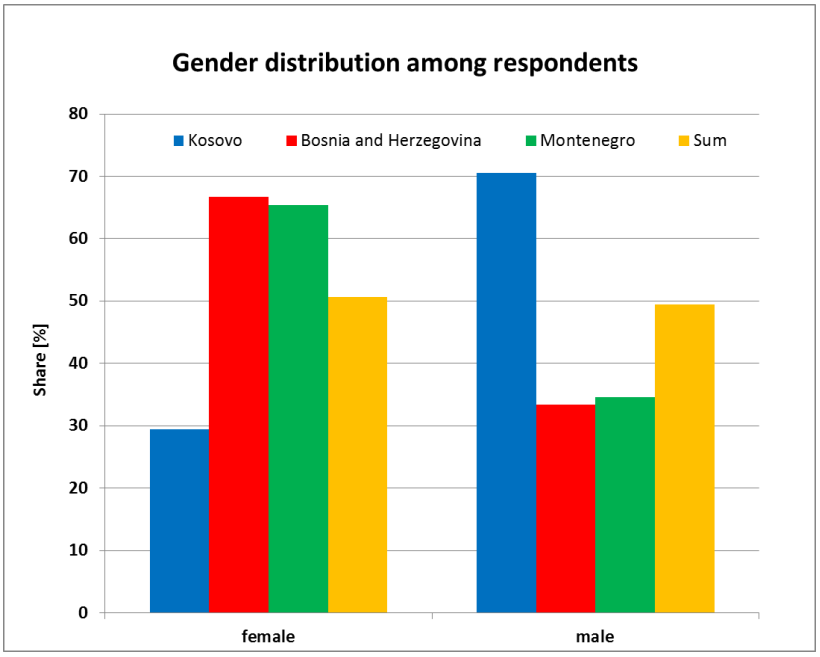

Figure 2: Gender distribution among respondents

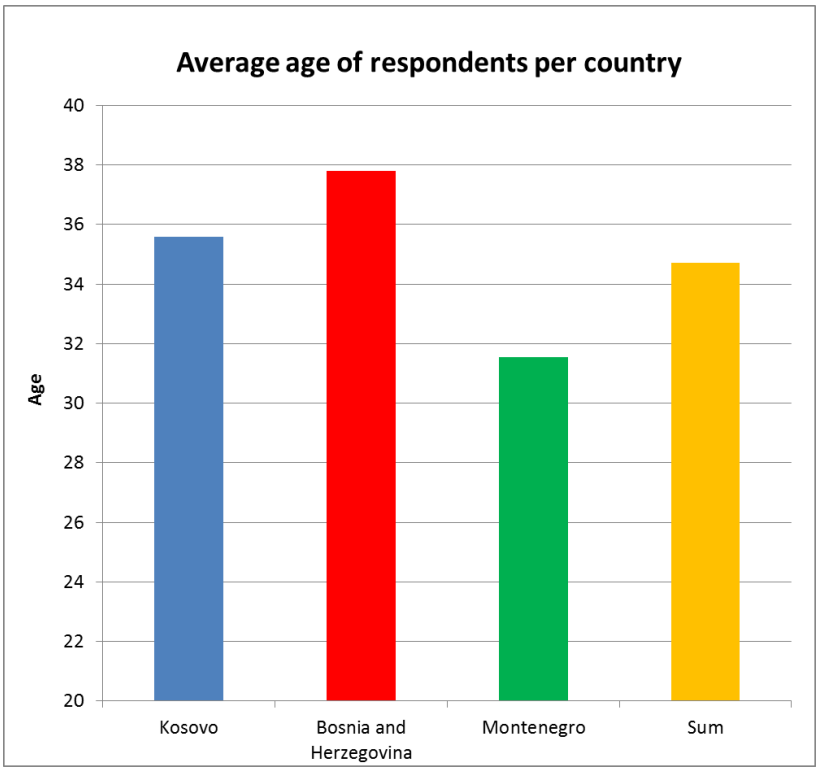

Figure 3: Average age of respondents

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The respondents estimate that they respectively their families produce and consume nearly 22% of the food themselves, while about 78% are purchased elsewhere (s. Figure 4). The self-consumption share is highest for Kosovo (29%) and lowest in Montenegro (15%).

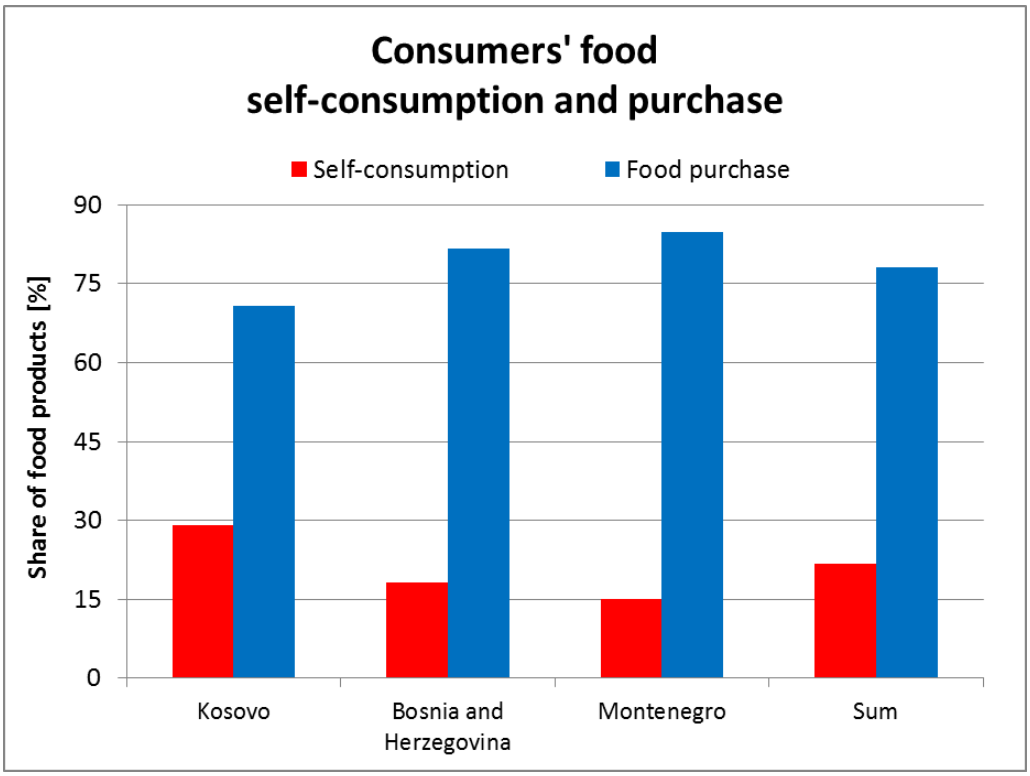

Figure 4: Consumers' food self-consumption and purchase

The following three figures show the importance of different food purchase channels for Kosovo (s. Figure 5), Bosnia and Herzegovina (s. Figure 6), and Montenegro (s. Figure 7). In all three countries discounter and farmer markets build important purchase channels for food products. In Kosovo on-farm purchase plays the most relevant role, while discounters reach the highest importance in Bosnia and Herzegovina and Montenegro. Discounters and farmer markets reach on a range from 1 (less important) to 5 (most important) values above three in all three countries.

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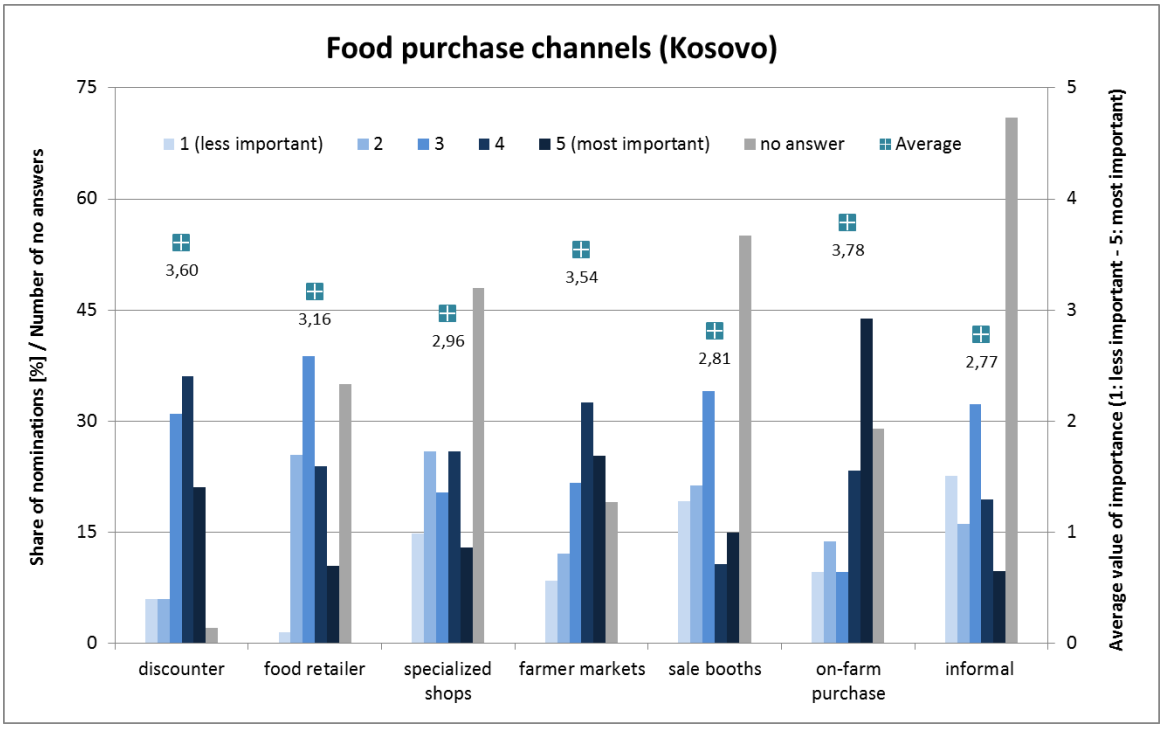

Figure 5: Food purchase channels (Kosovo)

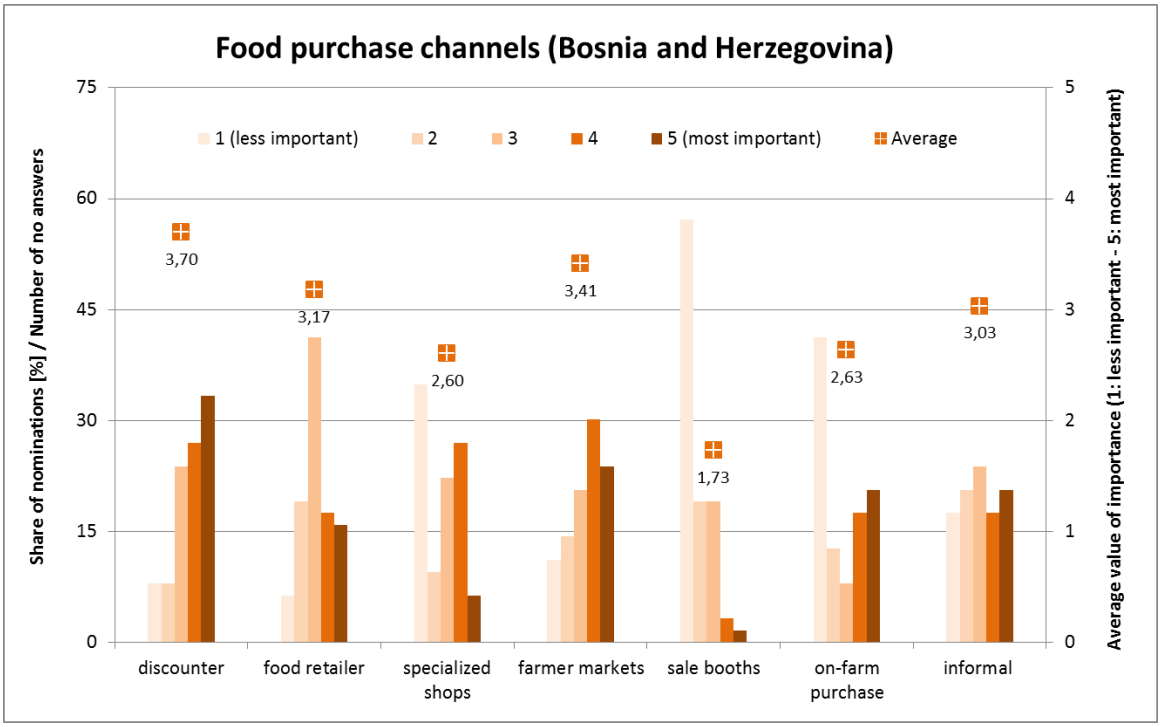

Figure 6: Food purchase channels (Bosnia and Herzegovina)

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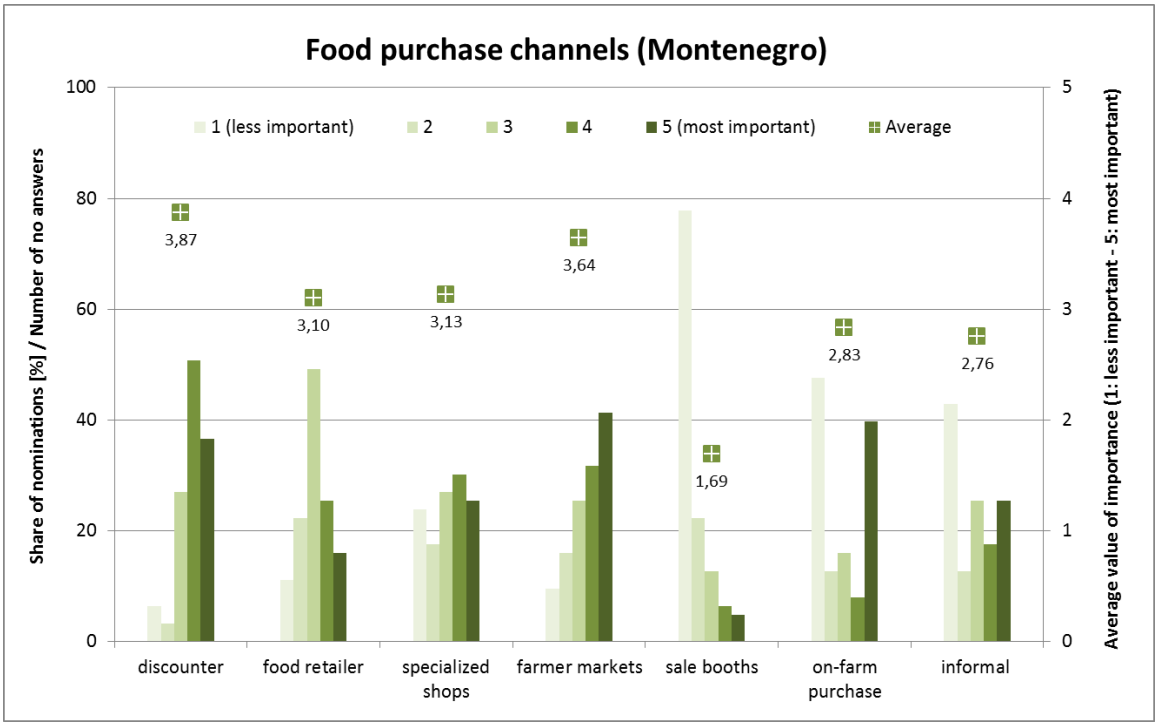

Figure 7: Food purchase channels (Montenegro)

The majority of respondents of the consumer preferences survey purchase fresh/unprocessed food (s. Figure 8). This category reaches more than 50% of all food purchases for Bosnia and Herzegovina and Montenegro. The following two food purchase categories are processed food products followed by convenience food, which accounts for ca. 30% of Kosovan respondents and less than 15% of respondents each from Bosnia and Herzegovina and Montenegro.

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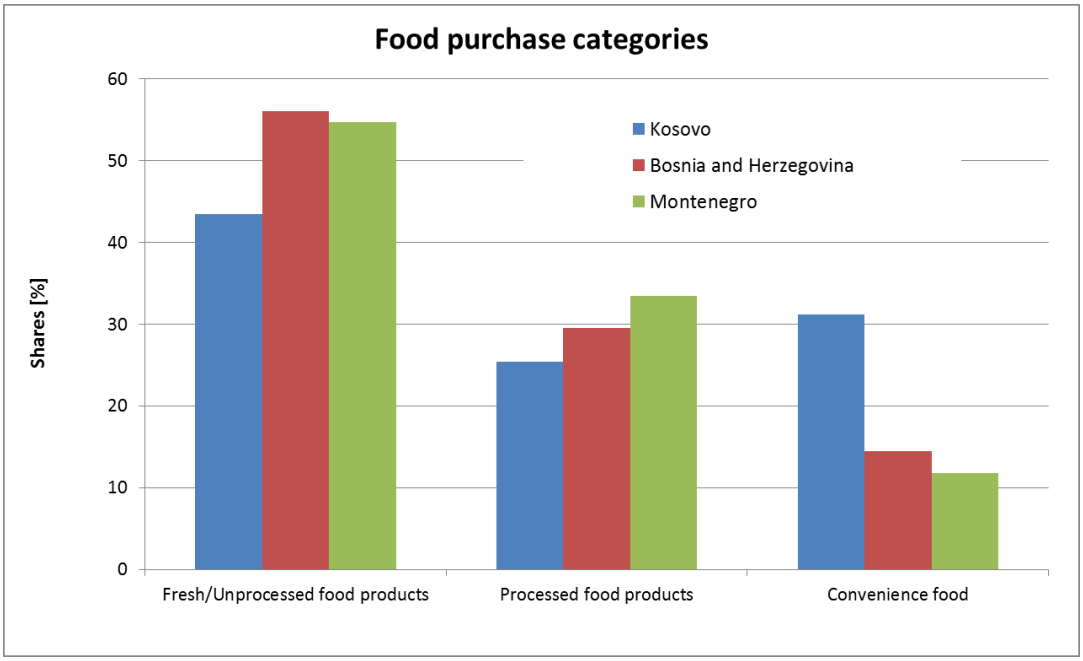

Figure 8: Food purchase categories

The majority of survey respondents has already used of the term "urban agriculture" respectively "urban farming" (s. Figure 9). The name recognition is highest in Bosnia and Herzegovina followed by Kosovo and Montenegro.

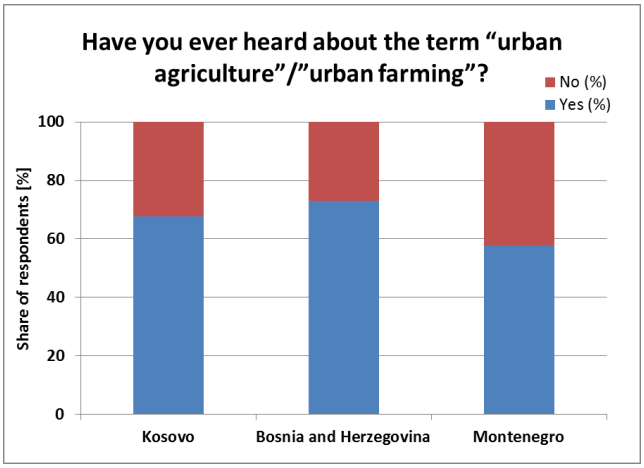

Figure 9: Recognition of the term "urban agriculture" / "urban farming"

The following question aims for deeper insights into the customers' willingness to buy food products from specific urban agriculture production types (s. Figures 10-12). On average, (peri-) urban farming types and private gardens receive more positive answers than the other urban gardening and technological innovation production types. In Kosovo, (peri-)urban conventional

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farms and pick-your-own offers reach the highest level followed by Community Supported Agriculture, private gardens, and (peri-)urban organic farms (all >4.5). Urban gardening (in public spaces and on vacant land) reaches still values >4, while technological innovations have values of on average below 4 each. These technological innovations have a high number of no answers, which has to be mentioned also for CSAs and pick-your-own.

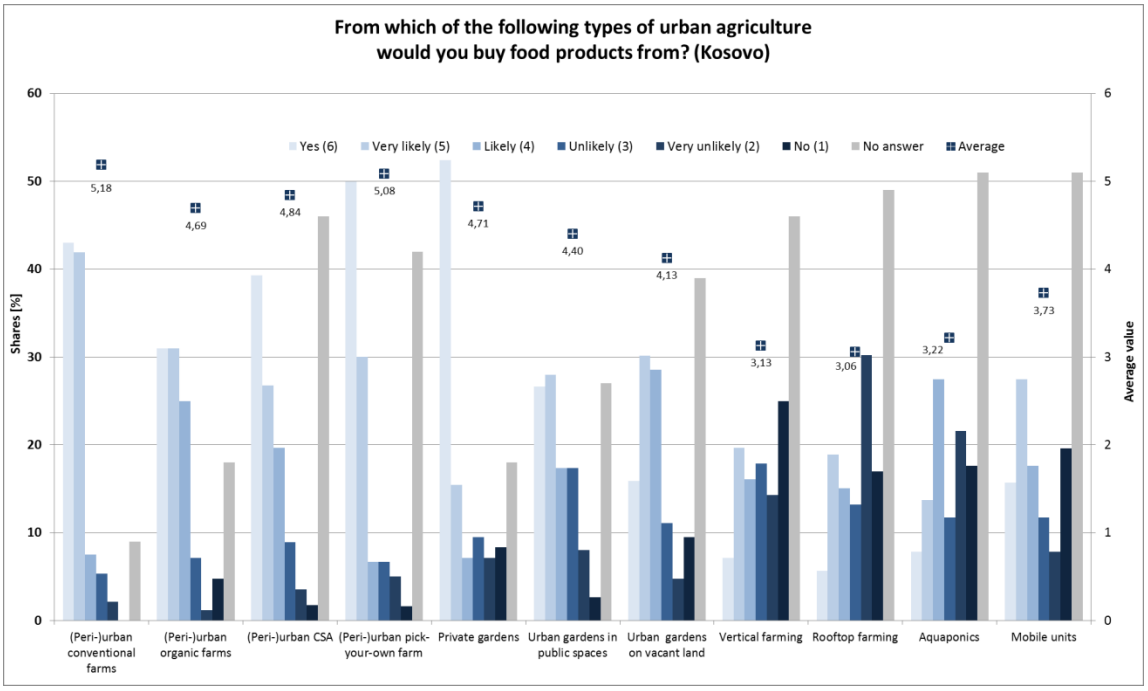

Figure 10: From which of the following types of urban agriculture would you buy food products from? (Kosovo)

Similar conclusions can also be drawn for Bosnia and Herzegovina (s. Figure 11) and Montenegro (s. Figure 12). The respondents from Bosnia and Herzegovina rate private gardens highest (close to 5); followed by the peri-urban production types: organic farming, pick-your-own, and CSAs. The technological innovations are rated higher than by Kosovan respondents. Furthermore, it has to be pinpointed that conventional farming is rated significantly lower compared to Kosovo, where it reaches the highest value of all urban agriculture production types. The values for Bosnia and Herzegovina and Montenegro are very similar between each other.

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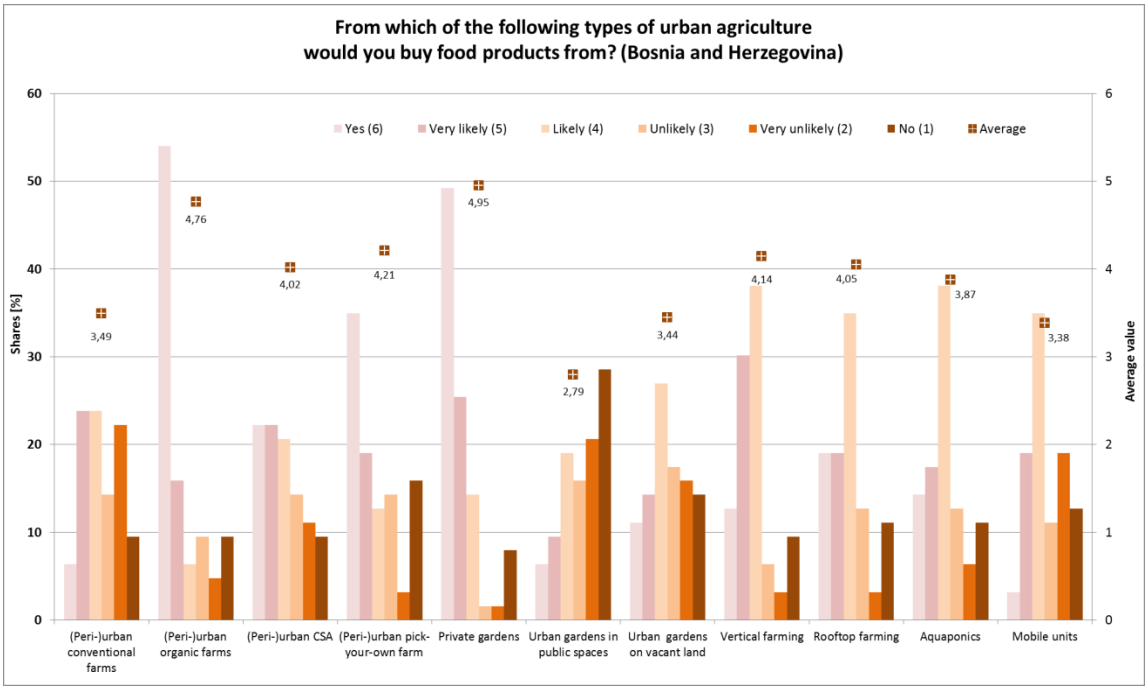

Figure 11: From which of the following types of urban agriculture would you buy food products from? (Bosnia and Herzegovina)

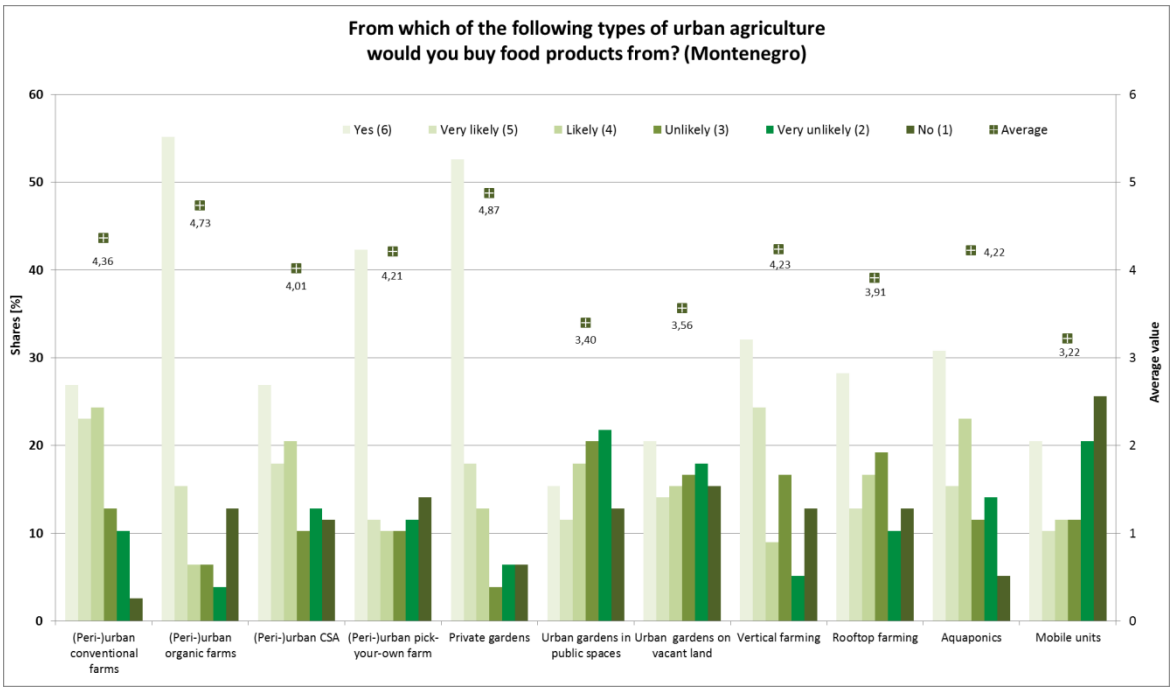

Figure 12: From which of the following types of urban agriculture would you buy food products from? (Montenegro)

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The following three figures visualize the respondents' attitude to production systems and orientations (s. Figures 13-15). This attitude is described as very accepted, accepted, indifferent, rejected, and very rejected. Again, it becomes obvious that the results from Bosnia and Herzegovina and Montenegro are very similar to each other, while the values for Kosovo differ to some extent. In Bosnia and Herzegovina and Montenegro organic production reaches the highest acceptance value with some distance to second placed resource-efficient agriculture (Bosnia and Herzegovina) respectively greenhouse technology (Montenegro). All production types in all three countries reach acceptance rates above 3 except the use of GMOs. The Kosovan respondents differentiate only little between the different production types. In Bosnia and Herzegovina and Montenegro the differences are stronger accentuated. In general, organic production, resource-efficient agriculture, and greenhouse technology reach the first three places of acceptance followed by extensive production, intensive crop and livestock production, soilless production, and the usage of GMOs. In Montenegro, the intensive crop and livestock production reach even to a little extent better acceptance rate than extensive production.

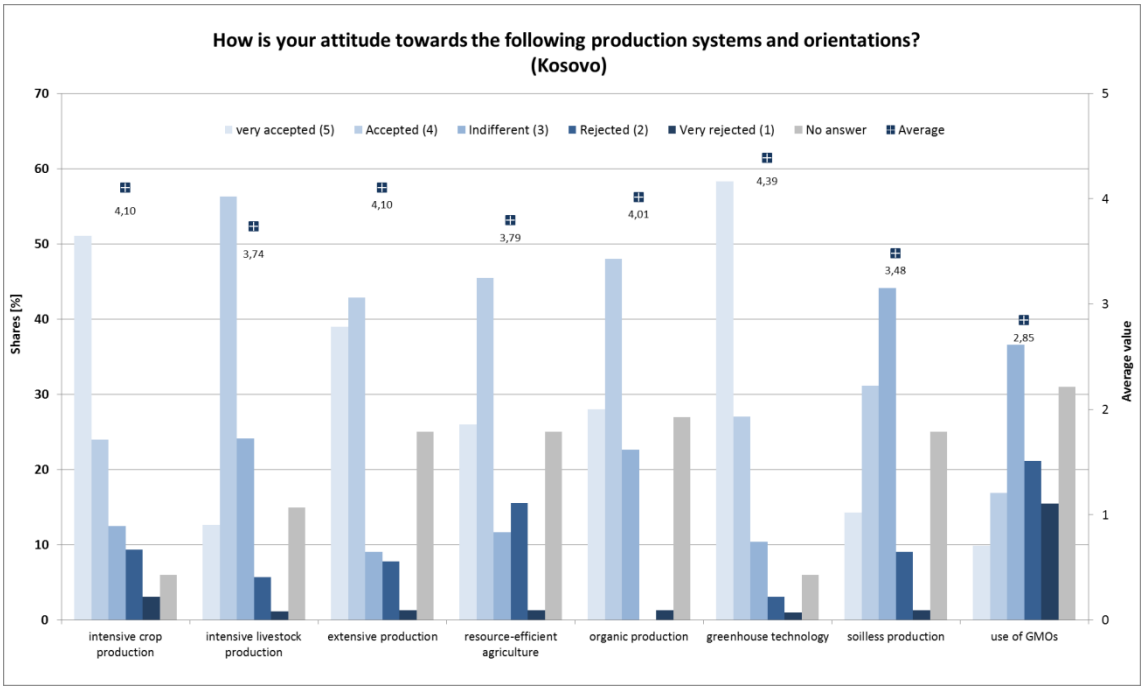

Figure 13: How is your attitude towards the following production systems and orientations? (Kosovo)

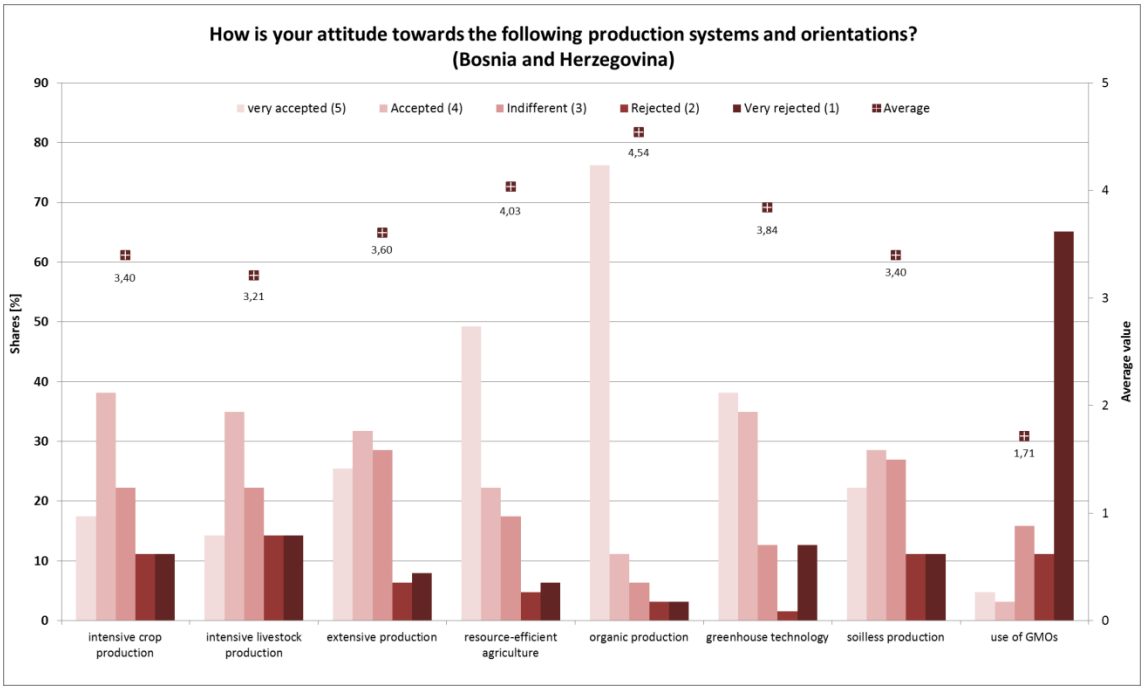

Figure 14: How is your attitude towards the following production systems and orientations? (Bosnia and Herzegovina)

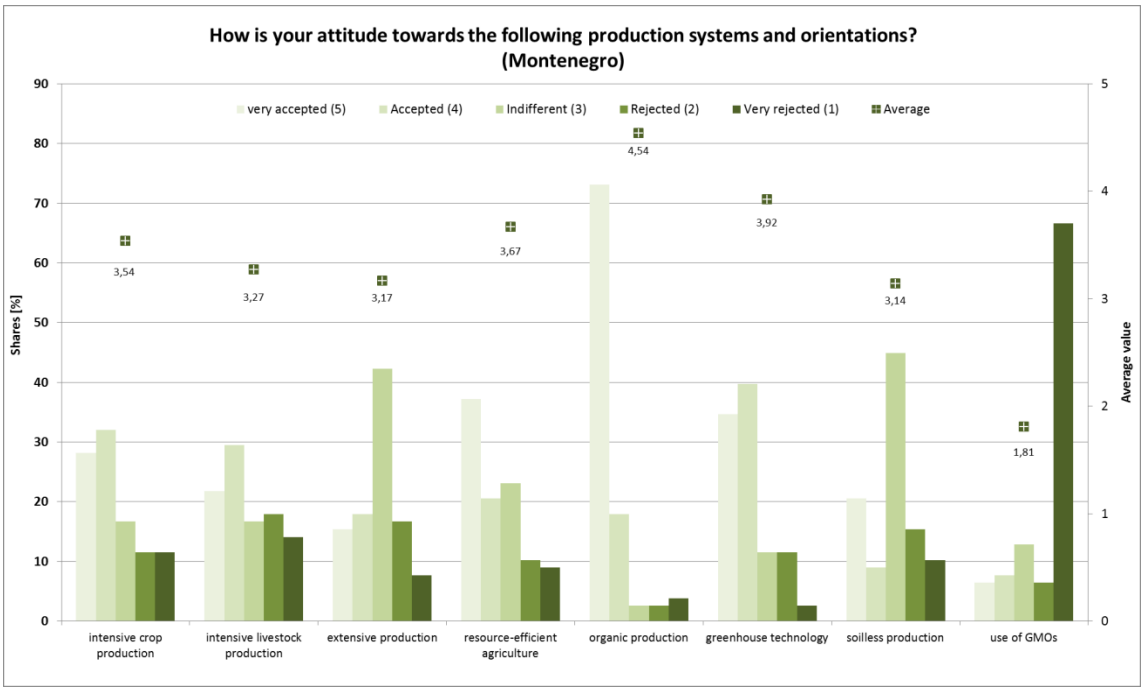

Figure 15: How is your attitude towards the following production systems and orientations? (Montenegro)

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Fruits and outdoor vegetables reach the highest willingness to buy based on urban agriculture production; followed by greenhouse products, eggs, and honey (s. Figure 16). These results contradict somewhat the earlier statement of higher acceptance of greenhouse technologies compared to outdoor production (s. Figures 13-15). The differences between countries are especially obvious when focusing on greenhouse products, which reach the highest willingness to buy for Kosovo (ca. 90%), while the two other countries Bosnia and Herzegovina and Montenegro reach only about 40% respectively 35%.

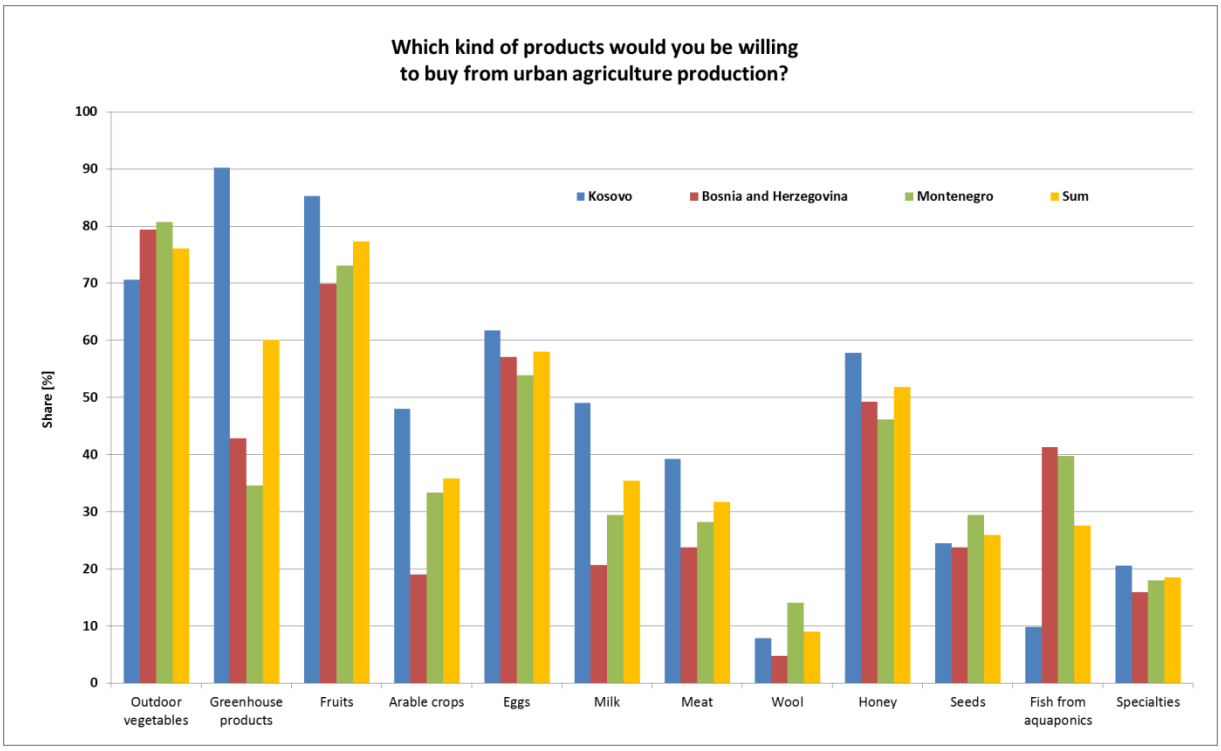

Figure 16: Which kind of products would you be willing to buy from urban agriculture production?

The willingness to pay for urban agriculture products is high. When 1kg of onions from conventional and imported agriculture costs 1 € in the supermarket, the respondents would be willing to pay for 1kg of onions from urban agriculture produced and sold in the respondents' city more than 1.70 € - in Bosnia and Herzegovina and Montenegro even > 1.80 €.

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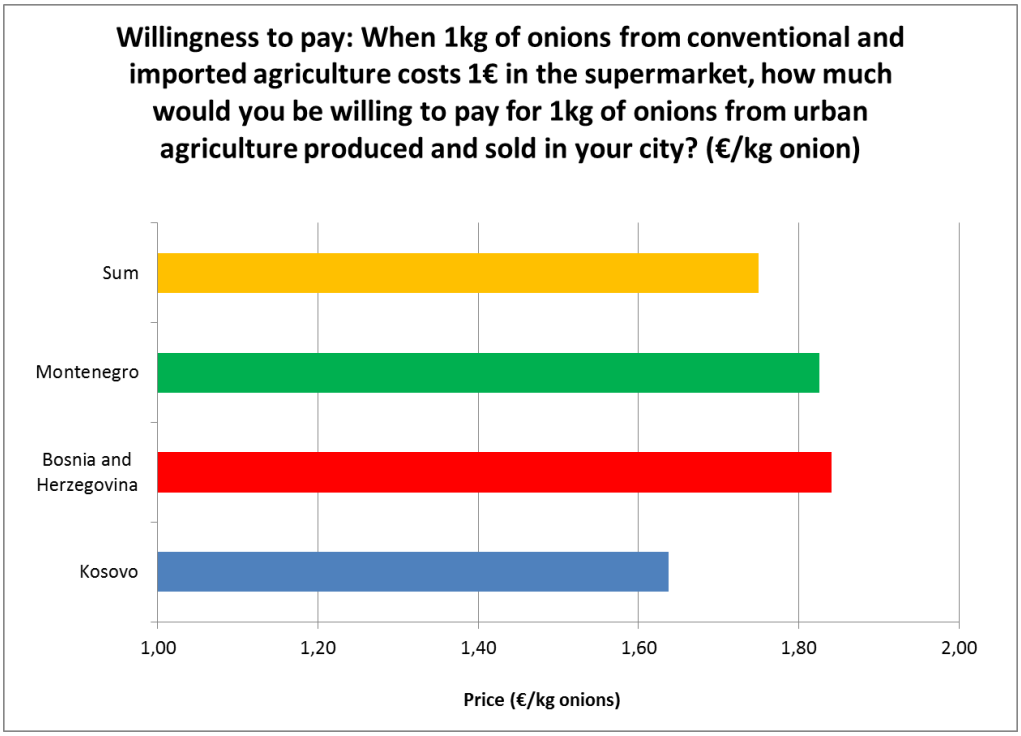

Figure 17: Willingness to pay: When 1kg of onions from conventional and imported agriculture costs 1€ in the supermarket, how much would you be willing to pay for 1kg of onions from urban agriculture produced and sold in your city? (€/kg onion)

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Appendix 1:

Consumer preferences survey

A) General food purchase behaviour

1. Please estimate the food share you (household level) produce on your own compared to the share you (household level) purchase elsewhere!
   - ☐ Self-consumption: ____ %
   - ☐ Food purchase: ____ %

2. Where do you (household level) preferably buy your food? Please tick the buying places you/your family uses and rank them based on your buying preferences from 1 less important to 5 most important.

	1	2	3	4	5
☐ Discounter	☐	☐	☐	☐	☐
☐ Food retailer	☐	☐	☐	☐	☐
☐ Specialized shops (e. g. organic shop)	☐	☐	☐	☐	☐
☐ Farmer markets	☐	☐	☐	☐	☐
☐ Sale booths (at the street, …)	☐	☐	☐	☐	☐
☐ On-farm purchase	☐	☐	☐	☐	☐
☐ Informal (family / neighbours / etc.)	☐	☐	☐	☐	☐
☐ Other: _____ (please specify)	☐	☐	☐	☐	☐
☐ Other: _____ (please specify)	☐	☐	☐	☐	☐

3. What are the most relevant food purchase criteria for you (household level)? Please rank the three most important criteria from 1 to 3!

	Rank (1—3)
☐ Price	____
☐ Origin	____
☐ Geographical proximity	____
☐ Taste	____
☐ Visual appearance	____
☐ Freshness	____
☐ Production system	____
☐ Use-by date (best before date)	____
☐ Ingredients	____
☐ Packaging	____
☐ Quality mark/label	____
☐ Other: _____ (please specify)	____

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4. Please estimate the food purchase share (household level) between fresh, processed, and convenience food (in total 100 %).
   - ☐ Fresh/unprocessed products (primary products) ____ %
   - ☐ Processed food products ____ %
   - ☐ Convenience food ____ %

B) Urban agriculture

5. Have you ever heard about the term "urban agriculture"/"urban farming"?
   - ☐ Yes (if yes, go on with question 6.)
   - ☐ No (if no, go on with question 7.)

6. How would you explain/define it? [Please go on with question 8.)

7. What do you think UA is like?

8. From which of the following types of urban agriculture would you buy food products from? (1: yes, 2: very likely, 3: likely, 4: unlikely, 5: very unlikely, 6: no)

	1	2	3	4	5	6
Urban / Peri-urban farms						
Conventional farms	☐	☐	☐	☐	☐	☐
Organic farms	☐	☐	☐	☐	☐	☐
CSA*	☐	☐	☐	☐	☐	☐
Pick-your-own offers	☐	☐	☐	☐	☐	☐
Urban gardens						

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Private gardens	☐	☐	☐	☐	☐	☐
Gardens in public spaces	☐	☐	☐	☐	☐	☐
Gardens on vacant land	☐	☐	☐	☐	☐	☐
Innovations						
Vertical farming	☐	☐	☐	☐	☐	☐
Rooftop farming	☐	☐	☐	☐	☐	☐
Aquaponics	☐	☐	☐	☐	☐	☐
Mobile units (container ...)	☐	☐	☐	☐	☐	☐

9. How is your attitude towards the following production systems and orientations?(1: very accepted, 2: accepted, 3: indifferent, 4: rejected, 5: very rejected)

	1	2	3	4	5
Intensive crop production (vegetables …)	☐	☐	☐	☐	☐
Intensive livestock production	☐	☐	☐	☐	☐
Extensive production	☐	☐	☐	☐	☐
Resource-efficient agriculture	☐	☐	☐	☐	☐
Organic production	☐	☐	☐	☐	☐
Greenhouse technology	☐	☐	☐	☐	☐
Soil-less production	☐	☐	☐	☐	☐
Use of GMOs	☐	☐	☐	☐	☐

10. Which kind of products would you be willing to buy from urban agriculture production? Multiple ticks okay.
    - ☐ Vegetables (outdoor)
    - ☐ Greenhouse products
    - ☐ Fruits
    - ☐ Arable Crops (except vegetables/fruits)
    - ☐ Egg
    - ☐ Milk
    - ☐ Meat
    - ☐ Wool
    - ☐ Honey
    - ☐ Seeds
    - ☐ Fish from Aquaponics
    - ☐ Specialties

11. Now we value the willingness to pay. When 1kg of onions from conventional and imported agriculture costs 1€ in the supermarket, how would you be willing to pay for 1kg of onions from urban agriculture produced and sold in your city?

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____ €/kg of onions

C) Socio-demographic characteristics

12. Please mark your gender?

- ☐ Female
- ☐ Male

13. Please indicate your age?
____ years

14. What is your highest education level?
- ☐ University or University of Applied Sciences
- ☐ Technical school / College
- ☐ Vocational school / training (apprenticeship completed)
- ☐ Secondary school
- ☐ No school degree

15. How is your working status?
- ☐ Employee (permanent position)
- ☐ Employee (temporary position)
- ☐ Self-employed /Freelancer
- ☐ Trainee/Apprentice
- ☐ Pensioner
- ☐ In education (university)
- ☐ In education (school)
- ☐ Unemployed

16. How many family members are living in your household?
____ family members, whereof _____ are children

Thank you very much for taking your time to take part in the survey. In case you are interested in the results, please give us your email or postal address.

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