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Slovenian Learners` Knowledge about Slovenian Native Livestock Breeds

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Abstract

In this paper, we present the results of the study on Slovenian learners` knowledge of native livestock breeds in Slovenia. We surveyed a total of 164 young learners, aged 12 to 15, from three elementary schools in rural areas using a questionnaire. They were asked if they had ever heard the term native breed and what the term Slovenian native breed meant. On the list of 23 livestock breeds, they had to tick the Slovenian native breeds. Finally, learners were asked to list their most common sources of information about Slovenian native breeds. The results of the study show that most learners had already heard the term native breed. Moreover, the learners know best that the Lipizza horse and the Carniolan bee are Slovenian native breeds. However, they do not know that the Bosnian mountain horse is also a native breed on Slovenian territory. Few learners recognised the Drežnica goat and the Cika cattle as Slovenian native breeds. Television and Internet are the most important sources of information about native breeds, while school education obviously does not play a role.

Keywords: Slovenian Native Breeds, Knowledge, Learner

Introduction

Autochthonous (native, indigenous) breeds are livestock populations that have adapted to local conditions, including traditional agricultural production systems and environments. They originate from specific geographic regions, are adapted to the environmental conditions of those regions, and are commonly used there (FAO, 2012). In recent decades, the number of native breeds has declined due to the

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demands of intensive livestock farming and global economic development. It is estimated that nearly 30% of the world's native breeds are endangered (FAO, 2021). In Slovenia, the conservation of animal genetic resources (AnGR) is included in the various sectoral strategies, plans and programmes at the national level. The long-term programme for the conservation of AnGR biodiversity serves as a strategic document that contains the priority actions needed to protect AnGR, with a focus on Slovenian native breeds (Program ..., 2016). National legislation recognises 14 livestock breeds as native to Slovenia: five sheep breeds, four horse breeds, one cattle breed, one pig breed, one goat breed, one chicken breed, and one subspecies of the western honey bee. Education and awareness of the important role of native breeds is carried out through various social media, publications, agricultural fairs and promotional materials for various groups and school classes.

Elementary school learners have various relationships with animals in their daily lives (KNOBLOCH et. al, 2007). They learn about animals in both formal and informal settings. The Experience obtained in interactions with pets, domestic, livestock, and exotic animals, as well as on school field trips to museums, farms, zoos, and outdoor/nature centres, have a significant impact on learners' attitudes and beliefs about animals. Integrating agriculture into elementary and middle school curricula brings learning to life. Elementary and middle school teachers believe that schools play an important role in teaching about agriculture, food, and natural resources. Teachers' beliefs and perceptions about agriculture (biodiversity – native livestock breeds) likely influence what and how they include agriculture in their lessons.

Educators have suggested that integrating agriculture into the general curriculum would help learners, based on the arguments of experiential learning, a community-based curriculum, and authentic or applied learning in real-life situations. Interdisciplinary education is the key to engaging people to think deeply about agriculture (biodiversity) and its role in society. Teachers' beliefs and past experiences influence what and how they teach (BURROWS et al., 2020).

Knowledge of Slovenian native livestock breeds varies widely among elementary school learners. It depends mainly on the modern learning-objective and process-oriented curricula of elementary science education. As far as we know, there are no data on knowledge of Slovenian native livestock breeds among elementary school learners in Slovenia. Therefore, the aim of this study was to investigate which breeds learners recognize as Slovenian native breeds.

Material and methods

A total of 164 learners aged 12 to 15 years from elementary school in rural areas were interviewed using a questionnaire: 80 girls and 84 boys.

The questionnaire contained the following questions:

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- Have they ever heard of the term native breed? If so, what does this term mean?
- Do they know a native breed and if so, write it down.
- Identify native and non-native breeds
- From what sources of information did they get most of their knowledge about Slovenian autochthonous breeds?

In the survey form we entered all 14 native Slovenian livestock breeds recognized by national legislation, and in addition we included other non-native breeds bred in Slovenia. When including other breeds, we focused on breeds that have the adjective Slovenian in their name, but are not native breed.

The teachers distributed the questionnaire to the learners and they answered the questions themselves. It took about 10 minutes to complete the questionnaire.

A survey was conducted in June 2022 among the learners of the last triad of elementary school in rural areas.

Results and discussion

A total of 164 learners aged 12-15 years were surveyed (Figure 1). The breakdown of the total number of boys and girls is shown in the graph. Most learners were in the 13-year-old age group (61 learners) and the fewest learners were 12 years old (25 learners). In terms of gender breakdown, 81 girls and 83 boys were surveyed in all four groups.

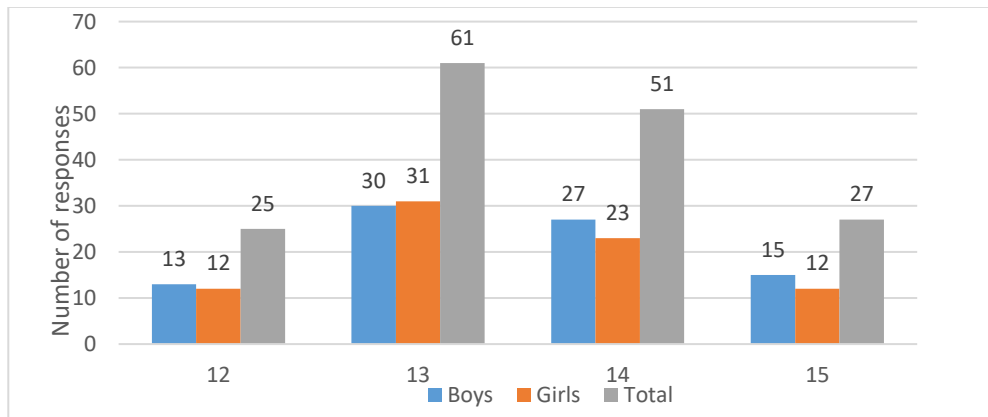


Figure 1: The number of learners who responded the survey, grouped by age and gender

In each age group, the majority of learners had heard the term native livestock breed (Figure 2). Similarly, the majority of learners indicated that they knew at least one of the Slovenian native livestock breeds (Figure 3). However, only a few of them

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wrote down the name of the breed or animal (Lipizza horse, Carniolan bee, Karst shepherd, human fish, bear, wolf ...).

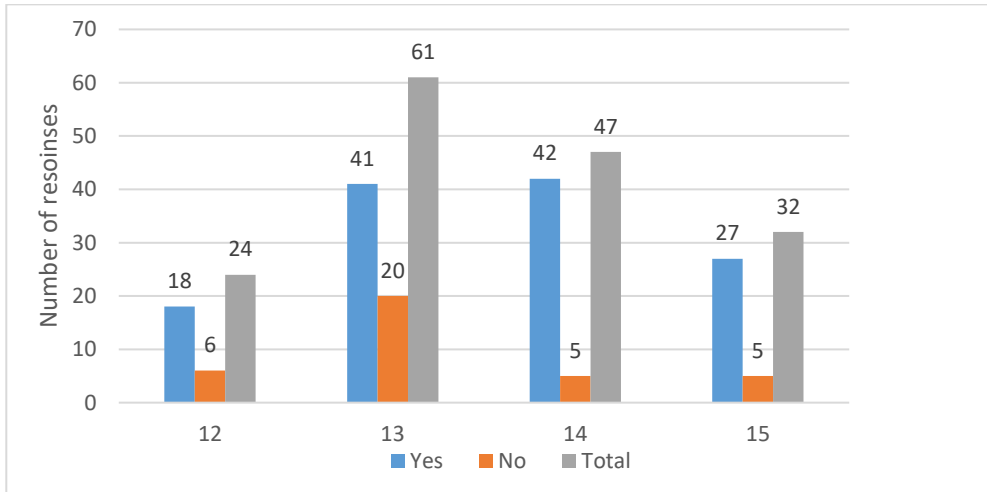


Figure 2: Have you ever heard the term native breed?

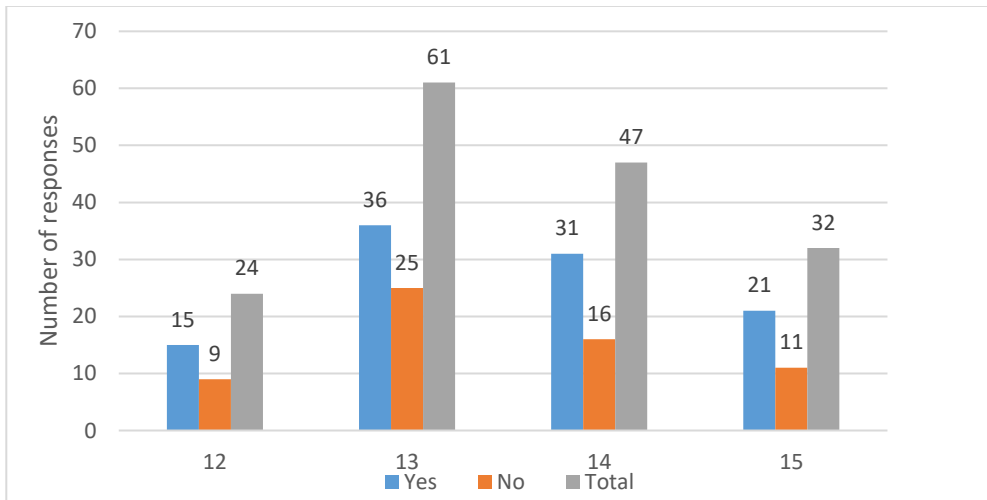


Figure 3: Do you know any of the Slovenian native breeds?

All Slovenian native livestock breeds are shown in Figure 4. The results of the answers where the learners recognized the breeds as Slovenian native livestock breeds are shown in proportions (%).

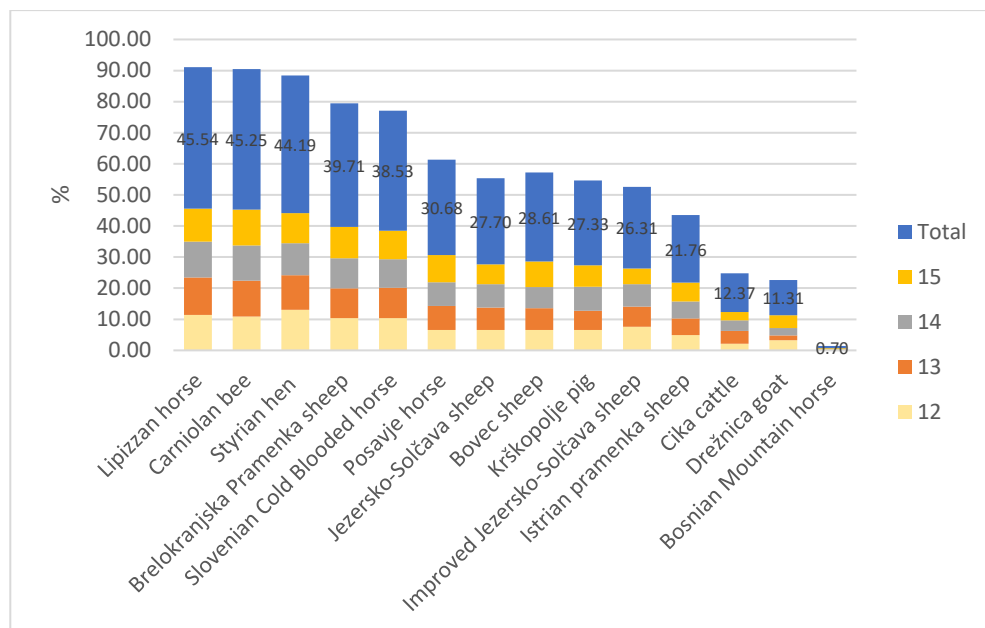
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Figure 4: The results of the answers if the learners recognized the breeds as Slovenian native livestock breeds

It is clear that the Lipizzan horse and the Carniolan bee are best known by the learners. These results are very interesting, but not surprising. The Lipizzan horse is one of the oldest bred horse breeds in Europe and the world and has been bred since its foundation in 1580 at the Lipica stud farm in Slovenia. Lipizzan horses are very much associated with Slovenia, although they are also known in Austria through the Spanish Riding School in Vienna. The story of the Lipizzan horse in Slovenia is very popular. The Lipizzan horse is often used for promotional purposes to present Slovenia for tourism. Of all the Slovenian native livestock breeds, the photo of the Lipizzan horse is the most frequently published in the public media.

The Carniolan bee has a similar history of popularity as the Lipizzan horse. Slovenian beekeepers are very active in promoting the Carniolan bee. As part of the “Traditional Slovenian Breakfast” project, which takes place every year on one day in November in kindergartens and elementary schools, beekeepers raise awareness among learners about the important role of bees in successful gardening at home and in the global production of food and in agriculture. In addition, there are many other projects to promote the Carniolan bee: opening of the House of the Carniolan bee, production of an anatomical model of the Carniolan bee in 3D 30 cm... In 2022, both breeds, the Lipizzan horse and the Carniolan bee, were included in the prestigious list UNESCO of intangible cultural heritage. Almost the same result as for the Lipizzan horse and the Carniolan bee was obtained for the Styrian hen (45 % of learners recognized it as a Slovenian native breed). This could be due to the

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adjective “Styrian” in the name, as the same name is used for a region in Slovenia (Styria region).

It is not surprising that, practically all learners did not know that the Bosnian mountain horse is a native breed on Slovenian territory (officially recognized in 2021). In addition, the Drežnica goat and the Cika cattle were classified as a Slovenian native livestock breeds by only 11% and 12% of the learners, respectively. Unfortunately, this means that elementary school learners hardly know these two breeds, which have been bred on Slovenian territory for centuries.

It is evident that television and the Internet together outperform the other responses in all age groups of learners (Figure 5). These two sources are followed by documentaries, school lessons, and others. The graph shows that educational workshops play a minor role in educating learners about Slovenian native livestock breeds.

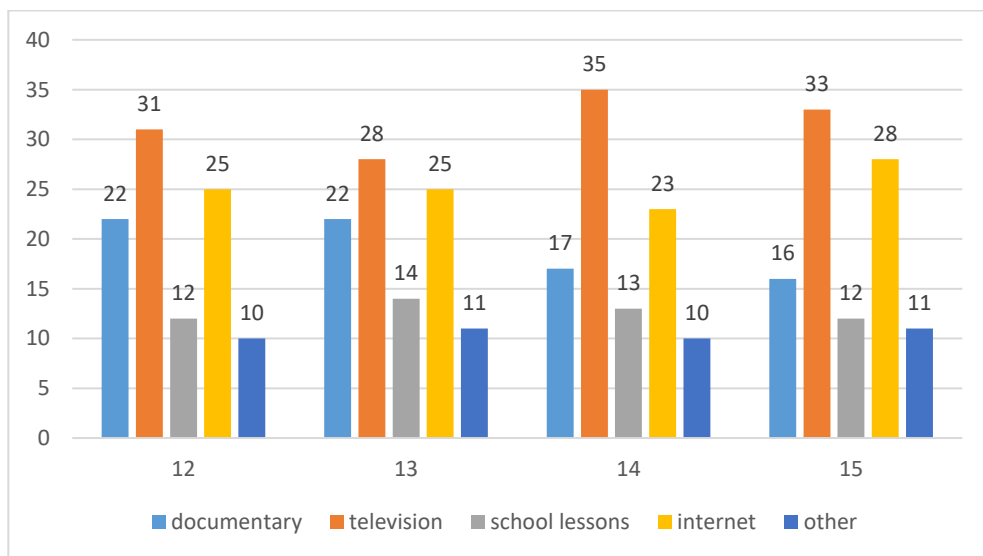


Figure 5: Where did you get your knowledge about Slovenian autochthonous breeds?

Conclusion and recommendation

The results of the study lead to the following conclusions. The first one is that the recognition of written livestock breeds as Slovenian native breeds among learners is not the best. The second one is that most of the learners had already heard the term native breed. The learners know best that the Lipizzan horse and the Carniolan bee are Slovenian native breeds (45 % correct answers). Almost the same result (44 % correct answers) was obtained for the Styrian hen. However, the learners do not know that the Bosnian mountain horse is a native breed on Slovenian territory as

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well. Few learners recognised the Drežnica goat and the Cika cattle as Slovenian native breeds. Television and Internet are the most important sources of information about autochthonous breeds, while school education obviously plays no a role. The findings of this study may help agricultural education coordinators and agricultural teacher trainers in planning training courses on the integration of farm animal biodiversity into the curriculum.

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