

WHAT IS THE POTENTIAL FOR COLLECTING AND MARKETING OF NON-TIMBER FOREST PRODUCTS IN HOREZU (VÂLCEA COUNTY)?

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Abstract

Since centuries, the collecting of non-timber forest products (NTFPs) represented one of the main human activities. Initially, the forest products were used in nutrition and traditional medicine, but with the development of society, they became significant sources for different industry branches. Romania has a long history and tradition in harvesting and using NTFPs, hundreds of species being of great interest nowadays. Along the Romanian Carpathians and their nearby territories, several communities are very active in collecting, processing and marketing of NTFPs. The aim of this study was to assess the collecting and marketing potential of NTFPs in Horezu locality (Vâlcea County). The methodology consisted in a questionnaire with 11 questions that was applied in one hundred households across Horezu during April 2020. Collecting of NTFPs represents a current activity, a high share of the inhabitants being interested in obtaining additional income for their family by selling the products either raw or processed. Due to the tourist potential of Horezu, the local people are motivated to collect considerable quantities of certain NTFPs, such as edible mushrooms, wild berries and medicinal plants. The diversification and the intensification of collecting and trading of NTFPs should be done in a sustainable way.

Key words: collecting, forest fruits, Horezu, mushrooms, NTFPs, Vâlcea

INTRODUCTION

Non-timber forest products (NTFPs), also known as non-wood forest products (NWFPs), complementary products (CPs) or even secondary forest products (SFPs), originate from shrubs, trees or forest stands. These diverse products are of biological origin other than wood and the most common categories consist in: forest fruits, edible mushrooms and truffles, medicinal and aromatic plants, game products, tree saps and resins [2], [4], [12], [23], [24].

Since ancient times, several NTFPs were harvested worldwide and used in a variety of purposes [24], some of them being internationally traded. An example is the perfume (obtained from different plant extract) that is intensively traded between Asia and Europe [1].

Nowadays, even if the medicine or the nutritional behaviors or other human-related activities changed and/or evolved, thanks to their diversity and uses (e.g. medicinal plants, berries, wild foods, edible mushrooms, forage,

[2], [6], [17], [18] or even edible insects [16]), NTFPs still remain of great interest for humans, having a significant social and economic contribution to both national and global level [10], [15], [26], [28], especially in developing countries [21], [22], [23], where, for example, in the case of the forest-based communities [19], they represent an important source of income [25], [29].

Even if the great importance of NTFPs is globally recognized, in the vast majority of the European countries, including Romania, forest planning and management is wood-oriented [3]. But, recently, NTFPs gained an increased attention in the so-called circular bioeconomy [20].

In Romania, more than three hundred species (both herbaceous and woody plants and wild animals) play an important role in harvesting and marketing of NTFPs. These include forest fruits, edible mushrooms, medicinal and aromatic plants, game species, or even tree saps [7], [8], [27].

Most of the NTFPs which are harvested at national level have multiple uses in human

nutrition, but also in several industrial branches [5].

The aim of this research was to assess the potential for collecting and marketing of non-timber forest products across Horezu locality (Vâlcea County).

MATERIALS AND METHODS

Horezu is situated in the central-western part of Vâlcea County (Map 1), in the center of the Horezu Depression and is bordered on the north by the Căpățâni Mountains and on the south by Măgura Slătioarei and Negrulești, Costești and Tomșani hills [11].

Horezu is a locality of tourist interest, being famous for its ceramic production and Horezu Monastery - which was included into UNESCO World Heritage Site - being situated in the proximity of Buila-Vânturarița National Park.



Map 1. Location of Horezu on Romania's map

Source: <https://ro.wikipedia.org/wiki/Horezu>, Accessed on 24th of December 2021 [30].

According to the latest available statistics, in Horezu, there are around 7,200 inhabitants, grouped in 2,300 households [11]. They are involved in several economic activities, including the ones related to forests, several wood and non-wood forest products being harvested and marketed both at local level and national level.

A series of eleven questions aimed at assessing the status and potential of collecting and marketing of non-timber forest products which was also used in a similar study done, in 2018, in Bertea locality (Prahova County) [9] was considered.

Q1. In what way does your family procure non-timber forest products? (a) A family

member collects them from the forest; (b) I buy them locally; (c) Other method (please specify which);

Q2. What non-timber forest products do you collect or buy? Specify, please, also the main species for each category, as follow: (a) Medicinal plants; (b) Forest fruits; (c) Edible mushrooms; (d) Other categories (please specify which);

Q3. What amounts of non-timber forest products do you (or your family) collect or buy annually? Specify, please, the quantities for every species/type of non-timber forest products;

Q4. How much do you pay per one kg/piece? Specify, please, prices and quantities for every species/type of non-timber forest products;

Q5. What is the destination of the non-timber forest products that you collected or bought? (a) Family consumption; (b) Income generation through sale; (c) Other purpose (please specify which);

Q6. Taking into account that your answer at Q5 was (b), mention the form in which do you sell the non-timber forest products, for every species/product, where applicable: (a) Fresh, immediately after harvest; (b) Processed/prepared (please specify in what form; e.g. frozen, processed as jams, juices, etc.);

Q7. Which are your favored areas where do you personally harvest non-timber forest products?

Q8. How do you promote these products in Horezu? Could you motivate your answer by presenting a way of promotion?

Q9. What non-timber forest products do you prefer to include in your diet the most? If so, what do you prefer (examples)? (a) Mushrooms; (b) Forest fruits; (c) Medicinal and aromatic herbs;

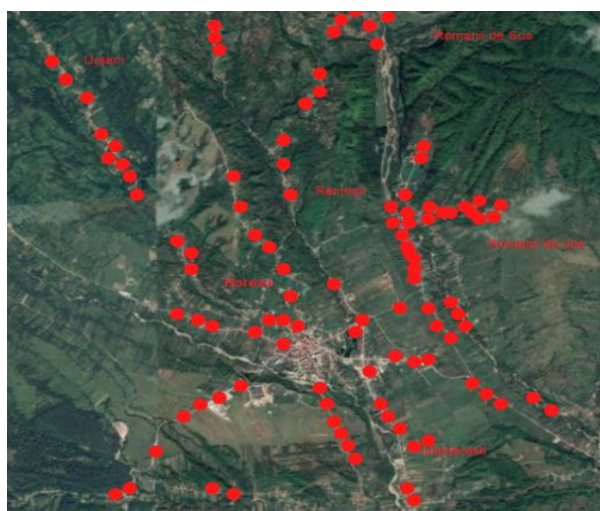
Q10. Do you consider that a shop where consumers may buy these products is needed in Horezu? (Yes or No).

Q11. Do you consider that a close cooperation between the retailing sector and local harvesters of NTFPs could be helpful for the development of this business in Horezu? (Yes or No).

The questionnaire was applied in April 2020 and, by taking into account the number of the households in Horezu, 100 households were included into the study, in order to achieve a probability of 95%, with a sampling error of 10%.

The sampling was calculated by the aid of the instrument available on INFOmass website, which is one of the main companies specialized in the field of opinion polls and market studies in Romania [14].

The households were chosen along the main streets of Horezu, by taking into account an uniform distribution as possible (*i.e.* by choosing one household out of consecutive twenty (Map 2, red dots).



Map 2. Distribution of the questioned households along the main streets in Horezu

Source: Google Maps, <https://www.google.com/maps>, Accessed on 24th of December 2021 [13].

The answers were centralized by the aid of Microsoft Office Excel, 2016 edition.

RESULTS AND DISCUSSIONS

One hundred households were considered and the answers of the respondents were centralized in an Excel file.

As regards question no. 1, two thirds (*i.e.* 67%) of the interviewees indicated that the collecting of non-timber forest products was done by a family member, 22% reported that they procured NTFPs locally, while only a few (*i.e.* 11%) bought them from the market (Figure 1).

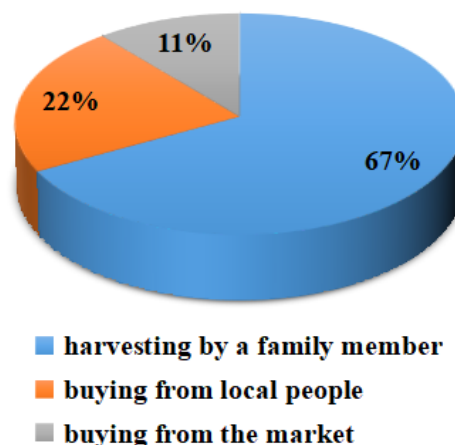


Fig. 1. The main ways of procuring NTFPs in Horezu
Source: original data.

The main types of NTFPs that were harvested and/or bought by the local people consisted in forest fruits, especially berries of European blackberry (*Rubus fruticosus* L.), European red raspberry (*Rubus idaeus* L.), dog rose (*Rosa canina* L.), European blueberry (*Vaccinium myrtillus* L.), edible mushrooms, especially penny bun (*Boletus edulis* Bull.), oyster fungus [*Pleurotus ostreatus* (Jacq.) P.Kumm.], and medicinal plants, mainly flowers of black elder (*Sambucus nigra* L.), common hawthorn (*Crataegus monogyna* Jacq.), common yarrow (*Achillea millefolium* L.) and common nettle (*Urtica dioica* L.). Figure 2 gives an example of short-term storing of the berries of dog rose.



Fig. 2. Short-term storing of berries of dog rose
Source: original.

Regarding the annual collected quantities, the highest average quantities per household were recorded in the case of edible mushrooms (*i.e.* 103.5 kg), followed by forest fruits (*i.e.* 43.3 kg) and medicinal plants (*i.e.* 1.5 kg), respectively (Figure 3).

These values are significant higher than the ones reported in Berteza locality (Prahova County), especially in the case of the edible mushrooms, the harvested quantities in Horezu being twenty times higher than the ones reported in Berteza locality [9]. This could be interpreted by a higher demand/interest, on one hand, or by abundant quantities in Horezu in comparison with Berteza, on another hand.

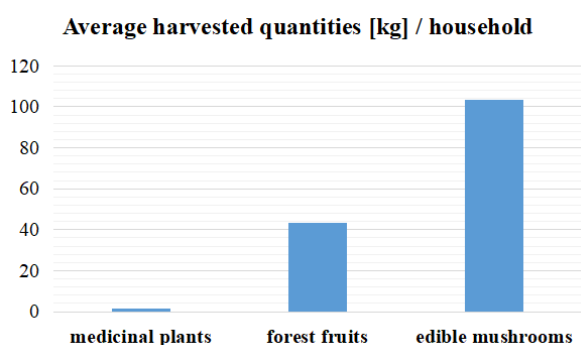


Fig. 3. Average harvested quantities [kg] of NTFPs per household in Horezu
 Source: original data.

The highest average prices per kilogram (question no. 4) were recorded for edible mushrooms (18 RON, *i.e.* 3.6 Euro), followed by forest fruits (11 RON, *i.e.* 2.2 Euro) and medicinal plants (7 RON, *i.e.* 1.4 Euro), respectively. These prices were 10-30% higher than the ones reported in Berteza locality (Prahova County) [9]. The higher prices could be explained by the demand of the tourists who are visiting Horezu and who can offer higher prices.

As regards question no. 5, 38% of the respondents declared that they are collecting the NTFPs for their family consumption, while the majority of the people from Horezu (62%) were interested to sale the harvested non-timber forest products in order to obtain additional income (Figure 4), by selling most of the products to the visitors, especially during local events or festivals.

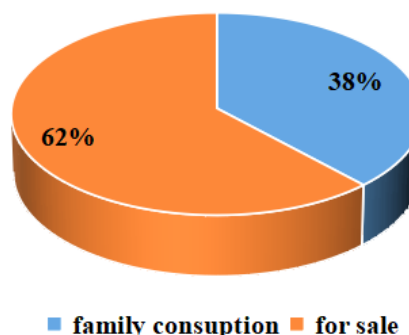


Fig. 4. Purpose for harvesting/buying NTFPs in Horezu
 Source: original data.

These people are usually selling the products as juices, jams and syrups. By selling processed products, not raw, the people from Horezu are obtaining higher revenues. These results are different from the ones reported in Berteza locality, where only one person was interested in selling the harvested NTFPs in order to gain additional income [9].

Căpățâni Mountains, Groșet, Barcaci, Neag's Valley, Băngi's Valley, Cocora and Poiana cu fragi represented the most common places for collecting of non-timber forest products across Horezu Administrative Unit (question no. 7).

82% of the respondents said that the marketing of NTFPs in Horezu should be promoted, during local celebrations and festivals or by creating a storing place with a shop dedicated to the visitors.

Moreover, the vast majority of the respondents declared that they are taking seriously into account to invest in the online marketing (via social media networks and specialized websites), by promoting secondary products derived from NTFPs, such as jams, juices, syrups, and other products (*i.e.* by-products) that could be stored for several months or even for several years under controlled conditions.

Only a low percentage of the interviewees (*i.e.* 18%) considered that the marketing of non-timber forest products should not be intensively promoted (Figure 5).

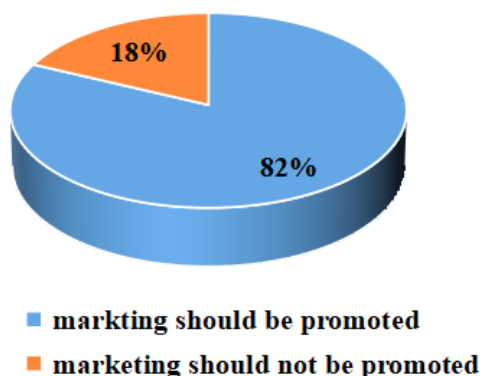


Fig. 5. Share of respondents' opinion regarding the promoting of marketing of NTFPs in Horezu
 Source: original data.

The vast majority of the respondents (89%) were consuming very often the harvested NTFPs, either in raw or processed form (Figure 6). In general, the mushrooms are eaten shortly after harvesting, while the berries are mainly consumed as juices or jams during the cold session.

Almost all interviewees (*i.e.* 86%) considered that a market in Horezu would be more than needed (answers to question no. 10).

Three quarters of the respondents said that a collaboration with the markets existing in Horezu would generate benefits for all shareholders, including, *inter alia*, the harvesters and the merchants (answers to question no. 11).

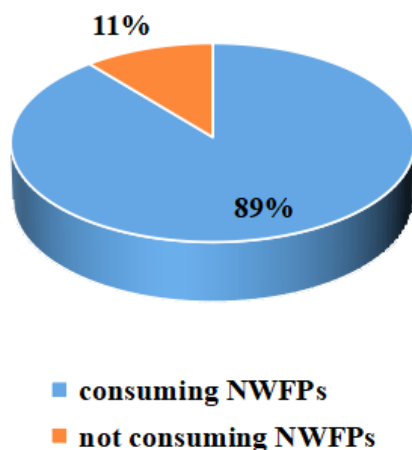


Fig. 6. Share of respondents' opinion regarding the consuming of NWFPs in Horezu
 Source: original data.

CONCLUSIONS

In Horezu, harvesting of non-timber forest products represents a current and intense activity, a high share of the inhabitants being interested in obtaining additional income for their family by selling the products either raw or processed, mainly to the tourists during local events.

The tourist potential of Horezu is encouraging the local people to harvest considerable quantities of certain non-timber forest products, such as edible mushrooms, berries, aromatic and medicinal plants. In this context, a diversification and an intensification of product marketing, including the online component, are more than welcome. These activities should be done in a sustainable way, by engaging specialists with different backgrounds, such as, *inter alia*, forestry, biology, management & marketing and sustainable development.

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