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The spread of sea buckthorn as a medicinal plant in Hungary

Abstract of PhD thesis

The doctoral thesis examines the permeation of sea buckthorn in Hungary and its role in today's health market offer. Despite the fact that sea buckthorn is an indigenous plant in Hungary it has only become widely known as a plant suitable for consumption in the last one and a half to two decades: its growing area and popularity are increasing year by year, its high vitamin content, effects and versatile uses are mentioned more and more often, which draw researchers' attention to the intertwining of phenomena related to health awareness, medicine and nutrition. To get to know them, I try to capture the popularity of sea buckthorn as a cultural phenomenon: what initiatives led to its development and what manifestations are associated with it?

The presence of sea buckthorn on the domestic market is primarily based on imports, in addition to which more and more domestically produced sea buckthorn products appear in the offer. In the course of the present research on growers, I examined these questions: who and how started growing the novelty plant and producing the preparations? What is the attitude of farmers and to which economic and market impulses does domestic sea buckthorn growing respond? By exploring its interpretations as medicinal plants and food raw materials on a micro level, I attempt to get to know farming strategies and contemporary lay medical interpretations. Sea buckthorn can be found on the market as a health-beneficial product, starting from this it can be placed in the conceptual spaces of medical pluralism, complementary alternative medicine and health awareness. In consumer society the demand for locally produced food, coupled with organic commodity farming fits into both environmental awareness and health-centered approaches. According to my premise the sea buckthorn growing in Hungary developed in connection with these tendencies which also constitute the interpretative framework of the dissertation.

The research work in the thesis focused on two areas: to follow the distribution process of sea buckthorn in Hungary and to map its role and methods of application observed today. The study covers several eras which I used several methods to get to know. To follow the historical processes, I applied the method of source research, based on agricultural, botanical, pharmaceutical works, educational publications and press materials. The presence of the medicinal plant in Hungary was related to several areas, for example: health

policy, the organization of public health, food supply, the expansion of the market of health market products, as well as the transformation of agriculture and the emergence of the agronomic entrepreneurs were all affected, the processes of which I outlined with the help of the relevant literature and sources.

The popularity of sea buckthorn is reflected in the increasing trend in the volume of press articles dealing with it, on which I based the method of content analysis, the analysis was carried out with the qualitative data analysis software ATLAS.ti Web: Powered by Open AI. The structured interview research among the recent sea buckthorn growers was conducted in two phases: the questions of the interviews conducted from summer 2021 to January 2022 were supplemented with opponents' opinions in mind, followed by another query in August 2024 by contacting previous interviewees. With the research carried out among growers I sought to answer the question of what methods and crisis management strategies are related to the cultivation of sea buckthorn as a medicinal plant, what is the attitude of farmers when dealing with the novelty variety, in what type of products and where is it sold, and how do they recommend the fruit that has become well-known as medicinal? Based on these questions I intended to explore domestic sea buckthorn growing in the light of the demand for locally produced and healthy foods as a consumer trend.

To supplement the interview research, I used the content published on the interviewees' internet interfaces. The spontaneously formulated answers to the interview questions form the basis of the research, in addition to which the constructed formulations of the texts available on the web intended for a wide audience further broaden and supplement the spectrum of producer narratives included in the study.

Based on the results of the research, consumer tendencies related to health awareness and healthy eating which gained ground mainly after the regime change in 1989 played a fundamental role in the spread of sea buckthorn as a medicinal plant in Hungary. Chemical-free cultivation which represents both environmental protection and human health, fundamentally determines fruit production and short food supply chains nowadays. The latter which have become popular in connection with sustainability, play a major role in its spread as a producer commodity and local product.

The foundations of the plant's spread in the public consciousness were scientifically legitimized by pharmacy, herbal research, food science, and then phytotherapy. The health-centred consumer attitude gained ground in Hungary at the end of the 1980s through the coming to the fore of naturalness and health awareness by which time several medicinal products were already present on the market. After the regime change the health-first aspects: *healthism* and

nutritionism tendencies, environmental aspects also appeared among consumer decisions. At the same time, the product range on the health market expanded with further momentum, serving – and generating at the same time – consumer decisions driven by health awareness, *immune nutrition* and *self-care*.

The "miracle-waiting" atmosphere of the period was matched by the demand for various promising herbal medicines, among which sea buckthorn was also included. At that time, the two larger enterprises producing medicinal products made from sea buckthorn were run by specialists – doctors and food chemists. Today, producers of sea buckthorn goods do not represent such knowledge, nor phytotherapeutic or naturopathic profiles: they mostly have agricultural or horticultural education or have started growing sea buckthorn in a self-taught way. In recent decades, the increase in the number of sea buckthorn growers and the growing awareness of the plant – in addition to its active ingredients – is also due to its versatility: in many places it is primarily referred to as a medicinal plant, but it is also a food raw material: this includes, in addition to medicinal, functional foods, its gastronomic use.

Since the 1990s, dietary supplements made from sea buckthorn distributed by larger enterprises and available in pharmacies and drugstores can be classified into the category of complementary and alternative medicine. Producer sea buckthorn products represent functional foods, when promoting which their producers regularly rely on scientific results and use their terms, and several also refer to positive medical and pharmaceutical feedback. The producers' interpretations also include media statements about sea buckthorn. The consumption of sea buckthorn preparations appears as an alternative remedy in the light of producer recommendations and consumer experience; In connection with this, the support of doctors or the effectiveness of sea buckthorn in addition to/instead of medical therapy was also mentioned in several cases.

Based on the results of the content analysis the ecological theme which represents both health-centeredness and environmental awareness, has been featured in press articles published from 1990 to the present. In line with this, the literature on crop production published after 2010 opposed the use of chemicals in cultivation, which was still included in previous recommendations, mainly because of the consumption of sea buckthorn as a medicinal plant and its nutritional values. According to press reports, the municipal sea buckthorn plantations established since 2011 are all chemical-free, and all producers surveyed in the research in 2024 also maintain their plantations in this way – with or without organic certification – which has been included in the image of products and the economy in many of them. Regarding chemical-free cultivation, growers named several reasons among which were taking into account the

medicinal effect of the plant, external motivation (customer/reseller request) and their own motivation in approach.

In the 2010s, traditional and newer forms of short food supply chains (SFSC) representing sustainability were organized in Hungary as well, which gave impetus to the market of producer goods, including sea buckthorn products. This was reflected in the increase in the number of producers engaged in fruit production and preparations, which made sea buckthorn appear in more and more direct sales channels throughout the country. By mapping the sales methods, I examined the relationship of sea buckthorn producers to SFSC: among the respondents, a close connection to SFSC sales methods was observed from the very beginning of their operation, most of them also relied significantly on direct online trade. The current economic recession has also brought about a decline in turnover and sales opportunities, and at a critical time, direct SFSC forms (including farmers' markets) are proving to be permanent for farmers among commercial arenas, many of them now sell only in these locations.

The domestic spread of the examined plant in connection with consumer trends can be described in terms of *glocalization* and *glocality*: *glocalization* refers to the adaptation process by which a product that has become widespread worldwide, adapts to the local cultural environment and appears as a local product – thus enabling the integration of local goods and markets into global markets. The reflection of global information at the local level is *glocality*, which here means the integration of sea buckthorn into local production and food systems.

The interview research provides insight into the evolving farming practices and the ways of facing the current ecological and economic crises. The latter, similarly to other contemporary research on small farmers, highlights the vulnerability of the farming sector, the diversity of challenges and the adaptation efforts of the stakeholders. Producer goods play a decisive role in the further popularization of sea buckthorn in Hungary and its representation as a local product – the question is what further degradation the crises mean in the production sphere and in the operation of SFSCs, which fundamentally affects the production and processing of this crop in Hungary.

