



# Seeds and Food Security

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## Abstract

Ensuring food security consists in ensuring the amount of food needed by people and is part of ensuring national security. Food security takes into account both the need to ensure a sufficient agricultural supply and to ensure the economic access of the population to food, the stability of the supply and the way of using food at the individual level. The involvement of the political factor in these efforts is not sufficient, thus justifying the appearance of state bodies or different forms of population organization. This paper argues, based on the study of normative acts, that he needs to involve the population in the free exchange of seeds, its first step in ensuring quality, tasty and safe vegetable products.

**Keywords:** Food security; Right to seeds; Seed circulation

## Introduction

The introduction displays an idea and aim of Globally, starting from mid-2020, the prices of basic agricultural products started to rise. The causes are multiple, strongly influenced by the recovery following the COVID-19 pandemic, the increase in fertilizer and energy prices, the deterioration of macroeconomic conditions worldwide due to Russia's war in Ukraine. The World Food Program of the United Nations estimates for 2022 an increase of 47 million in the number of people suffering from food insecurity globally, with the worst problems being in Sub-Saharan Africa. In the EU, the common agricultural policy ensures constant food production. The main problem in European countries is the low purchasing power for people with low incomes.

Food security is a priority topic in all the debates at the highest level (G20, G8, UN, UNFAO, OECD, IFAD, World Bank, World Program for Food, IAEA, etc.), at the level of most governments of the world, becoming a "zero" priority for them where agricultural productions are very low or completely absent (see the areas of Asia, the Middle

East, Africa, Central America, the areas seriously affected by desertification, lack of water, the low level of agricultural resources) [1]. FAO estimates that global food imports will reach the value of 1.8 trillion dollars in 2022 [2]. Our country ranks 12<sup>th</sup> in the world in terms of food risk, the main cause being the volatility (vulnerability) of food prices - the forecast of Nomura Bank in Japan showing that the food problem it will intensify [1].

## Materials and Methods

This paper argues, based on the study of normative acts, articles and reference works, the right and necessity of involving the population in the free exchange of seeds, as a first step in ensuring quality, tasty and safe vegetable products.

## Results and Discussions

In our country, at the level of 2020, Eurostat registered 8.5 million people at risk of poverty [3], one third of the population not having the opportunity to purchase items necessary for a decent

life. In urban areas, poverty is recorded at 13.8%, and in rural areas at 38% [3]. In 2020, Romanians allocated 26.4% of their total consumption expenditure to food and non-alcoholic beverages, compared to the EU average of 14.8% [4]. Of the total monetary expenditure for the purchase of food and beverages in 2020, Vegetables and canned vegetables represented 7.7% in Romania [4].

Beyond the involvement of political factors in solving these problems related to poverty and food expenses, the involvement of the human factor is required. Access to quality and low-cost food can be solved, for a good part of the population, from their own household, through subsistence agriculture, knowing that the majority of self-employed workers in Romania work in subsistence agriculture [5]. Result that the area of subsistence agriculture can help to solve the problems related to the expenditure of the main food raw materials. Medium and large farms are professional farms and make agriculture a business, while small farms have a less important role in the markets, but are important in the rural world, ensuring food and social security, contributing to the preservation and protection of the environment, by using traditional production methods. The results of an online survey conducted by Malagrow (June 16 and July 6, 2022), to which 2,580 people responded, show that 42.7% of respondents consider Romanian products to be important, but also buy imported products. 40% of the respondents go to the market for fruits and vegetables, 30% buy them from supermarkets, 16.6% from small local producers, and approx. 10% from small grocery stores.

The majority of Romanians buy fruits and vegetables two or three times per week. Almost a third of respondents buy fruit daily, while 24.4% buy vegetables every day. 2% buy fruits and vegetables a few times a month, 5.4% of respondents rarely buy vegetables and 3.8% rarely buy fruits because they produce them in their own household. This results from the importance that consumers attach to agricultural products from local households. Vegetables, fruits and some grains can be obtained by using quality seeds. The price of certified seeds is correlated with the expenses incurred for obtaining them. Bringing a new hybrid to market costs about \$136 million. The global seed market is estimated to be worth \$86.8 billion by 2026 [6]. Of the total seed market, 80%–90% come from from the unorganized sector, being farm-saved seeds, and commercial seeds represent 15%–30% [7].

Commercial seeds represent the source of tall crops, resistant to pests, but dependent on phytosanitary treatments, while direct pollinated seeds ensure high genetic diversity, high adaptability to local conditions and climate, due to unrestricted pollination between individuals. In addition, the resulting products are clearly superior in taste [8]. In the EU and EU Member States, seed laws and regulations have been designed to meet the needs of the agricultural industry, and the rights of peasants have been largely neglected. Peasant farming systems seeds and traditional knowledge were not recognized and therefore not adequately supported. This has discouraged and in some cases prevented the continuation of peasant agricultural activities [9]. Binding international treaties also protect intellectual property in seeds. The Agreement on Trade-Related Aspects of Intellectual Property adopted at the level of the World

Trade Organization (WTO) in 1994 ensures that WTO members must provide for the protection of plant varieties, either through patents or through an individual specific system or through a combination of those two (article 27).

The UPOV - International Union for the Protection of New Varieties of Plants Convention (adopted in Paris in 1961 and revised in 1972, 1978 and 1991) provides intellectual property rights to breeders for periods of up to 20 years or more. The UPOV system prohibits farmers from trading protected seeds, and a new revision in 1991 of the Convention, which already applies in nearly 30 developing countries, prohibits them from exchanging these seeds. Farmers in UPOV member countries since 1991 are not allowed to save or reuse seeds belonging to protected varieties, but only to a limited extent, on their own farms if their government has adopted an optional exception to that effect. The 2018 United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP) recognizes the right to seeds. According to the Declaration, all states must, "support peasant seed systems, promote the use of peasant seeds and agrobiodiversity" and "ensure that seed policies, plant variety protection and other intellectual property laws, certification schemes and laws on the marketing of seeds respects and takes into account the rights, needs and realities of the peasants".

Instead, states must encourage developing countries to use the possibilities offered by TRIPS (International Treaty on Plant Genetic Resources for Food and Agriculture-2009) to create individual specific systems for the protection of plant varieties and adapted to the agricultural and social specificities of each country, providing protection for the rights of both breeders and peasants. TRIPS, art 9 provides: "The contracting parties recognize the enormous contribution that local and indigenous communities have had and continue to have, as well as farmers from all regions of the world, and especially those from the centers of origin and diversity of cultivated plants to the conservation and valorization of photogenetic resources that constitute the basis of food and agricultural production throughout the world. Nothing in this article shall be construed as limiting the rights that farmers may have to preserve, use, exchange or sell on-farm seed or propagating material, subject to the provisions of national law and as the case may be" [10]. In the last 20 years, agricultural chemical corporations have taken over the production and marketing of seed and are doing their best to eliminate small producers from this equation. Currently, it is more and more difficult to find agricultural products from farmers on the market, obtained from seeds preserved from generation to generation and cultivated in a traditional system.

The peasant movement *La Via Campesina* - the largest social movement in the world representing over 200 million people) defends sustainable agriculture on a small scale [11]. Starting from the European currents concerning the right to free rescue and movement of the hearths, and in Romania there have been steps in this regard. In our country, there are few state institutions that produce and conserve Romanian vegetable seeds from traditional varieties. The gene bank from Suceava has been storing, for 40 years, traditional seeds that it offers free of charge to farmers to re-intro-

duce them into culture. In 2021, the Genetic Resources Bank was established in Buzău. Eco Ruralis is a national association of farmers and peasants, with more than 17000 members from all over the country. The association was founded in 2009 and represents the interests and rights of peasants, small producers and people working in the countryside in Romania. The vision of the association includes the right to use (propagate, exchange, improve) and sell peasant seeds, the right to land and access to the market, as well as the right to take part in making and deciding public policies in agriculture and food.

Since 2011, the association has been a member of the Via Campesina European Confederation, along with 31 other regional and national organizations from 21 countries on the continent [11]. The Eco Ruralis Association is involved in saving Romanian varieties of vegetables that are increasingly rare. The members of the association collect the local varieties of seeds from farmers and gardeners, multiply them and then offer them free of charge to those who want to cultivate them.

In Romania over 90% of the seedlings come from hybrid seeds produced outside the country, it is necessary to preserve the native varieties and carry out of seed exchanges between small producers [12]. They manage to get involved in this endeavor through different forms of organization. Thus, a series of groups of small producers appeared, which offer free seeds from their own culture: *Seminte Libere*, *Seminte cu suflet*, *Seminte Bune-Oameni Buni*, *Grădina Moldovei* (Chişinău-Moldova).

The group *Seminte cu suflet*, which has over 1500 members, was established in Ploieşti in 2015 and currently has its name registered with OSIM. Until this date, the group has organized 55 meetings in different localities in the country, intended for the donation and exchange of seeds, plants, shrubs and fruit trees. It also organized 7 Tomato Festivals. Members of the group participated in events organized by friendly groups, such as: the meetings organized by *Grădina Moldovei* in Ialoveni-Rep. Moldova or those organized by *Eco Ruralis*.

## Conclusion

The increasingly precarious food security of Romanians is not the consequence of a lack of food, but of the sharp decrease in do-

mestic production at the expense of increased imports. In this context, producing food in one's own household is a way to ensure safe and tasty food. The activity of some state units, such as the "Mihai Cristea" Plant Genetic Resources Bank Suceava, the Ecoruralis association or smaller groups of producers, such as *Seminte cu Suflet*, contribute to ensuring food security in our country by distributing native seeds free of charge to the willing population to preserve the traditional varieties and disseminate the harvested seeds in the same way.

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## Conflicts of Interest

The authors declare no conflict of interest.

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