Bulgarian Journal of Agricultural Science, 29 (Suppl. 1) 2023 Agricultural Academy

# Food production in the context of national food security: trends and opportunities

# **Darina Ruscheva**

*Economic Research Institute at the Bulgarian Academy of Sciences Corresponding author:* darinar@abv.bg

## Abstract

Ruscheva, D. (2023). Food production in the context of national food security: trends and opportunities. *Bulg. J. Agric. Sci., 29* (Supplement 1), 152–158

The relationship "food security-food resources" is expressed in the fact that the food security of any country, including Bulgaria, largely depends on what food resources a given country has at its disposal, and hence what the possibilities are for satisfying the national food needs. The production of food raw materials and products is a major core of domestic food resources. And in this role, it is directly related to national food security. The report focuses on the production of basic food products in Bulgaria, which are important for agriculture and the food industry, as well as for their consumption by the country's population. Conditions and factors for its development, trends in its quantitative dimensions, problems and opportunities to provide the country with food are consistently highlighted.

Keywords: production; agriculture; food industry; food products; food security

#### Inroduction

Guaranteeing national food security is essential for every country, including Bulgaria. The "food security-food resources" relationship is expressed in the fact that food security depends to a large extent on what food resources a country has, and hence what the possibilities are for meeting national food needs.

If we accept the interpretation of the concepts of resources es as sources of living and of foodstuffs as sustenance, then food resources could generally be understood as sources of sustenance. The problems of the sources of formation, the ways of distribution and their rational use are extremely important and for this reason of permanent relevance. The quantitative and qualitative parameters of food resources determine the food security of each country and the world as a whole. This is sufficient reason to consider the problems related to them as global problems of modernity. According to their purpose, they are divided into resources for internal consumption and for export; according to the period of use  for current consumption or for stocks, according to the degree of sufficiency – we talk about provision or deficit, etc. (Ruscheva D., P. Todorov, S. Grozdanova, 2010).

The production of food raw materials and products in agriculture and the food industry is a major core of domestic food resources. And in this role, it is directly related to national food security. It supplies the processing industry with raw materials, the internal consumption of the population with products diverse in quantity, assortment and quality, and forms resources for export.

The idea of the report is to highlight trends and problems in the production of basic food products from the agriculture and food industry of Bulgaria, showing its possibilities to provide the country with food.

### **Material and Methods**

In the study, for the purposes of analysis and evaluation, attention is focused on several years -2000 – accepted as the base year, 2007 – the start of the First Program Period

of the Common Agricultural Policy of the European Union (EU CAP), 2014 - beginning of the Second Program Period and 2020. The empirical study covers products of plant and animal origin, produced in agriculture and the food industry, which on the one hand are important for these industries, and on the other hand, are essential in feeding the country's population and as raw materials for the processing industry. From crop production - these are: cereals (wheat, barley, corn for grain), sunflower, potatoes, beans, vegetables (tomatoes, peppers, cucumbers), fruits (apples, peaches, apricots, plums, cherries), strawberries, wine and dessert grapes. From animal husbandry - meat, milk and eggs and from the food industry (bread and bakery products, meat, meat products, fish and fish products, fresh milk, yogurt, cheese, yellow cheese, oil, canned fruit, canned vegetables, sugar and sugar and chocolate products).

In general, during the mentioned period, the conditions for realizing the production of food products in Bulgaria are associated with the country's membership in the European Union, the pandemic crisis and the state of the main factors limiting agricultural production – land and farm animals.

Under the terms of Bulgaria's membership in the European Union and in connection with the new requirements, the environment in which the production of food products takes place is changing significantly (Ruscheva, 2017). It is connected with the implementation of the EU CAP and all the resulting requirements and regulations, the need to adapt it to the new requirements, subordinating the national agricultural policy to the main objectives of the EU CAP and others. Significant financial resources are coming under the First Pillar of the CAP and the Program for the Development of Rural Areas in Bulgaria.

The pandemic crisis COVID-19, in which basic connections are broken, both at the entrance to production (supply of raw materials, materials, fertilizers, preparations, etc.), and at its exit, related to the transportation and realization of the finished product, etc. brings to the fore the exceptional role of the local production of food products to feed the population, to cover food shortages, in the absence of imports. According to some authors (Ruscheva, D., S. Grozdanova, P. Brunzova, 2021) an important conclusion that can be made regarding the relationship "crisis - national production - food security" is that "the pandemic has put the focus of attention of society rethinking the importance of national production to ensure the population's continuous access to food - in sufficient quantities, with the necessary quality characteristics and species diversity. The reason for this is the expectation that the crisis will provoke and change world food flows, which to a large extent predetermines a strengthening of the relationship between improving the conditions for local production, aimed at developing opportunities to satisfy one's own needs and guaranteeing access to food " (Ruscheva, D., S. Grozdanova, P. Branzova, 2021).

In the production of food products in agriculture, important limiting factors are the size of the areas occupied by agricultural crops, orchards and vineyards, and the number of farm animals. What is the situation in Bulgaria regarding these two factors?

In 2000, the main cereal crops in Bulgaria were grown on the following areas: wheat -11,218.0 thousand decares, barley -2,268.0 thousand decares and corn for grain -5,763.0thousand decares. The changes at the end of the period are expressed in: an increase in the area of wheat to 12,006.2thousand decares, a decrease in the area occupied by barley to the size of 1,308, 9 thousand decares while keeping the areas of corn for grain almost unchanged. The data in Table 1 show the trends in area changes for the indicated years. In the case of the three cereal crops, the trend is in the restructuring of their areas, with those of corn for grain increasing significantly over the years, at the expense of reducing the areas with barley.

In the case of sunflower, there is a clear trend of increasing the area from 5,920,0 thousand decares at the beginning of the period to 8,230,0 thousand decares in 2020.

In 2000, the areas occupied by potatoes and beans were respectively: 528.2 thousand decares and 107.6 thousand decares. In 2020, their areas are greatly reduced to 99.5 thousand decares and 22.5 thousand decares, which represents

Table 1. Areas of agricultural crops (2000 = 100.0)

N₂	Years Products	2007	2014	2020
1.	Wheat	96.8	113.0	107.0
2.	Barley	82.4	94.7	57.7
3.	Corn for grain	37.2	70.9	101.2
4.	Sunflower	101.8	142.5	139.0
5.	Potatoes	42.5	19.3	18.8
6.	Beans	49.5	8.2	20.9
7.	Tomatoes	16.8	10.5	8.9
8.	Pepper	27.9	14.7	13.0
9.	Cucumbers	21.2	18.2	29.9
10.	Apples	26.0	29.2	32.0
11.	Peaches	38.4	41.3	42.9
12.	Apricots	44.6	46.7	56.5
13.	Plums	52.7	57.9	94.8
14.	Cherries	67.5	84.5	167.3
15.	Strawberries	67.0	36.2	39.5
16.	Vineyards with wine grapes	69.6	29.9	29.6
17.	Vineyards with dessert grapes	27.5	17.9	14.2

Source: According to the NSI Statistical Yearbook, for the respective years

respectively 18.8% and 20.9% of their base level. This could be seen as an extremely negative trend. We are talking about agricultural crops for which there are favorable conditions for their cultivation in the country and which are permanently present in the eating habits of Bulgarians.

Fruit species include: apples, with areas in 2000 of 135.5 thousand decares, peaches (including nectarines) -75.0 thousand decares, apricots (including greens) -57.2 thousand decares, plums -127.8 thousand decares and cherries -74.1 thousand decares. At the end of the period, only cherries saw an increase of 67.3% compared to the base level for 2000, and the rest saw a reduction in the size of the areas, the strongest – for apples up to 32% and the weakest – for plums – to 94.8% since 2000.

Similar trends are observed in strawberries, vineyards, wine varieties and dessert grape varieties.

The presented facts give reason to summarize that, regardless of the various fluctuations over the observed years, there is an extremely alarming trend of restructuring the areas with agricultural crops in the direction of increasing sunflower, wheat and corn for grain and reducing the areas of other crops.

In addition to the trends in the quantitative parameters of the areas occupied by agricultural crops, the care taken for soil fertility, the fight against erosion (water, wind, etc.), the applied technologies for soil treatment and other innovations are also important, to improve the quality characteristics of the soil and the top layer of soil. At this stage of agricultural development, many countries implement agroecological measures that aim to stimulate farmers to protect, maintain and improve the ecological quality of their agricultural land and to limit the negative impact on natural resources. Climate changes and the processes of erosion, pollution, swamping and lack of species diversity appear to be the most influencing factors on the achievement of sustainable agriculture (Blagoev, A., 2018). The application of agroecological practices aims to increase and improve the productivity of crops and at the same time reduce the input of resources such as pesticides, synthetic fertilizers, etc. (Blagoev, A., 2019). The increasing demand for food products in a period of limited natural resources in recent years leads to the need to develop policies to implement agro-ecological practices to protect resources. The lack of policies and political strategies are part of the factors that have a negative impact on the development and implementation of agro-ecological practices. The development and implementation of more and more agro-ecological practices in developed countries is accomplished through the use of institutional and political strategies. (Stoyanova, Z., Blagoev, A., 2020).

Regarding the other limiting factor, in the production of food products from animal husbandry, it is the number of farm animals. In 2000, the following were bred in the country: cattle – 681.8 thousand, buffalo – 5.9 thousand, pigs – 1,513.5 thousand, sheep – 2,547.2 thousand, goats – 1047, 2 thousand and poultry – 14.9 million pieces. In 2020, there was an increase in the number of buffaloes only – to 20.1 thousand. In the case of other types of animals, the number is decreasing: cattle are now 568.7 thousand, pigs – 592.1 thousand, sheep – 1,307.8 thousand, goats – 253.4 thousand and poultry – 13.9 million pieces. Table 2 shows the dynamics of the number of farm animals by year.

Table 2	2. Farm	animals (	(2000 =	100.0)

Nº	Years Animals	2007	2014	2020
1.	Cattle	88.3	81.1	83.4
2.	Buffaloes	95.7	102.2	216.1
3.	Pigs	58.7	36.5	39.1
4.	Sheep	59.9	54.4	51.3
5.	Goats	47.3	27.9	24.2
6.	Poultry	125.5	97.9	93.2

Source: According to the NSI Statistical Yearbook, for the respective years

It is noteworthy that the intensity of the changes is different for individual species. The tendency to decrease the number of cattle and poultry is relatively smooth. In the case of sheep, a significant decrease was observed in 2007 compared to 2000, after which the direction of change was maintained, but insignificant. The reduction in the number of pigs can be assessed as particularly critical. There are various reasons (diseases, epidemics, liquidation of farms, etc.). In the case of farm animals, in addition to their number, it is important to work in the direction of maintaining the gene pool, improving the existing ones and creating new breeds of animals with improved quality characteristics in terms of the products produced by them, etc.

The generalization that is necessary is that for a twentyyear period the agriculture of Bulgaria is facing serious challenges, and the processes of increasing the areas of only a few agricultural crops and seriously reducing the areas of other important agricultural crops, as well as increasing the number of only one type of animal (buffalo) and a significant reduction in the number of other species are important problems and essentially limit the scale of production of food products of vegetable and animal origin and reflect on the trends of its development.

Grain production has an important strategic importance for every country, including Bulgaria. In 2000, the following were produced in the country: wheat -3,406.3 thousand tons, barley – 636.4 thousand tons and corn for grain – 1,097.7 thousand tons. At the end of the observed period, in 2020, for two of the cereal crops – wheat and corn for grain, production increased to 4,710.9 thousand tons for wheat and to 2,969.2 thousand tons – for corn for grain, while in the case of barley, it decreases and is 549.1 thousand tons. Trends by year are shown in Table 3. For all three cereals, there is a persistent upward trend in quantities, but it is most pronounced for grain maize.

The only agricultural crop in which production has both permanently and repeatedly increased compared to the base year 2000, is sunflower, with 163.9 thousand tons or more than twice.

Potato production decreased from 397.5 thousand tons in 2000 to 192.5 thousand tons, reaching 48.4% of the base year.

Nº	Years Products	2007	2014	2020
1.	Wheat	70.2	156.9	138.3
2.	Barley	66.2	133.9	107.3
3.	Corn for grain	119.6	285.8	270.5
4.	Sunflower	94.3	335.8	258.2
5.	Potatoes	75.1	33.3	48.4
6.	Beans	81.3	9.9	2.4
7.	Tomatoes	32.5	29.4	28.2
8.	Pepper	36.9	39.2	40.0
9.	Cucumbers	44.9	27.4	27.5
10.	Apples	29.5	61.3	42.5
11.	Peaches	44.9	72.7	49.5
12.	Apricots	65.4	88.9	74.8
13.	Plums	37.2	39.8	97.1
14.	Cherries	65.0	117.7	184.8
15.	Strawberries	64.8	46.1	47.2
16.	Wine grapes	27.5	14.4	38.8
17.	Dessert grapes	90.7	32.9	25.3

Table 3. Production of agricultural crops (2000 = 100.0)

Source: Based on data from the Statistical Yearbook, NSI, for relevant years

The production of beans is actually on the verge of disappearing considering the fact that from 9.1 thousand tons in 2000 it is collapsing to 0.223 thousand tons in 2020.

"Vegetable production occupies an important place in the development of Bulgarian agriculture, vegetables are one of the main components in the diet of consumers, which is why they are also important for achieving food security in the nutrition of the country's population. In the last thirty years, however, the problems in the sector have deepened and it is necessary to find a way to break the negative trend and improve the sustainability of vegetable production as a share of Bulgarian agriculture." (A. Dimitrova, P. Branzova, 2022). In all three vegetable crops, production in 2020 is decreasing. For tomatoes, from 409.5 thousand tons in 2000 to 115.8 thousand tons, for pepper – from 182.0 tons – to only 50.1 thousand tons, and for cucumbers – from 131.3 thousand tons in 53.6 thousand tons. The data show that this process was more pronounced in 2007 compared to the beginning of the period, as in the case of tomatoes and cucumbers, it continues to operate in the following years.

In 2000, the following were produced: apples – 88.9 thousand tons, peaches – 41.8 thousand tons, apricots – 12.7 thousand tons, plums – 61.8 thousand tons and cherries – 28.3 thousand tons. In 2020, the quantities changed differently for individual types of fruit: they decreased for apples – to 37.8 thousand tons, for peaches – to 20.7 thousand tons, and for apricots – to 9.5 thousand tons. The amount of plums produced is almost unchanged – about 60 thousand tons. Only in the case of cherries, there was a significant, almost double increase in quantities – from 28.3 thousand tons (2000) – to 52.3 thousand tons. The year-by-year overview allows to outline years with notable increases from the base year 2000–2014 for apples, peaches, apricots, cherries, and 2020 for plums. This trend should be evaluated positively.

The amount of production of strawberries decreased from 9.1 thousand tons in 2000 - to 4.3 thousand tons, of wine grapes – from 376.9 thousand tons – to 146.2 thousand tons, and of dessert grapes – from 49.4 thousand tons to 12.5 thousand tons.

The review by years shows that in 2007, only for corn for grain, the quantities produced increased compared to 2000. In the following years (2014 and 2020), compared to the base year 2000, the quantities increased for all the cereals observed, as well as for sunflowers and cherries. This fact in itself is very disturbing.

In animal husbandry in 2000, the following were produced: meat (total, in slaughter weight, without meat byproducts) – 479.9 thousand tons, milk (total) – 1,655.4 million liters and eggs – 1,553.0 million. For all three products, at the end of the 2020 period, the quantities decrease, respectively: meat – to 207.7 thousand tons, milk – to 975.8 million liters and eggs – to 1,382.3 million pieces. The specified amounts represent 43.3% of meat, 58.9% of milk and 89.0% of eggs produced in 2000.

There is a decrease in the produced quantities of different types of meat – in the case of cattle meat (CM) from 73.2 thousand t in 2000 to 17.0 thousand t – in 2020, in the case of small cattle meat (SCM) from 59.1 thousand tons to 9.8 thousand tons, for pork – from 242.9 thousand tons to 66.3 thousand tons. The only exception is the production of poul-

try meat, the quantities of which increased for the mentioned years from 104.7 thousand tons to 114.5 thousand tons.

What is observed in the production of the different types of milk? The production of cow's milk decreases from 1,368.2 million liters to 856.1 thousand liters, of sheep's milk – from 93.7 thousand liters to 73.8 thousand liters and of goat's milk – from 184.4 thousand liters. 1 per 30.4 thousand liters. Only in the production of buffalo milk, the quantities almost doubled – from 8.9 thousand liters in 2000 to 15.4 thousand liters.

Egg production also decreased in 2020 compared to 2000 – by 170.7 thousand.

Table 4 shows the changes in the produced quantities of livestock products and by types of meat and milk compared to the base year 2000.

№	Years Products	2007	2014	2020
1.	Meat – general	49.1	41.8	43.3
	including CM	29.8	24.0	23.2
	- SCM	36.0	22.2	16.6
	– pigs	31.4	27.7	27.3
	– poultry	112.2	97.6	109.4
2.	Milk	77.8	72.2	58.9
	incl. cow milk	81.5	78.2	62.6
	– Buffalo milk	76.4	96.6	173.0
	<ul> <li>sheep milk</li> </ul>	87.5	77.5	78.7
	– Goat milk	45.9	23.5	16.5
3.	Eggs	101.7	78.5	89.0

Table 4. Production of livestock products (2000 = 100.0)

Source: Based on data from the Statistical Yearbook, NSI, for relevant years

The data show that of the three products, in 2020, compared to 2000, meat production shrank the most to 43.3% of the adopted base, followed by milk and egg production. Only in 2007, compared to 2000, in egg production, there was an insignificant increase in production compared to 2000.

In the production of meat, meat from small cattle decreased the most and reached 16.6% of its level in 2000, and in milk – the production of goat's milk – almost, as much as the meat from small cattle. This can be qualified as a very critical threshold.

For the period 2000–2020, the production of important agricultural crops, as well as food products (meat, milk and eggs) from animal husbandry is permanently decreasing. Other authors make similar findings – there is a big difference between the different specializations of farms, grain and technical crops dominate, at the expense of all other productions. There is an imbalance regarding the cultivation of various agricultural crops and animals, ie. the crop that

is most subsidized at the given time is produced. In Animal Husbandry, a greater decline in the number of holdings is reported, compared to Crop Husbandry, but the trend is negative for both branches (Dimitrova, A., 2023).

The distribution of the selected 13 products produced in the food industry can be conditionally done by grouping them as follows:

- a) products where the produced quantities increase in relation to the base year;
- b) products where there are no significant differences in relation to the base year;
- c) products where the quantities produced are decreasing.

In 2007 compared to 2000, the picture arranged by this classification is as follows:

The first group includes 9 products (69%) of their total number: bread and bakery products – an increase of 115.5 thousand tons, meat – by 10.7 thousand tons, meat products – by 61.9 thousand tons, fish and fish products – with 6.1 thousand tons, fresh milk – with 8.2 thousand tons, yogurt – with 37.4 thousand tons, canned fruit – with 48.5 thousand tons, canned vegetables – with 38.4 thousand tons, sugar and chocolate products – with 6.7 thousand tons.

In the second group belongs – cheese about 45 thousand tons and yellow cheese – about 25 thousand tons.

The third group includes oil – produced quantities decreased by 19.9 thousand tons and sugar – produced quantities decreased by 16.8 thousand tons.

In 2019, compared to 2000, the situation is as follows:

The first group includes 10 products (76.9%) of their total number: meat – an increase of 41.4 thousand tons, meat products – by 56.9 thousand tons, fish and fish products almost 5 times, but it should be taken into account that in this case we are talking about small quantities in the base year – production in the amount of 2.6 thousand tons, fresh milk – with 67.8 thousand tons, yogurt – with 66.4 thousand tons, this group includes cheese – with 15.3 thousand tons, oil – with 64.7 thousand tons, canned fruit – with 34.6 thousand tons, canned vegetables – with 29.9 thousand tons and sugar and chocolate products – with 11.5 thousand tons;

In the second group, only the cheese product remains, the quantities of which hardly change and vary between 23–26 thousand tons;

In the third group – bread and bakery products – the quantities decreased compared to 2000 from 464.7 thousand tons to 386.3 thousand tons and sugar – from 215.9 thousand tons to 107.8 thousand tons.

The fact that the quantities of the main part of the food products produced in the food industry are increasing can be assessed as positive. This means an increase in the resource that can be offered for consumption to the end user – the individual and society as a whole. However, the outlined extremely unfavorable trends regarding the production of food products in agriculture as the main raw materials for the processing industry (fruits, vegetables, meat, milk, etc.) puts on the agenda the question of the origin of the raw materials used. Is it not a matter of production based on the processing of imported raw materials?

An attempt was made to determine the possibilities of the production of basic food products from agriculture and the food industry to satisfy the consumption of food products in Bulgaria. For this purpose, the indicator "Degree of dependence" is used, calculated as a relative share (%) of produced to consumed food products, based on the average annual number of the population in Bulgaria and the consumption of products by households (on average per person). This indicator was calculated for the years 2000, 2007, 2014 and 2020, and 13 products from the food industry and 6 products from agriculture, important for feeding the population in the country, were selected.

Table 5 shows the produced and consumed quantities of the observed products, the difference between them and the parameters of this indicator for the year 2000.

In 2007, the following picture emerged:

With the produced quantities of the monitored food products, the consumed quantities can be covered in 5 (26.3% of their total number): cheese, sugar, sugar and chocolate products, potatoes and pepper. Compared to the list for 2000, in 2007 tomatoes, cucumbers and apples drop off. In the case of the remaining 14 (73.7% of their total number), the produced quantities cannot cover the consumed quantities. The distribution of these products, according to the value of the indicator, is as follows: 0-10 none; 11-20 – none; 21-30 – fish and fish products and beans; 31-40 – fresh milk and apples; 41-50 – none; 51-60 – yogurt, cheese, fruit preserves; 61-70 – bread and bakery products; 71-80 – meat, cucumbers; 81-90 – oil; 91-100 – meat products, canned vegetables and tomatoes.

In 2014, the situation is as follows: with the produced quantities of the observed food products, the consumed quantities can be covered in 3 (15.8% of their total number): oil, sugar and sugar and chocolate products. Compared to 2007, yellow cheese, potatoes and pepper drop off the list and the oil product enters. In the case of the remaining 16 (84.2% of their total number), the quantities produced cannot cover the quantities consumed. The distribution of these products, according to the value of the indicator, is as follows: 0-10 – beans; 11-20 – none; 21-30 – meat and fish and fish products; 31-40 – canned fruit; 41-50 – fresh milk; 51-60 – cheese, apples; 61-70 – yogurt, cheese, potatoes; 81-90 – canned vegetables; 91-100 – meat products, pepper.

In 2020, the production covered the required quantities for 6 products (31.5 %): pepper (100.8 %), potatoes (101.8

 Table 5. Degree of dependence of produced and consumed quantities of food products (2000)

N⁰	Products (thousand tons)	Quantities produced	Consumed quantities	Difference +/-	Degree of dependence %
1.	Bread and bakery products	464.7	1101.3	- 636.6	39.5
2.	Meat	46.4	180.6	- 134.2	25.7
3.	Meat products	43.4	93.1	- 49.7	46.6
4.	Fish and fish products	2.6	27.0	- 24.4	9.6
5.	Fresh milk (million liters)	38.6	236.1	- 197.5	16.3
6.	Yoghurt	86.8	180.6	- 93.8	48.0
7.	Cheese	45.9	75.2	- 29.3	60.8
8.	Yellow cheese	23.4	15.5	+ 7.5	150.9
9.	Oil	101.8	106.2	- 4.4	95.9
10.	Fruit cans	39.5	169.1	- 129.6	23.4
11.	Vegetable cans	49.3	102.1	- 52.8	48.3
12.	Sugar	215.9	68.6	+ 147.3	314.7
13.	Sugar and chocolate products	29.4	10.6	+ 18.8	277.4
14.	Beans	9.1	29.4	- 20.3	30.9
15.	Potatoes	397.5	214.9	+ 182.6	185.0
16.	Tomatoes	409.5	159.3	+ 250.2	275.0
17.	Pepper	182.0	71.9	+ 110.1	213.1
18.	Cucumbers	131.3	55.6	+ 75.7	236.2
19.	Apples	88.9	49.8	+ 39.1	178.5

Source: According to data from the Statistical Yearbook, NSI

%), meat products (110.0 %), canned fruit (111.0 %), canned vegetables (124.6 %), and oil (181.8 %). For the rest of the products, the distribution is: 0-10% – beans, 11-20% – none, 21-30% – meat, fish and fish products; 31-40% – none, 41-50% – apples, fresh milk; 51-60% – none, 61-70% – bread and pasta products and cucumbers, 71-80% – yogurt, 81-90% – cheese, yellow cheese and tomatoes and 91-100% – sugar and sugar and chocolate products.

"More and more producers are turning to organic production, and more and more consumers are looking for healthy and unpolluted production from fertilizers and other chemical ingredients. The motivation of both producers and consumers is a consequence of caring for the ecological balance of the earth and for our own health." (Branzova P., 2017).

#### **Results and Discussion**

Reduced production leads to a reduction in the quantities of food products produced, and this in turn leads to the emergence of food deficits. Deficits in terms of resources intended for domestic consumption and for export. Part of these deficits can be covered by food imports. In recent years, the main function of imports has changed significantly, from a source of products for which there are no favorable conditions for cultivation in Bulgaria to a main source for covering these deficits, such as quantity and assortment. At the same time, cheaper and poor quality food products are often imported into the country. Imported goods undermine the work of Bulgarian farmers. Moreover, in the conditions of a pandemic crisis, the circumstance of the need to look for an alternative to fill the deficits that have arisen, given that this cannot be done through imports, is clearly evident.

The results of the analysis and evaluation of the conditions under which the production of basic food products from agriculture and the food industry in Bulgaria is carried out, the state and trends in their development, the identified problems and opportunities to cover the consumption of food products with the obtained quantities, in the last twenty years, give reason to summarize that for now the production cannot be a guarantor for the national food security of the country.

#### Conclusions

The generalization that can be made is to strengthen the role of the production of basic food products from agricul-

ture and the food industry in Bulgaria to guarantee national food security by: improving the state of the two limiting factors – agricultural crops and farm animals; increasing the production of vegetables, fruits, wine and dessert grape varieties, meat, milk, etc., in order to cover the deficits and increase the resources for raw materials, consumption and export; overcoming monoculture agriculture; provision of sufficient quantity and assortment of resources to improve the possibilities of production to satisfy the food needs of the population from basic food products and groups of products.

## References

- Blagoev, A. (2018). Agroekologichnite praktiki za postigane na ustoichivo zemedelie, "Ikonomikata na Balgariya i Evropeiskiya sayuz v digitalniya svyat", Izdatelstvo na VUZF "Sv. Grigorii Bogoslov", ISBN: 978-954-8590-68-6.
- Blagoev, A. (2019). Svetovniyat opit za prilagane na agroekologichni praktiki "Modeli i sistemi na zemedelie v selskite raioni v Balgariya", Izdatelski kompleks – UNSS, ISBN: 978-619-232-204-5.
- Branzova, P. (2017). "Organic production in the European Union and Bulgaria –main crop", *Trakia journal of sciences*, 15, (supplement 1), 51-55, ISBN: 1313-7069.
- Dimitrova, A. (2023). Trends in the development of the structure of the agricultural holdings in Bulgaria, Economic Studies (Ikonomicheski Izsledvania), 7, 191-204.
- Dimitrova, A. & Branzova, P. (2022). Sustainable development of vegetable production via innovation, Innovative development of agricultural business and rural areas, 243-251,UNWE Publishing complex, Sofia, 2022.
- Ruscheva, D., Todorov, P. & Grozdanova, S. (2010). Prodovolstvenite resursi na Balgariya pri osashtestvyavane na Obshtata selskostopanska politika na EC, izd. Roll Kympani, S., 151, ISBN: 978-954-92236-2-0.
- Ruscheva, D. (2017). Vliyanie na OSP na EC i na nacionalnata agrarna politika vyrhu razvitieto na proizvodstvoto na prodovolstveni produkti v Balgariya. Agrobiznesyt i selskite raioni. Ikonomika, inovacii i rastej, izd. Nauka i ikonomika, IU – Varna, 203-212, ISBN: 978-954-21-0944-0.
- Ruscheva, D., Grozdanova, S. & Brynzova, P. (2021). Prodovelstvenata sigurnost i krizata s COVID-19. Publichnoto upravlenie sled 2020: kakvo znaem, kogato nishto ne znaem, UI "Sv. Kl. Ohridski", 61-77. ISBN: 978-954-07-5484-0.
- Statisticheski godishnik na Balgariya, NSI za syotvetni godini.
- Stoyanova, Z. & Blagoev, A. (2020). Rolya na programata za razvitie na selskite raioni za stimulirane prilaganeto na agroekologichni praktiki, "Upravlenie i ustoichivo razvitie", Yundola 2020.

Received: October, 13, 2023; Approved: October, 16, 2023; Published: December, 2023