

Prevention and response to risks in agriculture: Perceptions and assessments

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Abstract

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The orientation towards studying risks relevant to agricultural production is determined by the strategic importance of the sector, by the fact that it ensures food security, which is an essential part of national security. The present work aims to outline a range of risks relevant to agricultural activity, to establish how producers assess their vulnerability to them, what the personal strategies for prevention and response are, what the expectations towards the state are, and how its actions are evaluated.

The results presented and analyzed here are from a nationally representative empirical sociological survey conducted in April, 2024.

The most serious challenges in carrying out production activities are both natural and social factors – both drought and the lack of a stable economic environment.

The information collected shows that expectations for protection against risks are primarily related to the state, but the assessment given for what is being done is low. The strongest, almost complete, dissatisfaction is with what the governing bodies are doing to protect the rights of Bulgarian agricultural producers. The assessment is also similar in terms of ensuring a stable and predictable economic environment, ensuring good organization and transparency in the management (including support) of the sector, and ensuring a stable regulatory framework. It is also evident that there is a discrepancy between the needs of respondents and what is offered by insurers. The shared opinions frame quite a few bottlenecks in servicing farmers and raise questions for analyzing the insurer-agricultural producer relationship.

Keywords: risks; perception and assessment of risks; state institutions; personal responsibility; satisfaction with the state

Introduction

The topic of risks has been particularly relevant over the last four to five decades. Along with natural risks, modern society generates risks in the course of its very functioning, which gives researchers reason to define it as a “risk society” and “society of the risk” (Beck, 1992).

For every society and its future, the management of natural, social and environmental risks is of crucial importance. It is determined by the seriousness and scale of their con-

sequences in a complex, interconnected and interdependent world. The orientation towards studying risks relevant to agricultural production is determined by the strategic importance of the sector, by the fact that it ensures food security, which is an essential part of national security. This relationship – between food independence and the country’s national security, between social and economic interrelationships, has been the subject of many years of research and analysis (Anastasova-Chopeva, 2019; Kozareva, 2023; Grozdanova, 2023; Ruscheva, 2023; Georgieva, 2025).

The present work aims to outline a range of risks relevant to agricultural activity, to establish how producers assess their vulnerability to them, what the personal strategies for prevention and response are, what the expectations towards the state are, and how its actions are evaluated.

Producers highlight challenges of both a natural and social nature as very serious difficulties in their production activities. They most often point to the unpredictability of the economic situation (91.9%). It is obvious that this is a serious challenge for practically all producers. The overly frequent changes in the regulatory framework hinders 86% of those interviewed. The fact cannot be ignored that for more than four-fifths of those surveyed, it is management decisions that actually hinder work or harm producers. The negative impacts of natural disasters (88.2%), and various environmental problem (86%) are also very often mentioned. Producers' expectations for protection against the risks associated with their production activities are directed to the greatest extent towards the state.

Methodology

The results presented and analyzed here are from a nationally representative empirical sociological survey conducted in April 2024¹. The sample is formed based on the register of Bulgarian agricultural producers. In the first step, registered producers are grouped by type and size of farms and by regions. The corresponding numbers for the study are then determined from each group, so that there is proportional representation, after which the specific units for the study are randomly selected. The sample size is 800, which, according to the characteristics of interest to us, gives an acceptable stochastic error for the purposes of the study.

Results and Discussion

The conducted research showed that producers most often cite natural disasters as a very serious challenge in carrying out their production activities – 81.7%. Soil and water pollution is in second place – 69.9%. The third difficulty, however, is of a social nature – the unpredictably changing economic environment (50.5%).

If we add to the extreme answers (very severe problem), those indicating the presence of a severe problem, a shift occurs (Fig. 1). Then the unpredictability of the economic situation comes to the fore (91.9%). It is obvious that this is a

serious challenge for practically all producers. The negative impacts of natural disasters remain in second place (88.2%), and the overly frequent changes in the regulatory framework and one or another environmental problem (86%) are ranked third. The fact that for more than four-fifths of those surveyed, the problem is management decisions that actually hinder work or harm producers cannot be ignored. Those who mentioned other factors of an organizational and managerial nature, such as the shadow economy (68.8%), also have significant shares.

When asked to answer for themselves what the biggest problem is, most respondents (37.8%) point to natural disasters. The following – the unpredictably changing economic environment, soil and water pollution, and frequent changes in the regulatory framework, which are the most important obstacles in total for more than 40 percent of producers, are subject to influence by management bodies.

Producers rate their vulnerability to drought and hail as the highest (Fig. 2). Drought stands out as the most threatening threat. This is the case for a vast majority of farmers – 94.4%. Second place take hailstones (73.1%). For approximately half of the respondents, theft is also a very real threat.

As for real damage suffered, drought is once again the primary cause. Almost everyone answered that they had suffered from drought – 94.6%. Unfair competition follows with a significant difference – 69.9%. Slightly less than half of respondents have been a victim of some kind of fraud – 44.1%. More than a third – of hail and theft.

The study also provides information on who producers see as responsible for preventing the various risks and problems they face. Expectations for protection from the risks associated with production activities are directed to the greatest extent towards the state. Ensuring a stable economic environment (91.4%), protection against natural disasters such as droughts, floods, hailstorms, etc. (79.6%), preventing and sanctioning fraud to drain funds (69.9%) and protecting the environment (68.2%), are defined as its exclusive commitment. Local authorities are mostly expected to take care of property protection (65.6%). Producer organizations are required to protect producers' interests (66.7%).

It is striking that expectations (and attitudes) for action by the producers themselves are poorly spread. Besides being quite low, they are mostly focused on property protection (12.9%) and environmental protection (10.2%). Namely, with regard to the latter, the characteristics of their activity play a significant role.

Against this background, the low satisfaction with what the state is doing stands out (Fig. 3).

The responses show a generally rather low assessment of what is being done by the various state institutions. There

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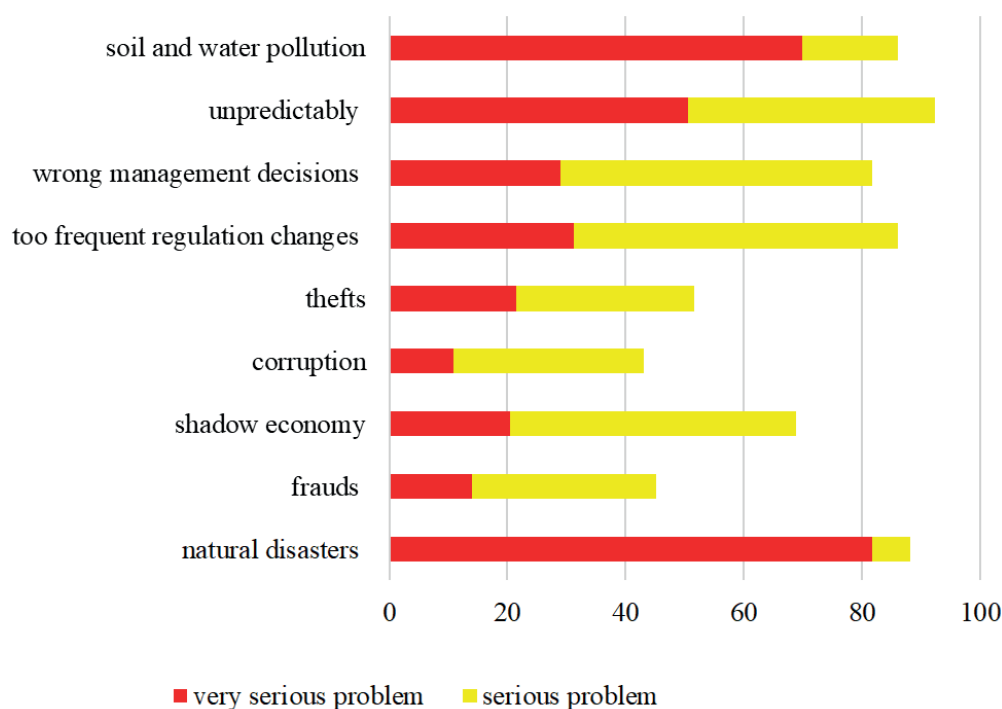


Fig. 1. Severe and very severe problem, negatively affecting production activity

Source: Authors' own elaboration

is no complete satisfaction with regard to protection against some risks (detection and sanctioning of fraud and environmental protection). In other cases, it varies around 2–3 percent. And taking into account the answers indicating partial satisfaction, it can be seen that the majority of the questions are clearly dominated by negative answers. The only exceptions are property protection – 57% satisfaction versus 43% dissatisfaction and environmental protection – 51.6% (and in

the absence of answers indicating complete satisfaction) and 48.4%, respectively.

The strongest, almost complete, dissatisfaction is with what the governing bodies are doing to protect the rights of Bulgarian agricultural producers – 95.7%. The assessment is also close in terms of ensuring a stable and predictable economic environment – 91.4%, ensuring good organization and transparency in the management (including support) of the sector – 90.3%, ensuring a stable regulatory framework – 89.3%.

A concrete illustration of the low ratings is the information about satisfaction with the actions of the police when it was notified of violations – **“If you were a victim of theft of your produce and reported it to the police, are you satisfied with the action taken?”** 4.3% of respondents responded that they are completely satisfied with the actions taken by the police in cases of theft. Rather yes is the answer, given by 18.5% of respondents. Totally it could be assumed that 22.8% of victims of product theft are satisfied with the actions taken by the police. 6.5% are rather dissatisfied, and 10.9% are not satisfied at all. A total of 17.4% of respondents express dissatisfaction with the actions taken by the police in cases of theft. A significant share of respondents – 29.3% – do not notify the police. Almost every third respondent an-

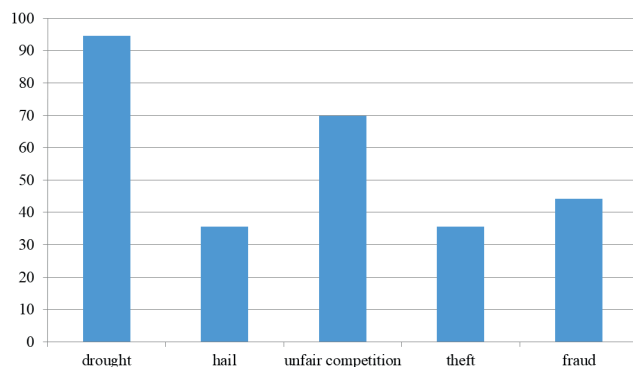


Fig. 2. Producers who have suffered, in the last year, from:

Source: Authors' own elaboration

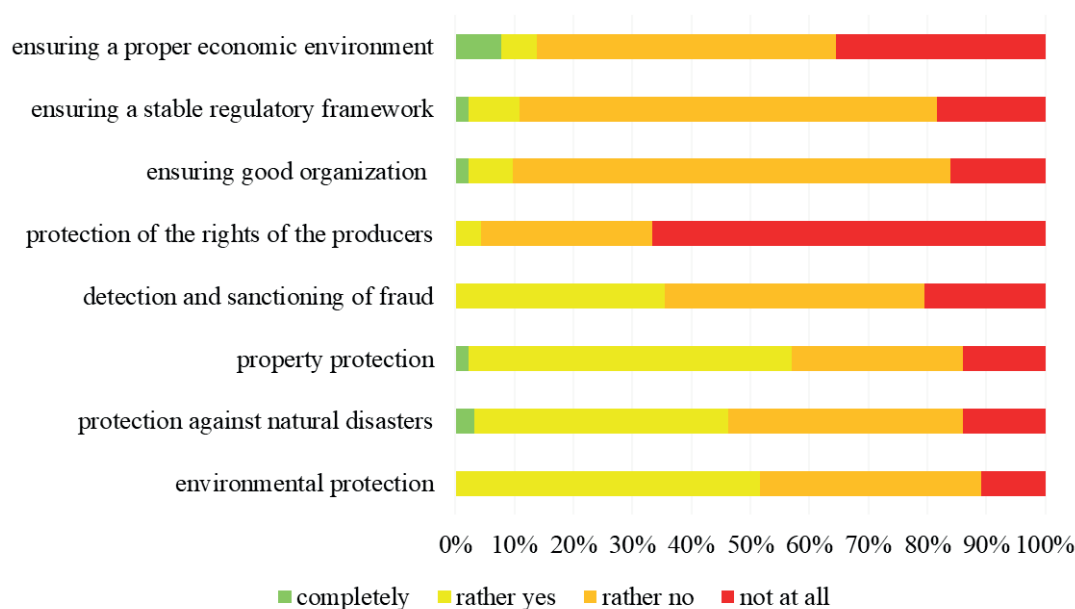


Fig. 3. How satisfied are you with what state institutions are doing for:

Source: Authors' own elaboration

swer that he (she) has not been a victim of assault – 30.4% of those surveyed. The share of those satisfied with the actions taken by the police in the event of theft of produce (22.8%) exceeds the share of those dissatisfied (17.4%), which can be considered/interpreted as a positive sign. At the same time, the fact that almost every third person surveyed does not notify the police that he (she) is a victim of theft, is disturbing. It is symptomatic that the relatively equal number of respondents, who responded that they had suffered theft and did not report it to the police, was the same as the number of respondents, who had not had their production attacked.

As for personal actions, information is obtained from an open-ended question – **“Are you doing anything to reduce the risk of adverse effects on your production activities from...?”**

The question provides qualitative information from what respondents freely share about their personal actions and behaviors to reduce the risk of adverse impacts on their production activities. Some of the opinions shared by the respondents are an expression of the so-called problem areas when a risk arises: *“We’re trying. But if the state isn’t there, we can’t do anything. Before, there was a police officer in every settlement here”*; *“There are security cameras installed; We are making attempts to properly store the produce”*, are some of the answers. Respondents who perceive adverse weather events as a risk of adverse consequences on production activities share that: *“You cannot fight nature alone.”*

When we asked **whether they have property insurance for natural disasters**, 40.2% of respondents give a positive answer. The majority of respondents – 59.8% – have not taken out property insurance for natural disasters. It can be seen that the share of farmers without insurance significantly exceeds that of those with insurance. This fact could be the subject of further investigation. From processing and understanding the information received, processes can be decoded, the in-depth study and analysis of which allows providing information for identifying processes with the potential to develop into risks for adverse consequences on the production activities of farmers. The production process in agriculture is influenced by factors of various nature – biological, technological, economic, political, socio-cultural, etc. The involvement of living organisms and the influence of natural and climatic conditions further complicates the production process. It is no coincidence that the 20th-century thinker, philosopher, and sociologist Karl Marx defined agricultural production as an open-air factory. It is natural disasters that are the first risk of compromising the harvest – a risk that is subject to analysis and insurance protection. The relationship between farmers and insurers should be in a systematic connection, which, as evidenced by the high percentage of uninsured farmers, is not present.

Some of the problems are revealed/contained in the answers to another question – **“If you don’t have insurance, why?”** (With the possibility of more than one answer). A sig-

nificant share of the surveyed agricultural producers points to a financial reason for the lack of insurance, a total of 42.1%. According to 8.8% of respondents who do not have insurance, *“the insurance I need is not available.”* *“The terms of the insurance offered do not satisfy me”* is the answer of 14.9% of respondents without insurance. A fairly high proportion of respondents who do not have insurance – 38.6% – feel distrust due to bad experiences with insurers. *“It’s not beneficial for me, it’s too expensive”* is the opinion of 19.3% of this group of respondents. The answer *“I cannot allocate funds for insurance”* is given by 22.8%. The responses received regarding the reasons why agricultural producers do not take out insurance indicate a discrepancy between the needs of the respondents, bad experiences and distrust of insurers, and financial conditions. This frames quite a few bottlenecks in servicing farmers and raises questions for analyzing the insurer-farmer relationship.

In the context of the stated financial difficulty in obtaining insurance, the respondents’ self-assessment of their own financial situation is of interest.

“Very good” is the assessment of 28% of the respondents, good for 33.3% of the respondents, satisfactory for 30.1%, and *“bad”* – 8.6%. Based on these assessments, it can be said, on the one hand, that this is a good assessment of the results of the economic activity of those employed in the Bulgarian agricultural, but on the other hand that for a significant part of the people additional expenses are problematic. The answers to another question related to expectations for the future – **“Do you think there is a possibility that your financial situation will noticeably deteriorate over the next year?”** can provoke certain reflections on potential processes with a certain negative connotation. A relatively high share of respondents (41.9%) answered affirmatively. For one third – 33.3%, there is no likelihood that their financial situation will noticeably worsen in the next year, the answer *“I can’t estimate”* is indicated by 24.7% of respondents. The high share of respondents who say that their financial situation is likely to deteriorate is a signal of a problem in the economic system of the agricultural sector. This response of uncertainty is a carrier of potential negative processes, the identification and resolution of which is beyond the capabilities of the individual farm. The process of uncertainty expressed by such a high percentage of agricultural producers is symptomatic and is a signal of the manifestation of potential risk.

In the context of the general orientation of the policy towards environmental protection, significant attention is also paid to the problem within the framework of the Common Agricultural Policy. The fact is that agricultural production generates anthropogenic changes in one or other components of the environment. It is a sector that actually has a share in

pollution and damage to nature – overloading of arable land with plant protection products and artificial fertilizers, salinization and acidification of soils, erosion are just some of the specific dimensions. In addition, agriculture also contributes to the generation of greenhouse gases.

Environmentally friendly production/behavior, however, is inextricably linked to the general socio-cultural context, to people’s value systems and orientations, to their preferences and attitudes. In this regard, a question was included: **“Which of the statements is closest to your opinion?”** *“It is more important that I get a bigger harvest this year”* answered 68.8% of respondents. The answer: *“It is more important to preserve the quality of the soil for the coming years”* was given by 31.2% of respondents.

The information from the next question – **“How do you perceive the Green Deal?”** provides an opportunity to see the opinion of agricultural producers on the relationship between business activity and green policies in the sector. It is defined as an *“opportunity for nature conservation”* by more than half of the respondents – 53.8%. This is also the explanation why almost every third registered farmer answers the previous question that it is more important to preserve the quality of the soil for the coming years. The Green Deal is perceived as increasing the cost of production by 15.1%, a difficulty in production for 14.0% of respondents, and an increase in bureaucracy for 5.4% of them. The answers of 9.7% of respondents are that for them the Green Deal is an opportunity for new business. This perception of the change in agricultural policy can be interpreted as a positive attitude by agricultural producers, and a possible expectation that in their activities they will apply technological solutions tailored to prevention and protection of natural resources.

Conclusions

In a communication of 19.2.2025, the Commission presents views on the future of agriculture and food in Europe (EC, 2025). The European agricultural and agri-food sector has many strengths in the areas of health, safety, quality, sustainability and innovation in production. The need to build on these strengths is highlighted. The Union must improve its response to the challenges faced by farmers, rural actors and the agri-food chain, preparing for the future with a more decisive political response in favor of European strategic autonomy and food sovereignty.

At the same time, the goals of nature conservation and decarbonization should not be abandoned. This is a political response, united around a common vision that will shape the Commission’s work throughout the current mandate in all policy areas that have an impact on agriculture and food.

This ideal cannot be achieved solely through efforts at EU level. New generations of farmers, agri-food operators, informed consumers and rural communities need to take over from the current generation the role of entrepreneurs, guardians of rural areas and drivers of change. This requires enhanced dialogue at all levels of government, with EU institutions, national, regional and local authorities. The analysis of the results of the nationally representative empirical sociological survey conducted in 2024 among registered Bulgarian agricultural producers confirms this thesis of the Commission. Those administering the Common Agricultural Policy in Bulgaria consciously declare that: “Good dialogue between the executive power, represented by the Ministry of Agriculture and Food, and farmers is the necessary stable basis for ensuring native, quality products on the market” (Ministry of Agriculture and Food, 2025).

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Conflict of interest

Authors declare no conflict of interest.

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