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ASSESSMENT OF ENTREPRENEURIAL RISKS IN AGRICULTURE

Об'єктом дослідження є підприємницькі ризики в аграрній сфері України та ступінь їхнього впливу на результати сільськогосподарської діяльності. Однією із найбільших проблем підприємницької діяльності є наявність ризиків, проте виміряти їх складно. На даний час відсутній визнаний науковою спільнотою та експертами-практиками стандарт (протокол) оцінки ризиків, який описує її завдання, методологію, процедури, статистичні аспекти та організацію дослідження. Отже, вдосконалення методичних підходів оцінки підприємницьких ризиків залишається важливим.

В ході дослідження використовувались наступні методи: абстрактно-логічний, порівняльного аналізу, статистичний, монографічний, експертних оцінок, графічний, табличний, діалектичний. Для аналізу ризиків була запропонована система індикаторів, які формувались з урахуванням прийомів декомпозиції, аналізу та синтезу. Під час відбору видів ризиків до системи індикаторів був застосований контент-аналіз літературних джерел авторства фахівців у сфері аграрних ризиків.

Отриманий результат полягає у розробці концепції авторської методики якісної оцінки впливу ризиків в сільському господарстві на результати діяльності. Методика має ряд особливостей, зокрема, вона враховує вплив найбільших галузевих ризиків – природних, макроекономічних, внутрішньоекономічних, політичних та кримінальних.

Запропонована методика оцінки включає етапи:

- 1. Експертна оцінка 20 чинників, які можуть найбільш суттєво вплинути на результати сільськогосподарської діяльності. Експерти у балах за шкалою від 1 до 5 оцінюють ступінь впливу фактора.*
- 2. Перевірка узгодженості думок експертів.*
- 3. Розрахунок середньої бальної оцінки ризиків з подальшою градацією ступеня ризику за групами: низький або помірний, припустимий та критично небезпечний рівень ризику.*
- 4. Формування висновків щодо управління ризиками діяльності.*

У порівнянні з аналогічними методами аналізу ризиків запропонована методика має наступні переваги:

- комплексний підхід, можливість деталізації окремих ризиків;*
- простота математичних розрахунків;*
- економія часу та ресурсів завдяки аналізу невеликої кількості чинників, що мають найбільший вплив на сільськогосподарську діяльність;*
- мінімізація суб'єктивності оцінок експертів;*
- можливість використання результатів в оцінці страхового ризику або оцінці інвестиційної привабливості проектів.*

Завдяки застосуванню даної методики забезпечується можливість отримання однозначної та науково обгрунтованої відповіді на питання «Наскільки високий ризик зазнати збитків у даній діяльності?».

Ключові слова: підприємницький ризик, методика оцінки ризиків, сільське господарство.

1. Introduction

Entrepreneurship in a competitive environment is inevitably associated with risk, which is the objective reality of any activity. The economic literature uses the terms «entrepreneurial risk», «business risk», «economic risk» or simply «risk» in an economic context. At the same time, the risk in entrepreneurship, as in other situations, is associated with the awareness of danger, threat, insecurity, negative manifestations of randomness and uncertainty.

Agriculture plays an important role in the economic development of Ukraine, however, it is one of the most risky sectors of the economy, and it is almost impossible to foresee the success of the results. In agriculture, the

level of entrepreneurial risk is higher compared to other sectors, since the results of activities depend significantly on external (natural, competitive and other) conditions. The success of activities in the agricultural sector is not provided by risk prevention, but by their assessment and adaptation of the enterprise to the conditions of the external and internal environment. Therefore, achieving a high level of competitiveness of agricultural enterprises is impossible without managing entrepreneurial risk.

It should be recognized that the theoretical and applied aspects of the impact of risks on the economic activities of agrarian enterprises in Ukraine are not sufficiently studied, therefore, it is relevant to study the characteristics of domestic agriculture in the manifestation of risks in it.

In addition, the methods for assessing entrepreneurial risks in the direction of determining their industry and domestic features require further improvement.

2. The object of research and its technological audit

The object of research is entrepreneurial risks in the agrarian sector of Ukraine and the sectoral features of their influence on the results of operations.

The subject of research is a set of theoretical and practical aspects of identifying and assessing the entrepreneurial risks of agricultural enterprises.

In the modern economic literature one can find various approaches to the definition of risk and their classification. For a wide practical application of risk management methods, it is necessary to clearly define the concept of entrepreneurial risk, develop a risk classification and determine the methodological basis for assessing their impact on activities.

Since risk, as an economic category, reflects the likelihood of an uncertain (random) event, which may or may not occur, a thorough risk analysis must precede any business decision.

The work of identifying potential risk factors in activities and assessing their significance in order to develop methods to reduce the risk or reduce the associated adverse effects is called a risk analysis [1].

One of the biggest problems of business is the presence of risks, but it is difficult to measure them. *Currently, the standard (protocol) of risk assessment, which describes its tasks, methodology, procedures, statistical aspects and organization of research, is not recognized by the scientific community and expert practitioners. So, the improvement of methodological approaches to assessing entrepreneurial risks remains important.*

3. The aim and objectives of research

The aim of research is development of a concept for a qualitative assessment of the impact of risks in the agricultural sector of Ukraine on the results of agricultural activities. To achieve the aim the following objectives are:

1. To summarize the main types of entrepreneurial risks in agriculture and clarify their classification by source.
2. To consider the most common methodological risk assessment methodologies.
3. To propose the concept of the author's methodology for the qualitative assessment of entrepreneurial risks in agricultural activity.

4. Research of existing solutions of the problem

For the first time, the question of the need for risk assessment was raised in [2], the author of which noted the need to include something like an insurance premium in profit rates as compensation for entrepreneurial risk. However, neither the classification of such risks nor the methodology for their assessment was proposed.

The first attempt to scientifically determine risk was made in the 18th century in work [3], which began the science of risk in economics and found practical application, in particular, in life insurance.

Traditional views on risk in economics are presented in the position of two scientific schools – classical and neoclassical. In the works of representatives of classical political economy, risk is considered as a mathematical expectation of damage as a result of making a specific decision [4, 5].

An alternative approach to the definition of risk was developed by the neoclassical school, which determines that the guaranteed income has more utility than the expected profit of the same size, but is associated with possible fluctuations) [6, 7].

For the first time classification of entrepreneurial risks was presented in the studies of the author of the work [8], who noted that in the economic sphere it is advisable to distinguish three main types of entrepreneurial risks: the risk of an entrepreneur or borrower, the risk of a lender and the risk of inflation. However, scientists did not consider other, no less important signs for classification, for example, by the scope of the risks, the degree of influence on economic activity and, if possible, the elimination.

In [9], the author of which was awarded the Nobel Prize, proposed a new approach to the study of the effects of risk on the distribution of investments, the correlation and diversification of expected investment incomes. However, the work is mainly devoted to the analysis of financial risks; therefore, the author's conclusions do not provide an answer to the question of how to avoid other types of risks.

In Ukraine, serious scientific research on the theory of economic risk began in the 90s of the twentieth century. In particular, the conceptual framework for qualitative and quantitative risk analysis, a system of indicators for quantitative assessment of economic risk, approaches to modeling, and risk management have been developed [4, 10].

Among modern studies of risk management activities carried out by scientists from countries with similar economic conditions to Ukraine, labor deserves the most attention [11, 12]. For example, in [11], the practical aspects of risk management are considered, in particular, attention is focused on risk factors that simultaneously affect the dynamics of several types of risks. But the question remains how to assess the degree of influence of these risks on the results of operations.

From an unconventional perspective, the risk management process is considered by the author of [12], which identifies the stages of the risk management process, reveals the possibilities of applying the reframing approach, and develops a model of the reframing of the stages of the organization's risk management process.

Now the theoretical concepts of economic risk continue to explore and improve scientists and practitioners in various fields of activity.

The subject area of research, namely the risks in the agrarian sphere of Ukraine, attracts the attention of many domestic researchers, both scientists and practitioners, including the agricultural producers themselves and specialists in the field of agricultural insurance. Several dozens of publications dealing with risks in agriculture have been developed using elements of content analysis (by determining what is most often raised in the investigated materials). Based on the results of the assessment of the spread degree to those considered in the context of possible risks in agriculture, a system of indicators was created to assess the riskiness of the activity, which will be presented below.

The authors of papers [13–15], which attract the most attention, provide the most detailed description of the types of risks in agriculture and offer tools for assessing their impact on performance. However, some issues require revision, in particular, it is necessary to decompose the sectoral risks of entrepreneurial activity, which would take into account the particularities of the national economy of the country in which the activity is carried out.

The risk analysis process includes the following stages (Fig. 1).

So, the first stage, on which the success of risk management is largely dependent, is their analysis, which can be qualitative or quantitative.

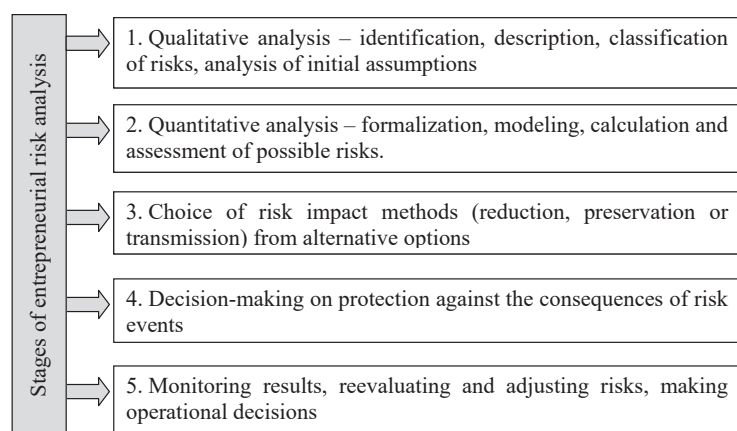


Fig. 1. The main stages of the entrepreneurial risk analysis

Qualitative analysis identifies the sources and causes of potential risks, types of risks at various stages of a certain activity, predicts possible negative consequences of the identified risks. A qualitative assessment implies setting a reference point in non-numerical, terminological terms, for example, «minimal risk», «moderate risk», «marginal risk», «unacceptable risk». The basis for assignment to a particular group is the system of parameters established for each risk portfolio [16].

During the risk analysis, non-formalized methods are used, such as expert assessment method, brainstorming method, association and analogy methods, Delphi method and other heuristic methods.

The result of the analysis is the basis for quantitative risk analysis. At the stage of quantitative analysis, the values of the individual risks and the risks of the enterprise (activity) as a whole are calculated. At the same time, they manifest negative consequences of possible risks, evaluate them quantitatively, develop a system of measures to counter the risk with the calculation of their economic effect.

The most common methods of quantitative risk analysis, including the study of agricultural risks, are statistical analysis of the feasibility of costs, the method of expert estimates and the use of analogues.

The statistical method is based on the study of statistical data on events that took place at a given or similar enterprise in the past in order to determine the likelihood of a single adverse event in the future [17]. When analyzing, indicators of variation (variance, mean deviation, coefficient of variation, semivariance, semi-quadratic deviation) and relative indicators (probability, risk coefficient, etc.) are calculated.

The method of analyzing the expediency of costs is focused on minimizing the amount of risky capital. Indicators of financial stability are used to assess the risk degree of use of financial resources.

Methods of expert assessments provide for a survey of competent persons, highly qualified specialists in the investigated problem, who assess the risk using logical and statistical methods using the intuition, knowledge and professional experience of the respondents [18].

The essence of the method of analogy lies in the analysis of all available data on objects that have a high degree of similarity with the assessed. The method uses a database of similar objects to identify common dependencies and transfer them to the object under study in order to calculate the probability of loss occurrence [17].

The advantages and disadvantages of the considered methods are summarized in Table 1.

Of course, the results obtained by different methods will differ, but an analysis of the differences between them will reveal the factors that are taken into account in some methods and not taken into account in others, affecting the accuracy of the assessment and the reliability of the obtained results.

Since each of the above methods has its disadvantages, the improvement of existing methodological approaches to the assessment of entrepreneurial risks, especially taking into account their industry specifics, remains promising.

Table 1

The main advantages and disadvantages of the most common methods of quantitative analysis of entrepreneurial risk

Method	Main advantage	Main disadvantage
Statistical	Simplicity of mathematical calculations	The need for a large number of observations
Cost benefit analysis	Integrated approach to analysis, the possibility of detailing individual risks	Components of the sources of risk occurrence are not analyzed (risk is taken as an integral value)
Expert review	Can be used in conditions of shortage and even lack of information	The subjectivity of experts can significantly distort the results
Use of analogues	Can be used to identify the risk degree of new business areas for which there is no statistical information	The risk factor does not take into account the time factor and the need for complete and reliable information regarding the analogue object

5. Methods of research

To achieve this aim, the following research methods were used:

- abstract-logical and comparative analysis (in disclosing the nature and characteristics of the risks of agricultural activities in Ukraine);
- statistical (for systematization and analysis of information on the impact of risks on the results of agricultural production in Ukraine in recent years);

- monographic (for in-depth study of certain types of risks in agriculture);
- expert assessments (when developing a methodology for assessing risk flooding on the results of activities in agriculture);
- graphic and tabular (when presenting the results of the study);
- dialectical (for theoretical generalizations on the definition of problems and ways to overcome them, the formation of conclusions).

For risk analysis, a system of indicators was proposed, which were formed taking into account the methods of decomposition, analysis and synthesis.

When selecting types of risks, a content analysis of literature sources of authorship of experts in the field of agricultural risks was applied to the indicator system. The application of these methods distinguishes research among others.

6. Research results

One of the essential elements of entrepreneurial activity is risk.

According to the authors of this study, entrepreneurial risk is the likelihood of adverse events occurring in the process of production, sales or financial activities, as a result of which business entities may incur losses, material, labor and other unplanned expenses, and receive less income in the process of their activities.

Risk classification is multidimensional, but from the point of view of entrepreneurial activity, the most important is the distribution of risks by sources of occurrence. It is proposed to divide risks on this basis into macroeconomic and political, internal economic, natural and criminal ones. It is noted that certain types of risks (criminal, resource, commercial, etc.) can be caused by both external and internal factors.

For example, criminal risks are associated with crimes that can be committed both by employees of the enterprise and by unauthorized persons.

Considered types of entrepreneurial risks are common to all types of activities, but in agriculture they are industry-specific.

To determine the types of risks that most affect the results of economic activities in agriculture, experts (scientists and agricultural practitioners) are involved and materials of scientific publications and electronic resources of agricultural producers for 2017–2018 are analyzed. A detailed description of the content analysis of the investigated materials is the subject of writing a separate work, therefore let's confine ourselves to topics that were raised most often.

Most often in the discussion of risks in agriculture the following types of risks are considered:

1. *Natural and climatic risks* are the main type of industry risk, since the results of economic activities are almost entirely dependent on weather and climatic conditions, natural phenomena and biological processes that are impossible to foresee and difficult to control.

For example, in 2017, as a result of extreme adverse weather conditions, the yield of sunflower was 30–40 % [19].

2. *Administrative risks* associated with the possibility of increasing tax and other pressure on product manufacturers, the adoption of laws and regulations that reduce

the efficiency of the industry. The instability and unpredictability of the legal field and, in particular, the tax legislation in Ukraine is one of the main constraints for the development of entrepreneurship.

3. *Credit risks*. High interest rates on loans significantly reduce the efficiency of agricultural enterprises and increase the risk of their default.

4. *Production risks* that are a consequence of non-compliance with agricultural technologies due to the lack of plant and animal protection products, mineral fertilizers, equipment and physical and moral deterioration of equipment, machinery and mechanisms, and the like.

5. *Risks of low competitiveness* may be caused by the inability of a particular enterprise to compete in the market of certain products. This may occur due to the slow response to market conditions, the transformation of demand for the monopoly of agricultural holdings, the dumping of competitors, a higher level of prices for products compared to imported goods, and the like.

Competitiveness risks in the industry are also associated with a significant duration of the reproduction cycle. For example, growing a dairy herd requires more than three years; therefore, in the event of a growth in demand for dairy products, it is not possible to quickly increase the livestock to adequately respond to market conditions. In crop production, they arise when creating a new garden, which is needed for more than five years for the first fruiting, a new vineyard, the first time of which is obtained after three years, and so on) [15].

6. *Risks of prohibition or sale restriction*. Thus, in 2017, Belarus imposed temporary restrictions on the import of pork (in particular, on live pigs, pork and its products) from certain regions of Ukraine due to outbreaks of African swine fever in these territories. At the same time, restrictions were imposed on the import of feed and feed additives containing raw pork, as well as equipment used for the transportation, maintenance, slaughter and cutting of pigs [20].

7. *Criminal risks* associated with theft of property, concealment of income, other crimes against property, as well as corruption crimes, significantly impede lawful business activities in Ukraine.

It is proposed to conduct a qualitative analysis of entrepreneurial risks using the above author's classification of risks in agriculture and a system of indicators-indicators, summarized in a comprehensive assessment. Determining a large number of indicators is a fairly voluminous work, difficult to interpret, so let's suggest limiting their number to 20. It is advisable to focus on the key risk factors listed in Table 2.

Each answer to the questions in column A of Table 2 are rated on a scale:

- 1 point, if the factor does not significantly affect the results of operations, the degree of influence of the factor is impossible or difficult to determine;
- 2 points, if the factor influences, for example, in the case of an adverse event, the losses will be non-critical;
- 3 points, if the factor is critically affected, there is a risk of receiving significant losses;
- 5 points in cases where the negative impact of a factor can lead to significant losses, bankruptcy of the enterprise. In Table 2 such consequences are underlined in column 3.

Table 2

Risk assessment of the influence of the most significant factors on the results of operations of an agrarian enterprise

Factors causing uncertainty of results	The degree and forms of possible negative impact on the activity		
	Will affect slightly – 1 point	Will affect permissible – 2 points	Will affect critically – 3 points/5 points
Macroeconomic and political			
1. Increased tax pressure or the abolition of tax incentives in agribusiness	Unknown hard to define	Increase in taxation expenses	The possibility of significant costs, profit shortfall
2. Cancellation of the moratorium on the sale of agricultural land	Will not affect	Unknown hard to define	The company can significantly reduce the area or cease to exist
3. The high rate of inflation in the country	Difficult to determine (an increase in prices for agricultural products can offset additional costs)	Increase in expenses, shortfall in income, profits	Getting a loss
4. Devaluation (depreciation of the hryvnia against «hard» currencies)	Hard to determine	Increase in the cost of imported components	Significant damage due to exchange rate differences
5. Instability of the political situation in Ukraine	Unknown hard to define	Possible loss of several buyers or suppliers	Possibility of nationalization, confiscation of an enterprise
6. Prohibition (restriction) of export/import of certain types of goods	Minor expenses	Reduction of income, inability to obtain the necessary imported goods, etc.	Loss, probability of partial termination
Natural			
7. Natural disasters (hurricane, downpour, fire, etc.)	Slight decrease in yield, allowable loss of production	Lack of agricultural equipment-products	Total loss of received products, loss
8. Adverse weather conditions (frost, drought, hail, etc.)	Minor expenses	Reduced yields, reduced feed base	Total loss of received products, loss
9. Risks of animal and plant diseases	Due to the special features of the technology, risks are minimal	Lack of agricultural equipment-products	Total loss of received products, loss
Criminal			
10. Property thefts, losses as a result of non-fulfillment of official duties.	Can be compensated by insurance or the perpetrators	Insignificant losses as a result of thefts of finished products, fuel and lubricants, etc.	Significant losses due to criminal management activities
11. Corruption offenses against business activities.	There are no or unknown cases of corruption crimes in this region, district	The occurrence of interference in legitimate business activities	The possibility of significant losses, stopping the activity
Domestic economy			
12. Production and technological in plant growing (non-compliance with technologies in plant growing)	Insignificant deterioration of soil quality, insignificant decrease in yield, shortfall in profits	Excess use of mineral fertilizers, chemicals, removal of nutrients from the soil, reduced yields and product quality, a significant decrease in profits	Loss of soil cover and soil fertility, unsuitability of land for agricultural use, loss of crop, losses
13. Production and technological in animal husbandry (non-compliance with the conditions of feeding, maintenance and use of animals and poultry)	Slight decrease in the productivity of animals, an increase in their premature culling, the shortfall in profit	A significant reduction in the livestock of animals, a significant decrease in production, deterioration of its quality, a significant decrease in profits	Loss of livestock, loss of production, losses
14. Resource (lack of basic types of resources, depreciation of fixed assets)	Main technological processes are fully provided with necessary resources	The resource potential provides the main processes, however there is a risk of improper performance of technological operations	Production shutdown, loss of products, losses
15. Risks of prohibiting or restricting the sale of certain types of products	Will not significantly affect	Quality products will be used for internal needs	Reduction of income, losses for certain types of products
16. Risks of self-reproduction	Will not significantly affect the required resources in the market	Additional costs due to external replenishment of resources	Production shutdown, loss of part of products, additional expenses for replenishment of resources
17. Transport (low transportability of products, interruptions in the work of transport, etc.)	Insignificant costs, damage to the goods, compensated by the carrier	Increase in expenses, loss of a part of production, decrease in sales, shortfall in profits	Possible loss of goods during transportation, loss of customers, damage
18. Competitive (falling demand for products, reduced competitiveness of goods, etc.)	Decrease in demand for the company's products is unlikely	Revenue reduction due to lower sales volumes and/or lower prices	Loss of customers, damage, crowding out competitors
19. Credit (non-borrowing)	Will not affect the company finances its current expenses at its own expense	The company will not be able to finance the replenishment of the material and technical base (MTB), resource risks will arise	Due to non-receipt of a loan or the impossibility of its return the risk of bankruptcy
20. Financial and investment	Hard to determine	Additional costs, may not pay off	Losses as a result of financial and investment activities, the depreciation of investments

Assessment of certain types of risks should be carried out by experts in an amount of at least 3 people. To ensure objectivity, the assessment in the expert group should include both employees of the enterprise and independent specialists (representatives of the insurance campaign, scientists, highly skilled workers of other enterprises of the agrarian sector). The selection of experts for risk assessment and the entire examination procedure should be carried out in accordance with generally accepted rules and principles that are well described in the special literature.

According to individual estimates determine the average. In order to assess the consistency of expert opinions, it is obligatory to check the answers according to the coefficient of concordance, the Pearson criterion or the Kendall or Spearman criteria [21].

Having determined the estimates of all the components, it is possible to find the total value of the indicator by summing these estimates. The method of calculation is designed in such a way that the final value will be in the range from 20 to 80. The greater the value of the indicator, the higher the risk level.

According to the results of quantitative risk assessment, a generalization of the riskiness of the activity is made (Fig. 2):

- 0–30 points – low (moderate) risk level. This risk level requires the reservation of funds to cover potential losses;
- 30–60 points – acceptable risk. At this risk level, losses can be minimized through insurance;
- 60–80 points – critically dangerous risk level. At such high risk, decisions can be made about abandoning overly risky activities, prevention or diversification (reduction method), outsourcing of expenditure risk functions (transfer method), formation of reserves or resources (adoption method).

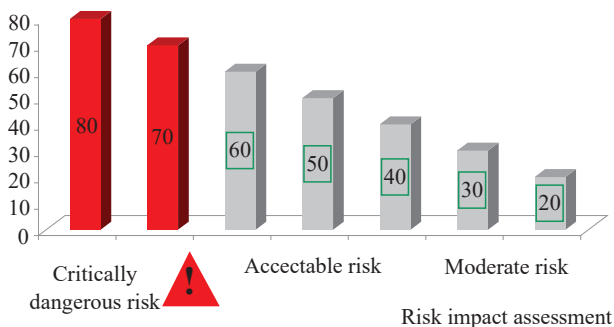


Fig. 2. Integral risk impact assessment, points

An example of the application of this methodology is given in Table 3.

According to the results of a survey of three experts on the risk degree of entrepreneurial activity of an agricultural enterprise specializing in the production of grain and poultry, an acceptable level of risk is found at 50 points of the integral indicator. This means that insurance is the most effective risk management tool in this sector.

Let's recognize that the proposed approach to the assessment of entrepreneurial risks so far is only a conceptual approach and quantitative criteria can be refined after repeated testing of the methodology.

Table 3

Risk assessment of the influence of the most significant factors on the results of operations of an agricultural enterprise (specialization is the production of grain and poultry farming)

Factors contributing to uncertainty of performance	The results of the survey of experts (points)			
	Expert 1	Expert 2	Expert 3	Average
1. Increased tax pressure or the abolition of tax incentives in agribusiness	2	3	2	2
2. Cancellation of the moratorium on the sale of agricultural land	2	2	5	3
3. The high rate of inflation in the country	2	2	3	2
4. Devaluation (depreciation of the hryvnia against «hard» currencies)	2	2	1	2
5. The instability of the political situation in Ukraine	1	1	1	1
6. Prohibition (restriction) of export/import of certain types of goods	2	2	2	2
7. Natural disasters (hurricane, rain, fire, earthquake, etc.)	5	2	5	4
8. Adverse weather conditions (winter frosts, drought, hail, etc.)	5	5	5	5
9. Risks of animal, plant diseases (epidemics, diseases, pests, etc.)	2	2	1	2
10. Property thefts, losses as a result of non-fulfillment of official duties.	1	1	1	1
11. Corruption offenses	2	5	2	3
12. Production and technological in crop production	2	2	2	2
13. Production and technological in animal husbandry	2	5	5	4
14. Resource	5	2	2	3
15. Risks of prohibiting or restricting the sale of certain types of products	3	3	3	3
16. Risks of self-reproduction	2	3	3	3
17. Transportation	2	3	3	3
18. Competitive	1	1	2	1
19. Credit	2	2	2	2
20. Financial and investment	2	2	2	2
Total	47	50	52	50

The effect of the application of the proposed methodology is an unambiguous and scientifically based answer to the question of the investor or insurer «How high is the risk of incurring losses in this activity?»

7. SWOT analysis of research results

Strengths. The strengths of research and application of risk analysis methodologies in agriculture is that it will improve the assessment result. Compared to other approaches, this can be done through an integrated approach to the assessment of all types of risks that have the greatest impact on the results of operations in the industry.

Weaknesses. For risk analysis, there are many methods, but most often they use such methods as the statistical method, the method of associations and analogies, the method of expert estimates, the analysis of the appropriateness of costs. Each of the above methods has disadvantages.

Therefore in practice it is necessary to use several different methods.

The proposed approach to assessing entrepreneurial risks is not yet sufficiently tested: the scoring of the influence of certain types of risks requires repeated verification. Talking about the possibility of implementing this methodology in practice is possible only after many years of experimental work, which consists in comparing the calculated integral assessment with the actual results of activities of business entities.

Opportunities. In this paper, our own version of assessing the impact of external and internal risks is proposed, which we plan to further improve by developing an insurance risk assessment scale. In the future, the process of risk analysis may be supplemented with modules of problem-oriented software packages, which are usually based on the developed mathematical apparatus.

Threats. The risks of risk management include the fact that even the proposed approach is not an algorithm, thus avoiding losses in general due to the influence of various types of risks. The problem is complicated by the fact that not all threats can be pre-identified and minimized.

8. Conclusions

1. Studies have shown that the results of agricultural activity are significantly influenced by systemic risks, such as macroeconomic and political, domestic economic, natural and criminal risks. Certain types of these types of risks in agriculture are identified and characterized.

2. This assessment of the advantages and disadvantages of the most common methods of quantitative risk analysis – statistical, cost-benefit analysis, the method of expert assessments and the use of analogues. It is determined that since each of them has its disadvantages, the improvement of existing methodological approaches to the assessment of entrepreneurial risks, especially taking into account their industry specifics, remains promising.

3. Since it is impossible to completely avoid entrepreneurial risk, it is necessary to learn how to manage it. One of the main stages of risk management is their analysis. The author's approach is proposed to the method of qualitative assessment of the impact of entrepreneurial risks in agriculture of the results of activity, taking into account the industry specifics. Developed assessment methodology includes the following stages:

- stage of expert assessment of certain types of certain risks in points;
- calculation of the average scoring risk, with a gradation of the qualitative assessment of the overall degree of risk by groups: low or moderate, acceptable and critically dangerous level of risk;
- formation of conclusions on risk management of this activity.

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