

# STATUS AND TRENDS IN THE DEVELOPMENT OF AGRICULTURAL INSURANCE IN BULGARIA

Assist. prof. Milen Mitkov, Ph.D.

**Abstract:** This study presents the results of an empirical research on the status and trends in the development of agricultural insurance in Bulgaria conducted in 2015. Data is systematized and analyzed; the dynamics of the development of agricultural insurance in Bulgaria for the period 2010-2014 is also studied. It was found out that agricultural producers express great interest in purchasing agricultural insurance. As a result, there is a significant increase in the scope of agricultural insurance in the Bulgarian insurance market.

**Key words:** agricultural insurance, risk, basic coverage, indemnity payment

**JEL:** G22.

## Introduction

Agricultural insurance is a topical issue due to the geographical location and the respective climatic characteristics of our country. Competition encourages insurers to seek ways to increase the efficiency of their business. Attracting new clients and strengthening relationships with the existing ones is of primary importance.

Agricultural insurance is intended to safeguard agricultural producers by providing them protection against natural risks through reimbursement of the investment they have made in cases of occurrence of insurance events.

The agricultural crop insurance is a product, intended to provide protection to agricultural producers against risks to crops grown by them.

Farmers purchase insurance against natural disasters chosen by them. Along with the basic coverage, well-established in practice, clients raise the question of covering additional specific risks. What is required is a future proposition of combined insurance products that will provide agricultural producers with a large-scale protection.

The main objective of the study is to analyze the status of agricultural insurance in Bulgaria and on this basis to reveal key trends in its development. To achieve the main objective, the following major tasks have to be performed:

- identify the need for insuring agricultural producers;
- outline the types of risks covered by insurance companies;
- identify the factors that influence the conclusion of agricultural insurance;
- analyse the status and development of agricultural insurance in Bulgaria within the period (2010-2014);
- analyse the agricultural insurance products offered on the insurance market;
- present the problems facing insurance companies in agricultural crop insurance.

The object of this study are insurance companies in Bulgaria working in the field of General insurance.

The subject of the study is the agricultural crop insurance offered by insurance companies and the possibilities for increasing the pace of development of agricultural insurance in Bulgaria.

The main thesis defended in the study is that the balanced provision of agricultural insurance leads to the development of insurance companies, hence to the successful achievement of their strategic goals. On the other hand it improves the communication between companies and farmers, facilitates the search for information by farmers and the purchase of agricultural insurance.

## I.

In the market-oriented economy, agricultural producers choose the structure of crop rotation and the crops included in it for growing, taking into account the potential benefits and risks. Farming is particularly risky.

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Agricultural production process can be interrupted or partially disturbed by natural elemental forces and other random events. Risk management in agriculture is particularly important for several reasons:

- risks affect the proprietary integrity of the affected farm;
- in the event of risks the manufacturing process is interrupted or disorganized to varying degrees;
- the expanded reproduction is disturbed or interrupted;
- in the event of risks farmers are deprived of income.

The lack of risk management has a direct impact on the income of agricultural producers, the market stability in the sector and the potential food safety. Farmers can manage only part of the production process, the outcome of which is significantly influenced by natural conditions. The sources of risk in agriculture are numerous and diverse. The variety of unfavourable events related to weather, pests, diseases, etc. are beyond the control of agricultural producers. On the other hand, unexpected changes related to the access to credit and other sources of income that affect the financial stability of the farm might occur. Markets for agricultural raw materials and production also directly affect the risk in agriculture through prices.

In specialized insurance literature, risk is defined as the danger of occurrence of a particular event which causes damage to a particular object<sup>1</sup>. In agricultural production events such as hail, storms, drought, torrential rain, flood, frost and others can occur. They can affect large areas under crops and cause serious damage. Their occurrence is due to the natural conditions which to a great extent cannot be averted. The amount of damage depends not only on the affected crop areas, but also on the strength of the natural disasters. The public has the opportunity to take measures to limit their destructive effect, namely:

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<sup>1</sup> **Erusalimov, R.**, Vasilev, V., Paneva, A., Mitkov, M., Ninova, V. Vavedenie v zastrahovaneto. V.Tarnovo, 2015. p.204 and **Iliev, B.**, Erusalimov, R., Vasilev, V. Osnovni printsipli na zastrahovaneto. V.Tarnovo, 2008. p. 74.

- Damage caused by torrential rain and floods can be reduced through taking special measures, although it cannot be prevented. Rainfall is difficult to regulate.
- Drought phenomenon that occurs due to insufficient rainfall or dry atmosphere can be eliminated not by regulating rainfall but through measures that provide the necessary soil moisture /irrigation systems and others/ or forest shelter belts which limit its harmful effect.
- Winds cannot be prevented, but their harmful effect may be limited.

The risk in agricultural insurance is higher compared to other property insurance. The production process, which is dependent on biological laws is long. Destroyed production cannot be replaced in a short time. The risk situation is determined primarily by objective risk circumstances. The destructive forces of nature occur despite the will of people and the measures taken for economic protection are limited to reducing their harmful effects.

The specifics of risk in agriculture causes problems of various nature. The occurrence of one of the above mentioned insurance events can lead to numerous insurance cases. On the other hand, the regularity in the development of risks can be determined by continuous observation which typically lasts for 10, 15 to 20 years. Practically the observation period is 11 years, that is to say, it coincides with the solar cycle because it is considered that the activity of the sun affects to the greatest extent the Earth's climate and the risks related to it.

Reorganization of agriculture in the country, through consolidation of farmland creates some changes when the risk occurs. Consolidation of farmland leads to accumulation of risk, which imposes continuous statistical monitoring in order to more accurately determine the regularity of its development.

Agricultural insurance is significantly different from other types of insurance in the field of General insurance because evolving biological objects are insured. Initially, the subject of insurance are plant shoots that will later form the crop or, in other words, commodity production becomes a reality after a certain period of time.

**II.**

In order to determine the status of agricultural insurance in our country a survey among insurance companies working in the field of General insurance was conducted. The main task of the study is to analyze the status and development of agricultural insurance within the period 2010-2014.

The survey was conducted within the period March-November 2015 and covers 8 insurance companies<sup>2</sup> generated randomly. The methodology used is as follows: a survey by means of individual questionnaire containing 13 questions to determine the current status of agricultural insurance. The questions in the questionnaire are related to: covered risks in agriculture; the most common crops that are insured; premium income from agricultural insurance; indemnities paid in connection with the realization of covered risks; problems with the insurance of crops, and others.

Data obtained from the survey shows that only 2 insurance companies do not have a department of agricultural insurance while the other 6 respondent insurance companies operating in the field of General insurance have such departments consisting of several employees. In companies which do not have a department of agricultural insurance, the functions are performed by another department. It should be noted that in order to supply agricultural insurance it is required to build a specialized team of experts in companies with the main objective to analyse and give recommendations for further development and improvement of products.

Companies responded to the question 'Which of the following risks are covered by your company' in the following way:

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<sup>2</sup> For more information see **Scientific project № 12-2015** 'The impact of the Common European Union Agricultural Policy on the development of agricultural insurance in Bulgaria', implemented by the Institute for Scientific Research /ISR/ at D. A. Tsenov Academy of Economis - Svishtov.

Table 1.  
Risks covered by insurance companies in the field of agricultural insurance

Insurance company	Hail	Storm	Fire	Torrential rain	Frost	Flood	Sludge	Frost heaving
A	X	X	X	X	X	X	X	X
B	X	X	X	X	X	X	X	X
C	X	X	X	X	X	X	X	X
D	X	X	X	X	X	X	X	X
E	X	X	X	X	X	X	X	X
F	X	X	X	X	X	X	X	X
G	X	X	X	X	X	X	X	X
H	X	X	X	X	X	X	X	X

Source: data from survey

In insurance practice, risks to which crops are exposed can be grouped into basic and additional coverage. Basic coverage typically includes risks such as hail; storm; torrential rain and fire on roots. The following risks could be added to the basic coverage against payment of an additional premium: frost; flood; sludge; frost heaving; snowbreak; root rot caused by excessive moisture.

The survey results show that there is an increase in the percentage of agricultural insurance to the total premium income, as in 2014 it reached 4.7% which is an increase by 23.7% in comparison with the previous year. For the whole period 2010-2014 the growth rate of agricultural insurance is 108.88%, which is definitely a sign of significant progress.

The increased market share of agricultural insurance is not only due to changes in climatic conditions in our country in recent years, which orients farmers to purchase insurance policies, but is also due to the aid granted by the state to farmers in the form of co-funding of insurance premiums. The survey data is illustrated in Table 2.

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*Table 2.*  
*Percentage of agricultural insurance in the revenue of insurance companies for the period 2010-2014.*

<b>Year</b>	<b>Market share / % /</b>
2010	2.25
2011	2.70
2012	3.10
2013	3.8
2014	4.7

*Source: data from survey*

In accordance with the outlined dynamics in the development of agricultural insurance in Bulgaria it is found out that during the analyzed period (2010-2014) there is an increase in indemnity payments made by the companies. In the beginning, their share was 3.34% of the total payments made by the companies. In 2014 the share reached 5.2%, i.e. at the end of the period, there was an increase of 55.68%. At the same time, compared to 2013, the share of benefits increased by 8.33%.

Logic indicates that with the increase in the premium income – respectively in the concluded insurance on the one hand and recent climate changes on the other hand, it is inevitable that there will be an increase in unfavourable events for which insurers accept liability and pay indemnities accordingly.

*Table 3.*  
*Percentage of crop indemnity payments for the period 2010-2014.*

<b>Year</b>	<b>Share of crop insurance indemnities / % /</b>
2010	3.34
2011	3.85
2012	4.5
2013	4.8
2014	5.2

*Source: data from survey*

It is noteworthy that hail has the largest share in indemnity payments. Nearly half of the agricultural insurance payments the companies make /45%/ are due to hail. It is closely followed by the storm and torrential rain. The risks of fire and frost have the lowest percentage. Data is given in Table 4.

*Table 4.  
Percentage of risk covered in the crop indemnity payments for the period 2010-2014*

<b>Risk</b>	<b>Share of indemnity payments /%/</b>
Hail	45
Storm	24
Fire	0,5
Torrential rain	35
Frost	1
Flood	4
Sludge	4
Frost heaving	7

*Source: data from survey*

The large share of indemnity payments as a result of hail and torrential rain is due to the fact that they are included in the basic insurance coverage. In most cases, hail is accompanied by torrential rain, but there are also cases of the so-called dry hail. On average, the hail season in Bulgaria lasts from 140 to 190 days, from April to October. It hails 50 to 150 days a year. It hails most in June and July. During this time cereal crops become ripe, fruit grows bigger in orchards and vineyards. Hail causes plant damage that could lead to their total destruction.

The intensity of torrential rain is great. A large amount of rain falls within a very short time. Torrential rain causes uproot of plants, breaking of stalks, and lodging of some agricultural crops. In the lowlands, torrential rain can leave behind layers of alluvium thus destroying crops.

The storm also occupies a large share of indemnity payments. It causes mechanical damage to plants: bent stems, lodging of crops, torn



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leaves, broken branches of trees, fruit shaken down from fruit trees, shelled grains; it also scatters and blows off agricultural production.

*Table 5.*  
*Number of events that occurred in the period 2010-2014.*

Indicators	Number of crisis events				
	2010	2011	2012	2013	2014
Torrential rain	651	382	692	547	360
Storms	47	48	528	89	14
Hail	16	13	14	13	8
Snowstorms (snowdrift)	103	94	93	50	25

Source: *www.nsi.bg*

Table 5 presents data from the National Statistical Institute on the number of events for the period 2010-2014 for which insurance companies made indemnity payments. It becomes clear that the number of hail as a major risk covered in agricultural production is the least as an absolute number of events. On the other hand, however, they cause significant damage.

*Table 6.*  
*The most common users of agricultural insurance for the period 2010-2014.*

Users	Share %
Large farms	28
Medium-sized farms	57
Small farms	15

Source: *data from survey*

Data in Table 6 shows the users of agricultural insurance by size of the farm. The largest share, 57% is occupied by medium-sized farms. Large farms own 28% and finally 15% is the share of small producers.

The logic of this distribution is related to the number of large, medium and small-sized producers. The smallest is the number of large farms. Therefore, despite the provision of enough resources and staff, they hold only 28% of users of insurance services. On the other hand, small producers do not have enough information, and insurance culture among them is at a lower level. Therefore, the share of small farms is the smallest among the clients of insurance companies.

*Table 7.*  
*Percentage of crop insurance indemnity payments*  
*for the period 2010-2014.*

<b>Statistical region</b>	<b>Share [%]</b>
<b>Southwest</b>	4
<b>Northwest</b>	5
<b>North central</b>	18
<b>Southeast</b>	18
<b>South central</b>	15
<b>Northeast</b>	40

*Source: data from survey*

Insurance companies surveyed indicated that the most common users of agricultural insurance are from the Northeastern Bulgaria. Their share is 40%. The reason for this is the fact that the largest share of agricultural land<sup>3</sup> is cultivated there.

Data shows that the Southwest region represents the least number of users of agricultural insurance, only 4%. Relatively steady is the number of agricultural insurance purchased by farmers who cultivate their agricultural production in the North central, Southeast and South central regions. Their shares move around 20%.

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<sup>3</sup> For more information see [www.mzh.government.bg](http://www.mzh.government.bg)

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Table 8.  
*Percentage of crops in companies' revenues for the period 2010-2014.*

Crops	Share [%]
cereal crops	50
oilseed	25
tobacco	5
fruit	5
vegetables	3
vineyards	5
others	7

Source: data from survey

Insurance companies indicate that 50% in the structure of revenue they generate in agricultural insurance is due to cereal crops, namely to agricultural areas mostly planted with wheat, barley and maize. Oilseeds occupy 25% as of their class sunflower is the most insured. Tobacco, fruit trees and vineyards occupy 5% of the realized revenue. Other crops not listed in table 8, occupy a share of 7%.

### III.

Data from the survey shows that insuring agricultural production in our country is still at a relatively low level. Most of the users of insurance services prefer to purchase insurance which allows them to cover losses due to a limited number of risks. The main reason for this are the prices of insurance services.

The relatively small percentage of the insured agricultural areas in the country is not only due to the limited financial resources of farmers. Distinctly noticeable is the disinterest most of them show to the idea of insuring some plants. They give priority to autumn cereals, spring cereals and technical field crops, while insuring vegetables, vineyards and orchards is still insufficient in volume. However, the study found out a continuous

increase in the percentage of agricultural insurance in the total premium revenues of the insurance companies surveyed. One reason for this are the opportunities offered to farmers by the state for co-funding of insurance premiums.

The above mentioned relatively low interest of large farmers to insure their agricultural crops is determined by the fact that they spread the risk together with spreading their activity on large areas, and according to them insurance premiums are much higher than the cost of damaged goods. The alignment of risk, however, is based on much larger aggregates. Moreover, no matter how large they are, farmers cannot align the risk neither in time nor fundamentally<sup>4</sup>.

Small-sized farmers who are the most numerous in Bulgaria are vulnerable in regard to natural disasters because they cannot accumulate sufficient financial resources to insure. They rarely insure their agricultural production or never do it, relying on financial assistance from the state as compensation for certain natural hazards.

Medium-sized farmers are those that insurers in Bulgaria rely on at the most. The balance between their financial resources, their awareness and level of insurance culture makes them be considered as preferred clients by insurers.

In the course of the study it was found out that insurance companies offer coverage of a sufficient number of risks in agriculture. Therefore, the next step to increase the scope of agricultural insurance could be to offer farmers different insurance combinations. Besides the main risks insurers may extend the coverage with various types of property, agricultural equipment, as well as the health of farmers, their families and their workers. This measure would stimulate to a large extent the growth of premium revenue of insurers working in the field of agricultural insurance.

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<sup>4</sup> **Erusalimov, R.**, Vasilev, V., Paneva, A., Mitkov, M., Ninova, V. Vvedenie v zastrahovaneto. V. Tarnovo, 2015. p. 38.

### Conclusion

With climate changes agricultural insurance will cover the increasingly frequent and severe events. In the short run the impact of climate changes on insurance is difficult to discern. However, in the long run, it can affect the accessibility to insurance products.

Climate changes raise the question of the yield that farmers in our country could get from their crops. The concern is further strengthened by the fact that not only small-sized, but also large farms prefer to cut costs at the expense of security. The relatively low interest in agricultural insurance in Bulgaria does not prevent the development of this type of insurance. There is a growing interest in insuring agricultural production during the period observed, due mainly to medium-sized farmers.

The insurance market in the country is characterized by the presence of multiple insurance companies, a wide range of types of crop and perennial insurance, additional grounds for concluding insurance contracts, and indemnity payments. The system of control by the state over insurance increases the social importance of insurance protection.

The increase in insurance culture in agriculture would be achieved by increasing public co-funding of insurance premiums. Cash resources of the country are considered a limiting factor so European programmes to fund farming businesses can also be used as an important catalyst for the development of agricultural insurance.

### References

1. Bashev, H. Upravlenie na agrarniya risk. *//Ikonomicheska misal*, 2013, №2.
2. Draganov, H., Neykov, M. Imushtestveno i lichno zastrahovane. Sofia, 2000.
3. Erusalimov, R., Vasilev, V., Paneva, A., Mitkov, M., Ninova, V. Vavedenie v zastrahovaneto. V.Tarnovo, 2015.
4. Erusalimov, R., Mitkov, M. Zastrahovatelni produkti. Svishtov, 2016.

5. Ivanova, D., Mitov, A. Pogled kam balgarskoto agrozastrahovane dnes. // *Zastrahovatel*, 2015, №5.
6. Iliev, B., Erusalimov, R., Vasilev, V., Osnovni printsipi na zastrahovaneto. V. Tarnovo, 2008.
7. Lefer, M., Nikolov, D., Paloma, S. Osnovni faktori na razvitiето i atraktivnosta na zastrahovatelniya pazar za zemedelskite proizvoditeli. // *Ikonomicheski izsledvaniya*, 2014, №2.
8. Nikolkov, D., Atanasova, M., Ivanova, E. Zastrahovatelni produkti za zemedeliето i reaktsiyata na zemedelskite proizvoditeli. // *Ikonomicheska misal*, 2013, №1.
9. Petrov, M., Imushtestveno i lichno zastrahovane. Svishtov, 1970.
10. [www.dfz.bg](http://www.dfz.bg)
11. [www.mzh.government.bg](http://www.mzh.government.bg)

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Address: "D. A. Tsenov" Academy of Economics, 2, Em. Chakarov str., Svishtov, Bulgaria