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**Gordana Đ. Radović, PhD<sup>1</sup>**

## **AGRICULTURAL INSURANCE IN THE REPUBLIC SRPSKA**

PROFESSIONAL PAPER

### **Abstract**

There is a significantly large, objective need for the agricultural insurance coverage in the Republic Srpska, especially in the environment of increasing climate changes. The insurance companies whose offer includes the insurance of agriculture are increasingly present and competing on the market, but the government also provides a big support by granting subsidies for agricultural insurance premiums. The author of this paper analyses the number and structure of agricultural insurance policies, the share of total agricultural insurance premiums in the non-life insurance premium total and/or the number of registered agricultural farms that benefited from the agricultural insurance premium recourses and/or took out the insurance coverage for their production. She concludes that the economic protection provided under the agricultural insurance cover has been underutilized in the Republic Srpska.

**Keywords:** *agricultural insurance, insured risks, insurance policy, agricultural insurance premium subsidies, Republic Srpska*

### **I. Introduction**

Insurance is usually divided into life and non-life business. The coverages are grouped according to the nature of the risk covered, the insured subject-matter, the origin, the method of organization and/or the method of risk balancing<sup>2</sup>.

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<sup>1</sup> Scientific associate, director of "Dnevnik-Poljoprivrednik" AD Novi Sad

E-mail: gordana.radovic09@gmail.com

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<sup>2</sup> Dragan Mrkšić, Zdravko Petrović, Katarina Ivančević, Insurance Law, Belgrade, 2014, p. 72.

Agriculture is characterized by numerous biological and social and economic features. The biological features comprise high risks of agricultural production, organic character of the production cycle and slow turnover of capital, seasonal character of agricultural production and low degree of capacity utilization<sup>3</sup>.

The agricultural production is mostly carried out in the open space, exposed to the effects of heavy weather that represents potential perils i.e. risks. Apart from natural perils, agricultural production can be jeopardized by numerous other types of risks. In recent years, moreover, the achievements of biotechnology and genetic technology have an increasing impact on agricultural production; they increase the risks and thus affect the insurance cover<sup>4</sup>. Consequentially, it is necessary to have a developed system of risk management. According to the authors of the analysed literature, insurance is the most widely represented system for risk management in agriculture.

However, despite its great social importance, agricultural insurance (more precisely, the insurance of plant production) is yet in its initial stage of development in many countries, due to numerous difficulties as bottlenecks to its financial profitability<sup>5</sup>. In order to develop crop and fruit insurance, it is necessary to regain confidence of the insured persons in the insurance companies, but also to apply preventive measures in order to reduce the probability of the occurrence of predominant risks<sup>6</sup>.

In order to reduce potential losses, it is necessary to increase the costs of agricultural production allocated for insurance, which would result in the need for larger investments or larger sources of agricultural financing<sup>7</sup>. In order to develop agricultural insurance and the agriculture in general, it is necessary to introduce partially mandatory agricultural insurance against the most threatening risks in particular areas as well as for the agricultural entities that are users of governmental resources<sup>8</sup>.

In the Republic Srpska, there is a huge objective need for agricultural insurance. The arable land covers 971,000 hectares and its structure is dominated by plough fields and gardens, which make up about 60% of the total agricultural

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<sup>3</sup> Zorica Vasiljević, *Economic efficiency of investments in agriculture*, Belgrade, 1998, p. 15–17.

<sup>4</sup> Nebojša Žarković, "Insurance in agriculture – underdeveloped and even more underutilized", *Poljoprivrednikov poljoprivredni kalendar*, 2016, pp. 72.

<sup>5</sup> Mayra Julia Teixeira Brandão, "Principle of good faith, market failures and moral risk in agricultural insurance", *Insurance Law Review*, Vol 4, 2011, pp. 33

<sup>6</sup> Bruno Toscano, *Plant production insurance - risks, conditions and loss assessments*, Belgrade, 2018, pp. 618–619.

<sup>7</sup> Gordana Radović, *Financing agriculture in the Republic of Serbia*, Belgrade, 2014, pp. 21.

<sup>8</sup> Gordana Radović, "Insurance serving the agricultural development", *Proceedings of the Ekonomska politika Srbije in 2017*, Belgrade, 2016, pp. 202.

land<sup>9</sup>. The risk of hail is the highest, that is, the most prevalent both in terms of frequency and severity of consequences. Potentially large risks of plant production are fire, lightning, storm, flood, drought and spring and autumn frost. Potentially large risks of livestock production comprise diseases and accidents.

## **II. Methodology**

The aim of this paper is to analyse the current development of agricultural insurance in the Republic Srpska. To this effect, we have applied the descriptive method, analysis and synthesis method and/or the statistical method. Data sources include the national and foreign literature, terms and conditions for agricultural insurance of insurance companies that are operating in the territory of the Republic Srpska, statistical data as well as reports on the results of agricultural insurance in the Republic of Srpska, available on the website of the Insurance Agency of the Republic Srpska.

## **III. Government Support for Development of Agricultural Insurance**

Subsidies, that is the co-financing of the agricultural insurance premium, were introduced in the Republic Srpska in 2010, in line with the Rulebook on conditions and methods of obtaining financial incentives for development of the agriculture and villages. The Article 90 of the mentioned Rulebook stipulated that the right to a co-financing of the insurance premium was to be exercised in the livestock production and fruit-growing, viticulture and vegetable production. Insurance premiums were subsidized to the amount of up to 30%, with a maximum of 30,000 KM per beneficiary. In 2013, the Ministry of Agriculture, Forestry and Water Management of the Republic Srpska cancelled the subsidies for agricultural insurance premium<sup>10</sup>.

There are some opinions that the reason for the decision of the Government of Republic Srpska to cancel the agricultural insurance premium subsidies should be sought in the low interest of farmers to use the economic protection for their own production. On the other hand, farmers believed that insurers were to blame for the poor representation of agricultural insurance, that is, that the insurance terms and conditions covering the agriculture were unfavourable, having in mind that the market was poor<sup>11</sup>.

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<sup>9</sup> Agricultural Payment Agency of the Republic Srpska, <https://www.vladars.net/sr-SP-Cyrl/Vlada/agencije/aap/Pages/default.aspx>.

<sup>10</sup> Capital. ba, <http://www.capital.ba>.

<sup>11</sup> Capital. ba, <http://www.capital.ba>.

In recent years, the Ministry of Agriculture, Forestry and Water Management of the Republic Srpska renewed the subsidization of the agricultural insurance premium, to the same amount as in 2013. Specifically, subsidies are paid to the amount of up to 50% of the agricultural insurance premium, whereas the amount of the subsidy per beneficiary cannot exceed 25,000 KM.

#### **IV. Offer on Agricultural Insurance Market**

In 2020, eight insurance companies operating in the territory of Republic Srpska presented data on agricultural insurance premiums in their reports. The mentioned companies comprised “Brčko-gas osiguranje” d. d. Brčko, “Drina osiguranje” a. d. Milići, “Dunav osiguranje” a. d. Banja Luka, “Wiener osiguranje” a. d. Banja Luka, “Asa osiguranje” d. d. Sarajevo, “Adriatic osiguranje” d. d. Sarajevo, “Croatia osiguranje” d. d. Mostar and “Sarajevo osiguranje” d. d. Sarajevo. These are both the companies that are headquartered in the Republic Srpska and the companies headquartered in Bosnia and Herzegovina with the branches in the Republic Srpska<sup>12</sup>.

Based on the analysis of the general and special insurance terms and conditions of the mentioned insurers, it could be concluded that they had satisfactory coverage of standard and additional perils within agricultural production. Therefore, we believe that there are conditions for the development of the agricultural insurance market in the Republic Srpska, as regards the size and diversity of offer.

#### **V. Development of Agricultural Insurance**

The development of agricultural insurance in the Republic of Srpska was analysed in the period from 2014 to 2020 based on the relevant indicators. The results are presented in the Table 1. From the data shown, it can be concluded that the livestock insurance policies had a predominant share, i.e. that their average participation was 71% in the total number of agricultural insurance policies issued in the Republic Srpska during the observed period. However, there is also a significant decrease in the absolute number of livestock insurance policies in the last two years of the analysed period, as well as a decrease in the relative share of livestock insurance policies in the total number of agricultural insurance policies in the Republic Srpska (Table 1).

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<sup>12</sup> Insurance Agency of the Republic Srpska, <http://www.azors.rs.ba>.

**Table 1 2014–2020 number of agricultural insurance policies.<sup>13</sup>**

Year	No. of plant production insurance policies	Share of the no. of plant production insurance policies in the total no. of agricultural insurance policies (%)	No. of live-stock insurance policies	Share of the no. of livestock insurance policies in the total no. of agricultural insurance policies (%)	No. of agricultural insurance policies
2014	53	34	103	66	156
2015	131	58	96	42	227
2016	335	24	1,056	76	1,391
2017	245	17	1,174	83	1,419
2018	330	19	1,445	81	1,775
2019	253	76	81	24	334
2020	288	84	53	16	341
<b>TOTAL</b>	<b>1,635</b>	<b>29</b>	<b>4,008</b>	<b>71</b>	<b>5,643</b>

Source: Insurance Agency of Republic of Srpska, <https://www.azors.rs.ba>.  
Author's calculation.

The number of plant production insurance policies varied very much in the analysed period, whereas their maximum participation in the total number of agricultural insurance policies was achieved in the last analysed year.

Bearing in mind the high exposure of plant production to numerous risks, the major being the risk of hail and/or the high risks of livestock production on the one hand and significant government support in subsidies granted for agricultural insurance premium, on the other hand, the results shown in Table 1 cannot be considered satisfactory.

Table 2 presents the tendency of crop insurance premiums and the changes in their share in the total agricultural insurance premiums in the Republic Srpska, in the period from 2014 to 2020.

<sup>13</sup> Insurance Agency of the Republic Srpska, <https://www.azors.rs.ba>.

**Table 2 2014–2020 Plant production insurance premium.<sup>14</sup>**

Year	Plant production insurance premium (km)	Share of plant production insurance premium in the agricultural insurance premium total (%)
2014	238,805	40
2015	399,458	72
2016	507,035	39
2017	373,310	33
2018	517,839	42
2019	553,311	67
2020	863,177	64
<b>TOTAL:</b>	<b>3,452,935</b>	<b>50</b>

Source: Insurance Agency of Republic of Srpska, <https://www.azors.rs.ba>.  
Author's calculation.

In the period observed, the total crop insurance premium, apart from a slight decrease in 2017, had a growing tendency. Analysing the data from Table 1, we found that the total number of plant production insurance policies participated with 29% in the total number of agricultural insurance policies in the Republic Srpska, in the analysed period. However, the share of the crop insurance premium total in the observed period was significantly higher and amounted to 50% of the agricultural insurance premium total (Table 2). The above said leads to the conclusion that the insurance premiums that is the rates for plant production were higher compared to livestock insurance premiums. i.e. the rates.

Table 3 presents the tendency of livestock insurance premiums, as well as changes in their share in agricultural insurance premium total in the Republic Srpska, in the period from 2014 to 2020. By analysing the data presented, it can be concluded that the total animal insurance premium recorded significant fluctuations in the observed period.

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<sup>14</sup> Insurance Agency of the Republic Srpska, <https://www.azors.rs.ba>.

**Table 3 2014–2020 livestock insurance premium<sup>15</sup>**

Year	Livestock insurance premium (km)	Livestock insurance premium share in agricultural insurance premium total (%)
2014	354,279	60
2015	155,958	28
2016	795,378	61
2017	744,011	67
2018	701,100	58
2019	271,867	33
2020	479,353	36
<b>TOTAL:</b>	<b>3,501,946</b>	<b>50</b>

Source: Agricultural Payment Agency of the Republic Srpska, <https://www.azors.rs.ba>  
Author's calculation.

In the last analysed year, the total animal insurance premium grew by 35%, compared to the initial one, and in 2016, when the animal insurance premium recorded its maximum, it was even 124% higher compared to 2014. The average share of the total animal insurance premium in the total agricultural insurance premiums, in the analysed period, was 50%, while the share of the total number of animal insurance policies in the total number of agricultural insurance policies was 71%. The above leads to the conclusion that animal insurance premiums are lower compared to plant production insurance premiums.

Analysing the data shown in tables 2 and 3, we can state significant fluctuations in the value and total insurance premiums for plant production and the total animal insurance premiums. Significant changes in value are particularly pronounced in the total animal insurance premium, which had its minimum in 2015, only to reach its maximum value in the analysed period already in 2016.

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<sup>15</sup> Insurance Agency of the Republic Srpska, <https://www.azors.rs.ba>.

**Table 4 2014–2019 agricultural insurance premium share in non-life premium total in <sup>16</sup>**

Year	Agricultural insurance premium total (km)	Non-life insurance premium total (km)	Share of agricultural insurance premium total in non-life insurance premium total (%)
2014	593,083	144,101,451	0.4
2015	555,416	152,208,722	0.4
2016	1,302,413	165,468,861	0.8
2017	1,117,321	178,431,097	0.6
2018	1,218,939	188,306,600	0.6
2019	825,178	193,200,598	0.4
<b>TOTAL:</b>	<b>5,612,350</b>	<b>1,021,717,329</b>	<b>0.5</b>

Source: Agricultural Payment Agency of the Republic Srpska, <https://www.azors.rs.ba>.  
Author's calculation.

Table 4 shows the tendency of the total premium of agricultural insurance and its share in the total premium of non-life insurance in the period 2014-2019. By analysing the data presented, it can be concluded that in the observed period the average share of the total agricultural insurance premium in the total non-life insurance premium was symbolic, indicating the underdevelopment of agricultural insurance in the Republic Srpska.

**Table 5 Subsidized amount of agricultural insurance premium and its share in 2018-2020 agricultural budget in the period<sup>17</sup>**

Year	Paid subsidies of agricultural insurance premium (km)	Agricultural budget (km)	Agricultural insurance subsidies in the agricultural budget (%)
2018	217,750,93	71,000,000	0.3
2019	261,705,60	71,000,000	0.4
2020	466,443,14	75,000,000	0.6
<b>Average share:</b>	-	-	0.4

Source: Agricultural Payment Agency of the Republic Srpska, <https://www.vladars.net/sr-SP-Cyrl/Vlada/agencije/aap/Pages/default.aspx>.  
Author's calculation.

<sup>16</sup> Insurance Agency of the Republic Srpska, <https://www.azors.rs.ba>.

<sup>17</sup> Agricultural Payment Agency of the Republic Srpska, <https://www.vladars.net/sr-SP-Cyrl/Vlada/agencije/aap/Pages/default.aspx>.



Table 5 shows the amounts of agricultural insurance premium subsidies and their participation, by year and on average, in the agricultural budget in the period 2018-2020. The analysis of the presented data shows that the absolute amounts of those subsidies in 2020 increased by 100% relative to 2018, but that their relative share in the agricultural budget increased only slightly. It is necessary to draw attention to the fact that these are actually the paid out subsidies, which also testifies to the insufficient interest of agricultural subjects in the economic protection of their own production.

Table 6 shows the trend in the number of agricultural farms that took out the insurance coverage for their production, as well as changes in their average share in the total number of registered agricultural farms in the Republic Srpska in the period 2018-2020. Analysing the presented data, it can be concluded that in the observed period, on average, only 0.4% of the total number of registered agricultural farms insured their production. This also leads to the conclusion that agricultural insurance in Republic Srpska was underdeveloped in the analysed period

**Table 6 2018-2020 number of agricultural farms that were entitled to agricultural insurance premium subsidies<sup>18</sup>**

Year	No. of agricultural farms that were entitled to agricultural insurance premium subsidies	Total number of registered agricultural farms	Share of agricultural farms in the total number of registered agricultural farms (%)
2018	195	42,829	0.5
2019	119	40,502	0.3
2020	153	41,085	0.4
<b>Average share:</b>	-	-	<b>0.4</b>

Source: Agricultural Payment Agency of the Republic Srpska, <https://www.vladars.net/sr-SP-Cyrl/Vlada/agencije/aap/Pages/default.aspx>.  
Author's calculation.

By comparing the data shown in tables 5 and 6, it can be concluded that, in spite of the existence of the government support to the agricultural insurance development, the implementation of such support was not sufficient (less than 1% of the total number of registered agricultural farms took out insurance coverage

<sup>18</sup> Agricultural Payment Agency of the Republic Srpska, <https://www.vladars.net/sr-SP-Cyrl/Vlada/agencije/aap/Pages/default.aspx>.

for their production). Therefore, the reason for the underdevelopment is the low demand on the agricultural insurance market in the Republic of Srpska.

## **VI. Conclusion**

Based on the conducted research, it can be concluded that there were significant opportunities for the development of agricultural insurance in the Republic Srpska. In particular, there was a satisfactory offer on the agricultural insurance market in terms of coverage of the most significant risks in agricultural production. Also, there was significant government financial support in the form of subsidizing the agricultural insurance premium.

The synergy of the results of the conducted research has led us to the conclusion that in the analysed period, 2018-2020, only 0.4% of the total number of registered agricultural farms benefited from the agricultural insurance premium recourse. In the period 2014-2019, the share of the total premium of agricultural insurance in the total premium of non-life insurance was as low as 0.5%. The above data point exactly to the conclusion that, in the analysed period, agricultural insurance in Republic Srpska was underdeveloped although there was a realistically high objective need for this type of insurance, especially in the current environment, when the climate changes are becoming harsher.

We are of the opinion that the government should introduce a legally mandatory insurance against the risk of hail as the biggest risk of crop production for agricultural entities that use some kind of a government resource (state subsidies). Moreover, we believe that the reason for the current underdevelopment of agricultural insurance in the Republic Srpska is, first of all, the low awareness of agricultural producers about the importance of using the economic protection of their own production. Therefore, it is necessary for the government and insurers to jointly organize training for farmers on the significance of agricultural insurance and actively affect the increase in demand for this type of insurance protection on the insurance market in the Republic Srpska.

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