ANALYSIS OF THE ATTITUDES OF THE POPULATION ON THE NEED FOR ANIMAL INSURANCE

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ABSTRACT
Agriculture in the Republic of Serbia is a sector of economy that is vital for the overall social and economic development of the country. The position of the agrarian sector in Serbia is specific, since, besides the economic importance, there is also a special social and ecological significance, and agriculture contributes to the national wealth with significant participation in the creation of GDP. Animal insurance involves a large number of risks and is classified as risk insurance. It belongs to the group of short-term insurance or insurance for up to one year, and even shorter. The subject of insurance is the animal itself, and not just certain parts of the animal’s body or manufactures that can be obtained from it. The subject of this research is to examine the attitudes of the respondents regarding the necessity of animal insurance and the problems that arise in this case.

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Introduction
Animal insurance in recent years is an increasingly frequent topic in agricultural holdings and farms. Despite careful and diligent breeding of domestic animals, farmers face a large number of unwanted events. Animals are prone to injuries, illnesses, and often occur and die. Also, in recent years, Serbia has been struggling with floods (floods in May 2014), and a large number of animals have been struck by water torrents. This is a big loss for farmers, or it causes high costs.

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These circumstances can’t be prevented, but domestic animals can be secured, and thus the farmers are provided with losses. The object of insurance of animals will be all domestic animals, cattle, sheep, goats, pigs and more often pets and dogs and cats are provided. Only healthy animals, that is, able-bodied animals for a particular purpose, are in good physical condition, animals that live in normal conditions and eat healthy, but above all the animals that are identified.

Livestock insurance belongs to the insurance of agriculture. This type of insurance is carried out by insurance companies that deal with non-life insurance. In Serbia, livestock insurance is underdeveloped. In general, a very small number of agricultural holdings are deciding on the conclusion of a livestock insurance contract. (Cogoljević et al., 2017)

Livestock manufactures is exposed to different dangers compared to plant production. An insurance contract is concluded on the basis of an oral or written offer, and it is concluded when the contractors sign the insurance policy. Animal insurance contracts are signed for a shorter period of up to one year or for a period longer than one year and are long-term animal insurance contracts. It often happens that contracts are signed for a shorter period of time, then they are extended from year to year.

The subject of the research in this research is the insurance of domestic animals. This insurance area in our country has not yet been developed individually. More attention is paid to ensuring crop protection than animal protection. In recent years, owners of dogs and cats have been increasingly choosing to provide their pets. It should be borne in mind that every larger farm should ensure its herds and in this way secures itself from possible risks or losses. The insured is entitled to receive compensation, if the secured case is realized. When the insured event occurs, the owner is obliged to take appropriate actions, both for the purpose of treatment, and in order to maximize the utilization of the saved remains in death/forced slaughter.

The main goal of the research is to show what people think about the insurance of domestic animals. It should also show the percentage of insured domestic animals in recent years in Serbia.

The basic task of this research is to find the answer to the question why there is no interest of the owners of domestic animals for their insurance? It should also be determined why this type of insurance is still linked to insurance in agriculture. It is then necessary to explore what role a state can have to contribute to the owners’ interest in securing their domestic animals.

Independent variables in the survey are the owners of domestic animals by gender, age, education level and professional education. Dependent variable are the views on the need for domestic animals in the Republic of Serbia. Whether domestic animals will be insured depends primarily on the needs of the owner, conditions in which animals are raised, financial resources, offers of insurance companies, climatic conditions, etc.
The general hypothesis can be defined as: Insurance companies in Serbia should, through various insurance policies, motivate primarily farmers, and then the owners of pets to ensure their domestic animals from possible damage.

Specific hypotheses:

— Animal insurance provides financial protection against various risks characteristic of livestock production;

— It is necessary to harmonize domestic regulations on the insurance of domestic animals with the regulations of the European Union;

— The state must provide assistance when it comes to insurance of animals, through various subsidies and tax cuts for farmers;

— Farmers must take into account that their domestic animal insurance can greatly benefit and reduce the damage that is caused by any form of animal loss;

— With the entry of foreign insurers, the level of quality of insurance services raises and the conditions for further liberalization of the market are created;

— Changes in insurance can have a positive impact on the further development of the insurance market in Serbia and contribute to its accelerated approach to the European Union.

The concept of animal insurance

Animal insurance means the financial protection of the owners of animals from the various risks that occur in the breeding of animals. The subject of this insurance is all farmed domestic animals (cattle, sheep, goats, pigs, poultry, horses), as well as pets such as dogs, cats, parrots. The insurance covers the risks of death or forcible slaughter of animals caused as a result of: an accident (basic narrow cover), an accident or illness (a basic wider coverage). (Kočović, Šulejić, 2016)

The amount of insurance premiums will depend on the type of animal that is the subject of insurance, the number of animals to be insured, the conditions and the method of breeding the animal, the risks for which the animals are insured, as well as their estimated value and amount of coverage as defined by the contract.

Payment of the insurance premium can be done on a monthly basis, then quarterly, semi-annually or advance. If contracts and participation are detrimental when it comes to the normal death of the animal, it is possible that the owner will receive a discount on the insurance premium up to 50%. Then, depending on the number of insured throats and the method of payment of the premium, it is possible to achieve a discount of up to 30% on the basic insurance premium. (Piljan et al., 2015)

In the case of animal insurance, a number of additional benefits can be achieved. For example, for owners of animals who conclude an insurance contract and premium pay advance above a certain amount, additional benefits are provided in the form of free
insurance against the consequences of an accident. This insurance is usually given for a period of one year, and from the consequences of the accident, it is ensured by the complete agricultural holding or all its members.

The state also encourages animal owners to provide them by subsidizing this type of insurance. To the registered farms, the state repays a certain portion of the paid premium insurance, where the provisions are more closely defined by the competent ministry.

Domestic animal insurance. Livestock insurance belongs to the insurance of agriculture. This type of insurance is carried out by insurance companies that deal with non-life insurance. In Serbia, livestock insurance is underdeveloped. In general, a very small number of agricultural holdings (5-10% of the total number) are deciding on the conclusion of a livestock insurance contract.

When it comes to insurance of livestock in Serbia, the general conditions for livestock insurance adopted by a more successful insurance company are analyzed, while paying special attention to the way subsidies for insurance premiums for agriculture and livestock insurance are supported by the Government of Serbia.

On the other hand, considerable attention is paid to livestock insurance in Mongolia, India, Mexico and Ireland, which have defined livestock insurance programs that have contributed to the number of contracts concluded in this area. In Mongolia, this program is implemented through integrated risk insurance, in India this insurance is implemented at the level of the local community (villages), in Mexico through self-insurance funds and the so-called. Stop-loss reinsurance, and in Ireland, various programs for controlling animal diseases and their eradication are defined. (Manić, 2012)

It should be said that livestock insurance does not have the place that it should have in the field of agricultural insurance. And in the world, livestock insurance represents a relatively small segment of total agricultural insurance, even in highly developed countries.

Subject of insurance. In the case of plant manufactures, the subject of insurance is usually a product or a product, and in rare situations and a tree, in the case of animal protection, the animal is ensured in its entirety, and not products that give it to us, such as milk, eggs, wool, and skin.

Therefore, in the case of animal insurance, the animal itself is the subject of insurance, and not certain parts of the body or products that animals give us. (Brkanić, Katrinka, 2016)

Sick animals or animals that are prone to illness, as well as extinct and exhausted animals can’t be provided. Also, the subject of insurance can’t be domestic animals that are not in good physical condition or their living conditions are poor. (Stojković, 2018)

Types of insurance. Animal insurance is a special branch of insurance for agriculture. Given the many types of animals and the risks involved in cultivating them, this insurance occurs in various ways: (Žarković, 2016)
— basic insurance of animals,
— supplementary and special insurance and
— sample insurance for those types of animals and the risks that are being secured for the first time.

Supplementary types of animal insurance. Additional insurance of animals includes insurance of animals for which there is very little interest, that is, animals that are not covered by basic insurance, or specific situations in which animals can be found and which can be risky for their lives (death of animals during labor, etc.). (available at: www.generali.rs)

**Animal Insurance Status in the Republic of Serbia**

On a global scale today, plant production insurance accounts for 90 percent of the total agricultural insurance premium.

Due to the emergence of new diseases that are currently present in animals, the need for livestock insurance is growing. In order to achieve complete economic protection, “a stronger link between farmers, insurance companies and the state is needed in order to create an integrated risk management system in livestock breeding”. (Marković, Jovanović, 2018)

It is considered that the costs of insurance of agriculture, that is crops, fruits and animals are almost negligible compared to the benefits of the farmers or the insured. Although theoretical views are different, in practice, in a large number of countries, animal insurance as a part of agricultural insurance is underdeveloped. The same situation is in Serbia where the insurance of animals is underdeveloped both in terms of volume, but also by type of protection.

Opportunities for insurance development in Serbia are much higher than the current level of development. The development of animal insurance in Serbia is now at a very low level, regardless of the support of the state and the introduction of subsidies on the insurance premium. It further indicates that the subsidy it holds is not sufficient to achieve a greater expansion of animal insurance in our market. (Piljan, Cogoljević, 2015)

Insurance is primarily necessary for the development of agriculture in general, but also for rural development of the country, but above all in order to ensure food safety. This is especially important in domestic conditions, primarily due to the fact that rural areas make up as much as 85% of the total area of our country, that the percentage of agriculture in the gross domestic product is large, but also in the export and overall employment of the population.

The results of the last census in agriculture in 2012 show that there are 631,522 agricultural holdings in Serbia, of which 99.5% are family farms that are also food security operators.
Looking objectively, the need for animal insurance exists and is very pronounced, given the fact that plant and animal production in Serbia is exposed to numerous risks, which are increasing year after year, especially when it comes to climate change. (Radivojević et al., 2018)

The subjective need for securing agriculture in domestic conditions isn’t sufficiently developed due to low payment power, that is, economic underdevelopment of agricultural entities, as well as low awareness of the importance of insurance. The underdevelopment of agricultural insurance on the micro level determines its underdevelopment in the macro level, as a result of the underdevelopment of agriculture, as an economic activity of national importance.

Analyzes of the four largest insurance companies in Serbia that together cover the entire agricultural insurance market in the Republic of Serbia, in addition to the basic conditions, there are also numerous conditions for insurance of crops and fruits, but also for animal insurance.

Regarding the special conditions for the insurance of crops and fruits, it is necessary to look at the insurance of seed corn from the loss of seed quality due to autumn frost, the insurance of table grapes from loss of quantity and quality, ensuring the trees of fruit trees and vineyard vineyards, as well as in the genus, and there is also a trial of rapeseed winter rape.

Based on this analysis of agricultural insurance in our market, we come to the conclusion that the most significant risks of plant and animal production are covered by the conditions of insurance of agriculture of insurance companies operating in the territory of the Republic of Serbia. What can be said that the lack of these insurances is the insurance against drought and loss of income due to drought, which is offered only by one insurance company in the Republic of Serbia.

The state of Serbia, in cooperation with the Ministry of Agriculture, regress the agricultural insurance premium starting in 2006. Number of agricultural holdings, which are in the period from 2006-2015, used the right to a premium for agricultural insurance premiums, it was very variable. In the last observed year, 2015, the right to regress insurance premium was realized by 19,799 agricultural holdings, 18,268 farms for insurance of plant production, and only 1,531 farm for animal insurance.

It is clear that 19,799 agricultural holdings were provided in 2015, which represents only 3.13 percent of the total number of agricultural holdings in the Republic of Serbia. The total number of agricultural holdings in the Republic of Serbia was determined in the last agricultural census in 2012 and amounts to 631,552 households.

In order to develop insurance in agriculture in the territory of our country, it is necessary to introduce partially compulsory insurance in agriculture. It is therefore necessary to define this type of insurance legally as partially mandatory, as well as to adopt a strategy for the development of agricultural insurance in the Republic of Serbia. The proposed model of partially compulsory agricultural insurance is based on
public-private partnership, and its implementation would enable the development of agricultural insurance, but also provide the necessary financial resources for ongoing and investment financing of this important economic activity.

Partially compulsory insurance of agriculture implies compulsory insurance of agriculture for all agricultural entities, users of some state resource, from those risks that are most represented in a certain area.

According to the suggested model, insurance of agriculture should be mandatory:

a. for users of incentive funds for the development of agriculture that are paid from the republic, provincial or local government budgets;

b. for users of loans that are granted with subsidized interest from the state budget;

c. for users of loans approved by state financial institutions and which are placed at low (subsidized) interest;

d. for tenants of state agricultural land.

Agricultural insurance should take place in Serbia in the modern market economy. Modern, market-oriented agriculture can not even be imagined without well-organized and developed insurance. The perspective of the development of agricultural insurance in domestic conditions should imply a much more active role of the state than so far.

The state role could also be seen in the introduction of partially compulsory insurance of agriculture, as well as in securing funds from the agrarian budget for higher subsidies of insurance premiums. At the same time, insurance companies should play a key role in the domestic agricultural insurance market through the development of supply and demand, as well as in informing and educating agricultural entities on the importance of economic protection of their production.

Results

For needs of this research was carried out on the attitude and opinion of the citizens of Lazarevac regarding the insurance of an animal. The survey was conducted at the territory of Lazarevac municipality, by survey method. The aim of the survey is to find out how much animal insurance is in our country, primarily in this city. 70 people were surveyed, 38 of whom (54%) were men and 32 (46%) women. Of the 70 respondents, aged 20-30, there were only 14%, aged between 31-40 years 19%, age 41-50 years 31%, then 51-60 years old 26% and age 61-70 years 10% which implies that the highest percentage of surveyed mature people. Regarding education in the sample, 4% were interviewed with elementary education, 29% had secondary education, 40% were with higher education, and 27% had higher education. 10% of students participated in the survey, 54% were employed, 20% were surveyed and 16% retirees.
Figure 1. Needs for animal insurance

The first question was about attitudes on animal insurance. 66% of the respondents expressed their opinion on the need for animal insurance, while 34% of the respondents considered it unnecessary to provide cattle, which is, first of all, not profitable for the owner of the agricultural household. Respondents who believe that there is a need to provide animals, primarily cattle on farms, do not see much benefit from it, but it is definitely one type of protection for the owner.

Figure 2. Animals that are subject to insurance

The next question was about which animals are the subject of insurance, or which animals are most often insured with us. The situation is as follows: 42% of the respondents consider that the most commonly used are domestic animals or equidae, primarily horses, which are among the most expensive animals on the farm, then cows and cattle. The following species of animals, which are most often assured in the opinion of the respondents, are herds (sheep, goats), and 24% of those who are washed out have been declared for this. The following group includes pets, above all dogs, which in recent years are increasingly subject to insurance when the animals are in question and that is considered by 23% of those surveyed, and finally, the last group is poultry or feathered animals, or 11% of the respondents said that way.
Some of the most common reasons why owners decide to secure their animals are the following: the risks of large farms, animal diseases, theft and weather. 34% of the respondents consider that the main reason why the owners insure their animals is to cover the loss, especially when it comes to larger farms with a large number of animals. The following reason is a natural disaster. We are witnesses that in recent years our country has often been hit by floods and landslides. After the May 2014 floods that affected our country, most notably the Municipality of Obrenovac, many owners of the households wondered if they could find themselves in such a situation tomorrow. A large number of animals were killed in May’s floods, and even less than 2% of them were insured. 29% of the respondents consider that the reason why it is necessary to provide animals of natural disasters. The next reason is animal disease, and 20% of the respondents said that, while the theft of domestic animals is the last one for a variety of reasons, which is why it is necessary to ensure that 17% of the respondents consider it.

The next question in the survey concerns the “popularity” of domestic animal insurance in our country. The question arises, is the insurance of animals in our country in general. According to the data 80% of the respondents believe that the insurance of animals in our country is at the minimum, while 20% of the respondents consider that domestic
animals are often provided as part of insurance in agriculture, but only in serious agricultural farms, which animals exploit the animals.

**Figure 5.** Easy and simple insurance decision

![Easy and simple insurance decision](image)

*Source: Authors’ calculations*

The next question was about whether people easily decide to provide animals and whether they are assisted by an expert or someone who is more concerned about the positive aspects of animal insurance. Based on the information we received, it is clear that people find it difficult to secure their animals and thus consider 86% of those surveyed, while 14% consider that if all the conditions are specified by the insurance company and if the state is included with subsidies, so that people can easily decide to secure their domestic animals.

**Figure 6.** The reason for insufficient development of animal insurance in Serbia

![The reason for insufficient development of animal insurance in Serbia](image)

*Source: Authors’ calculations*

What is the biggest reason why owners do not insure their animals was the next issue. Out of the total number of examinees, 46% think that one of the main reasons is insufficient information about the importance and need for animal insurance. The next reason is a relatively low payment power, and this is considered by 37% of respondents, while 17% consider it to be the reason for the drop in the volume of livestock production. All of the above reasons lead to the fact that the insurance of animals in our country is negligible, and that in a number of agricultural insurance, it is much more popular and demanding insurance of crops and fruits. That people aren’t informed about how much animal insurance is needed and useful, is the fact that they often do not know that this type of insurance exists. Insurance companies, in cooperation with the state that would

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subsidize this type of insurance, should organize education and lectures on the topic of usefulness of animal insurance, in order to teach the owners of all the positive aspects and benefits that they can have.

**Figure 7. Why owners insure pets (dogs)**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal attachment</td>
<td>36%</td>
</tr>
<tr>
<td>Professional breeding of animals</td>
<td>36%</td>
</tr>
<tr>
<td>Theft or disappearance of the animal</td>
<td>28%</td>
</tr>
</tbody>
</table>

*Source: Authors’ calculations*

In recent years, it has become increasingly common for owners to provide their pets, primarily dogs. What are the reasons why owners insure pets was a question in the survey. Opinions on pet insurance were given, so 36% believe that the main reason for animal attachment, that is, personal reasons, the same percentage 36% believe that the reason is in fact professional breeding of animals, and 28% of the respondents consider that the reason for the insurance of pets theft or the disappearance of an animal.

**Figure 8. The state encourages owners to insure animals**

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>87%</td>
</tr>
<tr>
<td>Not</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Source: Authors’ calculations*

The next question was whether the state was involved when it comes to animal insurance, or whether it encouraged owners to insure animals. The subsidies given by the state to farmers in agricultural holdings are State aid and this is the reason why 87% of the respondents stated that the state is helping the owners, while 13% think that the state is not involved or not sufficiently and that is the main reason why animal insurance in our country on the other.
Figure 9. The need for changing the legal regulations

The next question was whether there was a change in legislation when the insurance of animals concerned helped. If it is necessary to change the laws or certain legal items when the insurance of animals is in question, 74% of the respondents consider it, while 26% think that there is no need to change the law, but that the state needs to influence the change of attitudes of the farmers, take the measures needed to motivate owners and see the need for animal insurance.

Figure 10. State subsidies solve the problem

One of the last questions in the survey was whether subsidies given by the state would solve the problem. The answers we received from the respondents say that 60% of the respondents consider the influence of the state, ie the subsidization, will help and encourage farmers to ensure the animals, 30% think that the situation would change for the better, but not to a large extent, and 10% of the respondents think that the state’s influence would not help solve this problem, due to the underdevelopment of agricultural production or the small profits that farmers have.
In the end, the last question in the survey was the attitude of the respondents about the improvement when the insurance of the animals concerned. In the future, the situation in this area will change for better considered 54% of respondents, 25% think that nothing will change greatly from the current situation, while 21% of the respondents remain optimistic about the insurance of animals in our country.

### Conclusions

In the Republic of Serbia, insurance of agriculture is in the category of insufficiently developed insurance. The perspective of its development in domestic conditions should also imply a much more active role of the state than so far.

The main objective of animal insurance is the economic protection of animal owners who keep healthy animals, while ensuring that all conditions are met for the quality cultivation of animals and the exploitation of their products.

Although the animals are insured against certain risks, this doesn’t relieve the insured of the obligation to approach the production with the care of a good host, as the Law prescribes as obligatory relations.

Due to the many risks and types of animals, animal insurance occurs in various forms: basic insurance, a large number of supplementary and special insurance, sample insurance for certain types of animals that are being insured for the first time, or for the dangers for which the insured is covered for the first time.

Animal insurance belongs to short-term insurance that lasts a year or less and is usually linked to a single production cycle. The subject of insurance is an animal in its entirety, and not a product or part thereof. Insurance coverage can only be provided for animals of certain ages, which are healthy, in good condition and cultivated under acceptable conditions.

The importance of agricultural insurance is also reflected in the provision of economic protection to farmers against various adverse effects arising from the risks involved in insurance. Agricultural insurance is an important factor in the protection and improvement of agricultural production.
One of the good solutions that could accelerate the market is a model in which a country’s obligation to obtain a subsidy in agriculture by the state would be obliged to pre-contract appropriate insurance coverage.

It concludes that only positive engagement and synchronized action by the public sector and the insurance industry can make visible positive progress in this area. Insurers in their domain should offer the market an adequate product in terms of comprehensiveness (higher risk coverage), clear and simpler definition of insurance and tariff conditions and easier accessibility for insureds, which will be unambiguous to everyone, including agricultural producers, the state sector and the industry insurance.

Following the example of the developed world markets, the second part of the job would have to be taken over by the state through appropriate subsidization schemes, models of public-private partnership for the adoption of appropriate laws and by-laws in this area.

In the coming time, the establishment of quality cooperation between the insurance industry and the public sector to improve the current situation in the Republic of Serbia will be crucial for the exploitation of development opportunities that certainly exist in this extremely important area.

The state role could also be seen in the introduction of partially compulsory insurance of agriculture, as well as in securing funds from the agrarian budget for higher subsidies of insurance premiums. At the same time, insurance companies should play a key role in the domestic agricultural insurance market through the development of supply and demand, as well as in informing and educating agricultural entities on the importance of economic protection of their production.

The proposed model of partially compulsory agricultural insurance is based on public-private partnership, and its implementation would enable the development of agricultural insurance, but also provide the necessary financial resources for ongoing and investment financing of this important economic activity.

Through empirical research, a general hypothesis was confirmed that insurance companies in Serbia should, through various insurance policies, motivate farmers, and then pet owners to provide their domestic animals against possible damage.

In addition to the general hypothesis, research has also confirmed the specific hypotheses that animal insurance provides financial protection against the various risks characteristic of livestock production, that it is necessary to harmonize domestic regulations on the protection of domestic animals with EU regulations, that the state must provide assistance when the insurance of animals is concerned through various subsidies and tax deductions for farmers, that farmers must take into account that their domestic animals can benefit greatly from them and reduce the damage caused by any form of animal loss, that the entry of foreign insurers raises the level of quality of insurance services and creates the conditions for further liberalization of the market, that changes in insurance can have a positive impact on the further development of the insurance market in Serbia and contribute to its accelerated approach to the European Union.
Conflict of interests

The authors declare no conflict of interest.

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