

The situation with insurance of crop production in the Republic of Macedonia and the EU Member States and the USA

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Abstract

Crop production takes place in the open field, exposed of numerous risks and disasters, with damages that are often caused by action of natural forces. A risk caused by weather, man is not always able to forecast and control. In Republic of Macedonia insurance of agricultural production is a little present because of major risks and consequently high premium rates. Some countries in the European Union and the United States the insurance at farmers stimulate with the subsidizing insurance premiums. With insurance in agricultural production is allowed damage to be a compensated financially.

Keywords: *crop production, agricultural insurance, the consequences of non-insurance, damages in agriculture, insurance premiums.*

Introduction

Agriculture as one of the important industries takes place outdoors, it is exposed to certain risks that could cause major damage. Risks in agriculture are the result of exposure to the production of many natural disasters that often times, the man is unable to predicted and controlled. By the insurance of agricultural production is provided compensation for damage, and thus financial balance.

Risks in crop production (crops and fruits), occur as a result of the occurrence of certain natural factors affecting agricultural production itself, such as the occurrence of hail, torrential rains, erosion, floods, snow drifts, fires, storms and dry winds, early autumn and late spring frost, etc.

1. Risks in agricultural insurance

Risk in agriculture is a danger that can occur in crops, fruits, which occurs under the influence of certain objective and subjective factors¹. Due to the influence of certain natural factors, the production process in agriculture is at risk. Risk, often times, appears as an integral part of agricultural production. Risks in

agricultural production caused some damage to crops, fruits and animals, which mostly affect the height of the financial result. It is very important to take care of identifying, measuring and controlling risks i.e. to perform risk management. In recent years, it is a necessity for normal crop production, maintenance of its own property of legal entities and private farmers in the agricultural sector, and the possibility of creating more profits in agricultural production. Risk represents future, uncertain event, occurred as a result of the influence of certain factors and natural disasters, which can cause damage in various crops and fruits adverse economic consequences. Damages in agriculture, which are result from the impact of certain insured risks, create liability of insurance companies to compensate or pay damage. Risks in agricultural production, which is the subject of insurance, must meet the following requirements: to exist a possibility for the occurrence of possible damage in agriculture, the damage to be of economic nature, to exist uncertainty of occurrence of risk for crops, fruits and animals with no impact on the will of the insured, to not always occur at the same time and space, it can be repeated and to exist possibility for statistical monitoring.

2. Taking preventive measures to protect crops and fruits of natural disasters

Crop production is carried out in an open space, where production is subject to many risks from natural disasters that man is not always capable of predicting and controlling. The main objective of farmers is to identify potential risks that causing some damage to crops, fruits and animals, and take immediate preventive measures to be put into operation, to prevent or remove the reasons that causes damage. Risks that arise in crop production are result of occurrence of certain natural elemental factors, among which are: the occurrence of hail, torrential rains, erosion, floods, snow drifts, fires, storms and dry winds, early autumn and late spring frosts, drought, high temperatures, fire and others².

¹ Tihomir Jovanovski, Ph.D: „Economics of insurance“, EMK, 1997 p. 54

² Petar Ganchevski: „Theory and practice in insurance activities“, NID „Mikena“ Bitola, p. 541

The fight against these risks and adverse weather events, can be done in two ways: a) by prevention, which enables measures and activities for prevention and non-occurrence of damages, or if they occur to achieve the reduction or mitigation the harmful consequences through prevention and b) by taking indirect measures, especially through insurance, which should provide compensation for damages.

3. Need for insurance of agriculture

The term security means providing funds (fund formation) by joining multiple entities in order, the occurrence of certain damages to compensate (cover) by deploying them on multiple subjects¹. Insurance is based on the principle of solidarity pooling, based on a voluntary or compulsory basis, mediated by specialized organizations. Through insurance in agriculture, damages arising out of agricultural crops and fruits are reimbursed from the fund, set up from the investments of the insured. Insurance in agriculture is done on a voluntary basis. The essence of insurance in agriculture consists in compensation the damage of crops and fruits incurred as a result of the risks and dangers that are ever present in agriculture. Due to the nature of the production cycle, damages in agriculture, mostly, cause interruption of the production process. The extension of the production process requires considerable financial resources that can be provided through reimbursement of damages by way of insurance. Insurance in agriculture make legal and natural persons in the field of agriculture (insured) that are mutually connected and affected by specific hazards and risks to their properties (crops, fruits, animals). By paying a premium for insurance, they are providing funds for compensation of damage in agriculture. Insurance is composed and by insurers that are legal entities (insurance companies), which after the conclusion of the insurance contract and the payment of premium are obliged to pay damages to the insured. Agricultural insurance is a contractual relationship and are governed by a contract.

4. Insurance of crop production in agriculture

Losses in crop production are usually caused by natural disasters and risks, and man is not able to always predicted and controlled. Therefore, to protect production occurs insurance of production, through which allows damage to be compensated financially. Insurance of crop production can be basic and additional. Basic insurance of crop production covers insurance of damages from risks: hail and storms followed with hail,

³ Tihomir Jovanovski, Ph.D: „Economics of insurance“, EMK, 1997 p. 24

fire or lightning strike during not harvested crops and fruits. Additional insurance covers damages caused by risks: flood, ice or storm, occurred without the hail. Additional insurance of risks is always conditioned by prior agreement for basic insurance risks insurance.

5. Premiums and tariffs on agricultural insurance

Insurance of crops and fruits in every insurance company is regulated by special laws for ensuring crops and fruits. To regulate relations with insurance and fruit crops, the insurance companies have established insurance terms, among which are the following: 1) General conditions (rules) to ensure crops and fruits, which regulates the general principles of insurance and 2) Specific conditions (rules) to ensure the crops and fruits, which regulates the specifics in insurance of certain crops and fruits from certain risks. Premium of insurance in agriculture is a sum of money paid by legal entities and individual producers in agriculture due to the insurance of the crops and fruits of the insurance companies, or the price of the risk of the insured property. The insurance premium is always correlative dependence with the risk in insurance, which actually means as much greater risk, as the higher the premium². On the amount of premium in agriculture affect several factors, of which most important are: the degree of likelihood of risk, the average magnitude of the damage, the amount of insurance, term of insurance and interest rate of financial assets.

The tariff of the insurance premium (premium rate) in agriculture is a set of premium rates, in a kind of insurance, or in all insurances that any insurance company carries out for insurance in agriculture³. The tariff of the insurance premium, also represents a price list of premium for insurance and determines the price of risk insurance in agriculture. Tariff of insurance contains general and specific conditions (principles) for insurance of crops and fruits, based on which a policy and a contract of insurance are prepared.

Tariff of premium consists: tariff groups, according to the type of risk in agriculture, tariff items of groups or classes of sensitivity of cultures and classes of risk crop.

⁴Jelena Kochovikj, Ph.D and Predrag Shulejikj, Ph.D: „Insurance“, Economics faculty, Belgrade, 2002 p. 68

⁵ Jelena Kochovikj, Ph.D and Predrag Shulejikj, Ph.D: „Insurance“, Economics faculty, Belgrade, 2002 p. 225

6. General and special conditions for insurance of crops and fruits

Relationships in crop and fruits insurance, in principle, any insurance company regulate by special rulebook for insurance, which regulates the general conditions (rules) for insurance and general principles of insurance of crops and fruit, determined on the basis of previously issued business decisions. Based on the contracts of insurance, primary liability of the insurer due to occurrence of damage, (insurance case) is to make compensation and payment of damages i.e. insurance. The timing of the start of the obligation for payment of damages is determined by the insurer, depending on the type of crops and fruits and the type of damage and the stage of development of crops and fruits¹. Subject of insurance of crops and fruits in specific conditions in a plant production is the yield or all parts of the plant, that having a basic use value. Non-fruiting orchards and vineyards as well as crops that once have already been damaged by the risk that the insured, can not be the subject of insurance. With this in mind, the subject of insurance in crop production can be: crops, fruits, meadow grasses, herbs, ornamental plants, orchards, vineyards, young orchards and vineyards before fruiting, fruit, vine and forest planting material, young forest crops with 6 years age, plaiting willows, reeds, etc. Insurance of crops and fruits in plant production is carried out by groups of insured perils or risks that could cause some damage to agricultural production itself.

7. Tariffs of insurance premium of crops and fruits

Tariff of premiums or premium rate for insurance of crops and fruits, is a set of premium rates in a kind of insurance crops and fruits or all insurances, which performs an insurance company. Each insurance company sets its own rates for insurance, applying for insurance of crops and fruits, which use general and specific conditions for insurance of the following risks:

a) Primary Insurance of crops and fruits of risks: hail, fire and lightning and

b) Supplemental Insurance of crops and fruits of risks: storm, flood and spring frost. Tariff of insurance premiums on crops and fruits consist of tariff groups according to the type of hazard and risk, and elements of tariff groups respectively, under which tariff classes are divided into groups:

a) the sensitivity of culture class, which is established on the basis of reliability and sensitivity to the culture of risk and ensures and

b) the hazard class, which is determined by the dependence of territorial units and settlements in the area where it is insurance. The class of risk is determined based on the technical result obtained on the territorial unit, as the relationship between paid claims and written technical premium for more years for the territorial unit. Tariff for Insurance of crops and fruits consist of tariff groups that covers following types of insurance²:

- Insurance of crops and fruits of risk from hail, fire and lightning;

- Mass insurance of tobacco, hops and cotton of risk: hail, fire and lightning;

-Insurance of crops and fruits of storm risk;

-Insurance of crops and fruits of flood risk;

-Insurance of crops and fruits from spring frost risk;

-Insurance of crops and fruits of risk loss of seed quality;

-Insurance of crops and fruits of risks in greenhouses;

-Insurance of fruit trees and vine trees;

-Insurance of crops and fruits after the harvest or vintage;

-Insurance of fruits and table grapes from risk of losing quantity and quality etc.

Allocation of cultures by class of sensitivity of the culture is based on the reliability and sensitivity of the culture to risk which ensures. Distribution of the area in classes of risk, is based on the degree of danger in the area of individual risks. Unlike the previous insurances, tobacco is the only strategic crop, in which production and acquisition is regulated by the Law of Tobacco. Subject of insurance of tobacco is tobacco leaf from the following basic hazards or risks: hail, fire and lightning. In a separate contract, tobacco leaf is ensuring from flood risk, followed by the hail, the risk of storm and flood and fire risk in dry tobacco to until transfer the tobacco to the buyout.

8. Insurance of crops and fruits in the Member States of the European Union and the United States

Insurance system of crops and fruits in the member states of the European Union is one of the instruments in fight of the farmers with risk. Insurance system is compatible with the market structure, risks and production which cover, as well as the degree of penetration of the state in insurance market.

The European Union started with the development of new systems of agricultural insurance, as they are in North America. The development of such insurance system is in

⁶ Petar Ganchevski: „Theory and practice in insurance activities“, (Insurance of crops and fruits) NID „Mikena“ Bitola, p. 543

⁷ Tariff and insurance premium of crops and fruits," Manuals of company for insurance" QBE - Macedonia AD and Company for Insurance "Vardar"

conformity with the Common agricultural policy of the EU.

European Union treats the agriculture as "plant outdoors" exposed to risks that more or less reflect in the production and working results of agricultural holdings¹. The main feature of the insurance market in the USA is establishing a community of risk (pool). Community of risks include risks that are facing most individuals and that by paying the premium create Fund, which later is used for the payment of damages to those individuals of the pool who have suffered damage. More accurate is to say that it is the insurance companies sell insurance policies to different persons with less perfect related risks, with total indication of the insurance is less risky than the risk of each individual. It is because the probability of damage to all insured at the same time is very rare. So, insurance diversify non-systematic or unrelated risks in community of risks².

The insurance of crops and fruits in the United States by state agency for risk management conducted 22 programs for insurance that covers the value of the production of over 40 billion dollars in insured 90 million acres of land and over 100 agricultural productions. Among the ten most important productions include: corn (12 million US \$), soybeans (7 million US \$), wheat (4 million US \$), nurseries (3 million US \$), cotton (2 million US \$), citrus (1 million US \$), potatoes (0.9 million US \$), tobacco (0.8 million US \$), lemon (0.7 million US \$) and sugar beet (0.6 million US \$).

All insurance programs in agriculture are led by Agency for Risk Management (Risk Management Agency-RMA). RMA was established in 1996 and is part of the Ministry of Agriculture and managed by the state Insurance Corporation of crops (Federal Crop Insurance Corporation). RMA determines premium quotas, subsidies to insurance, develop new products and offers reinsurance to private insurance companies.

9. Involvement of states in subsidizing insurance premiums

An important feature of the insurance system is involvement of the state through various forms of subsidizing insurance premiums. In some countries the insurance premium is subsidized, while some are heavily subsidized. EU does not affect the amount of subsidies paid by its members, but the EU Commission in 1993 adopted some ceilings of subsidies on agricultural insurance from public funds. Thus, in Table 1 is given

⁸ Prof. Dr. Mario Njavro and grad. Eng. Agr. Marin Vidic "Insurance of crops and fruits in the EU and the USA"

⁹ Prof. Dr. Mario Njavro and grad. Eng. Agr. Marin Vidic "Insurance of crops and fruits in the EU and the USA"

subsidies (co-financing) of agricultural insurance in some EU Member States and the Republic of Macedonia.

Table 1 - Participation in subsidizing of insurance premiums in some EU countries compared with R. Macedonia

<i>Countries</i>	<i>Subsides in insurance in the field of</i>	<i>the amount of subsidies in terms of premium</i>
1. Spain	orchards and vineyards	from 38-45%
2. France	- subsidies from risk of hail - subsidies for viticulture - subsidies in fruit production	from 20-30% 20% 21%
3. Italy		from 20-30%
4. Germany	orchards	
5. Netherlands	Subsidizing premiums	
6. Austria	Subsidizing hail	25%
7. Macedonia	Plant production	Up to 30%

From the above table it can be seen that the share of insurance premiums ranges from 20% (France) to 45% (Spain). Republic of Macedonia for the first time in 2008 set aside funds to subsidize insurance premiums in the amount of 30% of the premium. Percentage of insured areas from risk of hail is in: Belgium 12%, Slovenija 18%, Spain, France, Italy 50%, Austria 57%, Switzerland 70%.

10. Involvement of the Republic of Macedonia in subsidizing insurance premiums

Republic of Macedonia recognizing the risks that occurred in agricultural production causing huge damage on it, in the same time keeping in touch with European trends in terms of aid given to farmers by subsidizing insurance premiums, the Programme for Financial Support of Agriculture provides certain funds to subsidize insurance premiums of certain crops in agriculture. For this purpose, several years ago by the Government is provided financial assistance amounting to 30 % of the insurance premiums that subsidize. But the interest of the farmers was still low for insurance of their crops and fruits.

Realizing the lack of interest of farmers in order to stimulate interest in ensuring agricultural crops and fruits, the Government in its Programme for Financial Support of Agriculture for 2013, financial assistance in subsidizing insurance premiums for agricultural crops and fruits increase of 60 % . Under this program determined is the maximum area that will be subsidized due to an insurance

in agriculture. Thus, subsidized premiums may have farmers that will ensure maximum up to 10 ha of vineyards and orchards, 2 ha of vegetables, tobacco 2 ha, 20 ha of cereals and 100 beehives.

11. Status of insurance in the Republic of Macedonia

In order to increase the volume of insurance on agricultural production, and simultaneously use the funds to subsidize agriculture, the Agency for Financial Support of Agriculture signed a Memorandum of Understanding with the Association of Insurance and brokerage companies that provides insurance brokers to be mediators between farmers and insurance companies, which will result in an increasing the number of farmers who will ensure the yield. Financial support for subsidizing insurance premiums for 2013 is 568 000 EU to cover the cost of insurance of agriculture or the insurance premium. Such support is projected to rise to 70 or 80 % of the insurance premium to revive the cooperative movement in the country. Despite this financial aid offered to farmers to subsidize insurance premiums for their crops and fruits, however the insurance situation is not satisfactory. Thus, according to the Agency for Insurance Supervision, for now only four insurance companies in the country offering agricultural policies. Of the 100,000 registered farmers, only 1,500 are insuring their crops and fruits. In them, the highest number in Kavadarci 340, which is further followed by Resen 250 and Negotino 200 farmers. In the structure of insurance the most are insured the vineyards of about 350 ha, further 270 ha of apples and wheat on about 210 ha. Insurance is relatively small in relation of agricultural area, agricultural producers and the opportunities afforded by the program for financial support in agriculture by subsidizing insurance premiums. From the given table can be concluded that agricultural insurance in the Republic of Macedonia is only 1.2 % in total insurance, which indicates that the risks in agricultural production are very large, and the insurance companies are often reluctant to provide insurance of agricultural production, or if they do it, they do it with a high premium rates that affect dissimulating for individual farmers and legal entities engaged in agriculture to ensure their production.

12. Conclusion

1. Risks in agricultural production is a future, uncertain event, occurred as a result of the influence of certain factors and natural disasters, which can cause various damages to agriculture and adverse economic consequences.

2. Damages that can occur in crop production are result of certain factors and risks, which affect the production. In livestock production damage may result from risks: deaths and forced slaughter and dangers of accidents. For continuing of the production process are required considerable financial resources that can be provided through reimbursement of damages by way of insurance.

3. Providing crop production from occurrence of certain risks and providing of damages is done through: prevention, repression and insurance .

4. New forms of insurance in agriculture occur after 1981 particularly among individual farmers and through collective security based on cooperation agreement, payment the part of the premium by the cooperative organizations, and performing organization, acquisition and processing of agricultural products.

5. Large and unpredictable risks in agriculture in previous years, and higher premium rates significantly lowered interest in ensuring agricultural production, such as insurance companies and the farmers .

6. Insurance system of agriculture in some highly developed countries in Europe is such, that uses stimulation for insurance by subsidizing insurance premiums, but the scope of insurance expressed through agricultural areas remains limited.

7. Although the agriculture in the structure of GDP of the Republic of Macedonia is 12%, still insurance in agriculture in the country in total premium paid for insurance in the Republic of Macedonia is only 1.2 %, suggesting that the risks in agricultural production are very large, and insurance companies often avoid performing insurance of agricultural production, or if they do carry a high premium rates that affect dissimulating for farmers and legal entities engaged in agriculture to ensure their production.

8. Despite 568 000 EU provided by the Government and by subsidizing 60 % of insurance premiums, the insurance of agriculture is not satisfactory .

9. In order to increase the interest of farmers to ensure their crops and fruits is necessary for continuing informing the agricultural producers what are the effects that can be achieved with insurance, especially by relevant institutions such as Ministry of Agriculture, Forestry and Water Management, Agency for motivating the development of agriculture, farmers' associations and insurance companies.

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