THE ROLE OF THE MARKETING MIX IN THE IMPROVEMENT OF AGRICULTURAL INSURANCE

Žaklina Stojanović¹, Mirjana Gligorijević², Tatjana Rakonjac Antić³

Summary

Specialization of agricultural production is closely associated with increased risk. Insurance is often used as a method of transferring risk from a farmer to an insurance company. The development of modern agriculture requires widening the scope of insurance coverage. Therefore, the paper analyzes the possibility of adjusting insurance offers to the specific needs in agriculture sector with the aim of increasing the number of insured business entities. First, it is necessary to properly define the marketing mix in agricultural insurance. Second, it is equally important to permanently measure effectiveness and legitimacy of its application. Importance of the most commonly used indicator - the Return on Marketing Investment Coefficient (ROMI), is underlined.

Key words: agribusiness, agricultural insurance, marketing mix, marketing metrics.

JEL: Q10, G22, M31.

Introduction: the complexity of risk in agriculture and insurance schemes

Agricultural business, faced with multiple unforeseeable circumstances, has always drawn attention in the context of finding the ways of adequate risk management. However, the classification of risks in agricultural production has a wider scope. Agriculture is exposed to numerous types of risks, which, combined, influence the effectiveness of agricultural production (Pejanović, 2006). Any negative change in the achievable results, whose certainty of occurrence cannot be foreseen, can be considered a risk. In general, the risks present in agricultural production can be classified as financial risks and business risks (Hardaker et al., 1997). Business risk includes production, market, institutional and personal risks, whereas

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financial risks result from different methods of financing (Table 1). The wider scope of risk that farmers are exposed to usually involves the so called institutional risk which results from changes in regulations, standards, and agricultural policy as well. However, farmers do not have significant influence on the institutional risk.

Table 1. Risk and Agricultural Insurance

<table>
<thead>
<tr>
<th>Types of risk</th>
<th>Internal methods of insurance</th>
<th>Insurance outside an agricultural holding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production risk</td>
<td>Diversification and technological innovation of production.</td>
<td>The classic insurance (property, crops, fruits, animals, against multiple types of risks etc.) and weather derivatives.</td>
</tr>
<tr>
<td>Market risk</td>
<td>Diversification, vertical coordination, marketing and production contracts, cooperatives and vertical integration.</td>
<td>Commodity derivatives (e.g. agricultural futures and options on futures)</td>
</tr>
<tr>
<td>Personal risk</td>
<td>Application of safety standards, systematic control of health of household members and staff.</td>
<td>Insurance for persons (against accident, life insurance, insurance against a number of diseases, etc.).</td>
</tr>
<tr>
<td>Financial risk</td>
<td>Diversification, planning and significant funding from private sources.</td>
<td>Financial derivatives (interest rate and currency swaps).</td>
</tr>
</tbody>
</table>

Source: research by authors.

Why classification of risks and insurance schemes are important? Producers should be aware of all types of risks and the impacts they have on the efficiency and effectiveness of agricultural production. Consequently, they are highly motivated to use certain methods to overcome those impacts. Yet, producers will first opt for internal methods for overcoming risks and use external methods only if certain conditions are met. Furthermore, an aggravating circumstance is the fact that different types of interdependent risks can occur simultaneously and have multiple impacts on the success on agricultural production.

Due to the specifics mentioned, the text below focuses on analyzing access to insurance against production risk in agribusiness. Given the importance of the modern concept of insurance against risks in agriculture, the paper raises the following questions: Who are the insured persons/business entities in agricultural insurance and how systematically different they are? Whether priority in stimulating an increase in the scope of agricultural insurance should be given to external (push) factors or the most important factors can be still found within the system of integral connections and relations between modern agriculture and services (insurance is viewed as one of the extra-agricultural services within agribusiness)? How can the attitude towards agricultural insurance be innovated? The significance of the work is reflected in clarifying marketing tools and methods that are used in agricultural insurance with the aim of a wider involvement of farmers/business entities.
Methodological clarifications: structural characteristics of agriculture sector and the factors of agricultural insurance

Agricultural insurance, in the broadest terms, refers to the insurance of crops (crop insurance) and insurance of livestock, and represents a method of risk transfer from a farmer to an insurance company. More specifically, agricultural insurance reduces the risk for producers and stabilizes their incomes, through indemnities. There are different approaches: the so-called all risk insurance, multi-peril insurance, catastrophe risk insurance, etc. Practice shows that even in the most developed economies, agricultural insurance is applied with many difficulties (Miranda and Vedenov, 2001). In terms of methodology, the obstacles to implementing insurance in agriculture can be found in systematic differences between the various factors comprising modern agriculture sector, as well as in the lack of understanding of how farmers/business entities make a decision on using an insurance scheme.

There are two parallel models how agricultural sector operates (Table 2): family farm model and agribusiness model (Strange, 1988). In relation to the family model of agriculture, it should be stated that it has never and nowhere existed in an ideal form (Vogeler, 1985; Galeski and Wilkening, 1987). In fact, the model indicates only a tendency, based on confronting philosophies of the “big” and “small” in the agricultural sector, to maintain a certain degree of balance between agents in terms of their interests within the complex agricultural system by consciously directing government policies.

Table 2. Models of organizational structure in modern agribusiness

<table>
<thead>
<tr>
<th>Family farming</th>
<th>Agribusiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operates on the basis of ownership</td>
<td>Organized on industrial scale</td>
</tr>
<tr>
<td>Venture aimed</td>
<td>Financed with the aim to grow</td>
</tr>
<tr>
<td>Dispersed as “small”</td>
<td>Concentrated as “big”</td>
</tr>
<tr>
<td>Diversified production</td>
<td>Aimed at specialization</td>
</tr>
<tr>
<td>Family based</td>
<td>Based on management</td>
</tr>
<tr>
<td>Technologically progressive</td>
<td>Capital intensive</td>
</tr>
<tr>
<td>Competitive advantage in open markets</td>
<td>Powerful at controlling the market</td>
</tr>
<tr>
<td>Environmentally friendly oriented</td>
<td>Standardized production processes</td>
</tr>
<tr>
<td>Aimed at resource conservation</td>
<td>Aimed at resource spending</td>
</tr>
<tr>
<td>Farming is both a business and lifestyle</td>
<td>Farming is exclusively a business</td>
</tr>
</tbody>
</table>


The “Farm model” of agriculture (family farming) involves at least two approaches. One of them favors the “entrepreneurial farmers”, and the other the “socially oriented farmers” who are, in a positive sense, identified with the so-called rural world (Zakić and Stojanović, 2008). The main characteristics of these two types of family agriculture are shown in Table 3.
Table 3. The characteristics of the family farm model

<table>
<thead>
<tr>
<th>Traditionally oriented farmers</th>
<th>Entrepreneurial farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usually a smaller farm, expand with caution</td>
<td>Extremely big farm</td>
</tr>
<tr>
<td>Cautious about getting a loan</td>
<td>Borrow huge amounts of capital</td>
</tr>
<tr>
<td>Greater stability during crisis</td>
<td>Risk of over indebtedness</td>
</tr>
<tr>
<td>Prefer owning to leasing land</td>
<td>Owning and leasing land equal</td>
</tr>
<tr>
<td>Diversified production</td>
<td>Specialized production</td>
</tr>
<tr>
<td>Less susceptibility to market disturbances</td>
<td>High susceptibility to market disturbances</td>
</tr>
<tr>
<td>Continual identity of family on the farm</td>
<td>Farm is not a permanent family base</td>
</tr>
<tr>
<td>Cooperation between members of household</td>
<td>Competitiveness between househ. members</td>
</tr>
<tr>
<td>Preserving the farm for one heir</td>
<td>The prospectus heir is self made</td>
</tr>
<tr>
<td>High communal loyalty and environmentally friendly behaviour</td>
<td>Lower level of loyalty to the community and profit oriented behaviour</td>
</tr>
</tbody>
</table>


Based on characteristics of the agricultural entities, we can clearly notice the distinguishing differences. The entrepreneurial farmers are more open to the choice of technology-intensive and specialized forms of production. As such, this production is more imposed to the impacts of risk, and the producers are therefore more willing to participate in the insurance scheme. A study conducted in France suggested large, specialized and exposed to highest risk farms as a typical insured client in the agribusiness sector (Enjolras, Sentis, 2011). However, within the bipolar system of family farming, the entrepreneurial-oriented producers have similar characteristics to agribusiness firms. The more developed the economy, the more significant the participation of the agribusiness and the entrepreneurial-oriented farmers within the agriculture system. However, even in these conditions, farmers make the decision to take insurance against risk by using a complex model of decision making, which involves recognizing the impacts of risk and comparing different insurance schemes.

Criticizing the models that use a general approach when dealing with insurance for farmers, treating them same as any other insurance clients, Myers explained how unrealistic this approach is and its irrelevance for insurance in agriculture (Myers 1989). Farmers should be seen as producers, making a decision on whether or not to conclude an insurance contract. It is pointed out that the modern farmer (regardless of the level of their aversion to risk) is willing to pay the insurance premium, which provides an increase in current consumption by lowering the production costs. Thus, the algorithm of farmers’ decision making includes two phases - one influenced by the push factors and the other controlled by the pull factors (Figure 1).

The push factors are different influences that come outside agriculture and individual entities, which are related to the application of various stimulating measures of agricultural policy such as subsidizing access to insurance. In contrast to these factors, insurance companies are trying to attract customers with a relevant range of products (the pull factors). In the process of “pushing” and “pulling” the motives of farmers and reasons for their behavior remain insufficiently explored.
Starting from the macroeconomic point of view, measures that are applied in the field of agricultural insurance are a significant component of agricultural policy. The main objective of this policy is to ensure sufficient amounts of food of adequate quality (food security and safety). Due to the fact that food in modern agriculture is produced with lower labor involvement (the share of agricultural population decreases with the economic development), the application of new technologies and more efficient, specialized production becomes inevitable. Therefore, diversification, as a traditionally applied method of insurance in agriculture, is regarded as a major obstacle in achieving the national goals of agricultural policy. For example, in the earlier theory of insurance in agriculture, subsidies from the agricultural budget were considered as an inevitable cost of modernization of agriculture (Ahsan et al, 1982).
Although developed countries have been implementing national crop insurance programs as a push factor (for example, in the USA the Crop Insurance Program have been implemented since early 1980s), these have suffered considerable criticism. More precisely, they do not contribute to greater market orientation of agricultural production (Nelson and Loehman, 1987; Goodwin, 2001; O'Donoghue et al, 2007). Some authors argue if lower cost alternatives are available, crop insurance is likely a suboptimal strategy (Glauberd, 2004). Due to insufficient financial capability of farms it might be particularly true for developing countries.

Taking into account all the aforementioned specifics of agriculture, the paper analyzes the so called pull factors that can essentially assist popularization of insurance. As an important institution of the economic system, insurance should facilitate both efficient and effective functioning of agriculture. A very important pull factor that may help in spreading the use of insurance in agriculture sector is the adequate use of modern marketing methods in business operations of insurance companies which are, among other, focused on agriculture as well (Milanović-Golubović, 2006).

Marketing mix and modern marketing metrics in agricultural insurance

Agricultural insurance needs more precise marketing programs and techniques, which require identification of individual needs of farmers and a dialogue with smaller groups of the insured persons/business entities. Insurers should make an extra effort to retain the existing clients, by developing a long term business relationship with them, as well as to gain new insured farmers. In that context, insurers should pay special attention to marketing mix, which in insurance business comprises the following: insurance products, insurance premiums, distribution channels and promotion.

An insurer starts its activity in the form of an insurance product, and an insured person/business entity is protected against the event of various types of risk. If a risk is to be insured, it is necessary that it meets certain conditions: 1) likeliness to occur, 2) uncertainty of the event, 3) economic peril of the event, 4) independence of the event on the will of the insured or other interested person, 5) distribution of the event in space and time, 6) the event must be repeated, 7) exposure to risk must be homogenous, 8) the event must be permissible by public order and morality (Kočović et al., 2010). It is important that insurers identify insurable risks in the system of agricultural production and provide adequate insurance coverage.

In order to draw up insurance contracts to be offered to various types of farmers and agribusiness companies, it is necessary to distinguish the types of farmers willing to pay insurance premiums according to the characteristics of the inputs/technologies used, the results/outputs and their willingness to take risks. It is necessary to define a number of insurance lines to be offered to the companies in agribusiness, and include the following: a) all the risks for a farmer or farm that can be insured, b) the most characteristic risks and c) individual risks. The crop insurance usually covers the following: cereals, industrial crops, orchards and vineyards, vegetables, ornamental plants etc. (Labudović-Stanković,
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Todorović, 2011). It is possible to insure parts of a plant that determine the purpose of its cultivation: grain (seeds), roots, fruit, etc. In cereals, for example, besides grains (seeds), it is also possible to insure the stem, and with fruit, for example, trees, vines, etc. Insurance is provided for annual and perennial crops, major crops, secondary crops, stubble crops. The loss of yield (fruit) or loss of yield quality, as a result of damage to or destruction of an insurance subject matter may be insured against general risks (such as hail, fire and lightning) and additional risks (floods, storms, spring frost, etc.). If all insurable risks are covered, it is possible to offer better insurance terms and conditions. The amount of insurance for crops and fruits is usually defined by the insured. This amount is defined based on the actual value of the expected yield of crops (including the expected return and market price, which is formed at the time of harvest). Crop insurance can also be arranged for guaranteed, or contracted prices for certain types of crops. However, contemporary farming is faced with numerous risks and any combination that forms multi peril insurance could be highly relevant in farmers’ decision making.

Preventive measures, aiming on control of the causes that could possibly influence on crops and fruits, etc., should be especially stimulated. Investments supported by subsidized interest rates for restructuring farms have been aimed at increasing the technical capacity of modern agriculture - irrigation, protection from hail, etc., and can contribute to the achievement of this goal. The main incentive in these measures is reflected in lower insurance premiums in agricultural insurance. These kind of measures are a good example of interplay between push and pull factors that can positively influence agricultural insurance in practice.

Insurance price - the premium, is the most sensitive element of the marketing mix. Higher premiums discourage demand for insurance products and, even if these result in a satisfactory profit during the calendar year, they may jet limit the insurer’s growth and cause a reduction in its market share. This is particularly relevant for agricultural insurance, because farmers belong to the insured persons/business entities that are very sensitive to these changes (Sherick et al., 2003.). On the other hand, low premiums enable growth, but threaten the profitability of an insurance company, and its survival in the market. Therefore, it is necessary to determine the premium that enables profitability, growth, and development. The main factors affecting the amount of insurance premiums in agriculture are: costs, demand, competition and economic measures of the state in the field of agricultural policy. Knowing the characteristics and intensity of impact of these factors, enables the insurer to determine the pricing policy for its products. Of all the above factors, the insurers can influence the level of certain costs most, including: the costs of the conclusion of an insurance contract, and administrative expenses (Kočović et al, 2010). In insurance, resources are pooled, and based on premium payments, are accumulated in the insurance fund and used to compensate the insured. If risk is spread over a greater number of insured, the insurance premium can be determined at a lower level. If a larger number of farmers are covered by insurance, this would certainly result in lowering the premium amount to the level satisfactory both for the insurers and the insured.

Distribution channels should provide contact between the farmers and the insurers and effective solutions to the issues that arise in their cooperation. Insurance can be sold directly to farmers through sales staff, branch network and direct marketing, and it is possible to use
various intermediaries (brokers, agents, etc.). Distribution channels length and width depend on the size of the company and its organization, market size and the scope of insurance. Also, we should always bear in mind that the approach to farmers is specific. In all systems these subjects are often regarded as traditionally - not open for any kind of innovation, including the application of modern methods of agricultural insurance. Therefore, this matter requires a specific method of communication, i.e. communicating the messages to end users (the insured). Commonly, the insurers use complementary channels which are normally used to communicate information to farmers about the technological and other innovations that can improve their business systems. It seems essentially important for national food security.

The tasks of marketing communications in insurance are: 1) forming a positive image of the company, its market and social missions, 2) information about the company’s marketing offer and creating clients affection toward its products 3) turning this affection into concrete sales and 4) development of long-term business relationship between the insured and the actual insurance company (Vračar, 1991). Promotion, as a marketing mix instrument, must be effective in bringing the characteristics of insurance products to the insured persons/business entities. Promotion can provide better insight for farmers into the characteristics of agriculture insurance, and promote more significant participation of farmers as the insured within this system. The information should be incorporated into a functional system that uses print, radio and television, public institutions’ publications, specialized industry associations, affiliations, websites and other forms of modern communication media (Gligorijević, 2012).

Investing in the marketing mix and marketing activities in general makes sense only if the investment is cost-effective (Kotler, Keller, 2009). Insurance marketing in general, and in the agricultural sector as well, applies a complex marketing metric today.

In the early stages of the implementation of marketing metrics, insurance companies track the number of agricultural insurance contracts concluded (for insurance products, region, market and sales channels), test and explore the market, then monitor the effectiveness of campaigns and marketing programs and assess return on investment (Farris et al., 2010). In the developed insurance markets, they consider optimal allocation of resources and asset value of the insurance company. Best results are achieved if the insurance company integrates the above measurements on the short-term and long-term levels, where the objectives are measured quantitatively and qualitatively. It is desirable that the metrics is part of the planning process and presented daily, at all management levels in the insurance companies engaged in agricultural insurance. The basic indicator of the results of marketing activities is return on marketing investments. Return on Marketing Investment (ROMI coefficient) is the additional revenue realized by applying a marketing campaign minus the costs required by the marketing methods applied.

The main objective of ROMI coefficients is to determine whether marketing activities are justified. The ROMI coefficient has not been used long for checking the effectiveness of marketing activities in insurance, particularly in insuring agricultural production. More
intensive analysis by using the ROMI coefficients started with the work of Lilien G., Kotler P., Moorthy K.S. (1992) in their book *Marketing Models*. A large contribution to the implementation of this coefficient can also be attributed to the work of Shaw R., Mazur L. (1997) *Marketing Accountability*. A number of books that address this issue were published recently, among which the most prominent are a book by Powell G. *Return on Marketing Investment* (Powell, 2003) and a book by Lenskold J. *Marketing ROI* (Lenskold, 2003).

It is extremely difficult to perform an accurate assessment of the effects of marketing activities on the results of operations of the insurers who are engaged in agricultural insurance. There are two forms of ROMI coefficients. The short-term ROMI coefficient measures current income and expenses, i.e. an increase in revenue compared to the investment in marketing activities. If the result is greater than zero, the marketing activity is considered reasonable in the short term. The long-term form involves improvements in the long run. Benefit is in the form of expanding a favorable image of the brand, including customers in the long run and so on. Best results are obtained if both the short-term and long-term forms of ROMI coefficients are used (McGovern and Quelch, 2007).

It is essential that the financial metrics related to profit, sales, cash flow, is supplemented by non-financial indicators such as market share, quality of products and services, customer satisfaction, customer loyalty, brand value etc. It is very important to choose the right metrics that will indicate the existence of an optimal allocation of resources to be used in the marketing of insurance companies.

Ultimately, marketing costs are justified if there is a corresponding correlation with the financial performance of the insurers. Through a system of evaluation, marketing performance management leads to a proactive governing of processes which result in reduced costs and increased efficiency, and consequently improves agricultural insurance.

**Conclusions and suggestions for further research**

The aim of this paper is to emphasize how modern marketing can promote agricultural insurance. Insurance companies can affect the willingness of farmers and their decision to conclude an insurance contract. In doing so, they use all elements of the marketing mix: insurance products, insurance premiums, distribution channels and promotion. These instruments should be carefully defined and tailored to the needs of the farmers and affordable. In this respect, they should take into account all the peculiarities of agricultural markets and farmers themselves. It is necessary to implement a marketing concept appropriately, and constantly measure the effects of marketing investments in agricultural insurance. One of the most commonly used indicator of marketing effectiveness is the ROMI coefficient, which is, unfortunately, still insufficiently used in the developing economies, and in our practice as well.

On the other side, farmers often are not familiar with all the effects and benefits that they can have from agricultural insurance, especially from new, contemporary forms and insurance lines. An important task of the insurers is to implement the education process for the
insured persons/business entities, so that they can better understand the characteristics of this insurance system and the necessity of the development of agricultural insurance. These activities, which are primarily classified as the so called pull factors, should be adequately supported by a controlled state intervention that produces push factors in the growth of insurance market in the agriculture sector. However, any excessive state interference is evidently counterproductive. This policy does not give the expected results for at least two reasons: (1) farmers will continue resorting to the internal methods of overcoming the risks in their practice (diversification of production), (2) producers are permanently unable to adapt to the specific market conditions. The consequences are twofold. First, due to unspecialized production it prevents the development of modern, highly efficient agriculture. Second, the role of insurance companies is completely neglected, which has multiple negative effects, not only in the context of agricultural production, but also in the overall economy.

Finally, this research is primarily theoretical since it aims at explaining the possibility of using marketing metrics in agricultural insurance burdened with the sector particularities. The application of modern marketing concept could have a decisive role in the popularization of insurance in agriculture. It implies a comprehensive knowledge of the specific needs and characteristics of the insured, as well as designing the marketing mix in concrete terms that give the best financial and other complementary business results. Measuring return on marketing investment is a very useful tool, and insurance companies could use it as a basic indicator of investment in marketing, in general, and especially of investment into certain instruments of the marketing mix. It would be also useful to investigate whether and to what extent the insurance companies use this indicator. Also, it would be important to investigate whether there is a difference in the degree of the use of this indicator, depending on the ownership structure of the insurance companies and individual fields of insurance. Future research should also focus on the analysis of different models of agricultural insurance applied in the developed economies, as well as on finding the best modalities for adoption of good practices in the less developed countries.

References

ULOGA MARKETING MIKSA U UNAPREĐENJU OSIGURANJA POLJOPRIVREDE

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Rezime


Ključne reči: agrobiznis, osiguranje poljoprivrede, marketing miks, marketing metrika.

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