

## DEVELOPMENT AND STRUCTURAL CHANGES IN TURKISH AGRICULTURAL INSURANCE POLICY

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**Abstract.** Climate changes, global warming and related environmental effects have increased the importance of risk sharing on sustainability of agricultural production. In developing countries the farmers have taken less action when it compared to their counterparts in developed countries. Accordingly, the policy makers in developing countries have been encouraging the farmers to attempt agricultural insurances against to risks. There have been different levels of subsidies on agricultural insurances implemented in several EU Member States. The aim of this paper is to analyse the effect of governmental-private partnership agricultural insurance system which have been practised in Turkey since June 2006.

**Key words:** agricultural insurances, agricultural insurances, risk sharing, Turkey

### INTRODUCTION

The monitoring of insurance systems in emerging economies shows a mixed record. Some schemes suffer of low penetration and constant underwriting losses due to factors ranging from high administration costs to adverse selection [Corneliu 2007]. In Turkey, agricultural sector has a specific important share in the economy as usual in other developing countries. Accordingly, recent process such as rising food prices, climatic change and other natural risks factors in the global economy have increased critical role of the agriculture production and the policy makers have relatively put more attempts

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about agricultural sustainability in government policies. In 2008, the share of agricultural sector is 11% in GDP and 28% in total labour force in Turkey. The share of the agricultural sector in the whole economy has got a decreasing trend, but it is also still the important economic activity in Turkey.

Though major part of the population is engaged in agricultural activities, distribution of the national income has deteriorated unfavourably against rural sections due to their low share in GDP. Since continuation of divisions of the agricultural territories via inheritance, decrease in size of the agricultural enterprises and occurrence of further problems in the rural areas (infrastructure, education, health, organizational structure etc.) has resulted in a widespread poverty. Therefore, one of the main reasons of poverty is instable income which has been fluctuated yearly by the natural risks factors (such as drought, hail, flood, storms, tornadoes, earthquakes, fire, uncontrollable pests, diseases, and accidents for: crops, greenhouses, agricultural buildings, agricultural machinery and livestock).

In order to solve these problems in the agriculture, establishment of a risk management system seems to be a prerequisite. Within this vein, Turkey has started to implement several risk management system in agriculture in terms of insurance system. After several unsuccessful attempts and adjustment, Turkey recently developed a new agricultural insurance scheme based on the public-private partnership, technical and economic resources to preserve the agricultural sector from suffering under difficult conditions. In particular, a new agricultural insurance law was accepted June 14<sup>th</sup>, 2005. Objective and scope of this new law [Law no: 5363] are as following:

**Objective:** Article 1 – *The aim of this Law is to determine the procedures and principles regarding the implementation of agricultural insurance in order to compensate farmers for losses occurring due to the risks set out in the Law.*

**Scope:** Article 2 – *This Law comprise the principals and procedures related to the establishment of the Pool, risks to be covered by the Pool, income and expenditures of the Pool, subsidies for premiums and support for damages exceeding the premium, insurance contract, provision of reinsurance and the duties, competence and responsibilities, contribution and participation of the insurance companies.*

The aim of this paper is to examine implementation of the agricultural insurance system in Turkey. In addition, the impacts of recently implemented agricultural insurance system on the agricultural insurance market are investigated in detail.

## RISK MANAGEMENT SYSTEMS IN TURKISH AGRICULTURE

Agricultural insurances, which originally got started simply as the hail insurance, have increasingly been expanded to include many other risks such as frost, flood and drought. Moreover, it has become a common practice throughout the world to subsidize the premiums that farmers pay for this coverage. In Turkey, the development of agricultural insurance has been primarily forced by such factors as rapid declines in farmers' income levels, the failure of successive governments to develop coherent agricultural policies over the years, and considerable ignorance and disinterest on the subject both in agriculture and in the insurance sector [TSRBS 2004].

Risk Management System can be divided into two sub-periods in Turkey. The first period started at the beginning of the implementation of agricultural insurance in 1957 and lasted until 2006. The second one started in 2006 and currently in effect. In the first period, to ensure sustainability of agricultural production in Turkey, different risk management systems were used via several kinds of laws. Within this period, the law used to compensate farmer's income against natural risks in the form of giving seed aiding to farmers who were influenced by natural disasters. Moreover, in order to benefit from these aids, at least 40% of loss on products resulting from the natural factors was necessary. In Turkey, the total harvesting land is 24.4 million ha, which has hail risk 98% and 47% of total land cultivated can be damaged by natural risks. These basic figures show that there is a high potential for the insurance in agriculture, but the share of agricultural insurance is 1.8% in the whole insurance sector in Turkey. In this period, agricultural insurances were mostly employed by 9 private companies (9 of 62 companies) besides government's aids to farmers. Proportion of insured in agriculture was so low, 0.1% at hail and 0.5% at animals [TEAE 2003]. There was a need for a new system in Turkey.

The new agricultural insurance system started from 6 June 2006 and has one authority for the implementation of the system covering agricultural production against natural risks. The main characteristics of the new system can be summarized as follows:

- Agricultural insurance pool.
- Partnership of government with the private sector.
- Government support for premium payment (50% of total premium in 2008).
- Voluntary for farmers.
- A managing company (TARSIM).
- Farmer registration systems.

## **PUBLIC-PRIVATE PARTNERSHIPS FOR RISK MANAGEMENT IN TURKISH AGRICULTURE**

It is generally accepted that the lack of farm credit has been an important reason why agricultural insurance markets in Turkey had been not developed in the past [TSRSB 2007]. In other words, the small farmers has difficulties to access the financial markets because of low income, high interest rates and insufficient provision of necessary legal documents showing their creditworthiness and therefore this process resulted in low investment for their agricultural activities and insufficient demand for the agricultural insurance. The government has taken up the responsibility of preparing a new regulatory framework to facilitate the growth of the insurance market [European Commission 2006]. The government has supported farmers by financing 50% of agricultural insurance premiums since the beginning of new agricultural insurance system in 2006 based on the private-government partnership.

The new agricultural insurance system has been established by the contributions of government, private agencies and organizations which have had activities in insurance and agriculture area. The main feature of the new agricultural system includes *the agricultural insurance pool*. The *management committee* of the agricultural insurance pool has been constituted by 3 contributors which indicated in Figure 1. Furthermore, the

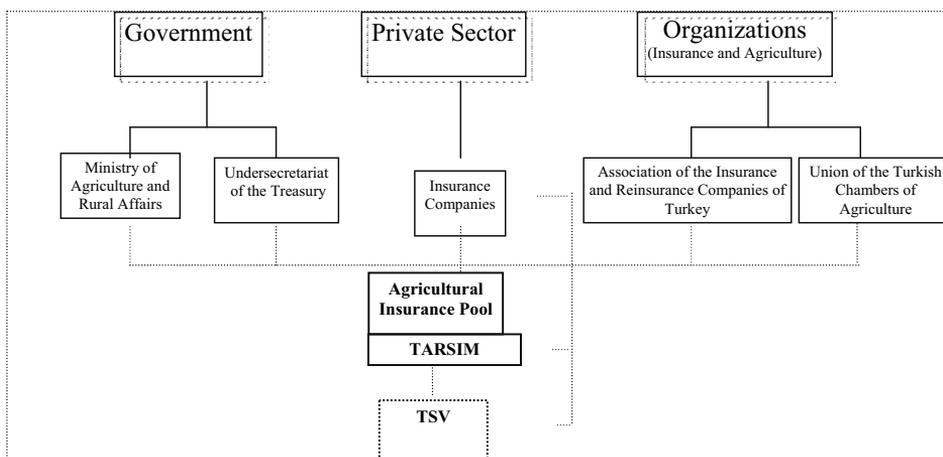


Fig. 1. Institutions involved in the new agricultural insurance system in Turkey

Rys 1. Instytucje związane z nowym systemem ubezpieczeń rolniczych w Turcji

Source: [Bora 2005].

Źródło: [Bora 2005].

agricultural insurance pool has been contained *a managing company* (TARSIM) which is a management entity, was established as a corporation by the insurance companies in order to carry out all tasks of the Pool, within the context of the agricultural insurance law. Insurance companies (22 companies in 2008) participate to the TARSIM with equal shares, and management committee that consist of 7 members from 5 different actors: Ministry of Agriculture and Rural Affairs (2 members), Undersecretary of the Treasury (2 members), Association of the Insurance and Reinsurance Companies (1 member), Union of the Turkish Chambers of Agriculture (1 member), Managing Company of the Pool – TARSIM (1 member) [TARSIM 2008].

The main duty of the management committee and the TARSIM are to determinate the basic principals of the new system and also to implement this in terms of determining ratio of subsidies, risks, regions and the crops. Moreover, the Management Committee is responsible for the solving problems faced in the implementation of the scheme, evaluation of the loss assessment procedures, making contracts with the TARSIM and determination of the commission of the insurance companies in return for their premium transfer. The TARSIM plays an important role in the system to carry out all kind of works for loss assessment activities, concerning risk sharing, risk transferring and implementation of reinsurance plan and also collection of the premiums and payment of indemnities.

The Ministry of Agriculture and Rural Affairs (MARA) is responsible for developing and expanding new agricultural insurance system in the country as well as monitoring and evaluating of the system, in terms of organization of seminars, training programs and publications. Theo MARA also has to present proposals for the approval to the Council of Ministers regarding the premium subsidies on the basis of crops, risks, and regions.

All insurance companies have the same terms and conditions, namely the same premium, exemption rates and technical terms in the TARSIM Pool system [TSRSB 2007]. Premiums paid by the farmer to insurance companies, which 22 insurance companies

have been participated in 2008, and aid premiums paid by the government are collected in the Pool operated by the TARSIM. Premium aid from the government has been about 50% in 2006–2008.

In Turkey, on the insurance sector, regarding the agriculture branch, the share of total agricultural premium within total premium income for the year, 2005, increased from 0.43 percent to 0.62 percent with respect to the previous year. In the same year, the loss ratio in agriculture branch has been realized as 87.38 percent, showing increase with respect to the loss ratio of 2004. The share of these branches within the total technical profit according to the former accounting system was 0.29 percent in the previous year to 0.33 percent in the year 2005 [TSRSB 2007]. Thus, the agricultural insurance share in total insurance market was small.

The first requirement for farmers in order to have government support for agricultural insurance is that they have to be registered in a farmer registration system (Fig. 2). The registration of farmers and their activities has an important role in structural changes of Turkish agriculture. In addition, both largeness of agricultural sector in total economic activity and small sizes of farms in comparison with the EU average have resulted in difficulties for the registration. Consequently, the registration system can be accepted as a necessity for insurance system in agriculture.

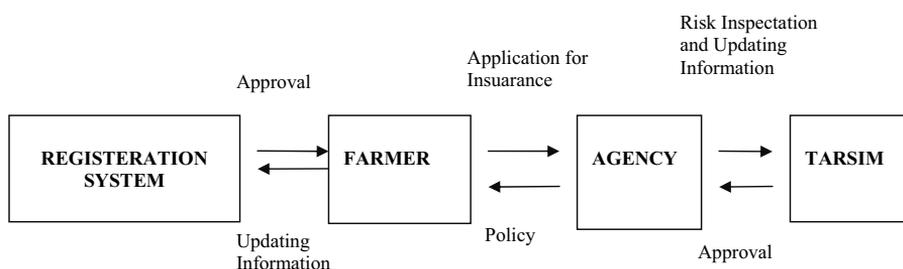


Fig. 2. Issuance of a policy

Rys. 2. Obieg polisy ubezpieczeniowej

Source: Authors' research.

Źródło: Opracowanie własne.

In Turkey, the farmers are registered according to their products and the information sources for an government supported agricultural policy. These registration systems according to type of products: for crops, the National Farmer Registration System (NFRS); for greenhouses, the Integrated Administration and Control System (IACS); for livestock, the Preliminary Pedigree and Pedigree System (PPPS); for aquaculture, the National Aquaculture Registration System (NARS).

## RECENT PROCESS IN AGRICULTURAL INSURANCES MARKET

Although there has been a considerable change with the implementation of the new agricultural insurance system, the agricultural insurance's share in total insurance market has been still low in Turkey. However, as can be seen Figure 3, the number of policies

has been dramatically increased in recent years, especially after 2005. In 2008, 361.226 policies has been signed as it was 137.694 in the whole year of 2004. As far as the number of policy signed is concerned, the impact of the new insurance system started in 2006 is clearly seen in the insurance market.

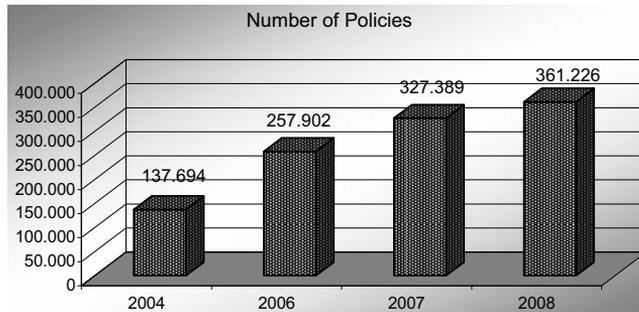


Fig. 3. The recent process of agricultural insurance policies in Turkey

Rys. 3. Liczba polis ubezpieczenia rolniczego w Turcji w latach 2004–2008

Source: The Association of the Insurance and Reinsurance Companies of Turkey.

Źródło: The Association of the Insurance and Reinsurance Companies of Turkey.

Recently there have been important developments in the agricultural insurances premiums especially after 2006. As can be seen in Figure 4, the written premiums have been steadily increased over the years. As far as low inflation rates in last two years are concerned, positive impact of the new insurance system in agriculture on this increase can be understood more clearly. Moreover, the average written premium also increased in recent years – in 2008 it was 345 TRY, while it was 210 TRY only in 2004.

The development in the agricultural insurance scheme also resulted in some activities in the whole insurance sector. Accordingly, there has been an increasing interest of the insurance companies which the new system means an additional source of income for them and therefore they have tried to utilize this new development. To this end, insurance companies, which especially has good standing in rural areas, have focused on agricultural

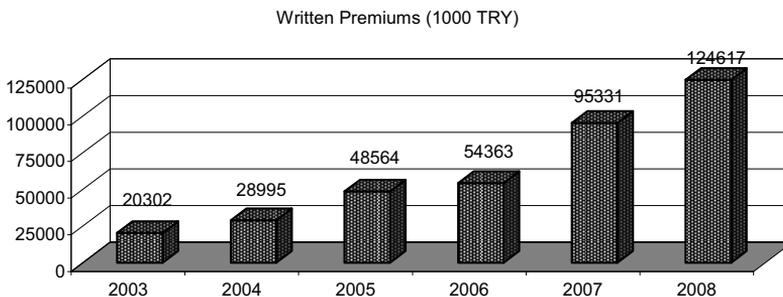


Fig. 4. The recent process of agricultural insurance policies in turkey (Written Premiums in TRY)

Rys. 4. Wartość polis ubezpieczenia rolniczego w Turcji (składki w TRY)

Source: The Association of the Insurance and Reinsurance Companies of Turkey.

Źródło: The Association of the Insurance and Reinsurance Companies of Turkey.

insurance agent training and marketing activities within this framework (TSRBS 2006). In Figure 5, the distribution of agricultural insurances as field of products in 2007–2008 can be seen. The year of 2007 can be accepted as a first year because of the written premiums began in the middle of 2006. The government supported agricultural insurance share in total agricultural insurance in terms of written premiums was 70.5% in 2004. In 2008, the share of government supported (GS) agricultural insurances increased to 80.2%. Consequently, government supports have been used extensively on agricultural sector not so long time passed from beginning of new agricultural insurance system.

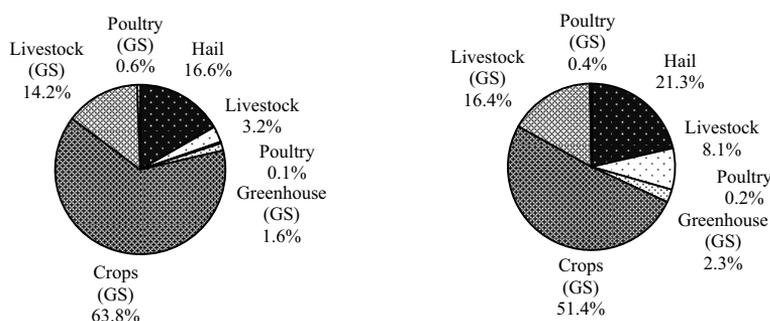


Fig. 5. Distribution of agricultural insurances as written premiums (in %)

Rys. 5. Charakterystyka ubezpieczeń rolniczych według składek ubezpieczeniowych (w %)

Source: The Association of the Insurance and Reinsurance Companies of Turkey.

Źródło: The Association of the Insurance and Reinsurance Companies of Turkey.

Figure 6 shows that the government supported agricultural insurance policies were used mostly (nearly 97%) for crops. However, the average written premiums was the lowest on policies for hail (196 TRY) and crops (305 TRY) in 2008 while these amounts were 173 TRY and 223 TRY respectively in 2007. The effect of new system on the increasing of average written premiums is also seen from these figures.

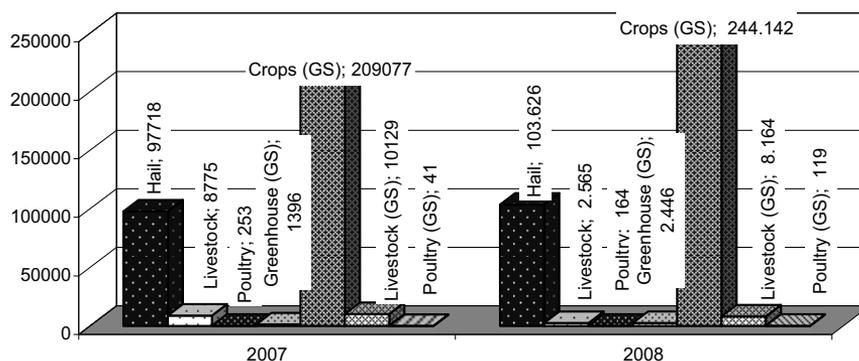


Fig. 6. Distribution of agricultural insurances as number of policies

Rys. 6. Charakterystyka rolniczych ubezpieczeń według liczby polis

Source: The Association of the Insurance and Reinsurance Companies of Turkey.

Źródło: The Association of the Insurance and Reinsurance Companies of Turkey.

In 2005, 15 companies in insurance sector had an agricultural insurance branch and the number of insurance companies has been increased to 22 in 2008 and these companies have equal shares in “the agricultural insurance pool” which was build in 2006 by 16 companies. However their share in the agricultural insurance market is not equal and a few of them is a dominant actor in the market. With the implementation of the new system, there has been a structural change in the market. In 2004, only 2 company had 63.07% of whole agricultural insurance market. However, these 2 company have been had 42.46% of whole agricultural insurance market in 2008. The newcomers into the agriculture insurance market shows attractiveness of the sector for the insurance companies and the sector seems to be more competitive now.

Table 1. The share of insurance companies in agriculture in Turkey  
Tabela 1. Zmiany w strukturze rynku ubezpieczeń rolniczych w Turcji

Agency	2004	2005	Agency	2006	2007	Agency	2008
Başak	37.4%	38.9%	Guven	32.0%	25.1%	Guven	22.1%
Güven	25.7%	37.0%	Basak Groupama	31.0%	24.4%	Basak Groupam	21.3%
İsviçre	7.9%	5.8%	Gunes	4.0%	14.1%	Gunes	19.5%
Koç Allianz	5.2%	5.3%	Koc Allianz	4.0%	6.8%	Ak Sigorta	5.9%
Güneş	4.6%	4.0%	Aksigorta	4.6%	5.5%	Anadolu	6.7%
First 5 agencies	80.8%	91.0%	First 5 agencies	75.6%	75.9%	First 5 agencies	75.2%

Source: The Association of the Insurance and Reinsurance Companies of Turkey.

Źródło: The Association of the Insurance and Reinsurance Companies of Turkey.

Agricultural insurances recently increased both in volume and number of policies in the case of the sectoral largeness and government supports on the sector in Turkey. Another leading factor leading to growth of the sector has been commencement of policy issuance by the TARSIM. It can also be expected that insurance companies will have more efforts to get more place in agricultural insurance market. Accordingly, efforts of insurances companies will able to encourage more farmers to take place in the insurance system and their risk sharing for the sustainability of agricultural activities.

## CONCLUSIONS

Turkey has witnessed an important policy shift in the agricultural insurance implementation which mainly based on government-private sector partnership. With the implementation of the new system, the number of policies and the written premiums has steadily increased over the years. However, despite of this growing in agricultural insurance, the system should be carefully monitored to update according to requirement of the agriculture and insurance sectors and also should be expanded to cover other risks such as drought because of the global warming. Moreover the new system is still unknown

enough by the farmers and therefore education and training programs throughout the country should be carried out to obtain an effective result. In order to fulfil the MARA's objective which covers 40 % of the farmers in the system in 2012, there seems to be more room for the utilization of the insurance companies.

The structure of agriculture constitutes an important obstacle for the development of agricultural insurances in Turkey. In particular, size of agricultural enterprises in Turkey is very small and share of the agriculture in the GDP is about 9.2% and that of employment is about 26.3% in 2008. In addition, the land registry is not completely carried out in Turkey. Thus, registration of agricultural sector seems to be necessity and precondition for the government to solve the problems and to develop the sector. For this reason, registration of agricultural activities is very important objective for the new agricultural insurance system in Turkey. In addition, in order to get government support for their agricultural insurances, the farmers have to update their information to the registration system each year.

The government supported agricultural insurance system tends to shows that there has been growing trend in terms of volume and numbers of policy in Turkey, although it is too early to draw firm conclusion. Policies mainly concentrate on crops and the average premium on livestock is relatively high resulted from the mostly large farmers applied for insurance.

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## ROZWÓJ I KIERUNKI ZMIAN STRUKTURALNYCH W POLITYCE UBEZPIECZEŃ ROLNICZYCH W TURCJI

**Streszczenie.** Zmiany klimatu oraz globalne ocieplenie oraz związane z nimi efekty środowiskowe nasilają znaczenie ryzyka w zrównoważonym rozwoju produkcji rolnej. W rozwijających się krajach rolnicy rzadziej podejmują decyzję o ubezpieczeniu produkcji rolnej, w porównaniu z rolnikami z krajów o rozwiniętej gospodarce. W związku z tym politycy w krajach rozwijających się zachęcają rolników do podejmowania działań mających na celu zmniejszenie ryzyka produkcji rolnej. W państwach członkowskich Unii Europejskiej stosuje się różne poziomy stawek ubezpieczeń rolniczych. Celem artykułu jest analiza wpływu publiczno-prywatnego systemu ubezpieczeń, który został wprowadzony w Turcji od czerwca 2006 roku.

**Słowa kluczowe:** ubezpieczenia rolnicze, rynek ubezpieczeń rolniczych w Turcji, ryzyko

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