

DEVELOPMENT OF IMPLEMENTATION OF AGRICULTURAL INSURANCE IN TURKEY

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Abstract

The share of the agricultural sector in employment in Turkey is 23%. Turkey is among the world's leading countries in the production of many agricultural products. In this respect, it has a great potential in terms of agricultural insurance. In 2005, in Turkey, "Law on Agricultural Insurances" was enacted with the law numbered 5363. In this 10-year period, premium production was realized as 5 billion Turkish Liras. The total number of farmers who have insurance in Turkey reached 2,031,061 in 2016 and the 316,000 damage file has been processed, 900 million Turkish liras were paid to the producers. In case producers have to insure agricultural insurance, the price they will pay per decare is 330 TL. These farmers will be able to pay close to 10 thousand Turkish liras in case of damage to their land. In this study, it was aimed to examine the agricultural insurance schemes existing in Turkey, the agriculture insurance pool system and the 10 years development under the law numbered 5363. In this context, the development of plant life, animal life, greenhouse, beekeeping, poultry life and aquaculture life insurance was examined. Proposals were developed for the producers to benefit more from agricultural insurance premium subsidies. Findings obtained from other studies related to the subject were also examined. In insurance premium subsidies, the innovations and objectives of the year 2017 implementations were also mentioned. In this system, 50% and/or 66.7% of the insurance premium is covered by the government as unrequited support. In total premium production in Turkey, there is a plant product insurance with a share of 28.0% at the maximum and an animal life insurance with a share of 20.8% in the second. The number of policies and insurance premiums increased by 27% and 32% respectively in 2015 compared to the previous year in Turkey. As of December 30, 2016, total premium production in Turkey has reached TL 1.3 billion. As of 2016, 2 million 470 hectares of land belonging to 562 thousand farms in 72 provinces were damaged from natural disasters. However, it is noteworthy that the ratio of insured farmers was between 10-20%. Therefore, it is necessary to increase the producers' regularly insured agricultural insurance rates. In this regard, actions are being proposed to increase awareness of more producers. In this way, there may be a minimum loss of producer income in the agricultural sector where risk and uncertainty are high.

Key words: agricultural insurances, TARSİM, state supported agricultural insurances, Turkey

INTRODUCTION

The agriculture which provided the indispensable lifestyles of life from the existence of mankind to today has been shaped by different forms of production at various periods and different strategies have been developed for this. Depending on these strategies, productivity has increased both in plant production and in animal production. The agricultural sector maintains its importance for every country in terms of ensuring community nutrition, contributing to employment, supplying industrial raw materials, increasing export revenues and contributing to the national economy, and is

seen as an indispensable sector. Therefore, today the agricultural sector is seen as an indispensable sector for every country. Agricultural production differs from other sectors due to dependence on natural conditions, discrete producing, seasonal characteristics, high risk and uncertainty, and limited control on production and agricultural market. Hence, it is more affected by both natural and economic risks and uncertainties. The main natural phenomena that cause uncertainty in crop production are drought, frost, fullness, storm and flood damage, and fire resulting from human neglect. In animal production, risks such as death, illness and accident are observed.

Measures must be taken against the risks and uncertainties faced by producers in both vegetable and animal production and the producers must be assured. Agricultural insurance is the basis of this insurance system. The agricultural insurance system aims to meet the losses of producers arising from risks and uncertainties.

In this study, the development of agricultural insurance applications in the world and Turkey was examined using primary and secondary data.

MATERIALS AND METHODS

The research material consisted of data compiled from secondary sources. The data taken from Agricultural Insurances Pool Operation Inc. (Tarsim) was included in the study. In addition, the Agricultural Insurance Pool's annual reports, work done by institutions and organizations related to the sector, personal interviews with employees working in the sector and national studies on agriculture insurances. The part of the research related to the world consists of the information obtained from scientific researches and activities related to the subject. The data obtained from Turkey in general could be taken over a period of 10 years between 2005 and 2016. Insurance values, damage assessment fees, premium production, number of insurance policies and number of insured persons were examined numerically in insurance branches. It was interpreted using simple indices with inter-period chain indices. Besides these, the shares of the branches in TARSİM were calculated and evaluated. The future goals of the sector for the future were also examined for 2017-2018.

RESULTS AND DISCUSSIONS

Agricultural Insurances in the World

In the face of risks and uncertainties, the most effective assurance system has been 'Insurance'. Insurance is born with the motivation to think of the living creatures themselves. Latin comes from the word "sicurta" meaning "assurance". It is possible to bring the emergence of insurance and

insurance-like applications in the world to the Hammurabi Laws about 4000 years ago [10]. The contract, which was regarded as the first insurance policy, was carried out on October 23, 1347 and was organized to provide the burden of the "Santa Clara" ship to Italy from Genoa Harbor to Mallorca.

The first insurance company was founded in 1424, again in Genoa. In the following periods insurance and similar concepts have been developed and implemented in overseas countries such as maritime trade, sailing trade vessels, fire, traffic, individual accidents, trains, agricultural fields and engineering insurance with the development of the industry [7]. Among these areas, agriculture, which is one of the most important sectors of world economy; Natural, economic, social, political, technological, personal risks and uncertainties. These uncertainties cause producers to lose revenue, financial disturbances in agricultural businesses, and fluctuations in the national economy. That is why foreign countries have adopted the model of agricultural insurances in order to take measures against these risks and uncertainties. In the modern sense, it started in Europe between 1770 and 1800, and for the first time, animal insurances in Ireland and fire insurance in Germany were made. However, in the first applications, although it failed, this system has been developed, implemented and applied in time depending on the types and scope of enterprises, economic development of countries, place and importance of agriculture in country economy [6]. The numbers of hazards covered by the insurance and the insurance technique have been determined by taking into consideration such factors as the degree to which the grown products are affected by natural risks, the frequency of natural risks, the amount of damage, [2]. Even some of the countries in the world, such as Spain, have come to the forefront and have been adopted by other countries. In the world, agricultural insurances are shaped as risk management models in the form of state insurance, private insurance and state-private cooperation, and these models are subdivided into programs such as single risk insurance, multi risk insurance, yield

insurance and income stability insurance.

Today, the US, Spain, Italy, Greece, Portugal, France and many other countries has the support of the state in agricultural insurance premium application. Agricultural insurance schemes are regulated by state support for premiums [8].

Agricultural Insurances in Turkey

The concept of "insurance" in Turkey passes for the first time in Anatolian Seljuk periods. A certain fee is taken from the caravans coming to the caravanserais and in case the caravans are subjected to any looting / theft, the loss is covered by the owner of the caravanserai. Care and protection of the caravans accommodating in this way was provided. At that time, the Anatolian lands provide security and are considered to be the starting point of the insurance [10].

It is observed that the first move in the field of agricultural insurance in Turkey started with the insurance of foreign insurance companies in Turkey at the beginning of the 1900's. Efforts to increase the efficiency of domestic capital have accelerated in the field of insurance as well as in other sectors with the declaration of the Republic of Turkey, and various institutions and organizations have undertaken various studies to develop the agricultural insurance program [4].

In Turkey, various practices of the government in this respect started in the period of Atatürk in order to compensate for the damages that the farmers would face in the face of the natural risks in agriculture and to help the farmers. Later, the first provisions related to the concept of agricultural insurance were found as agricultural insurances in the Turkish Commercial Code in 1926. At this time, some experts have examined applications in various countries. In addition, foreign experts have been brought to the country and reports on the possibilities of applying the agricultural insurance in Turkey have been prepared. In general, these studies indicated that agricultural insurance should be made by the state institution and that it is necessary to carry out compulsory insurance in fields where cotton, tobacco, grapes, etc., which are very important in terms of Turkey's economy [1].

In the first years of the Republic, T.C. Ziraat Bank has been working on agricultural insurance. The Ministry of Commerce prepared the "Draft Law on Agricultural Insurance" in 1940 and 1944 and this bill was replicated in 1952 and 1956 [2].

The first agriculture insurance policy was made by Sugar Insurance to sugar beet producers in 1957 as a crop product insurance policy. In 1960 Başak Insurance started to carry out activities such as full herbal product (full) and animal life insurance, poultry life in 1984, aquatic life in 1990 and pilot region in grape vineyards in 1991. However, this system has not been successful due to the low income of the farmers, lack of information in the sector and the lack of state infrastructure for agriculture insurances for many years.

In 1987, under the heading "Agricultural insurance should be made agriculturists", it was worked for the explanation, introduction and dissemination of agriculture insurances in the framework of "Development Plan for Agricultural Insurances for Turkey" and preparation of a healthy agricultural insurances infrastructure for farmers. This work continued until 1995 [4]. In 1995, the Agricultural Insurance Foundation was established to aim at correct damage detection in the main purpose agricultural insurance, immediate payment of damages in real value to the farmers and establishment of a pool system [6].

In the framework of the "Agricultural Reform Implementation" initiated by the Ministry of Agriculture and Rural Affairs in 2000, the start of state-sponsored natural disaster insurance for agriculture is foreseen. In 2001, one of the two legislative measures preventing agricultural insurance in the framework of the program was abolished. The other, though in effect, was rendered inactive. In 2001, a preliminary study was initiated by one side to support the project "Agricultural Reform Implementation Project" with the World Bank loan. On the other hand, infrastructure works related to legal regulations were carried out [3].

Representatives of the relevant institutions have conducted reviews and evaluations of agricultural insurance in Spain, the United

States and Mexico to establish a viable agricultural insurance system in Turkey. As a result, a consensus was reached that the most appropriate model to comply with the Turkish conditions would be the Spain case [14]. As a result of the changes made in line with these targets, "Agricultural Insurances Law" numbered 5363 was accepted in Turkey on 14.06.2005 [12].

State Supported Agricultural Insurance Pool in Turkey (TARSİM)

In order to eliminate the grievances of the producers against the risks and to create a solution against the risks, the Spain Agricultural Insurance Pool model was taken as an example to establish the appropriate agricultural insurance system in Turkey. The foundation is a modern form of risk management built on top of the "agricultural insurance foundation". With the application of the pool in Turkey, catastrophic risks such as drought and frost that an insurance company cannot undertake alone can be covered. In addition, reinsurance capacity and coverage have been expanded by encouraging reinsurance participation. It is ensured that the information, personnel and financial resources of insurance companies are used more efficiently in common. It was aimed to increase the contribution of insurance to the state by preventing the unfair competition in the prices, using the premiums, excessive support of the damage more effectively [8].

This model is based on legal regulations, communiqués and instructions to encourage farmers to insure. The system has its own stakeholders, its corporate structure and a board of seven members. It has been decided that state support should be applied in two ways, as premium support and damage support. There is a condition to register in necessary institutions and institutions and insurance is based on volunteerism. In other words, the farmer is insured with his own expedition. In addition, all operations and operations of the Pool are carried out by a profitable "Joint Stock Company". This is a joint-stock company of insurance companies that come together with equal capital. This company is referred to as TARSİM or Operator Company. In the first years of

implementation of the agricultural insurance, in 1963, there were two companies in Turkey that engaged in agricultural insurance. In the years when TARSİM was put into practice, the number of insurance companies has been fifteen. Later, during the periods when TARSİM's activity increased, the number of agricultural insurance companies increased to 24 (Table 1).

Table 1. Share of agricultural insurance companies in other companies in Turkey according to years

Years	Insurance companies	Agricultural insurance companies	Rate
1963	35	2	6
1973	38	3	8
1983	35	5	14
1993	38	14	37
2003	58	14	24
2004	56	13	23
2005	55	15	27
2006	55	16	29
2007	55	22	40
2008	58	23	40
2009	58	22	38
2010	59	23	39
2011	63	24	38

There are inspectors in the pool who perform risk assessment and damage assessment. From the system point of view; Insurance inspectors are always the most important stakeholder group, from the individual, face to face, with the farmer. This important stakeholder group should tell the truth to the producer and tell them, they should never make mistakes. The future of the system also depends on the correct and error-free operation of this group of stakeholders. This stakeholder group also serves the producers paid by the Agricultural Insurance Pool (TARSİM) for a certain fee and commission. Pool experts are needed every semester according to the increase in the number of policies between regions. According to this number, insurance inspectors are purchasing. Insurance experts are trained by the Insurance Training Center (SEGEM). As of 2016, the 17th training plan was made. In 2015, the number of experts reached 2,225 [13].

The Agricultural Insurance Pool and the operating company are controlled annually by the under secretariat of Treasury and all other transactions (administrative and financial) are

carried out by the Ministry of Food, Agriculture and Livestock.

In Turkey, in 2006 (crops, greenhouses, cattle life, poultry, aquatic life, small ruminant life, beekeeping), 3,672 producers made agricultural insurance. Producers have started to show interest in agricultural insurance with the introduction of new types of agricultural insurance and the effect of informing activities. With the increase of agricultural insurance types and the effect of information activities, the number of producers having

insurance was reached 403,569 in 2016. In the last 10-year period (2005-2016), the number of insured producers increased by about 110 times (Table 2).

In Turkey, 83.26% of the numbers of farmers who have undergone agricultural insurance in 2016 are farmers who are engaged in crop production activities. Herbal product activity is followed by bovine life with 8.69%, small animal life with 2.97%, and greenhouse with 2.55% and apiculture with 2.47% (Table 2).

Table 2. Number of producers of agricultural insurance in Turkey

Branches	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Crop insurance	2,333	49,787	71,627	74,619	82,832	129,719	172,962	214,780	239,470	320,294	336,012
Greenhouse insurance	624	748	1,242	1,751	1,694	3,082	6,303	7,428	7,549	8,554	10,292
Cattle insurance	711	10,116	8,082	17,748	17,074	29,662	29,553	25,308	222,888	26,143	35,082
Poultry insurance	4	8	17	21	36	27	79	43	27	81	139
Aquaculture insurance	-	6	9	8	14	11	40	30	35	41	54
Sheep and goats insurance	-	-	-	-	-	1,701	6,315	8,033	9,788	11,837	12,004
Bee hive insurance	-	-	-	-	-	-	-	-	6,811	7,704	9,986
Total	3,672	60,665	80,977	94,147	101,650	164,202	215,252	255,622	486,568	374,654	403,569
Index (2006=100)	100	1,652	2,205	2,564	2,768	4,472	5,862	6,961	13,251	10,203	10,990

Source: TARSİM, 2017 [17]

In 2006, the number of policies that were cut off as guarantees of insurance coverage for producers was 12,252, but nowadays the number was increased by about 118 and reached 1,444,285. As the number of policies increases in Turkey, the number of insurance experts also increases. The state allocates a certain amount of premium to the annual Agricultural Insurances Pool for the budget. Farmers pay premiums according to the

instructions to cover the insurance. The State and farmers paid TRL 4,447,303 in total in 2006. Today, this value was increased by 291 times to reach a premium production payment of 1,298,096,872 TRL. The total amount of insurance that the insurance company has undertaken against the assets insured by the producers was 207,322,324 TRL in 2006. Today, this value was increased 111 times and reached 23,066,785,113 TRL. (Table 3).

Table 3. Agricultural insurance premium production, insurance value and policy number in Turkey

Year	Premium production	(%)	Insurance price	(%)	Number of policies	(%)
2006	4,447,303	100	207,322,324	100	12,252	100
2007	62,939,522	1,415	1,471,449,519	710	217,710	1,777
2008	100,063,129	2,250	2,236,288,884	1,079	262,202	2,140
2009	119,861,920	2,695	2,882,903,205	1,391	306,560	2,502
2010	187,504,736	4,216	3,968,434,248	1,914	366,603	2,992
2011	442,055,989	9,940	7,020,918,054	3,386	587,693	4,797
2012	499,379,139	11,229	9,424,334,436	4,546	743,692	6,070
2013	528,392,158	11,881	11,322,033,156	5,461	892,332	7,283
2014	682,906,490	15,356	13,847,363,096	6,679	1,086,595	8,869
2015	968,820,976	21,784	18,363,516,231	8,857	1,375,397	11,226
2016	1,298,096,872	29,188	23,066,785,113	11,126	1,444,285	11,788

Source: TARSİM, 2017

State Premium and Damage Increase Support

Premium Support

One of the most important reasons why government support is needed in agricultural insurance is that risks and premium prices are generally high. At the same time it cannot insure agricultural products, especially because small farmers suffer from the difficulty of payment. For this reason, the importance of state support in the amount of premiums paid by producers for the purpose of ensuring stability in producers' income and supporting the producer in the social direction arises in agricultural production. This support is indirectly funded by the government in accordance with the World Trade Organization (WTO) and European Union (EU) criteria. According to the Agricultural Insurance Law, part of the insurance premium to be paid by the producers is covered by the government. This allows producers to pay lower premiums and insure agriculture. The state provides 50%, 60% and 66,6% of support premiums at varying rates depending on the branches of agriculture insurance. Amounts of premium support to be provided by the government in terms of products, risks, regions and scale of enterprises are determined annually by the Council of Ministers with the proposal of the Pool Executive Board and with the approval of the Ministry. In 2006, Ministry of Agriculture allocated 200 million TRL premium budget for TARSİM. With this budget, the government paid a total premium production of 2.7 billion TRL over 10 years.

Damage Extra Support (Reinsurance Support)

It is very difficult to find reinsurance capacity in the insurance of the natural risks outside the hail in agricultural products. All insured risks incurred by the insurance companies are transferred to the pool. The pool is responsible for reinsurance agreements with national and international companies to purchase protection in connection with these risks. In case the protection provided from the national and international market is not sufficient or in case of extraordinary damage in case of extraordinary damage, the amount

of additional allowance required by the decision of the Council of Ministers can be compensated by the state by transferring it to the Pool in the form of Damage Extra Support. As of 2016, the state has paid TRL 900 million in damages for 316 thousand damage files.

Types of State Supported Agricultural Insurances

Crop Insurance

Crop insurance started in 2006. A total of 211,854,304 decares crop farming area was available in Turkey in 2006. In 2006, 0.06% of this agricultural land was covered by crop insurance. The number of producers who had insurance in the first years started with 2,333 persons, and it increased by 144 times and reached 336,012 producers in 2016. The 10.67% of the total agricultural land is covered by crop insurance. Within 10 years, the area where the crop insurance was made within the total agricultural area reached 21,151,161 decares. As a result of this, the number of the area and the number of farmers who have insured crops for 10 years have increased.

Crop insurances' share of total premium production in Turkey was 75.26% in the year 2016. In this year, the amount of premium collected in the crop insurance was 977,007,569 TRL. The share of the crop insurance in the total insurance cost was 65.90% in the 2016 and 15,200,835,463 TRL was paid for the crop insurance. The share of the number of crop insurance policies in the total agricultural insurance policy was 94.62%. The number of crop insurance policies reached 1,366,548 in 2016. Crop insurances had the highest share within the total number of producers and total insurance cost. This trend continued for ten years.

Cattle Insurance

A considerable part of the agricultural population in Turkey earns its living from livestock farming. However, many producers are victims of natural risks such as theft, food poisoning, animal diseases, feed poisoning. Cattle insurance has been started for bovine producers in Turkey not to be a victim and to protect animals in 2006. There were a total of 10,971,880 cattle in Turkey in 2006. About

0.06% of these animals have cattle insurance. The number of producers who have insurance in the first year was 711 persons. This number increased by 49 times in 2016, reaching 35,082 producers. The 3,18% of the total cattle have cattle insurance. That is, at the end of 2016, the number of insured animals reached 17,891,240. As a result, the number of animals and the number of persons who have been insured for bovine animals increased during the ten year period.

The share of cattle insurance in Turkey's total insurance premium production was 18.10% and insurance premium of TRL 234,995,674 was collected in 2016 agriculture insurance. The share in total insurance cost was 14.93% and for cattle insurance amount was 3,443,177,922 TRL. The share of cattle insurance policies in the total agricultural insurance policy was 2.48% and today it has reached to 35,777 policies.

Sheep and Goat Insurance

Farmers who provide their livelihoods from small ruminant farming in Turkey are often victims of risk and uncertainty such as animal diseases, animal deaths caused by poisoning, sunstroke, theft. In order to eliminate these grievances, sheep and goat insurances in Turkey had been activated in 2011. There were 32,309,518 small ruminant animals in Turkey in 2011. About 0,2% of these animals were insured. So sheep and goat insurances started with insurance of a total of 6,355 breeders in the first year. This number increased 70 times in 2016, reaching 12,004 breeders. Small animal insurances were made for 1.99% of total small ruminants. At the end of 2016, the number of insured small ruminant animals rose to 1,122,002. Though small ruminant animals insurances are a new insurance in Turkey, the number of insured animals and the number of insured breeders increased during the periods examined.

In the case of 2016 agriculture insurance, the share of sheep and goat insurance in total insurance premium production was 2,12%. Premium production of sheep and goat insurance was 27,495,051 TRL. The share of total insurance cost was 2.44%. For sheep and goat insurance, 563,027,543 TRL was paid in 2016. The share of the number of sheep and

goat insurance policies in the total agricultural insurance policy rose to 0.83% and the number of policies reached 12,027 breeders.

Greenhouse insurance

Climate conditions in some regions in Turkey are not suitable for growing every crop. Therefore, producers especially in the Mediterranean region, grow crops in the greenhouse. There are greenhouses and victims who suffer from various factors such as hail, frost, fire, car crash and snow weight. Greenhouse insurance began to protect producers from such risks in 2006. A total of 469,081 decares of greenhouse farming were available in 2006, in Turkey. The greenhouse insurance was made in 0.66% of the greenhouses area. The number of producers having greenhouse insurance started with 624 people in the first years. In 2016, the number of producers increased 164 times and reached to 10,292. The share of greenhouse insured area also increased to 9.02%. In other words, insured greenhouse farming reached 59,861 decares, and there has been a significant increase in the insured greenhouse area and the number of insured producers in this decade.

In greenhouse insurance, the share of premium production in total agricultural insurance was 3,67% in 2016 and a total of TRL 47,680,898 premium was collected. The amount of insurance paid for this accounted for 14.02% of the total insurance cost. In 2016 this value was 3,234,450,769 TRL. The share of greenhouse insurance policies in the total number of agricultural insurance policies was 1.36%, and the number of policies reached 19,649 in this type of insurance.

Poultry Insurance

Poultry insurance began in 2006. The number of producers having insurance was 4 in 2006. These number increased 34-fold and 139 poultry producers in 2016. In poultry insurance, the number of insured farmers increased in 10 years, although not so much compared to other types of insurance.

The share of poultry insurance premium production in total premium production was 0.11% and a total of TRL 1,470,483 was collected in year 2016. The share of the insured amount paid for poultry husbandry

insurance in the total insured amount was 0,4% and the poultry husbandry insured amount was 104,364,985 TRL in 2016. The share of poultry insurance policies in the total number of agricultural insurance policies is 0.11%. Poultry insurance policy number was 225 in 2016.

Bee hives Insurance

Bee hive insurance started in Turkey in 2014. Turkey had a total of 7,082,732 new and old hives in 2014. The share of the total number of beehives in the hive was 19%. Turkey's ratio of beehive insurance in the total number of generic hives increased by 25.10% and rose to 1,934,936 hives in 2016. In the year 2014, this number increased by 130 times in 2016 and reached 9,986 beekeepers.

In Turkey general agricultural insurance data, the share of bee hive insurance premium in total insurance premium was 0.45% in 2016. Beehive insurance premium was 5,548,962 TRL this year. The share of the insured amount paid for the bee hive insurance in the total insured amount was 1.89% and the insured amount of 435,381,265 TRL was realized. Beehive insurance policy number rose to 9,998 people. The share of beehive insurance policies in the total number of insurance policies was 0.60% in 2016.

Aquaculture insurance

Aquaculture insurance activity passed in 2007 in Turkey. The 174 decrees were made to insure the aquatic products in 2007. The number of producers having insurance for the first year was only 6 persons. Only 590 acres of general aquaculture production area was insured in 2016, the number of insured persons increased 9 times and rose to 54 persons. During the 9-year adjustment period, there were no significant increases and remained below 1%.

According to the aquaculture insurance issued in Turkey, premium production of TRL 3,898,234 was realized in 2016. The share of the aquaculture insurance in total insurance premium was 0.30%. The share of insurance premium paid for aquaculture insurance was 0.37%. The price of aquaculture insurance was 85,547,166 TRL in 2016 and the number of policies rose to 61.

District-Based Drought Yield Insurance

This insurance provides insured against the loss of yield in the face of the catastrophic risks that occur in the whole district in the wheat crops produced in insured dry farming areas registered to the Farmer Registration System (ÇKS) in the provinces determined by the decision of the Council of Ministers in 2017.

There have been some studies on agriculture insurance in Turkey. For example, in Eraktan's [5] study, he took into consideration the data of 1960-1969, showing the importance of agricultural insurance in Turkey, the reasons for the need for agricultural insurances, the extent of the needs of the agricultural insurances applied and the applications in general. This research was one of the first studies in the field of agricultural insurance in Turkey.

Güngör [6] pointed out that the negative effects of natural risks on agriculture sector and economy could be mitigated by developing risk management systems and transferring risks to the global market. Güngör [6] stated that with these methods the income stability of the agricultural sector can be achieved and the contribution of the agricultural sector to the economy of the country can be increased.

Keskinçinç [8] stated that the agriculture insurance system in Turkey had many problems. Some of these problems stem from insurance companies with insufficient resources, reinsurance and technical staff, some of them due to legal reasons and some of them due to insufficient state policies. But the most important problems are; He stated that the problems caused by the agriculture of Turkey and the economic problems related to it. He pointed out that catastrophic risks should be more focused on agricultural risk management programs, adding to increased participation in insurance programs and keeping farmers' premiums at a low level. Farmers who showed interest in the insurance also stated that they are generally commercialized agricultural enterprises.

Sumer et al. [11] reported that Turkey, along with TARSİM, has made a significant progress in agricultural insurance. They stated that this system encourages the producer to

produce and contributes to the provision of stable agricultural production. The more efficient and healthier the system was, the greater the involvement of the farmers in the system and the lowering of the premium amounts.

Kipkemoi [9] stated that the most important reason why farmers do not have agricultural insurance is that the coverage of insurance policies is narrow. The author listed as lack of confidence, lack of understanding of the insurance policy, intense bureaucracy, lack of information about insurance coverage, high premium price, farmers' limited agricultural land availability and long waiting time for compensation as other factors preventing the extension of agricultural insurance. The author determined that about half of the farmers are willing to pay for the agricultural insurance policy. According to the author, the provision of publishing services to farmers on agricultural insurance could accelerate the adoption and dissemination of agricultural insurance. In addition, the author informed that the content of the insurance policy should be revision; the interest of the farmers to the agricultural insurance may increase with the reduction of the bureaucracy. He pointed out that focusing on farmers who are more agricultural land of their training and publishing work, may increase success.

CONCLUSIONS

In this study, evaluations were made about the recent developments of agricultural insurance in Turkey. In Turkey, agriculture insurance has a ten-year young infrastructure. Today, climate change and risk / uncertainty conditions in Turkey can aggrigate the agricultural sector. Especially in recent years, the damage caused by natural risks has increased. In 2016, 7,270 provinces in Turkey and 562,000 farmers in 530 provinces were affected by natural disasters. In 2016, an increase of 105.00% in the agricultural insurance policy, 109.75% in the insured land, 123.21% in cattle insurance, 122.10% in the greenhouse and 119.67% in the insured hive were detected as compared to 2015. In addition, in the face of these and similar risks,

producers secure both their products with TARSİM and they also get credit by pledging their fruit trees / animals. As a result, it can be said that the diversification of agricultural insurance and awareness of farmers in Turkey will lead to more application areas of agricultural insurance. TARSİM is shown as an exemplary application not only in Turkey but also in the world. The example of the existing agricultural insurance in Turkey is also being applied by some countries in the world. It has been observed that the agricultural insurance system implemented by TARSİM in Turkey is now successful and that more farmers are benefiting as a result of increasing demand applications every year.

At the time of the TARSİM period, the agricultural insurance system was started with 4 branches first, this number was removed from the 7th and 8th branches in time. In February 2017, wheat drought yield insurance was initiated to eliminate the grievances of producers in grain breeding. For the year 2018, a target including all grain groups was reported. In addition, in the year 2017 crop product insurance, fruit trees grown outside the fruit, quality losses due to cherry rains and grape leaves in vineyards were secured. Furthermore, in 2018, it is planned to implement income stability insurance for the producers and studies are being made in this regard.

The structural features of the agricultural enterprises and the characteristics of the operators are the most important handicap in the development of the agricultural insurance in Turkey. At this point, the greater awareness of the agricultural insurance system and the transfer of its benefits to the producers may be effective in eliminating this handicap.

In addition, with increasing agricultural insurance diversification and government support, it is anticipated that the number of insurance applications and the transaction volume will expand further in the agriculture sector in the coming years.

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