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Applicable agricultural insurance models at the rural area: A case study from Turkey

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The sector of agriculture needs protection for its critical role in responding to human needs as well as its vulnerability to various risks. This risk factor emanates from sector's high dependence to natural conditions and it is mainly this factor, which necessitates protection. Insurance is one way to cope with natural risks involved in agricultural activities. The main theme of this insurance is agricultural production in general, covering both crop farming and livestock activities. The importance of insurance in agriculture becomes clearer when one considers that in Turkey, 97% of all cultured land receives precipitation in the form of hail, that farmers' loss in areas with heavy hail may even reach such rates as 46% and that only a small amount of this loss can be compensated for under the existing law. The study is an attempt to examine the present state of social protection in the 9 villages of Siran District, Gumushane and to expose the patterns of crop farming and animal husbandry, risks involved in these activities, existing insurance practices, and level of information and tendencies of local farmers in regard to insurance. It was also the aim of the study to come up with viable and sustainable insurance models in the context of the "Project for Income Generating Activities" carried out in the area jointly by the Turkish Development Office (TDO) and German Technische Zusammenarbeit (GTZ).

Key words: Agricultural insurance, rural area, insurance models, agricultural risks.

INTRODUCTION

Risk is an unavoidable but manageable element in the business of agricultural production and marketing. Agricultural production can vary widely from year to year due to unforeseen weather, disease/pest infestations, and/or market conditions causing wide swings in yields and commodity prices. During production and marketing period, farms have to use risk management strategies and techniques. Some of them such as crop diversification, maintaining financial reserves, reliance on off-farm employment and income generation, production and marketing contracting, forward pricing, futures options contracts, leasing inputs and custom hiring acquiring are not interest at this research (Mark and Arias, 2004). But one of the most important risk strategy is insurance that was carried out in this study. It is stated that crop and animal insurance are the only mechanism available to safeguard against production risks (Raju and Chand,

2008). The most common forms of agricultural insurance in the world are related to the couples hail-frost and hail-fire. Naturally, geographical location and climatic conditions of countries shape the content of insurance and insurance schemes cover those risks, which affect crop farming the most. For example, in such countries as Switzerland, Denmark, Sweden, Argentina, Australia, France and Great Britain field crops are insured only against the risk of hail while fire is the only risk for which insurance works in Ireland (Hazell and Pomerada, 1986; Skees et al., 2000). Further examples include Greece and Bulgaria where insurance covers the risks of hail and frost and Germany where hail and fire are both covered (Chambers, 1989; Barnett and Coble, 1999). Besides, there are different agricultural insurance organization and supporting institution in the world. Many agricultural risks cannot be insured on a financially sound basis, but there is a scope for increased insurance of farm assets, of the life and health of rural people and of some specific perils that affect crop and livestock yields (Hazell, 1992). On this basis, Dandekar (1985) recommended that the

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“crop insurance scheme should be linked, on a compulsory basis, with the crop loan system...”. The system of Agricultural Insurance in Spain has Professional Agricultural Organisations and Agricultural Cooperatives, the Insurance Companies and the Public Administration (Fernando and Burgaz, 2009). In Nigeria, the Government introduced agricultural insurance programme with the tripartite aim of broadening farmers’ access to farm resources, positively changing farmers’ attitude to risk in their choice of resource use and to achieve increased food supplies in the market (Olubiyo et al., 2009). The government of India had introduced a Comprehensive Crop Insurance Scheme in 1985 and later, a National Agricultural Insurance Scheme in 1999 - 2000 (Bhende, 2005). The Czech Ministry of Agriculture started agricultural insurance support programme named subsidy class 8D “Infection Insurance Support” in 2000, (Vávrová, 2000; Vávrová, 2005). In India, crop insurance has been subsidized by the central and state governments, managed by the general insurance corporation (GIC) and delivered through rural financial institutions, usually tied to crop loans (Sinha, 2007). In April 2007, the Chinese government plans to provide 1 billion Yuan RMB for agricultural insurance subsidy in six provinces for five crops involved (corn, cotton, rice, soybean and wheat) (Kailiang and Wenjun, 2007). According to Hatch (2009), agricultural insurance requires the full support of the Finance Ministry and the Central Bank.

In Turkey, agricultural insurance schemes were first started in 1957 and these schemes reached our day with animal and hail insurances. The first companies in the field were Seker and Basak Insurance Companies. The main drive for these companies for starting insurance schemes was to protect the crops and animal products of farmers in their respective fields of activity. As to the insurance system in Turkey, total harvesting land is 24.4 million ha, of which 98% is exposed to hail risk and 47% to other natural risks. In this case, a high potential of agricultural insurance can be seen, as the share of agricultural insurance is 1.8% in the insurance sector in Turkey (Ucak and Berk, 2009). Today, there are some 40 insurance companies in Turkey and 9 of them are also extending agricultural insurance services (Dinler, 1993; Anonymous, 1997; Akdemir et al., 2001). Despite supporting farmers by financing 50% of agricultural insurance premiums by government (Ucak and Berk), improvement of agricultural insurance is still back. Proportion of the insured in agriculture was so low, 0.1 percent at hail and 0.5% at animals (TEAE, 2003). Compared to this figure, Turkey is similar to Latin America countries. Their natural resources are more plentiful and easier to harness. Brazil has approximately 3% insured, Argentina and Chile around 2% insured with Uruguay and Paraguay at less than 1% (Wenner and Arias, 2004; Hatch, 2009). After a period of 45 years, it is not possible to assert that developments in this field are satisfactory in Turkey. The present agricultural insurance

scheme provides for hail, frost, greenhouses and livestock all insurance companies. They are the leading ones in terms of their collection of premiums (Tanrivermis, 1997). It should be noted here, however, that the adoption of agricultural policies that missed insurance component blocked the encouragement and development of insurance in this sector. Still, another factor is the persistent attitude of farmers to expect much from the state (Dinler, 2000).

MATERIALS AND METHODS

This study is an attempt to examine the present state of social protection in the villages of Siran District, Gumushane. The field survey was carried out in 9 villages covered by the TDO project (Acikalin ve Gulcubuk, 2000). Survey related field activities took place by using “village level participatory evaluation forms” designed for this purpose. Data obtained through these forms were analyzed and used in the report. The method of field survey was largely based on the technique of “rapid rural assessment” and this was further supplemented by “group discussions.” Binswanger (1980) studied attitudes towards risk by using interview methods at 240 households. Considering the work load of farmers, meetings and discussions were held mostly at night in coffee houses, village rooms and quarters of village headmen. During these meetings and discussions, various texts and visual instruments including brochures, posters, blackboards and overhead projectors were used to inform local people and give examples on agricultural insurance practices. Also, small papers for prioritization and ranking were used to depict farmers’ views, assessments and overall tendencies. Besides, investigated during the survey were affordable insurance premium rates and feasible insurance models. In this study, the main facts considered were those crops that had the largest area of culture and suffered much as a result of recent trends as well as existing animal stock. In making calculations about the cost of insurance premiums, the position of lowest income groups was particularly considered. Probable insurance costs were calculated on the basis of the damage and loss of crops such as wheat, barley, bean and vetch had suffered within the last 10 years.

Some companies were visited at this research. To get an overall idea about the status of agricultural insurance in the area, contacts were established with the Trabzon Regional Directorates of Basak, Gunes and Ak Insurance Companies. Before going out for the field survey, the literature concerning the topic was reviewed and also an interview was held with the Agriculture Branch of the General Directorate of Guven Insurance. Following the field survey, visits were paid to the person in charge of agricultural insurance in Karadeniz Birlik (Samsun) and to the General Director of Havza Oil Seeds Agricultural Marketing Cooperative to build information on the agricultural insurance practices adopted by cooperatives in Turkey. Further interviews took place with the senior staff of the Foundation for Agricultural Insurance, which is the expert organization in agricultural insurance practices also coordinating, supervising and guiding relevant practices in this field. The main topic during these interviews and discussions was the possibility of furthering institutional cooperation between this Foundation and TDO.

RESULTS AND DISCUSSION

Gumushane county takes place in Blacksea Region of Turkey (Figure 1). There are 620 households in 9 villages covered by the survey. The average household size



Figure 1. Location of research area over Turkey map.

varies from 3.9 to 5.8, giving an average figure of 4.7. While 25.7% of all farmland in the area can be irrigated, 74.3% is dependent on rain-fed farming. The average size of land per household is 3.9 ha. In Siran District, small farming enterprises are dominant and farmlands are excessively split in small parcels. While 16.3% of all culture land is under irrigation, rain-fed farming is dominant on the rest (83.7%). The leading activity on this culture land is field crops (39.8%), which is followed by fallow (26.4%) and fodder crops and industrial crops (together 10.3%). Livestock farming (mainly large head animals) is widely practiced in the area. Half of the existing animal stock is composed of crossbred and culture breed animals.

The most common form is private family enterprises and number of parcels in each enterprise varies from 4 to 11 depending on the size of the enterprise concerned. The dominant crop in the area is wheat (over 43.1% of culture land). Other crops are barley (26.2%), vetch (8.6%), sugar beet (6.5%), clover (4.9%) and beans (4.4%). Yield in crop farming is naturally affected by such factors as irrigation, care, altitude, precipitation, frost and drought. It is stated that recently, there has been considerable losses in yield as a result of limited input use (for rising input prices), insufficiency in combat work and natural conditions (drought, excessively hot

temperatures, diseases and insects).

The area has a more promising potential for livestock activities rather than crop farming. It can be added that 20% of all land in the district consists of ranges and pastures (this share is even higher up to 25% in project villages) and fodder crops are sown on 5.7% of culture land. The number of animals in project villages depends on a count taken more on large head ones (cows). On average, there are 5 cows per household for those who have cattle. 11.9% of households in project villages have no cow. The highest frequency in the number of cows owned by individual households is 3 (21.5%). Only 1.4% of households have more than 20 heads of cattle. Livestock related marketing activities in the project area involve live animals, milk and milk products. Since in the project area there is no integrated meat or milk processing plant, sales are made in a piecemeal manner. In these villages, milk is mostly processed as cheese, yogurt, butter and cream that these are mostly consumed domestically by households or sent to relatives living in other places. Beekeeping is presently an activity, which is in rise since the start of the project. The project villages now produce honey, though at limited amounts yet.

Recent increases in the price of agricultural inputs that are well above crop prices led to a pronounced decrease in input use. As prices of such basic agricultural inputs as

fertilizers, chemicals, seed and fuel increase, local people start to have few options that include restricting input use and leaving some land idle. Local farmers procure their fertilizers and agricultural chemicals from the Chamber of Agriculture, Agricultural Credit Cooperative (ACC) or from private traders. As to seed, the first source is farmers' own seed stock and other sources include the chamber and private traders. In the provision of veterinary services, there is the weight of TDO in recent years. Local people first apply to the TDO for such services and then try the District Directorate or free-lance veterinaries. Factory feed is an important input in the area, which is provided by the TDO, ACC or by private traders.

The basic means of subsistence in the survey villages consist of crop farming and animal husbandry, agricultural and non-agricultural labor, renting of tractors, shop keeping and various trades and there are some people, mostly those over age 65, living on their retirement pensions. Among these sources of income, stock-breeding leads the list. Income from this activity has a share of 35 to 50% in the total income of survey households. Observations in the project villages point out that there are more or less clear examples of social stratification but this stratification has not developed into class distinctions in daily life. In general terms, however, distinction is clear between the poor-low income and middle groups. The survey villages display a uniform pattern in terms of agricultural insurance coverage. There is no insurance against hail and fire in crop farming and no animal insurance in any of these villages. Our investigations ended up with no farmer having any of these insurances. In general, hail, frost, drought, excessive rain and flood as well as animals are the main headings for insurance coverage. Farmers state that wheat and barley are the crops most directly affected by climatic conditions since they have larger areas to culture and depend on natural rainfall. The next "vulnerable" crop after wheat and barley is bean.

It appears that in almost of all project villages, frost and drought are closer threats compared to hail, but the damage of hail, when it happens, is heavier than the other two. Since animal husbandry is not as dependent to natural conditions as crop farming, risk factors in this line of activity are also less related to these events. The most important risk in animal husbandry as approved by all project villages is foot-and-mouth disease. This is the common problem faced by all villages. Other problems and risks include injuries, parasitic diseases and malaria. It must be noted here that for many animal deaths taking place in these villages, real causes are not fully known.

In the survey area, there is no precaution in crop farming taken by farmers against such risks as hail, frost, drought and flood. It is only in those localities where there are possibilities of irrigation that farmers use watering against drought and excessively high temperatures. Agricultural combat work is the means used against pests and insects in crop farming. Medication is common

especially in sugar beet and bean culture. In recent years, however, rising prices of such chemicals has made it more difficult for farmers to wage this combat work. In animal husbandry, local farmers stated that inoculations are in rise since the presence of the TDO is in the area and they are eased at least in this line, thanks to the intervention of the TDO. The only measure that farmers have adopted, though somewhat unconsciously, against such events as drought, hail, flood and price fluctuations is to save some of their wheat, barley and bean output as seed for next cultivation. Meanwhile, highly fluctuating nature of their income from crops and other problems derived from the market may in time lead farmers to new lines and activities.

In all survey villages, animal husbandry and fodder crops come to the fore as more lucrative enterprises. Others include greenhouse farming and culture of pulses and vegetables. The declining income in agriculture triggered the tendency to culturing the land under sharecropping-tenancy arrangements. Another tendency is to leave farmlands merely idle. All these naturally lead farmers to non-agricultural activities and then to move somewhere else. This situations and price elasticity of products effected demand of agricultural insurances. Goodwin and Smith (1995); Knight and Coble (1997) did some useful research on the price elasticity of agricultural insurance demand. These literatures indicated that the demand of agricultural insurance lacked price elasticity. Therefore, the marginal subsidy to increase a unit of insured area was very high (Kailiang and Wenjun, 2007). Obstacles in the survey area to sustainable crop farming include the following: High input (feed, fertilizers, seed, medicine, etc.) costs; insufficient financing; low level of input use; declining soil fertility; high cost of credit and adverse climatic conditions.

As far as crop farming is concerned, the leading theme in the context of insurance is drought. Yet there is yet no practice in Turkey in this respect. Low productivity, risks and uncertainty of incomes make crop farming a less attractive field for insurance than animal husbandry. The development of agricultural insurance schemes in the area will take a course shaped by such factors as the identification of risks and uncertainties in respective lines of activity, models of insurance envisaged and level of income and awareness of farmers.

According to collected data, the cost of insuring crops (wheat, barley, bean and vetch) against hail was calculated as 10.933 US \$ for all villages. This gives a cost of 18.8 US \$ for each household, on average. Taking all villages together, the share of individual crops in total insurance cost is 32.1% in wheat, 21.7% in barley, 26.2% in beans and 20.0% in vetch. Similarly, basing upon the number of animals as stated by farmers, the cost of insuring animals was also calculated. The tariff adopted by insurance companies is 6.0% for domestic and 6.5% for cross-pure bred animals. The total cost of animal insurance in villages was found as 65.400 US \$,

giving the average cost of 119.7 US \$ per household. The share of animals in this total cost is 14.5% for domestic, 76.0% for crossbred and 9.5% for purebred animals. Taking these two lines of activity (crop farming and animal husbandry) together, the average cost of insurance is 138.5 US \$ per household.

The district of Siran where the survey was conducted is located in an area where no agricultural insurance has taken place so far. To promote the idea in these villages, it is first necessary to implement an "agricultural insurance training program" for local farmers. As stated earlier, the Black Sea Regional Directorate of Basak Insurance Company is ready to provide such training. The realization of this training depends upon official talks to be conducted by the Insurance Company and TDO. In the district of Siran and its villages, the sustainability of insurance schemes is an issue as important as just introducing the idea and the scheme. In fact, agricultural insurance should be regarded not only as a part of TDO's temporal presence and intervention in the area but a more lasting model extending beyond the duration of the TDO project. The study thus elaborated on possible insurance models capitalizing of different instruments and these are below:

Model 1: In addition to micro financing, TDO's is also involved in insurance as an activity running parallel to the first one

It is stated that the basic objective of the project launched in the area by the TDO is to strengthen the socio-economic status of resource poor farmers with few animals and no other source of income and hence improve their standards of living. Raju and Chand (2007) emphasized that, insurance programme could help equal to the share of agriculture in the national income level. Here, poor households come to the fore. Therefore, the intervention logically invites an approach through which the products of farmers are safeguarded. Moving ahead from this point, noting that the project has a social fund budget, poor households benefiting from the micro financing activities of the TDO may be considered in the context of an insurance scheme. That is, those who benefit from micro credit facilities may be made obliged to insure their products as well while being given the chance to pay their premiums in future in line with their strengthened economic position. As stated above, such a group may be supported by using a part of the fund for insurance premiums. The target of the TDO for the end of 2003 is to provide beekeeping credit to at least 50 poor households, greenhouse credit to 20 households, fruit culture credit to 20, silage production credit to 40 and finally trout hatching credit to 2 households. It may be considered to include these households in an insurance scheme as well.

Although priority may be given to poor households covered by the TDO project, this model infact intends to

cover other farmers as well. The TDO farmers are just a starting point for an insurance scheme. The TDO farmers may be guided or convinced more easily to insure their products, either field crops or animal products, depending on the specific TDO project they benefit from. Insurance premiums may be collected either during credit delivery or after harvest or at the time when TDO is paid back in kind. It may also be considered to encourage insurance contracts by applying a method of preferential selection where credit priority is to be given to those who agree to go for insurance. It must be stated here that, it is not possible to make any definite judgment about the sustainability of this model. What farmers would do after the withdrawal of the TDO is highly uncertain. The model thus requires some supplements to ensure sustainability.

Model 2: Farmers establishing an agricultural development cooperative and agricultural insurance taking place under the cooperative organization

Agricultural insurance cooperatives constitute a type of insurance organization observed mostly in industrialized countries. The Turkish agriculture is alien to this practice and it is not much probable that such a cooperative can be established in the project area. This derives from the dominance of subsistence and semi-subsistence farming and absence of monolithic-intensive culture.

There are agricultural development cooperatives, though not properly active, in two project villages. It seems a better alternative to have active agricultural development cooperatives, established by farmers, also covers insurance practices rather than insurance cooperatives per se. The essential point in this model is to ensure that the cooperative is active and perform their marketing functions. Looking from this perspective, there is, for the moment, no specific crop that can be marketed under a special brand. In animal husbandry, on the other hand, a cooperative may have a sound basis if a dairy products plant is established and milk output is increased. Here, the envisaged cooperative must be active and functional in input provision and output marketing. Also, this model can be further developed capitalizing on outputs obtained as a result of TDO's organic farming and greenhouse initiatives. What follows is a brief description of the "agricultural insurance" model to be put in effect upon the establishment of a cooperative.

The cooperative will provide for all input needs of its members at reasonable prices and market their crops and animal products under a special cooperative trademark. Farmers have their annual insurance procedures completed through the cooperative (whatever may be the specific insurance company that the cooperative has made an agreement). Insurance premiums will be collected by the cooperative by withholding corresponding amounts from returns to be forwarded to members after their products have been marketed and

sold. In this scheme, it is essential that farmers regard the cooperative as an indispensable entity, commit themselves to its success and conduct their input procurement and marketing activities through it. In other words, this model can be successful only if farmers adopt it and its sustainability depends on this engagement. However, it is still difficult to say something beforehand about the possibilities of success. It is yet certain that the chances of success are more with conscious and well informed members. Naturally, answers to such questions as to how many cooperatives are needed and where these cooperatives should be established will gain clarity only after talking with farmers. Also in this model, the project fund of the TDO may cover, during initial years, the insurance premiums of farmers fully or partly depending on their level of poverty.

The most significant practice relating to agricultural insurance is that of agricultural marketing cooperatives. During the survey, the districts of Vezirkopru, Havza and Kavak were visited to conduct observations on agricultural insurance practices adopted by the Black Sea Union of Cooperatives and also by other cooperatives. Here, each individual cooperative attached to the Black Sea Union also acts as an agency of Basak Insurance Company. The domain of insurance mostly consists of insurance of wheat and sunflower against hail. Insurance premiums are collected from individual farmers either after harvest or when their crops, mostly sunflower, are delivered to the cooperative and when they get paid. It must be noted here that this scheme is not compulsory for farmers. Still, farmers interviewed during their crop delivery stated that such a practice was both necessary and beneficial. Cooperative managers, on the other hand, stated that the demand for insurance is increasing as people are compensated for their hail losses and there is even a growing interest in animal insurance schemes as well. It is further stated that other insurance agencies active in the area are now more interested in agricultural insurance.

Another characteristic of this scheme is the practice in which farmers deliver their crops to the marketing cooperative and the cooperative collects insurance premiums over amounts they pay to their members in return to their delivered crops. This means that there exists a network of mutual relationship and need. It is concluded from this example that any prospective cooperative insurance scheme in Siran should also involve deliveries to a cooperative or another company.

Model 3: Combined practice of models 1 and 2 or "mixed system"

In this model, priority will be given to those who both benefit from TDO credits and also have membership to a prospective agricultural development cooperative. By this approach, both the organization of farmers in cooperatives will be encouraged and also agricultural insurance

operations will be carried out by cooperatives. The cooperative suggested here will give priority to poor households in membership and the project fund will be phased in for paying the insurance premiums of the poor. The status of other members in relation to insurance premium payments will be determined after talks with the Basak Insurance Company, which may bring in such conveniences as payment in installments or payment after harvest. In this model, the cooperative may act as a local agency of the insurance company. If adopted and given start, this model seems more promising in terms of its sustainability. This model is similar to Spanish agricultural insurance system (Fernando and Burgaz, 2009) and organizes all institutions. At this system, there can be high integration.

Model 4: Agricultural insurance on purely voluntary basis

In this model, farmers will first be informed about agricultural insurance through informal training and after this training, pioneer or voluntary farmers will be encouraged to enter into agricultural insurance (crop and/or animal) contracts. Crop insurance policies are delivered, sold, serviced, and underwritten by private insurance companies in USA (Sinha, 2007). The executing agency will be Basak Insurance Company, which is to cooperate with the local Agriculture Bank. This model may end up with very few volunteers. In fact, during meetings held in villages, many people spoke about high premiums, unsuitability in the timing of payments and lack of information. Against these reservations, some privileges may be granted including breaking the payment into installments and/or post-harvest payment once a promissory note is given. Even though it works, this model, however, will not cover the target group, that is, poor farmers. Insurance with limited number of farmers may deem this model more sustainable, but it has a major disadvantage of appealing to few against the original premises of the project.

Each of the models presented has its specific problems and pertinent solutions. The most suitable and viable one among these has to be determined after discussions to be conducted jointly by the project staff and local farmers. The first step to take in this process is to safeguard the products of poor households (those without or tiny spots of land, having few animals or others having no other means of subsistence except their farming plots). The project fund may be phased in for this purpose and practice may start with these people. In the selection of eligible farmers, cooperation between the project staff and village headmen is important. Besides hail, the survey area also faces such risks as drought, frost and storm-flood. It is therefore necessary to assess the tendencies of farmers regarding these risks. This point was emphasized in discussions held with the managers of the Agricultural Insurance Foundation (AIF). During

these discussions, the AIF staff gave information about the "pilot project for drought, storm/flood and frost insurance practices in Turkey" proposed to the World Bank for implementation in 2004. It was further stated that Siran district would be proposed as one of the pilot areas where this project was to be implemented. If this happens, there will be more information on and interest in drought, storm/flood and frost insurances besides drought and fire. All these naturally require the establishment and development of institutional cooperation between the TDO and AIF.

Conclusion

The benefits of the existence of a good system of agricultural insurance not only are to the level of the farmer but also to regional level and top areas, since to the regional production turns diminished, it reverberates in the economic productivity and in the rest of economic sectors, with the consequent tensions and imbalances, and the probability of being translated in a decrease of the quality of life of the rural way (Piñero and Pintor, 2009). Implementing the development of agricultural insurance in Turkey are multiple and include insufficiency of capital resources; low capacity; difficulties in providing re-assurance; technical limitations; shortage of trained personnel; abundance and rather catastrophic nature of risks in agriculture; limited economic means of potential clientele for agricultural insurance and low level of culture and awareness in relation to insurance. In Turkey, the development of agricultural insurance was thwarted primarily 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 in this issue from the side of both agriculture and insurance sector (TSRBS, 2007). Although a growth in real term is observed recently in agricultural insurance, what exists now is still far behind what is desired. It will be rational to seek the reasons of this unsatisfactory situation in both the sector of agriculture and insurance and also in State policies concerning insurance. Agricultural insurance law which adapted 2005 had an important position in agriculture sector of Turkey. However, the system needs more time to be developed and to cover other risks, such as drought related to global warming. As the system is still unknown to the farmers, they need more education and training programs (Ucak and Berk, 2009). In general, the development of agricultural insurance in Turkey's rural area requires the inclusion of this line of insurance in agricultural support programs. If such programs are effectively implemented and expanded throughout the country, it will also be possible to ensure the adoption of agricultural insurance in rural areas. Without any need for large-scale transfer of resources, the burden of such a system will be shared by producers through the premiums they pay. However, it is still necessary to

secure State support and to make insurance compulsory for those who benefit from State support in various channels. The legislation on the insurance of agricultural products is quite important in this respect. This importance stems from the fact that the legislation envisages the participation of the State, farmers, their associations and insurance companies and the development of agricultural insurance schemes by insuring crops as well as agricultural inputs and machinery against natural calamities and farm animals against damages from natural calamities, diseases and accidents. In case this legislation takes effect, waste of resources in state transfers to the agriculture will be avoided. In such a case, it may well be expected that the share of agricultural insurance in the portfolio of insurance companies will get larger and companies will accordingly pay due attention to this specific branch in terms of resource transfer and technical staff. The expanding domain of agricultural insurance will also give boost to training activities in this field. It is therefore reasonable to expect an improvement in the social and cultural make up of the sector together with the level of education, while conservative and fatalistic attitudes lose weight.

As a general evaluation, it is possible to say that there are some farmers in the project area considering the possibilities of insurance, animal insurance being in the first place. In crop farming, drought, hail and frost are the main threats bringing the people closer to the idea of insurance coverage. An important problem here is the lack of sufficient information on the part of farmers. When asked, farmers say installments, proper timing of payables (11th or 12th month of the year) and/or low rates of premium would be the most important factors they consider while making their decision on insurance coverage. Another problem is mistrust for insurance schemes. This is, however, a problem that can be solved through information building and training. The traditional attitude of expecting everything from the state is also valid for the area. As to training in agricultural insurance schemes, the Black Sea Regional Office of Basak Insurance Company states that they can give training to farmers in Siran region upon the approval of their headquarters. Interviews with the management staff and field personnel of the Foundation for Agricultural Insurance also revealed that their support might be enlisted in training work. It appears from the moment that institutional contacts and communication in this respect may end up with the design and preparation of training materials and informative brochures for farmers.

Agricultural insurance is a facility that covers only a rather limited domain in Turkey. The situation is similar or even more backward for the district of Siran. It would therefore be more rational to make efforts first for establishing systems or models instead of expecting immediate and quantifiable successes. For the time being, it is more critical to plan for farmers' training programs in agricultural insurance schemes, organize

discussions on different models and to develop institutional cooperation with the AIF. While trying to cover poor households, the factor of sustainability should be paid attention to instead of introducing free insurance services. There may be a "grace period" for the starting year, but later on methods must be sought to ensure the cost sharing of farmers.

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