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Strategies for Development of Shaanxi's Agricultural Insurance Industry

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Abstract This paper introduces current situations of agricultural insurance market in Shaanxi Province. It is indicated that development of Shaanxi's agricultural insurance industry is faced with following difficulties. First, risks of agricultural production are various, occurrence frequency is high and losses are great. Second, effective supply of commercial insurance companies for agriculture is seriously inadequate. Third, farmers' demand for agricultural insurance is restricted by many factors. Fourth, government support for agricultural insurance is not generous. Then, it puts forward strategies for development of agricultural insurance in Shaanxi Province. These include: encourage commercial insurance companies to actively enter agricultural insurance market; establish perfect agricultural reinsurance system; strengthen propaganda of agricultural insurance and speed up agricultural industrialization; enhance policy support for agricultural insurance to promote its development.

Key words Agricultural insurance, Financial subsidy, Government

Shaanxi is a large agricultural province, thus high risks of its agricultural insurance should rely on high-efficient insurance mechanism, which concerns increase of farmers' income and national grain security. In 2010, China's agricultural insurance scale is only second to the United States in the world, and ranks first in Asia. However, as to scale of agricultural production and the proportion to property insurance, agricultural insurance is still unable to fully satisfy demands of farmers for risk transfer. At present, agricultural insurance is set up on the principle of low protection, so it still belongs to small amount insurance. Externality and quasi-public goods natures of agricultural insurance determine that its development is inseparable from government support, which should be manifested mainly in premium subsidy, reinsurance support of catastrophic risks, as well as stimulating effective supply and demand.

1 Current development situations of agricultural insurance market in Shaanxi Province

Agricultural insurance is a kind of insurance system established for indemnifying agricultural producers against losses from natural disasters or accidents during production and primary processing of crop cultivation and breeding. According to difference of subject matter insured, agricultural insurance can be divided into crop insurance and breeding insurance^[1]. In 2011, crop insurance set up by Shaanxi Province includes insurance of grain crops (including wheat, corn, and potato); insurance of economic crops (including rape, Chinese pricklyash, and walnut); insurance of fruits and fruit trees (including

apple and jujube). Large-scale apple insurance business is undertaken by branch companies of PICC, China United Property Insurance Company Limited, and Yong'an Insurance Company in Shaanxi Province. In 2008, about 18 360 hm² area of apple was insured in Shaanxi Province. In 2010, it completed insurance of 21 130 hm² area. In the first half of 2011, totally 23 920 hm² area of apple was insured. Other crop insurances are mainly conducted in Yangling National Agricultural Demonstration Zone for vegetable greenhouse facilities. For example, the vegetable "Yinbaofu" insurance developed by Shaanxi Branch Company of PICC. In 2009, a total of 308.73 hm² area was insured in Chang'an District and Jingyang County of Shaanxi Province. In 2010, totally 673.33 hm² area was insured.

Such grain crops as wheat and corn play strategic role in national economy, while risk accidents including flood, drought, frost, hail, diseases and insect pests will often bring tremendous losses. Only during 1961 to 1990, area covered by disasters took up 29.8% of the sown area, and area affected by disasters took up 12.7% of the sown area. Since we enter the 21st century, both proportions have an increase. In central Shaanxi area, losses of cotton from disasters take up 9% to 18% of average yield, and losses of corn and wheat take up 7% to 13%. The insurance pilot of corn and wheat was locally launched until 2011.

It indicates that implementation of crop insurance in Shaanxi Province is not ideal. On one hand, type of risks covered is single. Most insurances cover apple risk, which is closed related with the fact that Shaanxi is a large apple production province. However, such crops as corn, cotton and rice receive little attention. The implementation of wheat insurance does not match well with position of central area of Shaanxi as one of main producing regions of wheat. On the other hand, scale of risk covered is small. Take an example of apple insurance which has bigger influence, the cultivated area of apple was 601 510 hm² in Shaanxi Province in 2010^[2], but

the area covered was only 21 130 hm² with participation rate only 3.6%. In 2009, Shaanxi Branch of Yong'an Insurance Company launched pilot of insurance against jujube disaster in Qingjian County. The pilot area was only 666.67 hm², while the jujube planting area reached 162 480 hm² in the whole province, so only 0.4% cultivated area was covered. Shaanxi is a traditional walnut producing region. It is the second largest province producing walnut in China. In 2009, the cultivated area of walnut reached 308 670 hm². However, the walnut insurance was just launched in 2011. And by June of 2011, the area covered was only 2 330 hm², and the rate of coverage was only 0.8%.

2 Difficulties faced by agricultural insurance industry of Shaanxi Province

2.1 Risks of agricultural production are various, occurrence frequency is high and losses are great

Shaanxi is one of the provinces prone to natural disasters in China. In recent two decades, the annual economic loss directed caused by disaster is about 5 billion yuan. In some years, it even reaches 10 billion yuan. The annual area of crops covered by disasters in Shaanxi Province is about 1.2 million hm², accounting for 30% of total cultivated area. In the worst year, it is up to 2.67 million hm², accounting for two thirds of the total cultivated area^[3]. Hail, gale and frost also occur occasionally. What's worse, the situation of economic losses directly resulted from natural disasters is increasingly aggravated along with development of economic and social causes.

2.2 Effective supply of commercial insurance companies for agriculture is seriously inadequate

2.2.1 High risk and high rate of compensation restrict insurance companies from expansion. Since losses from disasters are unpredictable, especially catastrophic risks, once such disasters happen, millions of hectares will be destroyed, leading to compensation of crop insurance remaining high for a long time. Yong'an Insurance Company had an income of 1.7 million yuan from premium of crop insurance, while the insurance indemnity is up to 1.61 million yuan with the rate of compensation up to 98.57%. In 2009, the income from premium is about 0.8 million yuan, while the insurance compensation is 0.39 million yuan. The rate of compensation is reduced to 52.45%, while that of the whole province is about 85.4% in that year. In 2010, the income from premium is reduced to 0.41 million yuan, and the compensation drops to 0.06 million yuan, with the rate of compensation reduced to 14.99%. Major reasons for reduction in rate of compensation include reduction of coverage rate and abandonment of such insurances with high rate of compensation as jujube insurance. High rate of compensation makes many insurance companies crippled by losses and greatly dampens commercial insurance companies' initiatives to launch crop insurance. In addition to lack of reinsurance support, it directly causes that rate of coverage for crop insurance remains at a low level for a long time, and even there is trend of depression again.

2.2.2 There are defects in design of agricultural insurance provisions and determination of premium rate. Commercial in-

surance companies have poor communication with farmers in design of crop insurance provisions, which brings about some unnecessary conflicts. For instance, the jujube insurance in 2009, part of jujube trees was damaged to some degree before harvest, but the final output value was not lower than the insured amount 10 500 yuan/hm². Compensation may be refused with reference to insurance provisions, but participant farmers think that they should receive compensation because they are hit by disaster. On May 4, 2010, Luochuan County was attacked by hail and over 2 000 hm² of apple orchard was devastated. According to usual practice, the work of apple insurance will not be carried out until issue of provincial document, so the insurance work in Luochuan was only started till middle of May. In accordance with insurance principle, losses already incurred cannot be insured, but farmers insist that the insurance period specified in insurance clauses is from flowering period to end of collection.

Agricultural risk losses are quite different between each year. The premium rate should be determined on the basis of long-term average loss, but original records and statistical materials about crop production are not comprehensive. It is hard to collect long-term and accurate data of crop yield and loss, and land possession condition is also varied from time to time. Therefore, it is more difficult to determine the premium rate for agricultural insurance.

2.2.3 Claim cost is high in case of loss occurred. Once loss occurred in agricultural insurance, survey, loss assessment and claim works need those inter-disciplinary talents who not only know agricultural insurance, but also have a good command of agricultural management. However, such talents are rare, so it is very difficult to assess losses and claim. Take example of apple insurance and jujube insurance, apple losses have to be determined according to hail size, and jujube losses have to be assessed as per quantity of cracked and the amount of fruit. When insurance company surveys losses, these difficulties will influence the accuracy and manpower and materials are hard to guarantee. Then, survey results may be not prompt and inaccurate. Therefore, loss survey and assessment cost much and face great difficulty.

2.2.4 Moral risk and adverse selection are inevitable in agricultural insurance. Moral risk is persistent ailment of insurance development. Since insurance industry comes into being, both moral risk and adverse selection force insurance companies to take every preventive measure, but the overall effect is subtle. Subject matter insured in crop insurance is live plant, so the crop selection, farming method and degree of fineness may influence the yield, and active measures for disaster relief and rescue in case of disaster will also affect the yield. According to statistics, average indemnities resulted from moral risk take up 20% of the indemnity of crop insurance^[4], and commercial insurance companies have great difficulty in preventing moral risk of crop insurance with limited manpower.

2.2.5 Agricultural insurance belongs to quasi-public goods. With the aid of findings in researches of the welfare economics, insurers still have difficulties in obtaining profits. Participant

farmers can be benefited to some extent, while the final beneficiaries are consumers of agricultural products. Since insurers' input in disaster and loss prevention will benefit all farmers in the whole region, such problem as hitchhiking may occur in agricultural insurance. Agriculture concerns national economy and people's livelihood, agricultural insurance related to agriculture belongs to quasi-public goods. According to theory of public economics, it is not practical for agricultural insurance to be supplied completely by the market.

2.3 Farmers' demand for agricultural insurance is restricted by many factors

2.3.1 Farmers' risk and insurance awareness is weak. Building of risk and insurance awareness in a region is closely related with its social, economic and cultural environment. Although Shaanxi is a large cultural province in western inland China, its social and economic development level is obviously lower than eastern region. Some farmers have clear weaknesses in knowledge of risk and insurance due to passive thoughts in traditional culture. In addition to distrust in insurance due to one-sided knowledge of insurance knowledge, farmers' risk and insurance awareness is relatively weak^[5]. A survey conducted by Baoji City Center Branch of the People's Bank of China in 2010 indicates that about 40% farmers in Baoji region have never heard of agricultural insurance and 55% farmers do not know government subsidy. Among farmers who know policy insurance, 37% are unwilling to purchase agricultural insurance, mainly for consideration of unnecessary to pay high cost of premium due to low probability of loss. Besides, among farmers who have purchased insurance and insured event occurs, about 30% farmers think that the claim procedure is complex and it wastes time and money, so they are just unwilling to make claims.

2.3.2 Some low-income farmers cannot bear premium of agricultural insurance payable by themselves. High risk and low scatter features of agriculture result in high risk and cost of agricultural insurance. Consequently, premium of agricultural insurance remains at a high level. The premium rate is up to 9% to 10%, so even government provides 50% subsidy for the premium, some farmers with low and unstable income are still unable to purchase agricultural insurance. Meager income of crop farming leads to low ability of paying premium for crop related insurance. In addition, limited and intermittent government subsidy further restricts effective demand of agricultural insurance.

2.3.3 The amount of indemnity for agricultural insurance is low and some farmers are not dependent on agricultural income. The limit of indemnity for agricultural insurance is generally 40% to 50% of normal harvest yield. The amount of indemnity is too low and dampens farmers' enthusiasm for purchasing the insurance to some extent. The agricultural insurance period is generally one year and the premium is collected as per proportion of estimated output value. For example, the premium for one hectare of vineyard is 1 800 yuan, while the amount of indemnity is 15 000, 30 000 and 45 000 yuan/hm² against losses respectively in fruit-set period, growth period and mature period. High premium and low indemnity greatly dampen farmers' enthusiasm for participation in agricultural insurance.

In recent years, along with increase of migrant workers' income, many rural families become not dependent on crop farming any longer. The structure of farmers' income in Shaanxi Province in 2007 shows that farmers' income is mainly from wages and household business operation. The proportion of income from household business operation drops to 50.9% in 2007 from 78.1% in 1990, while that from wages rises to 39.1% in 2007 from 16.6% in 1990. Along with constant increase of farmers' income, they are less dependent on income from crop farming and their income is less influenced from natural disaster, consequently it dampens some farmers' enthusiasm for participation in agricultural insurance.

2.4 Government support for agricultural insurance is not generous Since agricultural insurance market is out of order^[6], if insurance product is completely by market, there will be problem of continuous shrinkage of market supply of agricultural insurance, thus, government should take responsibility for supporting this field. At present, local government intervenes in agricultural insurance mainly in the form of providing premium subsidy. With increase of area covered, local government will continuously increase its subsidy amount for agricultural insurance. In 2009, in Baoji City which has three national level poor counties, the financial subsidy for policy agricultural insurance is 9.013 million yuan, accounting for 0.3% of the whole city's financial revenues in that year. In 2009, the national level poor county, Baishui County, provided 1.05 million yuan for premium of apple insurance. Just this takes up 2% of the whole county's financial revenues. If it extends to subsidy for grain crop insurance, local finance can hardly bear. The preferential policy of government for commercial insurance companies is only the exemption of 5% business tax for setting up agricultural insurance, so the insurance fund mainly comes from the premium paid by participant farmers. As a result, government, insurance companies and farmers fail to receive benefit due to insufficient provisions of risk, too low of premium subsidy and lack of continuous policy. Furthermore, some staff members of grass-roots government fail to fully realize that crop insurance needs government guidance and policy support. They are just forced to act in compliance with orders of documents, so they lack initiative and enthusiasm for communication and cooperation. In short, most premium subsidies provided by government at all levels belong to temporary policy, and implementation and promotion of insurance work largely depend on various documents issued by different departments. Due to lack of legal and institutional restriction, crop insurance is faced with the dilemma that all will say it is important but neither will do it actually.

3 Strategies and suggestions for development of agricultural insurance in Shaanxi Province

3.1 Encourage commercial insurance companies to actively enter agricultural insurance market and to establish perfect agricultural reinsurance system^[7] Major suppliers at agricultural insurance market are still commercial insurance companies. For commercial insurance companies, the compe-

tition of insurance market is increasingly fierce in cities, thus it is extremely urgent to explore rural insurance market and find new growth point. It is possible to set up agricultural insurance to enter rural insurance market. Reputation obtained from agricultural insurance market will certainly promote sales of other types of insurance at rural market. Therefore, government should encourage commercial insurance companies to actively explore agricultural insurance market, and provide proper policy support (for example, deduction or exemption of tax) for those insurance companies that have made great achievements in Shaanxi's agricultural insurance market. When commercial insurance companies enter high-risk agricultural insurance market, they have to improve its design of insurance clauses, determination of premium rate and assessment of losses. However, high rate of compensation makes them fail to solve the problem by themselves. What's worse, government is also restricted from financial budget and is unable to bear unlimited compensation. In these situations, commercial insurance companies should seek reinsurance support to share and shift huge losses of agricultural insurance. Therefore, it is required to speed up construction of agricultural reinsurance system in the whole country, and to spread losses of agricultural insurance to the whole country and even to the world through reinsurance.

3.2 Strengthen propaganda of agricultural insurance and speed up agricultural industrialization

Since participant farmers are numerous and decentralized, commercial insurance companies are confronted with problem of short supply of manpower and materials. Firstly, it is required to strengthen propaganda of agricultural insurance through many channels, to get farmers familiar with procedure and benefits of agricultural insurance. Secondly, it is proposed to speed up agricultural industrialization in Shaanxi Province and actively develop modern large-scale and intensified agriculture. It can heighten farmers' risk awareness, raise yield rate of agriculture, increase farmers' income, and improve farmers' ability of paying premium. Besides, it also can reduce moral risk and reverse selection of crop insurance through improving organization level of farmers and strengthening farmers' cooperative mechanism. Furthermore, it can save manpower, financial and material resources for management of agricultural insurance, to provide favorable environment for continual implementation of agricultural insurance business.

3.3 Enhance policy support for agricultural insurance to promote its development

3.3.1 It is proposed to promote legislation of agricultural insurance, to provide policy basis for its rapid development. The *Agricultural Law* revised in 2002 only confirms policy agricultural insurance, and the *Insurance Law* issued in 2009 is also very simple in provisions of agricultural insurance. At present, we should speed up legislation of agricultural insurance and formulate laws and regulations on agricultural insurance as soon as possible. Before promulgation of agricultural insurance law, it is required to issue local regulations suitable for conditions of Shaanxi Province. Then, there will be laws to abide by when carrying out business, accepting insurance and making claims

for crop insurance, and constant and stable development of insurance business will not be disturbed by various temporary factors.

3.3.2 It is proposed to implement compulsory insurance for some insurance types. Crop insurance plays a strategic role in the national economy and the people's livelihood and has important influence on farmers' production and living. Insurance risk is huge, so agricultural insurance cannot be supplied completely by the market according to business management rules. There is also certain limitation for principle of "government guidance, policy support, market operation, and voluntary participation (wide participation)" followed at the time of designing agricultural policy. Take the United States as example, from 1939 to 1995, government provided substantial subsidy for agricultural insurance, but farmers' participation in crop insurance kept at a low level. In 1996, the participation rate rose to 80% due to conditional compulsory measures, while in Japan, agricultural insurance has been implementing compulsory insurance all the time. In view of features of agricultural production in Shaanxi Province and limited self-organization ability of farmers, it will lead to low rate of insurance covering if it completely relies on voluntary participation. Without sufficient rate of insurance covering, it is difficult to realize diversification of agricultural insurance risk. Therefore, it is proposed to add (conditional) compulsory insurance provisions in local regulations of agricultural insurance. In addition, it is noted to enhance insurance awareness of grass-roots government during development of agricultural insurance. For instance, include establishment of agricultural insurance into performance appraisal system, to summon up grass-roots officials' enthusiasm for promoting agricultural insurance.

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