

**Research on Agricultural Insurance Modes in China**

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## ABSTRACT

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The agriculture is the basic industry of national economy, and as it has the characteristic of feebleness, its development requires the safeguard and support of many kinds of mechanisms. The agricultural insurance has a great significance for avoiding the risk during agricultural production and promoting the rural economy. But at present the demand and supplies of the agricultural insurance are both dispirited, and the status quo of development is not very satisfactory in China. Therefore, develop Chinese agricultural insurance is significant and urgent all the time.

Although Chinese government has done a lot of innovations and experiments in some places, the agricultural insurance market is still dead-alive in China. This thesis constructs the research from the point of the present situation of the agricultural insurance, studies and compares the data of agricultural insurance modes in Shanghai, Xinjiang and Heilongjiang in the way of using the real diagnosis, thus to propose the new viewpoint on the mode of the agricultural insurance's present stage which is used to anticipate the future of the agricultural insurance in the end.

**Keywords:** agricultural insurance, mode, organization, system, economy.

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## 1. INTRODUCTION

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### 1.1. Background

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China, the giant dragon in the east, is today on everyone's mind. With its blooming economy and increased influence in the world it is basically impossible not to have an opinion about or interest in what is going on in the Far East. China is a big country with 1.3 billion people where about 1 billion in the rural population and 300 million in the urban areas. China is transforming from a planned economy<sup>1</sup> to a market economy<sup>2</sup> and with all the changes involved this process is not an easy task.

China's economy maintained a steady but rapid growth in 2005. Reforms had been effectively enforced in key fields. More efforts were also made on the work of promoting employment and social security. Further, the living quality of urban and rural residents had been continuously improved, and Chinese market was further opened up to the outside. All these lay a sound foundation for the social and economic development in China in National 11th Five-Year Plan period. But on the other hand, the economic structure needs to be improved, and the extensive economy has to be transformed into intensive one. In 2005, China's GDP totaled RMB 18.2321 trillion, up by 9.9% compared to the previous year, among which, the added value of primary industry was up to RMB 2.2718 trillion, increased by 5.2%, that of secondary industry up to RMB 8.6208 trillion, with a rise of 11.4%, and that of tertiary industry up to RMB 7.3395 trillion, up by 9.6%. CPI (Consumer Price Index) rose by 1.8%. What's more, the total employed staff amounted to 758.25 million, up by 6.25 million compared to the end of a year earlier. China's foreign exchange reserve reached USD 818.9 billion, with an increase of USD 208.9 billion compared to the end of previous year. (China National Economic and Social Development Report, 2005)

Agriculture is the basic industry of national economy, and as it has the characteristic

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<sup>1</sup> Planned economy: Also known as command economy and centrally planned economy, is an economic system in which the state or government controls the factors of production and makes all decisions about their use and about the distribution of income. In such an economy, the planners decide what should be produced and direct enterprises to produce those goods.

<sup>2</sup> Market economy: Also called a free market economy or a free enterprise economy, is an economic system in which the production and distribution of goods and services take place through the mechanism of free markets guided by a free price system. In a market economy, businesses and consumers decide of their own volition what they will purchase and produce.

of feebleness, its development requires the safeguard and support of many kinds of mechanisms. The agricultural insurance has a great significance for avoiding the risk during agricultural production and promoting the rural economy. But at present the demand and supplies of the agricultural insurance are both dispirited, and the status quo of development is not very satisfactory. Therefore, develop Chinese agricultural insurance is significant and urgent all the time. Although Chinese government has done a lot of innovations and experiments in some places, the agricultural insurance market is still dead-alive in China.

## **1.2. Purpose**

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The purpose of this thesis is to get a clear impression of what the situation in China, regarding agricultural insurance, is like today. China is coming closer to becoming the largest economy in the world. One of the key issues is to construct a suitable agricultural insurance system. What are the problems concerning the development of agricultural insurance in China? What have been done so far to solve the problems and what have to be done further on for Chinese agricultural insurance? In the thesis, we will put our focus on three modes which put in practice respectively in Shanghai, Xinjiang and Heilongjiang in China. Compare the three modes based on the present situation in China.

## **1.3. Method and Structure**

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In order to get a focus in the subject there had to be restrictions set. This thesis includes only China (the mainland), not Hong Kong, Macau and Taiwan, since these regions have separate systems and policies. There is no interviews done for this thesis and sources consist of written material such as textbooks and articles. And most of data are in Chinese version.

The thesis begins with a theoretical part about the different types of organization for agricultural insurance, and also some other important concepts. After that is the situation of Chinese agricultural insurance nowadays. The following part is the empirical part where three modes in Shanghai, Xinjiang and Heilongjiang are

introduced and compared. Finally, there is a conclusion of the thesis.

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## 2. INSURANCE THEORY

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In this section we will discuss the insurance theory in general, and then we will move on to agricultural insurance as our focus. There we will introduce different organization structures of agricultural insurance companies. Finally several other important concepts will be given.

### 2.1. Insurance Theory in General

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A legal definition of insurance that appears in many insurance laws is the following: A contract of insurance is that whereby one party, the insurer, undertakes, for a premium or an assessment, to make a payment to another party, the policyholder or a third party, if an event that is the object of a risk occurs. (Scott E. Harrington, 2003)

The fundamental requirement for the existence of insurance contracts is the existence of a large number of similar loss exposures. What makes insurance feasible, is the pooling of many loss exposures, homogenous and independents, into classes, according to the theory of probabilities. Even if the probability that an event will occur is accurately known, the statistics do not apply to an individual exposure or even a small group.

The pooling of loss exposures and the reduction of the risk of variation from the expected outcome is one reason insurance companies can issue insurance contracts to individuals unable to diversify themselves the risks. Another reason is that insurance company can diversify the residual risk of each class of loss exposure by combining several classes of business into a portfolio. An insurance company can not have all of its eggs in basket.

To be insurable, the occurrence of a peril must be accidental. It is only possible to insure against perils that are certain to occur if there is uncertainty on the timing of the occurrence or the amount of possible loss.

## **2.2. Agricultural Insurance Theory**

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The business of agricultural insurance is underwritten by different types of organizations – more or less similar to other classes of business organizations. The nature of classification of such organizations varies according to the criteria used as well as the purpose behind it.

In the first instance, insurance organizations may be grouped under private or public insurance depending on whether the ownership or control rests with private persons or with the state and other public institutions. Private insurance, again, may be classified as commercial or mutual & co-operative, according to the juridical character of the insurance organization and whether the organization is an acquisitive undertaking or is one serving primarily the interests of its members. Private commercial insurance organizations may be either the more simple form of individual underwriters like the underwriting associations of Lloyd's<sup>3</sup>, or the more usual joint-stock companies.

In this section we will discuss joint-stock insurance companies, mutual insurance society, co-operative insurance society and public insurance in detail. Thereafter some other important concepts of agricultural insurance will be introduced.

## **2.3. Joint-Stock Insurance Companies**

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Joint-stock insurance companies form by far the largest and the most important section among the insurance underwriters in the world. The principal characteristics of a joint-stock insurance company are well-known. They are similar to those of any other joint-stock corporation. First, such a corporation is a union of capital invested primarily with a view to earning profit. Second, the capital stock or shares of a corporation, the number and value of which are fixed by articles of association, are freely transferable and may be held by anyone. Third, in a corporation the amount of control by a shareholder depends ultimately upon the number of shares held by him. This is known as the principle of voting by stock. Fourth, profits accruing to a

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<sup>3</sup> Lloyd's: An association of underwriters and others in London, for the collection and diffusion of marine intelligence, the insurance, classification, registration, and certifying of vessels, and the transaction of business of various kinds connected with shipping.

joint-stock company or corporation belong to the company which is, as distinguished from its individual members, a new aggregate endowed with full legal personality. A part of the profit is, however, distributable among the shareholders in proportion to the number of shares held by them. Fifth, a joint-stock company does business with the public in general, that is, in it the buyers and sellers are distinct and different, and the shareholders benefit from any surplus arising out of the business regardless of whether they patronize the company or not. Sixth, the liability of individual members of a corporate enterprise is limited in proportion to the number and value of shares held by each. (Ray, Parimar Kumar, 1967, p.208)

Joint-stock companies were considered by Adam Smith as particularly suited to the business of insurance. With large capital and without any exclusive privilege they are enabled to give security to private people in case of losses which would ruin an individual. In fact, as shown by result of their working for the last two and a half centuries, the joint-stock companies have undoubtedly proved to be satisfactory carriers in all the major fields of insurance. The insured have been provided with a considerable measure of safety, either with adequate regulations or with merely enforced publicity of accounts and transactions. Moreover, the insurance companies have served as a vast organization for community saving and their huge accumulated funds have been utilized for large-scale productive investments. (Ray, Parimar Kumar, 1967, p.208)

However, in most countries a majority of the joint-stock insurance companies are found to have generally higher operation expenses as compared with co-operative and mutual insurance associations. This is due largely to their greater overhead costs but partly also to the dividends which they often pay their shareholders. Higher expenses necessarily force their premium rates higher. In numerous countries farmers of poorer resources have therefore been unable to purchase security from joint-stock insurance companies. The latter in turn, going after profit, have found that underwriting of farming risks, except in few specific cases, are not profitable enough to be accepted on a large scale. In either case the result has been that these risks remain, to a large extent, uncovered by the joint-stock insurance corporations. Consequently in a number of countries especially the small and the medium farmers have taken an initiative in providing insurance protection to themselves often at lower costs by having formed their own insurance institutions on mutual and

co-operative lines. (Ray, Parimar Kumar, 1967, p.208-209)

#### **2.4. Mutual Insurance Society**

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The real objective of forming a mutual insurance society is for its members to share each other's misfortunes. It arises from two basic urges of human beings, namely, mutual help and self-help. It is indeed actuated by our desire for sharing the misfortunes of persons whom we know and towards whom we feel a sense of responsibility. At the same time it is the result of an inner urge of self-help practiced in anticipation of a similar misfortune befalling us. These two common human instincts have prompted men almost from the antiquity to form mutual associations for reciprocal protection of the members against fortuitous losses. In the mediaeval guilds of Europe, for example, where the principle of mutual protection was a recognized activity, it was practiced more commonly through the payment of a small money contribution to constitute a mutual aid fund. Not infrequently, however, the contribution took the form of a certain amount of labour, the product of which was utilized for the purpose of helping those members of the guilds who, either on account of old age or for other reasons, could not provide for their own needs by their own efforts. Funds were also contributed for freeing comrades from imprisonment, and for replacing cattle stolen from members of a guild. Even in modern times mutual insurance is regarded as a distinctive and valuable type of social organization designed for mutual help and protection among persons faced with same or similar hazards. (Ray, Parimar Kumar, 1967, p.209-210)

#### **2.5. Co-operative Insurance Society**

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In view of the complex nature of present co-operative organizations, especially of differences often observed in their economic objective, legal character and structural pattern, it is not easy to establish a universal definition of such organization.

The orthodox and traditional definition of a co-operative is given by Fay. A co-operative, he says, is "an association for the purposes of joint trading, originating among the weak and conducted always in an unselfish spirit, on such terms that all

who are prepared to assume the duties of membership share in its rewards in proportion to the degree in which they make use of the association". An organization to be a co-operative should, according to this view, have four essential characteristics. First, it should be an association for the purpose of trading or business, that is, its object should be primarily commercial. Second, the organization should be started by the economically weak to protect their legitimate interests from being exploited by those who are economically strong. Third, the service to members is to be rendered in an unselfish way, that is, without any motive of profit. Fourth, the surplus of business, if any, is to be distributed amongst the members as the reward of joint trading in proportion to their utilization of the co-operative's services. (Ray, Parimar Kumar, 1967, p.211-212)

Besides, a co-operative society is also considered to have the following other characteristics, namely, its capital is variable and membership is open to all. Unlike the capital of a joint-stock company which is fixed and can be altered only after formal notification, the capital of a co-operative can be changed along with its membership. Further, a co-operative is a union of persons, and nobody is to be debarred from its benefits. Finally, a co-operative is based on, what is often regarded as very important, the principle of "one man, one vote". (Ray, Parimar Kumar, 1967, p.212)

## **2.6. Public Agricultural Insurance**

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Public agricultural insurance, also called governmental agricultural insurance, may take a number of forms. First, there may be public insurance institutions competing freely with private companies. Such institutions are reported to have existed in Germany and Denmark as early as the seventeenth century. There was, for instance, a public fire insurance institution in Schleswig-Holstein, and another managed by the city of Copenhagen.

The second type of public insurance institution consists of those which have a legal or virtual monopoly of insurance although the insurance is voluntary, e.g. the United States Federal Crop Insurance, crop and livestock insurance in Brazil, and coffee insurance in Puerto Rico.

Public insurance institutions of the third type comprise those where insurance is compulsory. There are three different categories of compulsory public insurance. First, there is the obligatory public insurance from which private competition is completely excluded. In the second category of compulsory insurance under State monopoly the competition of private companies is excluded only from the minimum of cover available under it but they may engage in the business for values above the minimum. The third category of compulsory public insurance is the “optional application of compulsory insurance” that is, where compulsory public insurance may be introduced only when people have decided in its favor by vote in a commune or district. (Ray, Parimar Kumar, 1967, p.223)

## **2.7. Other Important Concepts**

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### *2.7.1. Risk in Agriculture*

The terms “risk” and “uncertainty”, often used interchangeably, have different technical connotations. While uncertainty is subjective probability, risk is objective probability. The former represents a probable state of mind, the latter a state of things. There is again a difference between the terms “risk” and “hazard”, the former denoting property subject to loss and the latter referring to the factor which causes loss. These distinctions, however, are not strictly adhered to in current literature on insurance, nor in this text. (Ray, Parimar Kumar, 1967, p.1-2)

Risk in agriculture may broadly be classified as property risks and personal risks, according to the object of incidence of uncertainty. Risks to agriculture property may again be divided into three major groups: natural, social and economic, depending on whether the uncertainty involved is due to natural, social or economic factors.

### *2.7.2. Insurability of Agricultural Risks*

To be insurable an agricultural risk should satisfy at least the following conditions. First, it should be a real risk, that is, the loss must be of fortuitous character; second,

it should be measurable in large numbers; third, the cost of insurance or premiums should be within the means of the average farmer.

Fortuitousness of agricultural risks: So far as fortuity is concerned, perhaps no other firm is subject to as much fortuity as the farm firm. As observed before, uncertainties created by various natural elements, diseases and pests make the outcome of the farm enterprise extremely uncertain. (Ray, Parimar Kumar, 1967, p.19)

Computability of agricultural risks: In order to be insurable a farming risk, besides being fortuitous, must also admit of statistical measurement to determine the probability of the occurrence of the risk. This is, the risk should belong to a class large enough to conform to the theory of probability; and the percentage of loss to total exposure, that is, the loss-cost, should be calculable to find the amount of coverage required and the premiums to be charged. (Ray, Parimar Kumar, 1967, p.20)

Low cost of insurance: Even if an agricultural risk is of fortuitous character and measurable it may not be insured unless the cost of insurance is within the means of the average farmer. This would require at least two things. First, premiums must be reasonably low in proportion to the protection available. Second, there must be an effective demand for insurance amongst a sizeable section of the farming community so that the administrative and operational expenses might be low per unit value of insurance. However, an insurance, even though beyond the means of the average farmer may, be available if the government subsidizes a part of its costs as well as expenses, e.g. the sickness and unemployment insurance in the United Kingdom, or “all-risk” crop insurance in the United States, Sweden, Japan and other countries. (Ray, Parimar Kumar, 1967, p.23)

### 2.7.3. The Functions of Agriculture Insurance

The general functions of agriculture insurance are risk dispersion and economy compensation. This function of agriculture insurance is to reallocate existing social wealth, thus it can't increase social wealth. The insured who suffers from agriculture risk damage can gain a certain earnings according to the function, which is no other

than the loss of the insured who haven't had any damage and plus the support from government. Agriculture insurance also has two descendent functions, i.e. prevents catastrophes & damages, and financing. (Guozhu Tuo & Jun Li, 2005)

According to above functions of agriculture insurance, we can have following three comprehensions of agriculture insurance:

- From the government's point of view, agriculture insurance is a policy tool to protect agriculture.
- From the farmer's point of view, agriculture insurance is a financial instrument of transferring agriculture risk.
- From the agriculture insurer's point of view, agriculture insurance may be an approach to actualize economic benefit of it by implementing social benefit of agriculture insurance.

Effect is the influence and impact of one object against another object. So the effect of agriculture insurance is the influence and impact of agriculture insurance against another object in practice. The effect of agriculture insurance can be thought in two aspects, i.e. macroscopical and microcosmic.

Macroscopical effects of agriculture insurance are: firstly, it is favorable to reduce the threat of agriculture toward agriculture risk, therefore, improve stability of agricultural economy; secondly, it is favorable to deploy agricultural resource rational, promote structural adjustment of agriculture industry, and furthermore achieve the aim of national agriculture development. Thirdly, it is helpful to strengthen the protection of agriculture, thus enhance international competitive strength of farm produce. Fourthly, it is helpful to offset the deficiency of relieving fund, in order to reduce government burden after catastrophe. Finally, it is advantageous for steadying rural social life and improving mental outlook of peasant. (Guozhu Tuo & Jun Li, 2005)

Microcosmic effects of agriculture insurance are: firstly, it is favorable for decreasing catastrophe and damage of agriculture, therefore, reducing agriculture risk. Secondly, it is favorable to cushion blow that farmer suffers from catastrophe and damage, thus reduce the undulation of peasant's income. Thirdly, it is furthersome to ensure security of agriculture investment, moreover, improve the position of peasant's credit

and increase peasant's income. Finally, boost the application of new technique in agriculture. (Guozhu Tuo & Jun Li, 2005)

#### *2.7.4. Three-Nong Problems*

Three-Nong Problem: Issues on China's "Agriculture, Countryside and Farmers" which are structural deviation problems caused by the disparity between urban and rural economic and social reform in the course of national industrialization. The issues are specifically reflected on the contrast between urban and rural area, overabundance of agricultural population, expanding income gap between urban and rural residents, and exacerbating polarization between rich and poor. The issues of "Agriculture, Countryside, and Farmer" are closely connected, differed essentially, and incompatible under certain condition. Radically speaking, the issue of farmers is the focus of the three. The nucleus of farmer issue at present phase is that the income is low; employment is difficult, and also difficult for income growth. Addressing "Agriculture, Countryside, and Farmer" issues should take reducing agricultural population and increasing farmers' income as strategic objectives. Only when we break through the dated thinking formula and the restriction of system bottle-neck, following the thoughts of urban-rural reform and development integration to design scheme, put the work highlight on right system supplying, can the new design works. (Niu Ruofeng, 2003)

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### 3. STATUS QUO OF CHINESE AGRICULTURAL INSURANCE

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Agricultural insurance is always a hot subject in the domain of insurance and agronomics. Why it has been paid great attention? On the one hand, it is because the risk carriers are farmers, whose economical capability is relatively low in most countries. Due to the fundamentality of agriculture in the economy, stable production and subsistence in the sector are significant to national economic development. On the other hand, as we mentioned in previous section, agricultural risks derive from natural, social and economic, especially nature, for example: drought, flood, hail, insect damage and so on. Any of these disasters would create huge influences. In other words, agricultural insurance needs to cover risks which insurability are relative low and affected range is widespread. Above reasons show the speciality of agricultural insurance. So, establish a suitable agricultural insurance system for a country is very important for national economic development and political stability.

In this section, we will first give a short description of Chinese agriculture. Then we are going to present the situation of agricultural insurance in China. After that, we intend to discuss the problems facing the Chinese agricultural insurance in detail.

#### 3.1. Chinese Agriculture

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China is a country with a large population and less arable land. With only seven percent of the world's cultivated land, China has to feed one-fifth of the world's population. Hence Chinese agriculture occupies an important position in the world. In China, family based farm is the basic production unit. Farmers are self-sufficiency oriented. Beside that, they would sell the surplus part to the market to get money for other expenses.

Since 1978 when China adopted the policy of reform in its rural areas, China's agriculture has developed rapidly. In the past two decades or so, the Chinese countryside, under the premise of adhering to collective ownership, has taken the market economy as guidance to break away from the traditional system and to pursue a new mode for the realization of the collective economy under the market economy. Reform has brought benefits to the farmers, emancipated and developed the rural

productive forces, and promoted the rapid development of agriculture, especially the production of grains, and the constant optimization of agricultural structure. As a result, Chinese agriculture has made remarkable achievements.

Since the practice of "Reform and Opening-up Policy", Chinese government has ever commented on "issues concerning agriculture, countryside and farmers" for several times by NO.1 File. Obviously, Chinese government pays great attention to "issues concerning agriculture, countryside and farmers". Furthermore, "the 11th Five-Year" Plan has also emphasized several achievements for building a New Socialist Countryside, such as developing modern agriculture, increasing peasants' revenues, improving appearance of the countryside, cultivating new farmers, increasing financial input in agriculture and countryside, and finally deepening rural reform. (China Agriculture Industry Report and Major Enterprises, 2007)

Since founding of the People's Republic of China, China has cultivated more than 5,000 main new crop varieties, and total output of grain in 2005 increased to 480 million tons, basically satisfying consumer demands of 1.3 billion populations in China. Along with further development of industry integration in the future, there will be several key enterprises in feed industry. In fact, from January to September 2006 gross output value of animal husbandry has hit RMB 890.11 billion, up by 5% year-on-year, accounting for 34% of that of farming, forestry, animal husbandry and fishery. In accordance with the 11th Five-Year Plan for Nationwide Development of Animal Husbandry (from 2006 to 2010), by the end of 2010, output value of national Animal Husbandry will account for 38% of gross output value of agriculture. (China Agriculture Industry Report and Major Enterprises, 2007)

The period of "the 11th Five-Year" Plan (from 2006 to 2010) is such a critical period, when strong basis will be built for constructing a new socialist countryside and meanwhile the course of building modern agriculture will also be further promoted. In addition, as policies and measures are put into effect, China agriculture will go on keeping a steady growth trend. (China Agriculture Industry Report and Major Enterprises, 2007)

### 3.2. The Situation of Chinese Agricultural Insurance

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China is an agricultural country. It is also one of the countries which suffer from serious natural calamities. According to statistics report from National Bureau of Statistics of China, the total planting area was 122.08 million hectare, the planting area which has been hit by natural calamities was 38.8 million hectare in 2005, and increased 3.91 million hectare compare to previous year. Frequent natural calamities have brought farmers heavy economic losses. The economic losses which caused by natural calamities was 108 billion RMB in 2005, and increased 37 billion RMB compare to previous year. So that develop Chinese agricultural insurance becomes more and more urgent now.

The Chinese insurance system was almost totally destroyed during the Cultural Revolution<sup>4</sup> (May 1966 – October 1976). In eighties of 20th century, it began to be gradually recovered. The development of Chinese agricultural insurance over the past 30 years, and it can be divided into two stages

Recovery and Fluctuation Stage (1982-2003). Since 1982, civil administration departments, agriculture departments and insurance companies issued agricultural insurances one after the other, it presented fast uptrend. The income of agricultural insurance premium was 862 million RMB in 1992. At the same time, loss ratio<sup>5</sup> increased largely, the loss ratio of agricultural insurance reached 119% in 1991. However, along with lessened support from government, especially, when People's Insurance Company of China (PICC) started to change into commercial insurance company, agricultural insurance shrank step by step. In 2000, the income of agricultural insurance premium decreased to 387 million RMB, and it continuously dropped to 300 million RMB in 2002. In other words, one farmer paid less than 1 RMB for insurance at that time. During 1982-2002, the average loss ratio of agricultural insurance was 88%, and it was higher than agricultural insurance breakeven point 70% which is generally accepted internationally. Because of the long deficit of agricultural insurance, insurance companies cancelled agricultural

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<sup>4</sup> Cultural Revolution: It was launched by the Communist Party of China's Chairman, Mao Zedong on May 16, 1966, and ended in 1976. In the People's Republic of China was a struggle for power within the Communist Party of China, which grew to include large sections of Chinese society and eventually brought the entire country to the brink of civil war.

<sup>5</sup> Loss ratio: The proportion of claims paid (or payable) to premium earned. A loss ratio is usually calculated for each class of business in which an insurer participates. Analysis of loss ratios can be useful in assessing risks and designing appropriate insurance structures.

insurances in succession. (Yankun Du, 2005) Only People's Insurance Company of China (PICC), Shanghai Branch and China United Property Insurance Company (CIC) still issued agricultural insurances, but the category was few and the size was small. During this stage, Chinese agricultural insurance had experienced from fast development after recovery to downturn.

Redevelop Stage (2004-Now). Three-Nong Problems have been paid more and more attention recent years, as well as China entered WTO, the sheltering effect of agricultural insurance for agriculture, countryside and farmers becomes prominent, and agricultural policy insurance has been paid attention to. In 2004, the China Insurance Regulatory Commission has launched agricultural insurance experimental units in 9 provinces and cities, e.g., Shanghai, Heilongjiang, Jilin etc. The agricultural insurance premium has increased obviously, and the loss ratio has shown a sharp decrease in 2005. (See Table 1) Presently, China has set up 4 agricultural insurance companies. (Yankun Du, 2005) Now, Chinese government emphasizes the work in experimental units of agricultural policy insurance, and enlarges the area of experimental units. Through these experimental units explore different modes of Chinese agricultural insurance, as well as establish policies to encourage commercial insurance companies participate in agricultural insurance.

*Table 1 Agricultural Insurance Premiums and Indemnity, 1993-2005*

Year	Premium (Million RMB)	Indemnity (Million RMB)	Loss Ratio
1993	561	651	116.04%
1994	504	538	106.75%
1995	496	355	71.57%
1996	575	415	72.17%
1997	576	429	74.48%
1998	715	563	78.74%
1999	632	492	77.85%
2000	404	321	79.46%
2001	307	293	95.44%
2002	331	291	87.92%
2003	432	398	92.13%
2004	377	352	93.37%
2005	650	300	46.15%

*Data sources: 2006, China Statistical Yearbook, and Statistical Yearbook of Chinese Agricultural Insurance*

### **3.3. Problems during Development of Chinese Agricultural Insurance**

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Chinese Agricultural Insurance has been facing many problems which obstruct its development. First, conflicts between supply and demand of the agricultural insurance. On the one hand, the conflicting management aim exists between agricultural insurance and commercial insurance. If operation is commercialized, insurance companies have to bear risks from both nature and market. In order to cover these risks, insurance companies require insureds to pay high premium. As we know, the insureds of agricultural insurance are mostly poor farmers in China, if the agricultural insurance premium is high, insureds can not afford it; if the agricultural insurance premium is low, insurance companies can not maintain their operations. So it leads to blur common benefit between insureds and insurance companies. On the other hand, simplex source of fund restricts the development of agricultural insurance. Nowadays, the fund of agricultural insurance mainly comes from premium which paid by insureds. Agricultural insurance premium is still very high for poor farmers in China. According to a Chinese agricultural survey, 59% farmers live only on agricultural productions. That means if they purchase agricultural insurance, no matter whether the danger happens, most farmers' incomes will decrease. Although agricultural insurance is to protect insureds, and insureds should pay for the premium, but due to low incomes of insureds, only depends on premiums which paid by insureds to aggregate agricultural insurance fund is very difficult. This simplex and unstable source is one of the main reasons caused unsuccessful of agricultural insurance. Furthermore, agricultural insurance coverage has been controlled strictly, and with complex operation, which cause insureds and insurance companies sometimes have large divergence, so usually insureds have to give up to buy agricultural insurance.

Second, the dispersive management of agricultural insurance fund can not promote the development of agricultural insurance. Usually, insurance companies manage agricultural insurance together with commercial insurance, which cause agricultural insurance fund to be used as a part of property insurance fund, and the profit of property insurance to be used to cover the loss of agricultural insurance. So that agricultural insurance fund is lack of individual account, means check agricultural insurance fund together with other insurance funds. Although some insurance companies have fished out some methods for checking agricultural insurance

separately, they still haven't given up using property insurance to support agricultural insurance. Moreover, subsidiary companies have not followed the standing rules of agricultural insurance to cumulate special agricultural insurance fund in each level. However, they use internal responsibility system to cover agricultural insurance, which leads to risks undispersed. Insurance fund can not be cumulated due to dispersive management of fund, so it can not promote the development of agricultural insurance.

Third, unreasonable category structure of agricultural insurance causes unreasonable structure of agricultural insurance fund. Obtaining maximize profit is the aim for insurance companies. Normally, insurance companies prefer to offer agricultural insurances which with high short-term return and low risk. However, they rarely issue long-term insurance, due to its high uncertainty and risk. This causes the unstable of agricultural insurance fund.

Fourth, farmers are lack of insurance awareness in China. On the one hand, most farmers still do not get used to participate in agricultural insurance. They have fluke mind when face risks. On the other hand, some farmers are very poor therefore they can not bear the premium. It requires government to publicize agricultural insurance among farmers intensively. Moreover, offering more preferential policies for agricultural insurance.

Finally, agricultural insurance is short of legal and political support. There is no special agricultural insurance law in China. Moreover, the insurance law does not put a clear identity for agricultural insurance. So, the default would cause problem inevitably.

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## 4. THREE AGRICULTURE INSURANCE MODES IN CHINA

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During the practice of agricultural insurance in over 20 years, Chinese agricultural insurance have been done a lot of experiments in order to seek suitable type of organization and system for agricultural insurance to break away from predicament. And also Chinese government participates in policy operation in specified area. These operational experiments are commercial insurance, mutual insurance, co-operative insurance, and public insurance and so on. There are both successful experience and failing lesson. The three most valuable agricultural insurance innovation experiments are in Shanghai, Xinjiang and Heilongjiang.

In this section, we will introduce Shanghai mode, Xinjiang mode and Heilongjiang mode, including their characteristics, effect and problems. After that, we will put our focus on comparison of these three modes.

### 4.1. Shanghai Mode

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#### 4.1.1. *Characteristics of Shanghai Mode*

Before 1990, only People's Insurance Company of China (PICC), Shanghai branch issued agricultural insurance in Shanghai which belonged to commercial agricultural insurance. But due to the high risk of agriculture, Shanghai branch often had deficit. In 1991, Shanghai reformed the methods of operation, i.e. local government organizes and boosts, PICC Shanghai branch operates and introduces divisional management. Besides, agricultural insurance uses individual account, exempts from all kinds of taxations and surplus is kept as VC (venture capital) funds of agricultural insurance. (Guozhu Tuo & Jun Li, 2005)

There are also innovations in operating procedure in Shanghai. Firstly, it promotes blanket insurance<sup>6</sup> method in specified region. Blanket insurance follows law of large numbers in insurance, it prevents adverse selection and moral hazard, at the same time, eases the insufficient in both manpower and financial resources. Secondly,

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<sup>6</sup> Blanket Insurance is an insurance policy that covers more than one piece of property at a specific location or multiple items at multiple locations.

insurance premium is collected in many ways. Shanghai government, groups and farmers undertake the agricultural insurance premium together for staple products, such as rice, milk, pig and so on. It promotes the stability and development of agricultural insurance.

In addition, agricultural insurance has been paid attention to disease prevention, calamity prevention and damage prevention in Shanghai. On the one hand, it has supported insureds with fund. On the other hand, PICC Shanghai branch has established a cooperative relationship with relevant agrotechnical sectors which offer referral services for insureds. By the way of coinsurance<sup>7</sup>, integrates economic compensation function of insurance with the service of agrotechnical sectors.

#### *4.1.2. Effect of Shanghai Mode*

Agricultural insurance in Shanghai has shown resultful since 1991. Firstly, agricultural insurance has experienced a great development. After the development of agricultural insurance over 20 years, types of risk, premium income and indemnity increases continuously in Shanghai. The types of risk have increased from 11 to more than 20, the premium income has rose from 10 million RMB to 79 million RMB, and indemnity has grown from 8.11 million RMB to 32.41 million RMB from 1991 to 2003. (Guozhu Tuo & Jun Li, 2005)

Secondly, the economic compensation function of agricultural insurance has been embodied. The summation of agricultural insurance indemnity was 350 million RMB from 1991 to 2005 in Shanghai. In 2005, it has reached the vertex which was 80 million RMB. Because of blanket insurance method and the multi-channels of insurance premium income, it has provided affluent agricultural insurance aid fund, which made insureds resume production quickly after damage, due to agricultural insurance indemnity paid in time.

Thirdly, because agricultural insurance has been paid attention to disease prevention,

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<sup>7</sup> Coinsurance: An insurance policy provision under which the insurer and the insured share costs incurred after the deductible is met, according to a specific formula. More generally, a sharing of risk between the insurer and the insured, also called copay.

calamity prevention and damage prevention in Shanghai, it has strengthened prevention work, reduced loss rate and improved economic benefit.

#### *4.1.3. Problems of Shanghai Mode*

The innovation of agricultural insurance in Shanghai has been made by government, PICC Shanghai branch and farmers. Sometimes their benefits are consistent, but sometimes inconsistent. The purpose of government is that use agricultural insurance to support and protect agricultural social objective, moreover, maximize the social benefit. Without doubt, the purpose of insurance company is to gain profit. And the purpose of farmers is that use least money to scatter the risks in agricultural production. According to the practice result, Shanghai government, PICC Shanghai branch and farmers have almost achieved their aims presently, but it still needs improvement.

Firstly, as we mentioned in the theory part, in most countries a majority of the joint-stock insurance companies are found to have generally higher operation expenses as compared with co-operative and mutual insurance associations. This is due largely to their greater overhead costs but partly also to the dividends which they often pay their shareholders. This problem also appears in PICC Shanghai branch. Higher expenses necessarily force their premium rates higher. In numerous countries farmers of poorer resources have therefore been unable to purchase security from joint-stock insurance companies. Therefore, it is not profitable enough to be accepted on a large scale. The result has been that these risks remain, to a large extent, uncovered by PICC Shanghai branch. In order to solve this problem, we suppose that PICC Shanghai branch should reduce its expenses in any possible way. In addition, under the boost by government, it should become better and better.

Secondly, the contradiction between exploring new service and controlling risks appears day by day in Shanghai. In order to suit the new situation of agricultural structure, Shanghai emphasizes the boost for new types of risk, but at the same time, operational risks increase continuously. How to strengthen the control of risks is an important problem for agricultural insurance.

Thirdly, in terms of the present agricultural insurance fund, the capability to withstand catastrophe risk is still weak. How to scatter catastrophe risks is also important problem in the development of agricultural insurance in Shanghai.

## **4.2. Xinjiang Mode**

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### *4.2.1. Characteristics of Xinjiang Mode*

In 1986, Xinjiang Production and Construction Corps (Detailed information in appendix) set up the first policy agricultural insurance company which called Xinjiang Production and Construction Corps Farming and Grazing Production Company. The name has been changed to Xinjiang Corps Property Insurance Company in 1989. In 2002, the name has been changed again to China United Property Insurance Company (CIC). As we see that CIC is launched by corps, so it belongs to public agricultural insurance. (Guozhu Tuo & Jun Li, 2005)

As one of the most successful mode in china, it has some unique characteristics. Firstly, it is compulsory insurance, means every one has to cover. According to Document No.12 made by Xinjiang Corps, all of the crop productions and livestock breeding which undertake by farming and grazing organizations, home farms and contractors should be covered. The loss has to bear by itself, if the ones do not cover. Contrarily, there is some preferential policy concerning the premium and financial affairs, if the ones participate in agricultural insurance.

Secondly, CIC follows the direction which is that the agricultural insurance should be always served for farms and farmers, and the guiding ideology - pulling together in times of trouble, integrating prevention with compensation, undertaking risks together, and pooling-of-interest. In addition, agricultural insurance also uses individual account, and surplus keeps as local agricultural insurance fund.

Thirdly, CIC constitutes clear executive methods as follows:

- Transacting cover and premium businesses in insurance company according to present insurance regulation.

- Setting up agricultural insurance fund. If there is surplus in a year, set up agricultural insurance fund in both division and regiment with the proportion of 30% and 70%. Insurance fund managed by insurance company, accumulated step by step, in order to prepare for catastrophe.
- Establishing collegiums for agriculture policy insurance in every division of corps which exam the operation of agriculture policy insurance once a year.
- CIC uses premium and unused insurance fund over the years to compensate, when farms suffer from calamities and damages within their insurance coverage. If the premium and unused insurance fund are not enough to pay for the indemnity, CIC will take out 30% from the profit of commercial insurance to support it.
- The unused agricultural insurance fund has two purposes. First, surplus keeps as agricultural insurance fund. Second, when unused agricultural insurance fund is more than premium income of the same year, take out 30% from premium balance of the year to improve urgent need items, hazard resistant items, as well as scientific experiments.

#### 4.2.2. Effect of Xinjiang Mode

Generally speaking, agricultural insurance in Xinjiang is very successful. Because it is a kind of public agricultural insurance, it gets great support from government continuously. In addition, due to its compulsoriness and speciality as we mentioned above, not only insureds get guarantee for their production and life, but also the size and strength of insurance companies get increase. It realizes “Two Win” in both insureds and insurers. Agricultural insurance has experienced a remarkable development in Xinjiang. In 2003, the agricultural insurance premium income in Xinjiang occupied 55% of total agricultural insurance premium income in China. The agricultural insurance premium income rises steadily year by year. We can see the statistics of agricultural insurance operation achievement of CIC from following table. (See Table 2)

*Table 2 Statistics of Agricultural Insurance Operation Achievement of CIC,  
1987-2003*

Year	Total Output Value of Agriculture (RMB)	Premium Income (RMB)	Indemnity (RMB)	Loss Ratio (%)
1987	201 182	1 205	1 015	84
1988	247 334	2 263	1 710	76
1989	270 719	2 951	3 252	110
1990	383 188	3 442	2 170	63
1991	412 351	4 605	2 567	56
1992	418 635	5 402	3 714	69
1993	472 704	5 729	4 073	71
1994	726 703	6 815	3 922	58
1995	1 055 545	8 715	4 854	56
1996	1 111 518	10 835	8 359	77
1997	1 311 916	12 573	8 377	67
1998	1 407 689	14 021	10 863	77
1999	1 420 600	16 296	16 397	101
2000	1 437 400	16 389	11 172	68
2001	1 300 066	18 398	15 591	85
2002	-	19 722	13 537	69
2003	-	21 767	15 248	70
Sum	-	171 128	126 821	74

*Data sources: 2002, Statistic Bureau of Xinjiang Production and Construction Corps, statistical yearbook of Xinjiang Production and Construction Corps.*

#### *4.2.3. Problems of Xinjiang Mode*

Although the agricultural insurance operates very satisfactory in Xinjiang, it still has some problems inevitably. Firstly, the guarantee level of agricultural insurance is low in Xinjiang. The operational principle is low sum insured<sup>8</sup>, low premium, and

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<sup>8</sup> Sum insured: The amount specified in the policy up to which the insurer will pay indemnities should the insured peril(s) occur and result in a loss to the insured property.

implement basic guarantee in Xinjiang. Because the sum insured is low, and most types of risk are deficit insurances. Insureds can not gain enough indemnity when they have been hit by calamities. To solve this problem, we suppose that government should increase its effect in agricultural insurance in Xinjiang, and leading enterprises can be brought into agricultural insurance, so that to set up a risk pooling mechanism, i.e. government supports, leading enterprises and farmers share premium together. By means of this method, it can reduce farmers' premium burden. Besides, with the help of the compensation effect of agricultural insurance, the basic links of leading enterprises' industry chain may become steadier. And what's more, it embodies pooling-of-interest and risk pooling mechanism between companies and insureds.

Secondly, the type of risk is simplex. The types of risk are centralized on crops in Xinjiang, especially cotton. There is no type of risk on forest and melon & fruit. Xinjiang is the second pasturing area in China, so that animal husbandry economy plays an important role in Xinjiang. Although the agricultural insurance increases steadily, breed aquatics insurance is still behindhand. A small quantity of milk cow and sheep insurances has been launched presently, but it is still in experimental stage. Government should increase the support in this field.

Thirdly, the loss ratio of agricultural insurance is high. According to the report from Statistic Bureau of Xinjiang, the average loss ratio of agricultural insurance was 66.48% from 1985 to 2004. Some years even exceed 100%, and it was higher than agricultural insurance breakeven point 70% which is generally accepted internationally. Loss ratio is related to the profit of a company intimately. If the loss ratio is too high, it will bring deficit for a company. A vulgate method to solve this problem in international is that offer policy allowance for reinsurance business of catastrophe risks through legislative form. That is a referential experience for agricultural insurance in Xinjiang.

### 4.3. Heilongjiang Mode

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#### 4.3.1. *Characteristics of Heilongjiang Mode*

Mutual agricultural insurance has been issued in Heilongjiang since 1991, i.e. farms share each other's misfortunes. It has experienced three stages in Heilongjiang, i.e. wind and hail fund mode; agricultural risk cooperation mode; and mutual agricultural insurance mode. (Guozhu Tuo & Jun Li, 2005)

- Wind and hail fund mode (1991-1992): Farms raised capital, and General Bureau of Land Reclamation of Heilongjiang Province & substation kept 50% of fund separately. Finance department and agricultural sector acted as deputies for the business. Paying indemnity based on the result evaluated by professionals. During these two years, it accumulated 58 million RMB for wind and hail fund, and all used for farms which hit by calamities.
- Agricultural risk cooperation mode (1993-2002): Farms organized, farmers helped each other. And General Bureau of Land Reclamation of Heilongjiang Province, substation as well as farms kept 20%, 50% and 30% of fund separately. This mode experienced two steps. From 1993 to 1995, it was crop risk cooperation step. From 1996 to 2002, it turned to development step of agricultural risk cooperation. During this period, the emphasis of work was changed from mutual salvation into prevention first, prevention and indemnity integrated.
- Agricultural mutual insurance mode (2003-now): Adapt the main line that is unified management of mutual agricultural insurance by General bureau of Land Reclamation of Heilongjiang Province, and also have insurance association mutual management on the foundation of the system of unified management combined with independent management. Crop production and livestock breeding based on the principle of operation, checking, allowance and preferential policy all manages individually. There are three characteristics under this mode. First, Premium is shared by General Bureau of Land Reclamation of Heilongjiang Province, farms and farmers with the proportion of 20%, 15% and 65%. Second, take out 10% from the premium income, and hand in to General Bureau of Land Reclamation of Heilongjiang Province in order to prepare for catastrophe. Then insurance association and substation keep 70% and 30% of the

surplus premium income. Finally, the transparency of agricultural insurance is high, which means insurance content, loss evaluation, and indemnity encash are all open-eyed.

#### *4.3.2. Effect of Heilongjiang Mode*

Heilongjiang has issued agricultural insurance for over 10 years which has take effect for steady development of agricultural economy. Firstly, under this mode, it has patched up natural calamities in Heilongjiang. Insureds can get indemnity in time when calamities happened, therefore, they are able to recover production capacity rapidly. It is helpful to maintain social stabilization. Secondly, it speeds up to establish a system for preventing and reducing calamities in Heilongjiang. Thirdly, due to the hypostasis of mutual agricultural insurance, it consolidates the system of unified management combined with independent management based on home farms, i.e. use money from many families to save one family. Finally, it boosts the adjustment of agricultural economic structure in Heilongjiang. It has launched milk cow & beef cattle risk cooperation, as well as cash crop risk cooperation one after another, thus protected the insureds' activity.

#### *4.3.3. Problems of Heilongjiang Mode*

From the practice of agricultural insurance over 10 years in Heilongjiang, we still can find some problems concerning its development. First of all, under the mutual agricultural insurance mode in Heilongjiang, it is lack of fixed channel to receive national grant-in-aid. It has not set up cooperative relationship with other agricultural insurances and support policies even more. Therefore, it is unable to deal with catastrophes. In 1993, 1994, 1998 and 2002, Heilongjiang assart suffered from catastrophes heavily, which resulted in difficulty to pay for the indemnity. In order to cross over the difficulty, Heilongjiang assart applied fund from General Bureau of Land Reclamation of Heilongjiang Province. We suppose that it is very necessary for Heilongjiang to set up cooperative relationship with other agricultural insurances and support policies, so that it can get more help when faces catastrophes.

Finally, the outlay of mutual agricultural insurance institutions are short in Heilongjiang, thus, the function of mutual agricultural insurance can not exert its best. In our opinion, it is possible to apply more policy support from government.

#### **4.4. Comparison of Three Modes**

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The agricultural insurance in Shanghai, Xinjiang and Heilongjiang are the most typical ones in China. According to above introduction of the three modes, here we intend to compare their modes by their environment, organizational structure, and operational method.

##### *4.4.1. Environment*

- Shanghai: The natural environment in Shanghai is better compares with Xinjiang and Heilongjiang. As we know, Shanghai is the most developed city in China therefore the economic background and people's insurance awareness are better than other places, that is preponderant in the development of agricultural insurance.
- Xinjiang: The natural calamities are frequent and widespread in Xinjiang. The main disastrous weathers are flood, hail, wind, drought, snow, wind-blown sand frost and so on. In addition, secondary calamities are plant diseases, insect pests, rat pests, grass pests and geologic hazard and so on. Flood, hail and drought are most serious. Geologic hazard happens mainly in pasturing area. Because of the specific geographical conditions, the environment of agricultural industry is weak in Xinjiang. The reasons which cause calamities are not only weather, but also unreasonable behaviors from human beings, because people's consciousness is relatively weak in Xinjiang.
- Heilongjiang: Heilongjiang assart was a wasteland before it has been reclaimed. The farms in Heilongjiang are almost around borderland. The weather conditions are also very complex there. Drought, flood, wind, hail, freeze, diseases, insect pests and so on occur frequently.

Comparing the environments in the three places, it seems that Shanghai has the best

conditions when issues agricultural insurance. But due to the worst weather in Xinjiang, the demand for developing agricultural insurance is urgent, whereas, there must be great potential in agricultural insurance market in Xinjiang.

#### *4.4.2. Organizational Structure*

- Shanghai: Before 1990, only PICC Shanghai branch issued agricultural insurance in Shanghai. PICC Shanghai branch is a joint-stock company, so it issues commercial agricultural insurance. Since Shanghai government did an innovation on agricultural insurance in 1991, agricultural insurance boosted by government and operated by PICC Shanghai branch.
- Xinjiang: The organizer of Xinjiang agricultural insurance is very special compares with others, i.e. Xinjiang Production and Construction Corps. So it belongs to public agricultural insurance.
- Heilongjiang: The organization structure changed three times from 1991 to 2003. In the first stage, it organized by General Bureau of Land Reclamation of Heilongjiang Province and substation. Then it organized by General Bureau of Land Reclamation of Heilongjiang Province, substation and farms. In 2003, it changed to adapt the main line that is unified management of mutual agricultural insurance by General bureau of Land Reclamation of Heilongjiang Province, and also have insurance association mutual management on the foundation of the system of unified management combined with independent management. The principle of agricultural insurance in Heilongjiang is farms share each other's misfortunes. So that it belongs to mutual agricultural insurance.

Comparing the organizational structure of the three places, local government has been referred to agricultural insurance in Shanghai and Heilongjiang. Due to the specific situation in Xinjiang, its agricultural insurance gets great support from central government continuously. It is one of the reasons which cause agricultural insurance runs well in Xinjiang.

#### 4.4.3. *Operational Method*

- Shanghai: local government organizes and boosts, Shanghai branch operates and introduces divisional management. Besides, uses individual account, exempt from all kinds of taxations and surplus is kept as VC (venture capital) funds of agricultural insurance. Moreover, it is voluntary insurance.
- Xinjiang: It is a kind of public insurance, and also compulsory insurance. Pulling together in times of trouble, integrating prevention with compensation, undertaking risks together, and pooling-of-interest. In addition, agricultural insurance also uses individual account, and surplus keeps as local agricultural insurance fund.
- Heilongjiang: Adapt the main line that is unified management of mutual agricultural insurance by General bureau of Land Reclamation of Heilongjiang Province, and also have insurance association mutual management on the foundation of the system of unified management combined with independent management. Crop production and livestock breeding based on the principle of operation, checking, allowance and preferential policy all are managed individually. It is also voluntary insurance.

Comparing the operational methods in the three places, we can find that there are both similar and different operational methods among them. The same aspect is that they all use individual account when issue agricultural insurance, which is one of the reasons cause their success.

Agricultural insurances in Shanghai and Heilongjiang both are voluntary insurances. But in Xinjiang, it is compulsory insurance. Due to the specific situation, and frequent & widespread calamities in Xinjiang, compulsory insurance should be suitable. By this way, it is helpful to accumulate fund, reduce risks of both insureds and insurers. Therefore, steady economic development in Xinjiang.

The insurance modes in the three places are totally different. Shanghai uses the mode of commercial agricultural insurance based on the boost of local government. Xinjiang uses the mode of public agricultural insurance. And Heilongjiang uses the mode of mutual agricultural insurance. They all run resultful until now, but the most successful one is Xinjiang Mode. Therefore, we suppose public agricultural

insurance with Chinese characteristics is executable in China. But it is not absolute. We have to take actions that suit local circumstances when consider a mode.

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## 5. CONCLUSION

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After the extensive study of agricultural insurance in China, we find although Chinese government has done a lot of innovations and experiments, the agricultural insurance market is still dead-alive in China.

Why it shows dead-alive situation in China? According to our research on present situation of agricultural insurance and three modes in China, we find that the surface reasons are: firstly, heavy deficit of agricultural insurance. Secondly, insurance companies are willing to issue types of risk with high profit, whereas, unwilling to issue types of risk with high management costs and high risk. Thirdly, farmers' low income and lacking insurance awareness cause low cover activity. The essential reason which leads to the dead-alive situation is the incomplete system of agricultural insurance in China. For a long time, except the remission of sales tax, there is no other support policy from Chinese government. Agricultural insurances are almost standard commercial insurances. No other than this agricultural insurance system causes the standstill of Chinese agricultural insurance.

How to develop Chinese agricultural insurance market? In 2003, the chairman of China Insurance Regulatory Commission said, "China Insurance Regulatory Commission will explore different organizational forms to operate agricultural insurance. Research the feasibility of establishing policy agricultural insurance company and mutual cooperation insurance organization, as well as encourage present commercial insurance companies to explore agricultural insurance business. At the same time, introduce foreign capital insurance companies which expert with agricultural insurance. Construct a multiform and multi-channels agricultural insurance system." We think that should be the way out for Chinese agricultural insurance.

Based on our study of present situation of Chinese agricultural insurance, as well as the research on Shanghai mode, Xinjiang mode and Heilongjiang mode, we suppose the following countermeasures can be introduced into Chinese agricultural insurance.

Firstly, strengthen legislation is a key issue. During the development of agricultural insurance, national will plays a leading role. Moreover, grant-in-aid, financial

support and tax preference etc. also play great effect. Besides, the aim of agricultural insurance is to promote steady development of agriculture, not with the aim of gaining profit. Therefore, Insurance law which applies to commercial insurance is unsuitable for agricultural insurance. So set up a suitable agricultural insurance law to support Chinese agricultural insurance is very important.

Secondly, due to the simplex source and dispersive management of agricultural insurance fund we described in the previous part, set up modern collection and management system for agricultural insurance fund is also very important, i.e. agricultural insurance fund can be collected from local Ministry of Finance, Civil Administration Department, rural economic organizations, urban units, and personal contribution etc. At the same time, constitute perfect regulation and policy for agricultural insurance fund, including its collection methods & instruments, the checking method which different from commercial insurance fund, as well as the ownership & management right of agricultural insurance fund, so that make it go on the track of institutionalization and law-based.

Thirdly, owing to the impact of environment and paying capacity in different places in China, the gap of insurance capacity is very large, so set legal types of risk for agriculture insurance is very necessary. In terms of law of large numbers, the bigger participation rate of insurance, the bigger stability coefficient, and the more logical. It is possible to set legal types of risks based on the regional difference, for example, Third Party Liability (TPL) in auto insurance. It is helpful to improve people's insurance awareness, increase fund for insurance companies, and steady the management of agricultural insurance.

Finally, reinsurance is also necessary for crops in order to scatter risks further. The same method of agricultural insurance in Western countries is that use administrative means to constitute multiple reinsurance system. It is possible to be applied in Chinese agricultural insurance. Constitute reinsurance system can improve the activity of agricultural insurance operators, conduct operational emphases, increase the income of handling charge and enhance the management level.

In a word, agricultural insurance is still in developing stage at this moment in China. Although it meets predicament time after time, it is still a potential market in China.

By the way of using other countries' successes as a source of reference and boosting by Chinese government, we believe that Chinese agricultural insurance will find a suitable way to break away from downturn, and it will have a luciferous future.

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### **General Introduction of Xinjiang Production and Construction Corps**

The Xinjiang Production and Construction Corps, also known as XPCC or Bingtuan for short, is a unique economic and semi-military governmental organization existing in Xinjiang Uyghur Autonomous Region in the People's Republic of China. The XPCC has de facto administrative authority over several medium-sized cities as well as settlements and farms all across Xinjiang. It has its own administrative structure, fulfilling governmental functions such as healthcare and education for areas under its jurisdiction. The government of Xinjiang Uyghur Autonomous Region does not usually interfere in the administration of these areas.

The stated goals of the XPCC are to develop frontier regions, promote economic development, ensure social stability and ethnic harmony, and counter the East Turkistan independence movement. In its 50-year history, the XPCC has built farms, towns, and cities, and settled millions of migrants, mainly Han Chinese, into Xinjiang. As such, the XPCC is lauded in China as a cornerstone of stability and prosperity in an otherwise troubled region, and characterized as a vehicle of colonization and sinicization among supporters of East Turkistan independence.

The XPCC also participates in economic activities, and is known as the China Xinjian Group. It has a number of publicly traded subsidiaries.

- *History*

The XPCC draws from the traditional Chinese tuntian system, a policy of settling military units in frontier areas so that they become self-sufficient in food. Construction corps was set up for several sparsely-populated frontier regions, including Heilongjiang, Inner Mongolia, and Xinjiang. The newly founded People's Republic of China also had the problem of what to do with many former non-Communist soldiers who had been removed from economic production for many years. Ideas about settling such soldiers on the land had been common in China for many years. The Chinese government formed the XPCC from soldiers from the

(Communist) First Field Army, former Kuomintang soldiers and the Ili National Army (the military forces of the East Turkestan Republic). The XPCC itself was founded in October 1954, comprising 175,000 military personnel based in Xinjiang, led by Tao Zhiyue as its first commander-in-chief.

The XPCC was initially focused on settling, cultivating, and developing sparsely-populated areas, such as the fringes of the Taklimakan Desert and Gurbantunggut Desert. The ranks of the XPCC were also joined by many youth, both male and female, from other parts of China, to balance out its sex ratio and include members with better education backgrounds. The crises of 1962, in which rioting occurred in Yining and thousands of refugees fled to the Soviet Union also prompted the government to divert more people and resources to the XPCC. By 1966 the XPCC had a population of 1.48 million.

The XPCC, together with many other governmental and party organizations, was severely damaged by the chaos of the Cultural Revolution. In 1975 it was abolished completely, with all of its powers transferred to the government of Xinjiang and regional authorities.

By the 1980s Xinjiang was once again feeling the pressures of ethnic and religious strife, Uyghur independence movements, and Soviet encirclement (Afghanistan had been invaded in 1979). In 1981 the XPCC was restored, with explicit objectives of countering Soviet encirclement, the East Turkistan independence movement, Islamic fundamentalism, as well as the cultivation of frontier lands and economic development.

- Organization

The XPCC is administered by both the central government of the People's Republic of China as well as the government of Xinjiang Uyghur Autonomous Region. It has sub-provincial powers on par with sub-provincial cities and its economic and social development are administered separately from that of Xinjiang. The area and population of the XPCC are generally given as part of Xinjiang's total figures, but the GDP of the XPCC is generally listed separately.

The XPCC is subdivided into divisions, then regiments. It is headquartered at Urumqi. Each XPCC division corresponds to a prefecture-level administrative division of Xinjiang, and is in themselves sub-prefectural in rank.

The XPCC itself, as well as each individual division, is headed by three leaders: a first political commissar, a political commissar, and a commander. The role of first political commissar of the XPCC is filled by the CPC (Communist Party of China) Xinjiang committee secretary, and the first political commissars of each XPCC division are likewise the committee secretary in each of the corresponding prefecture-level divisions. In addition to regiments, the XPCC also administers regiment-level farms and ranches.

At the end of the 20th century, the military role of the XPCC has been diluted, being given instead to the Xinjiang Military Region, a part of the Lanzhou Military Region that includes all of northwestern China. At present, the military personnel of the XPCC are mostly reservists or militia.

- Administrative Structure

The XPCC consists of 14 divisions which are then subdivided into 185 regiment-level entities (including regiments, farms, and ranches), scattered throughout Xinjiang, mostly in previously unpopulated or sparsely-populated areas.

- Cities

The XPCC has built six medium-sized cities during its history, and now controls five of them. The governments of these cities are combined entirely with the division that controls them. For example, the division headquarters is the same entity as the city government, the division political commissar the same person as the city committee secretary, the division commander the same person as the city's mayor, and so forth. Four of the five XPCC-administered cities are nominally listed as "county-level cities" of Xinjiang Uyghur Administrative Region, but the government of Xinjiang is usually not involved in the administration of these cities.

The cities are, with dates of official designation as "cities" in parentheses: Kuitun (1975), Shihezi (1976), Aral (2002), Tumushuke (2002), Wujiaqu (2002), and Beitun. Beitun is officially designated as a "town", and has not been officially designated as a "city". Kuitun is no longer controlled by the XPCC, though it once was (by the 7th division) before 1975.

- Demographics

Most of the population of the XPCC is Han Chinese, while Uyghurs, Hui, and Kazakhs are the largest minority groups. The XPCC constitutes about 13% (2002) of the population of the Xinjiang Uyghur Autonomous Region.

- Economy

The XPCC is currently focused on economic development as its stated primary goal. With the continued opening up of the economy, the XPCC has created many publicly traded subsidiary companies involved in the production and sale of a variety of products. When involved in such economic activities, the XPCC uses the name "China Xinjian Group".

The primary economic activity of the XPCC remains agriculture, including cotton, fruit, vegetables, food crops, vegetable oils, sugar beets, and so forth. Important products are cotton, tomatoes, ketchup, Korla pears, Turpan grapes, wine, and so forth. The XPCC has a mix of factory farming and smaller farms.

During its history, XPCC established a large amount of mining and mining-related industries, most of which have subsequently been handed over to the Xinjiang government. Currently the XPCC is primarily engaged in food- and agriculture-related industries.

The XPCC is also involved in a variety of tertiary industries, including trade, distribution, real estate, tourism, construction, even insurance.