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# Reform of China's Food Security Policies: Central Government Decentralizing Autonomous Management Right

Ming LI\*

Hunan Vocational College of Modern Logistics, Changsha 410131, China

**Abstract** Guaranteeing the food security is a fundamental state policy of China. Food security needs overall planning of central government, economic benefit allocation of local government, and increase of grain farmers' income. Through analysis on current situations and causes of China's food security, and comparative study on purposes and functions of foreign and domestic grain reserves, it came up with recommendations that central government should decentralize rights of grain production, reserve, sales, and management to grain producing areas and major sales provinces. It is not appropriate for central enterprises to take charge of national food security reserves. And it is required to make a new round of reform in autonomous management right of major grain producing areas and the capacity of the state purchasing social grain reserves.

**Key words** Food security, State subsidies, Depredating, Security system, Economic benefits

## 1 Introduction

Food security is a great issue concerning sustainable and stable development of a state. In 1974, United Nations Food and Agriculture Organization (FAO) defined food security as ensuring that all people at all times have both physical and economic access to the basic food that they need. With social development, the concept of food security is assigned with new content. It is ensuring all people to be able to purchase sufficient and safe foods using limited land resources at any time.

## 2 Current situations of China's food security

**2.1 Gradual decline of farmland area** Local government is not willing to protect farmland<sup>[1-3]</sup>. Data issued by agricultural department indicate that national farmland area declines year by year. The farmland area was 141 million hectare in 1986, 130.039 million hectare in 1996, and 121.716 million hectare in 2008. In the past 20 years, farmland area reduced about 20 million hectare.

**2.2 Increase of per capita grain consumption** The increase of China's per capita grain consumption has reached world level, as shown in Fig. 1. By 2013, total grain yield of China reached 601.94 million tons, increasing about 12.46 million tons compared with 2012, growing about 2.1%. In recent 10 years, the per capita grain consumption remains 320–400 kg, near to the world level 350–400 kg. In 2012, China's grain import exceeded 70 million tons. The net import of corn, wheat and rice was 5.157 million tons, 3.689 million tons, and 2.065 million tons respec-

tively. In 2013, grain import exceeded 80 million tons, and in 2014, the grain import exceeded 100 million tons.

**2.3 Huge amount of state grain subsidies** The amount of state subsidies for grain is huge, but only 14% is given to grain farmers<sup>[4-6]</sup>. In 2012, the total amount for direct grain subsidies reached 164.2 billion yuan, accounting for 1.31% of total state finance expenditure. This includes 107.1 billion yuan direct subsidy amount for means of agricultural production, which is 7.09 times the direct grain subsidies. Increase of farmers' income is not high, so they are not highly enthusiastic in planting grain crops. Since China implemented the direct grain subsidy policy in 2004, the annual net income of farmers per capita grew from 2936.4 yuan in 2004 to 5919 yuan in 2010. However, agricultural income of farmers was only 1723.49 yuan, accounting for 29.11% of net income, resulting in low willingness of farmers in planting grain crops. For example, some areas change their double cropping rice to single harvest rice, or even lay idle their farmland.

**2.4 Grain reserves of China are monopolized by central enterprises** Grain reserves of China are monopolized by China Grain Reserves Corporation (Sinograin), provincial and county level grain reserves enterprises in major grain producing areas stay in weak position<sup>[7-10]</sup>. Sinograin enjoys a large portion of China's grain subsidies. When grain price rises, Sinograin can obtain high profit from sales of grain; when grain price is low, Sinograin can obtain state subsidies, forming isolated island of planned economy with high yields irrespective of drought or water logging (decline or rise of grain price). In recent years, negative reports are increasing about Sinograin. For example, when grain price rises, Sinograin fights for grain with local grain enterprises; while the grain price is low, Sinograin scrambles for subsidies with local enterprises. It was reported that Sinograin obtained as high as 10 billion yuan profit by such means. In particular, improper storage leads to moldy grain, spontaneous combustion and fire. Also, crime of management frequently occurs.

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\* Corresponding author. E-mail: hnclslm1@163.com

**2.5 Some farmland areas of grain producing areas are polluted and food security is questioned** Heavy metal ( cadmium, nickel, arsenic, lead, mercury) pollution of farmland reaches 19.4% , the total rate of exceeding standards is up to 16. 1% , the point of heavy metal pollution is up to 3. 1% , and about 36. 3%

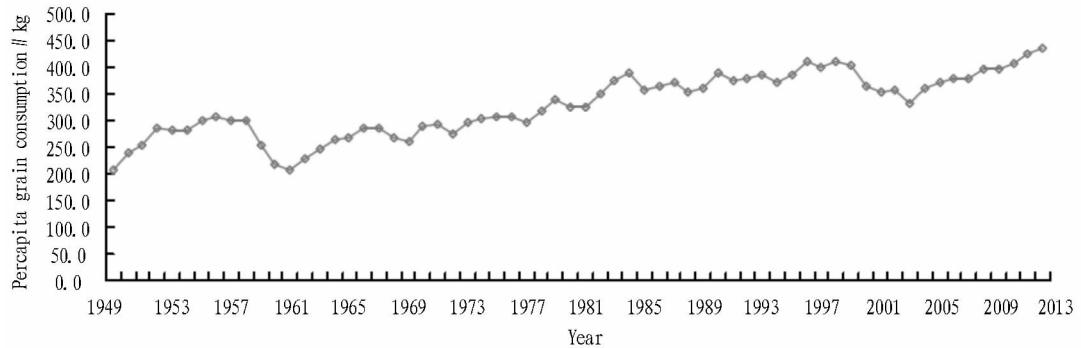


Fig.1 Per capita grain consumption in China

### 3 Analysis on causes for current situations of China's food security

The most prominent problem of China's food security is that three parties ( central government, local government and farmers ) are not enthusiastic for planting grain and protecting farmland. This is mainly because economic benefits are not distributed in a fair manner. Urban areas depredate economic benefits of rural areas, economically developed areas depredate economic benefits of grain production areas, and Sinograin depredate benefits of local grain enterprises. Such predatory manner is established on the basis of generating huge income difference through obtaining and controlling land use methods.

#### 3.1 Urban areas depredating economic benefits of rural areas

Urban areas depredating economic benefits of rural areas will be mainly manifested in following three aspects.

(i) Huge difference of land price between urban and rural areas causes that marginal benefits of urban land are tens of thousands higher than marginal benefits of rural land. In urban areas, the land grant price is as high as several hundred million yuan/ mu, local government will obtain several hundreds of thousands yuan financial revenue from grant of one mu land; in rural areas, however, even the homestead can be transacted, the income from land circulation is meager compared with large cities, and income from planting grain crops is only several hundred or thousand yuan. As a result, local government is not highly enthusiastic for protecting farmland, but active in developing real estate.

(ii) Government inputs huge subsidy amount in water, electricity, gas, transportation and foods of urban areas, so the price of necessities ( such as electricity, liquefied gas, and foods) in urban areas is lower than that in rural areas, farmers' living security scope is far smaller than urban residents.

(iii) Price of agricultural products produced by farmers is fixed according to urban demands, rather than according to actual cost plus profit. Therefore, when the price fixed by urban demands is lower than costs of agricultural products, farmers would

areas surrounding enterprises of pollution are polluted. However, China still demands safeguarding farmers' benefits and asks farmers to plant grain crops in the polluted areas. As a result, the grain quality and security issue is increasingly prominent.

rather let their grain crops decayed in their field. Any product or service in urban areas can be priced according to cost plus profit. If farmers fail to obtain profit, it will cause that China's agricultural reform fails to last for a long time.

**3.2 Economically developed areas depredating economic benefits of undeveloped areas** Economically developed areas make products with high profit and high value in local areas with the aid of advantages in geography, science and technology, and policies, and transfer in low price labor and agricultural products from agricultural production areas. Calculated at 1000 kg / mu rice yield, only 700 kg edible rice is obtained. At 3 yuan/kg price, only 2100 yuan is obtained. Except costs for seeds, chemical fertilizers, pesticides, and labors, net income from planting grain crops is only several hundred yuan, which is much lower than net income of a mobile phone. If without other effective methods to adjust unbalance of economic benefits, high value products will engulf economic benefits of low value products, and economically developed areas depredate economic benefits of underdeveloped areas, forming hidden soft predation. Farmers would rather go to economically developed areas to work than stay at hometown for planting grain crops. Farmers are not enthusiastic for planting grain crops, as a result, major grain producing counties become poor counties<sup>[11-12]</sup>.

**3.3 Central agricultural enterprises ( Sinograin, China National Cotton Reserves Corporation, China National Meat Reserves Corporation) depredating benefits of local government and agricultural enterprises** Central agricultural enterprises undertake stabilizing price, protecting farmers' benefits, ensuring food security, and take charge of state grain circulation, and macro regulation. Also, they undertake seeking profit and realizing objectives of value preserving and appreciation. In this situation, local government will fight for benefits with local agricultural enterprises, and also fight for state subsidies. The proportion of Sinograin purchasing grain to the total state purchase volume is about 30% , while it takes up more than 50% of state grain subsidies.

## 4 Government establishing security system with grain production as major part

Central government divides 32 mainland provinces and municipalities directly under the Central Government into 13 main grain producing areas, 9 main grain sales areas, and 10 grain production and marketing balance areas. According to grain policies issued in 1995, grain production is in the charge of provincial governor, and grain reserve is also in the charge of provincial governor. However, there coexist central and local reserve systems in the grain reserve work. Thus, there is a logical conflict. Namely, grain is reserved repeatedly, the division of rights and obligations is not clear, government grain subsidy is inefficient, and main grain producing areas and main sales areas do not have autonomous management right.

### 4.1 Grain reserves for ensuring market economy function of commodities

Central government should make reform of purpose and methods of grain reserves, to ensure market economy function of commodities. Commodity reserves of China are mainly for the purpose of curbing inflation and ensuring market. By contrast, developed countries reserve grain mainly for strategic purpose, rather than for affecting market. Grain reserve function of developed countries is socialized. For example, 3/5 of grain reserves of the United States are undertaken by farmers and 2/5 are undertaken by private commercial enterprises. Government only provides certain financial subsidies for reserve organizations. They can buy high efficient reserve services. In China, grain reserves are undertaken mainly by central enterprises and local government plays an auxiliary role<sup>[13-15]</sup>.

### 4.2 Decentralizing rights and concentrating attention on guidance and supervision

Central government should implement reform of simplifying administration and decentralize rights related to market economy to enterprises in provinces, counties and rural areas. It is recommended to disincorporate central agricultural enterprises, decentralize rights of central enterprises like Sinograin to provinces and counties, and make provinces have autonomous management right of agricultural planting and sales. Agricultural products should be regulated through market. It is recommended to regulate grain price and varieties using market economy. Grain producing provinces (areas) can determine grain price and output volume, and also can increase added value of grain products through grain management, such as animal husbandry and food production industries, to raise enthusiasm of grain producing areas for producing grain crops. Main sales provinces can determine where to purchase types and volume of grain, for example, northeast provinces. Also, they can export grain to Russia, Japan and South Korea, and purchase grain from Guangdong, Hainan, Vietnam, and Thailand, to reduce grain logistics cost. State Administration of Grain plays the role of guidance, supervision and registration functions in the entire process.

### 4.3 Direct grain subsidy policy of central government

Direct grain subsidy policy is to distribute the subsidies directly according to total grain yield and quality in certain proportion to ag-

ricultural provinces, local government allocates the subsidies to grain planting farmers, to promote development of agricultural machinery, promote farmland construction, and ensure grain reserves of local grain enterprises and production of agricultural and sideline products<sup>[16-17]</sup>. Local government is a grounded and practical organization, clearly knows grain production cost and sales cost, and can accurately know the amount of direct grain subsidies to grain planting farmers. For polluted farmland, it is recommended to plant cash crops, reduce total grain yield, reduce grain stock, and the grain price will return to normal level in two or three years. According to varieties, yield, quality of grain, and local economic level, it is recommended to stimulate enthusiasm of farmers for planting grain, rather than providing direct subsidies to land contractors. In the meantime, under the supervision of central government, the subsidy process can ensure no decline of capital farmland area, and also guarantee development of agricultural economy and food security<sup>[18-19]</sup>.

### 4.4 Ensuring grain storage of large grain producers, provinces and counties

There is excellent tradition of grain storage in rural areas of China. For those farmers, individuals and enterprises not selling grain harvested in the same year, government may provide grain storage subsidies. Grain storage can guarantee grain supply security of rural areas and reduce consumption after harvest of grain<sup>[20]</sup>.

## 5 Discussions

Since the ancient times, China has the tradition of grain storage and there are grain depots in farmer households, counties, prefectures, provinces, and central government. However, in socialist market economy, the state grain reserve becomes a special area in market economy. Apart from this, cotton, pork, salt, edible oil, or even tea become monopolized by the central enterprises. Such strange situation of planned economy is mainly resulted from Ministry of Commerce, Ministry of Finance, Ministry of Agriculture, and central enterprises, as well as industrial associations. Such situation needs deeper and more powerful administrative reform of central government. Specifically, central government should decentralize autonomous management right to local government, support local agricultural enterprises, directly subsidize grain producers, and help large agricultural producers, to really guarantee actual system of food security. This is the second time reform, and the ultimate objective of this reform is to decentralize powers to grain farmers and enterprises, and the whole society.

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ens food storage and circulation facility construction, promotes healthy consumption concept, and vigorously promotes food-saving mechanism.

### 3 Conclusions

In this paper, we systematically study various links in national food security, and further explore the key factors influencing each link, in order to provide a reference for analyzing food security level and ensuring food security. The two factors that affect food production are climatic conditions and agricultural science and technology. Climatic conditions have a comprehensive impact on food security, while agricultural science and technology can effectively solve the problem of shortage of rural labor to expand production scale of agriculture. Food circulation involves many aspects, and good circulation mechanism can ensure the smooth transition between food production and demand, which is an important basis for food security. Food storage is to ensure food quality and food safety. Food consumption includes food demand and food waste, and the two factors bring greater pressure on food security. The analysis of main factors influencing food security paves the way for the study of the weighting factor, and provides theoret-

ical support for the construction of food security early warning system.

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