THE FRAME OF AGRICULTURAL POLICY AND RECENT MAJOR AGRICULTURAL POLICIES IN CHINA

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Abstract

During the 30 years of Reform and Opening up, China’s agricultural policy has formed a relatively complete framework. This framework generally consists of three major categories: basic agricultural policies, policies to support agricultural production, and policies to protect agricultural benefits. In details, the policies cover 16 areas, including basic rural management system, agricultural subsidy policy, agricultural technology policy, and resources and environment protection policy, etc. These policies have played an important role in the development of the agricultural and rural economics. However, the agricultural and rural development of China still faces many challenges, such as tight balance between supply and demand of major agricultural products, difficulty in price regulation of the agricultural products, increased demand for agricultural socialization service, relative stagnation of agricultural technology, increased difficulty in improving rural governance, and pressure to continuously increase farmer’s income, etc. Based on the existing policies, Chinese government has developed a number of new policies for the future development of agriculture. The new policies generally include: improving national food security system, enhancing agricultural supporting and protection system, establishing long-term sustainable development mechanism of agriculture, deepening the reform of rural land system, building of new agricultural management system, accelerating rural financial system innovation and developing the mechanism of urban-rural integration, etc.

Key words: China’s agricultural policies, effective supply of agricultural products, increase farmers’ income, agricultural modernization
1. INTRODUCTION

Since the 1980s, the agricultural economy and rural development in China has made tremendous achievements, and innovation and implementation of agricultural policies played a key role. However, entering the new century, China is facing a more complex macroeconomic situation:

- The rapid development of industrialization, informatization and urbanization has made the demand for simultaneously pushing forward agricultural modernization more urgent,
- The contradiction between ensuring the supply of grain and other important agricultural products
- The bearing capacity of resources and the environment has become increasingly more acute and the profound changes in the economic structure and the social structure have put forward tasks in innovating rural social management that badly need to be fulfilled.

So, to keep agriculture sustainable, stable and harmonious development, China has to promote agricultural policy innovation based on the new features of its own agricultural development and continuing to strengthen the foundation of existing agricultural policies.

This paper provides a systematic insight into the China agricultural policies since the new century. The second part introduces the main objective of China's agricultural policy based on summarizing its new features at the present stage; The third part shows China’s basic agricultural policy framework involving a total of 16 specific policy aspects of three major classes; The fourth part Analyzes the role played by the existing agricultural policies and the new challenges faced by the existing agricultural policies recently; the fifth part focuses on the new thoughts “Sannong” (works related to agriculture, farmers and rural areas) development and the highlights of agricultural policy innovation; the final part is the concluding comments.

2. THE OBJECTIVES OF CHINA’S AGRICULTURAL POLICIES

2.1 Features of the development of China’s agriculture in the new century

Since the new century, China has undergone significant changes in economy and society, and agricultural economy and rural development has stepped into a new stage. Obvious features are shown in management of agricultural system, demand and supply of agricultural products, cost and price of agricultural products, rural labor force, operation mode, technology, farmers’ income, etc.
The first feature is that the management system of agriculture was converted to active design from passive adjustment. From 1980 to the end of 20th century, the dominant way of China’s agricultural system management was passive adjustment, such as household contract responsibility system, reform of grain circulation system, and reform of taxes and fees. Since the new century, especially after 2004, CPC (Communist Party of China) central committee has issued 11 consecutive “No. 1” documents, focusing on issues of agriculture, farmer and rural area. Government has implemented a series of "giving more, taking less and liberalize" policies to benefit the agriculture, and agricultural system started to convert from passive adjustment to active design.

The second feature is the tight balance of the overall supply and demand of the agricultural products and accelerated shortage of some varieties. In 2004, China encountered its first deficit in agricultural product international trade, and the situation has not reversed till now. Food self-sufficiency rate has dropped from 99.6% in 1990s to around 90% in 2010. The structural shortage of some varieties is serious, for example, 2.84 million tons of cotton was imported in 2010, taking about half of the domestic cotton production (5.96 million tons); 6.87 million tons of vegetable oil was imported, taking 1/3 of the domestic consumption (25.75 million tons). In addition, structural shortage is also partially reflected on the shortage of high-quality agricultural products. The occurrence of a series of food safety incidents has driven a sharp increase in demand for safe and high quality agricultural products.

The third feature is the rising of production cost and various fees. Since 2003, the cost of agricultural production started a new round of rising, and the costs started to increase significantly in 2006. Meanwhile, the various types of agricultural production costs hiked, and the unit costs, such as wages per working day, the costs of land, fertilizer, and machinery per Mu, kept increasing for farming.

The fourth feature is the volatile rising of agricultural products and the growing number of affecting factors. From 1999 to 2003, the price index of China’s major agricultural products dropped by approximately 10%, while from 2004 to 2011, it rose by about 72%, and the price of agricultural products has obviously turned into upward trend since 2004. The prices of three major grain (rice, wheat and corn), vegetable and cotton have less annual volatility, while that of soybeans, cooking oil and pork is greater; and the prices of vegetables have strong cyclical fluctuations within the year. The dominant causes of the rising of agricultural products are the increased cost, changes in demand-supply structure, excessive money supply, and influences of international prices, etc.

The fifth feature is the limited rural labor surplus and structural shortage of agricultural labor. Because of China's large rural population, there are currently about 100 million rural surplus laborers. However, with a large number of rural labor force moving to
urban, the proportion of young, relatively well-educated, and male labor force dropped significantly, leading to a significant shortage in young rural labor force in busy seasons and certain regions.

The sixth feature is the acceleration of the process of agricultural organization and diversity of the operation modes. Farmers’ specialized cooperatives and various types of agriculture industrialization organizations were developing rapidly, and agricultural organization process was accelerated significantly. By the end of 2003, 982,400 farmer cooperatives were registered nationwide, and 74.12 million farmer families joined the cooperative, taking up to 28.5% of the total number of farmer households. The operation modes of agriculture was getting more diverse, with joint-development of family-operated, collective managed, cooperative and business modes, etc. Vertical integration of agriculture process was speeding up, and the scale of operation of agriculture was expanded.

The seventh feature is the steady growth of technology contribution rate and the increasingly prominent position of technology in agriculture. Recent years, the technology contribution rate in agriculture increased rapidly with a yearly increment of 1%, and has reached 53.5% in 2003, which has surpassed the contributions of land, labor, and material input factors.

The eighth feature is the steady growth of farmers’ income, and both wage income and household business income increases. From 1998 to 2003, the average annual increment of farmers’ net income per capita was 3.5%, and it was 6.5% from 2004 to 2013, which was 1.9 times greater. The percentages of wage income, household business income, transfer income, and property income in 2003 were 45.3%, 42.6%, 8.8%, and 3.3% respectively, and the wage income surpassed the household business income for the first time, and became the primary income source for farmers (Rural Development Institute Chinese Academy of Social Scinece 2014).

2.2 The objectives of China’s agricultural policies in current stage

Based on the above features of agricultural economics and rural development, the overall objective of China’s agricultural policies in current stage is to ensure the sustainability, stability, harmony, and innovation of development of agriculture. Sustainability is to well handle the relationship of the exploitation, conservation and protection of the agricultural resources, and to ensure environmental friendly, ecological improving, and sustainable development of agriculture. Stability is to keep steady growth of agricultural production, to ensure food safety, to keep steady growth of farmers’ income, and to protect farmers’ benefits.

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Harmony is to coordinate the development between agriculture and other industries, and to prevent stagnation in agricultural development. Innovation is to develop modern agriculture, and to realize innovation of technology, agricultural system and management.

Currently, the objectives of China’s agricultural policies include:

(a) Ensure effective supply of agricultural products. Since 1978, food production in China has been greatly increased, but there is still a lot of pressure in medium and long-term food security. Therefore, ensuring effective supply of agricultural products and national food safety is the primary objective of China’s agricultural policies.

(b) Promote the steady growth of farmers’ income. Improve farmers’ income and welfare is an important objective of China's agricultural policy. The policies must place steady improvement of farmers’ income in the position equally important as the effective supply of agricultural products. Farmers will increase the agricultural input and supply of agricultural products only with the stimulation of the increase of their income.

(c) Realize sustainable development of agriculture. In the context of global climate change, the realization of sustainable development of agriculture is the major objective of China’s agricultural policies. This is not only the need to undertake the responsibility of country with great power, but also the requirement of the economic development of the entire society and the actual conditions of China.

(d) Promote agricultural modernization. This is not only an important part of transformation of China’s economic development mode and building a well-off society, but also a necessary requirement to improve agricultural production capacity, increase farmers’ income, and build a new socialist countryside. Completing the transition from traditional agriculture to modern agriculture through innovation of technology, agricultural system and management is an important strategic objective of China’s agricultural policies.
Table 1 The key indicators of agricultural development during China’s 12th Five-Year Plan

<table>
<thead>
<tr>
<th>Category</th>
<th>Indicator</th>
<th>2010</th>
<th>2015</th>
<th>Annual growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply of agricultural product</td>
<td>Comprehensive food production capacity (10^8 tons)</td>
<td>&gt;5.0</td>
<td>&gt;5.4</td>
<td>3.27</td>
</tr>
<tr>
<td></td>
<td>Grain acreage (10^8 Mu)</td>
<td>16.48</td>
<td>&gt;16.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cotton production (10^8 tons)</td>
<td>596</td>
<td>&gt;700</td>
<td>&gt;3.12</td>
</tr>
<tr>
<td></td>
<td>Oil production (10^8 tons)</td>
<td>3230</td>
<td>3500</td>
<td>1.62</td>
</tr>
<tr>
<td></td>
<td>Sugar production (10^8 tons)</td>
<td>12008</td>
<td>&gt;14000</td>
<td>&gt;3.12</td>
</tr>
<tr>
<td></td>
<td>Meat production(10^4 tons)</td>
<td>7926</td>
<td>8500</td>
<td>1.41</td>
</tr>
<tr>
<td></td>
<td>Egg production (10^5 tons)</td>
<td>2763</td>
<td>2900</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>Dairy production (10^4 tons)</td>
<td>3748</td>
<td>5000</td>
<td>5.93</td>
</tr>
<tr>
<td></td>
<td>Aquatic production (10^4 tons)</td>
<td>5373</td>
<td>&gt;6000</td>
<td>&gt;2.23</td>
</tr>
<tr>
<td></td>
<td>Overall pass rate of agricultural product quality and safety routine monitoring (%)</td>
<td>94.8</td>
<td>&gt;96</td>
<td>&gt;1.2</td>
</tr>
<tr>
<td>Agricultural structure</td>
<td>Proportion of animal husbandry vs. overall agricultural output (%)</td>
<td>30</td>
<td>36</td>
<td>[6]</td>
</tr>
<tr>
<td></td>
<td>Proportion of fishery vs. overall agricultural output (%)</td>
<td>9.3</td>
<td>10</td>
<td>[0.7]</td>
</tr>
<tr>
<td></td>
<td>Proportion of agro-industry vs. overall agricultural output (%)</td>
<td>1.7</td>
<td>2.2</td>
<td>[0.5]</td>
</tr>
<tr>
<td>Agricultural material&amp; Equipment</td>
<td>New effective irrigation area (10^4 Mu)</td>
<td>0.5</td>
<td>0.53</td>
<td>[4000]</td>
</tr>
<tr>
<td></td>
<td>Effective utilization coefficient of irrigation water</td>
<td>9.2</td>
<td>10</td>
<td>[0.03]</td>
</tr>
<tr>
<td></td>
<td>Gross power of agricultural machinery (10^8 KW)</td>
<td>52</td>
<td>60</td>
<td>[8]</td>
</tr>
<tr>
<td></td>
<td>Overall mechanization level of farming (%)</td>
<td>52</td>
<td>&gt;55</td>
<td>[3]</td>
</tr>
<tr>
<td></td>
<td>The contribution rate of technology (%)</td>
<td>820</td>
<td>1300</td>
<td>6.8</td>
</tr>
<tr>
<td>Agricultural technology</td>
<td>Total number of rural talents (10^6)</td>
<td>52</td>
<td>&gt;55</td>
<td>[3]</td>
</tr>
<tr>
<td></td>
<td>Annual growth rate of value added of farming, forestry, animal</td>
<td>1.07</td>
<td>1.3</td>
<td>3.97</td>
</tr>
<tr>
<td></td>
<td>Rate of large scale cow farming (annual herds &gt; 100) (%)</td>
<td>28</td>
<td>&gt;38</td>
<td>&gt;[10]</td>
</tr>
<tr>
<td></td>
<td>Rate of large scale pig farming (annual slaughter &gt; 500) (%)</td>
<td>35</td>
<td>50</td>
<td>&gt;[15]</td>
</tr>
<tr>
<td></td>
<td>Biogas penetration rate of suitable famers (%)</td>
<td>33</td>
<td>&gt;50</td>
<td>&gt;[17]</td>
</tr>
<tr>
<td></td>
<td>Comprehensive utilization of crop straw (%)</td>
<td>70.2</td>
<td>&gt;80</td>
<td>&gt;[9.8]</td>
</tr>
<tr>
<td>Agricultural ecological environment</td>
<td>Tranferred agricultural labor forces (10^4)</td>
<td>5919</td>
<td>&gt;8310</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Net income per capita of rural residents (Yuan)</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. [ ] gives accumulated values in 5 years; 2. a total number of 8.2 million rural talents as the base number of 2008; 3. the absolute value of average net income per capita of rural residents is calculated based on prices in 2010, and growth rate is calculated with comparable prices.


3. CHINA’S AGRICULTURAL POLICY FRAMEWORK

Since 1950s, Chinese government has implemented a series of policies and measures for agriculture according to the national economic and agricultural development in different periods. After 30 years’ development of reform and opening up, China’s agricultural policy has formed a relatively complete framework. This framework generally consists of three major categories: basic agricultural policies, policies to support agricultural production, and policies to protect agricultural benefits.² (Figure 1)

Figure 1 Current framework of China’s agricultural policy

3.1 Basic agricultural policies

3.1.1 Basic rural management system

An important historical experience of China’s rural reform is to insist on the basic rural management system created by millions of peasants, which adapts to the socialist economic system and accord with China’s agricultural production features. The dual
management system, basing itself on the family contractual operation, is a fundamental management system for Chinese countryside. The main elements of this policy are: collective ownership of rural lands and other major means of production, basis of family contractual operation, land contractual management rights which can be transferred according to laws, enhancement on collective organization services, and support on the various types of cooperation with farmers, etc. In 2003, NPC Standing Committee passed the “Land contract law of the people's Republic of China”, which conducted a systematic review and improvement of land contract policies at a legal dimension since the family contractual operation system. Meetings of CPC and NPC since 2004 have proposed to continue to “stabilized and improve the basic rural management system”. Therefore, the dual management system, basing itself on the family contractual operation, is the most important institutional achievement on China’s rural reform, the cornerstone of the rural policy, and the foundation of various specific agricultural policies.

3.1.2 Farmland protection policy

Farmland resource constraint is the “bottleneck” and “short board” of China’s agricultural development and China has taken the farmland protection as the long-term basic nation policy. When talking about farmland protection, the core content is to maintain the quantity and improve the quality of the farmland, including establishing the basic farmland protection system, implementing the most stringent farmland protection system, strengthening the farmland quality improvement, and improving the land requisition system, etc. Article 4 of “The land administration law of the people's Republic of China” states that “It shall rigidly restrict conversion of land for agriculture to land for construction, keep the total area of land for construction under control and give special protection to cultivated land”. In 2003, implementing the most stringent farmland system was proposed in the 16th third plenum of the CPC. In 2008, the 17th third plenum of CPC emphasized to “improve the strictly regulated rural land management system”. In 2002, the new “National modern agriculture development plan (2011-2015)” stated that “continue to implement the most stringent farmland protection system, strengthen the farmland quality improvement, make sure to keep the amount of arable land at 1.818 billion Mu, and the amount of farmland not less than 1.56 million Mu”.

3.1.3 Food security policy

Chinese government has paid great attention to food security. Since 1980s, the government has implemented a series of policies and measures to benefit the food development: adhere to the principle that meeting demand with domestic production;
implement governor responsibility system of food; improve comprehensive production capacity of food; increase the input to agriculture and food fields; improve financial awards policy; highly strengthen agricultural technology innovation and application; strengthen protection of arable land, water resource and other primary elements for production; improve the reform of food circulation system; promote the food price protection; improve the policy of the regulatory mechanism of food reserves; and establish the food security policy system that obey the rules of market economy. The contents of the policies have been in a prime position in the No. 1 document of CPC central committee since 2004. In the background of global food crisis, the 17th third plenum of CPC stated that ensuring the national food security and effective supply of major agricultural products is necessary. “The national modern agricultural development plan (2011-2015)” further implemented strategic objectives of steady development of grain, cotton, oil, and sugar, to ensure the national food security.

3.2 Agricultural production supporting policies

3.2.1 Agricultural structural adjustment policy

The main content of the agricultural structural adjustment policy are: promote the upgrading and optimization of industrial structure of agriculture; promote the arrangement optimization of the main area; promote the improvement of agricultural product quality; promote the development of agricultural industrialization; strengthen agricultural research and technology; and construct the structural adjustment supporting system of agricultural industrialization, etc. Before 1990s, the major objective of the agricultural structural adjustment policy is to never relax grain production, and actively carry out a variety of business. Since 1992, the central committee declared to be guided by the market, accelerate the development of productive, high quality, efficient agriculture, and promote the regionalization, specialization, and commercialization of agricultural production. The agricultural structural adjustment focused on grain and cotton production, “non-staple food project” and the effective supply of agricultural products. Since 2000, the central committee has declared to include developing product processing and ensuring the product quality and safety in the main content of the agricultural structural adjustment, and take improving the quality and efficiency, and realizing sustainable agricultural development as the target of the structural adjustment. In 2006, the No. 1 document stated that “adjust the agricultural structure according to requirement on the high productivity, high quality, high efficiency, ecology, and safety”. In 2009, government support growing oil plants, cotton and other economic crops in advantageous areas, and started to implement a new round of arrangement of agricultural advantageous area. In 2003, the No. 1 document again proposed to “adhere to area stabilization, structural optimization, and unit output improvement in grain production”,
and continue to support the construction of production base of cotton, oil and sugar plants in the advantageous area.

3.2.2 Agricultural product quality and safety policy

Since 1980s, the food quality problem has been more and more serious, as the pressure of food quantity problem got relaxed. As a result, China implemented a series of policies and measures, including: establish monitoring system on product quality, quality certification and labeling system, product quality standards system, safe production supporting system, and product quality traceability system, etc. Since the 21st century, China has started to formulate rules and provisions relating to agricultural product quality in the law dimension. April 29th 2006, the “Quality and safety law of the people's Republic of China Agricultural Products” was passed in 21st meeting of the 10th standing committee of NPC. This was a milestone in the history of China’s agricultural product quality and safety control, and it stated that “the country shall establish and improve standards of agricultural products quality and safety”. The product quality and safety issues were considered seriously in the No. 1 documents in the new century: arranged product quality and safety tasks comprehensively (2005); proposed “development of healthy aquaculture” (2007); proposed to “strengthen agricultural standardization and product quality and safety” (2008); proposed to “strictly monitor the product quality and safety” (2009); proposed to “accelerate the construction of the monitor and inspection system of product quality and safety, and actively develop pollution-free, green and organic food” (2010); and emphasized to reform and improve the food safety regulatory system, and implementation of regulatory responsibility from the farm to the table, etc.

3.2.3 Agricultural taxes policy

Agricultural taxes are the taxes levied by the government from all companies and individuals working on agricultural production and have agricultural income. The taxes policy, from June 3rd 1958 when “The agricultural tax regulations of the people's Republic of China” was first passed in the 96th meeting of the Standing Committee of the first NPC to the end of 20th century, has made a significant contribution to the development of the country, but it has also accumulated a large number of agricultural and rural conflicts. In the new century, from the trial operation in Anhui in 2000, to nationwide operation in 2003, China started the reform the taxes policy aiming to reduce farmers’ burden. Starting from 2004, the taxes reform went into a deeper stage, all or part of the agricultural taxes were waived in 8 provinces including Jilin and Heilongjiang, and the agricultural taxes were reduced by 3% in 11 major grain producing areas such as Hebei, and by 1% in other areas. In 2005, all
agricultural taxes were waived in 28 provinces, and were reduced to 2% or less in Hebei, Shandong, and Yunnan. December 29th 2005, the 19th meeting of the Standing Committee of the 10th NPC decided to abolish “agricultural tax regulations” from January 1st 2006, abolish taxes on special agricultural products except for tobacco, and abolish all livestock tax. From December 1st 2010, all toll roads nationwide (including independent toll bridges and tunnels) were included in the network of “easy access” of fresh agricultural product transportation, and vehicles legally loaded with fresh and live agricultural products are allowed to run across china free of tolls. From January 1st 2010, value-added tax in the link of vegetable circulation was exempted. The current main policies and measures include: the abolition of agricultural tax, special agricultural product tax, slaughter tax, and property tax, cancelling "three deductions" and the "five charges", cancelling systems of labor accumulation and volunteer work, and promoting coordinated reform.

3.2.4 Agricultural subsidy policy

Currently, China generally is in the development stage of “promoting agriculture with industry, rural area with urban”. The state government has implemented basic policies of “industry nurturing agriculture, city supporting countryside” and “giving more, taking less and loosening control”, and a agricultural subsidy policy system is initially formed, focusing on grain production, farmer’s income, and environment protection, combining comprehensive and specialized subsidies, and covering contents including infrastructure construction, seeds, agricultural machinery, agricultural products, production technology, and disaster relief, etc. In 2004 direct subsidy for grain farmers were fully implemented nationwide, and in 2012 the grain farmer subsidy came up to 15.1 billion Yuan. In 2006, the state took the fuel price adjustment as an opportunity, and established the comprehensive agricultural price subsidy system. The subsidy fund in the same year was 12 billion Yuan, and increase to 107.8 billion Yuan in 2012. In 2009, the agricultural subsidy was greatly increased, full coverage of seed subsidy was realized for rice, wheat, corn and cotton, and the scale of seed subsidy for canola and soybean was also expanded. In 2010, scale of subsidy for potato farming was expanded, highland barley seed subsidy was started, peanut seed subsidy was started in trial areas, and animal husbandry, forestry and drought control, and water-saving machinery were included in the scope of subsidy for agricultural machinery and tool purchase. From 2004 to 2012, the funds for agricultural “Four Subsidys” kept increasing, and were accumulated to 166.8 billion Yuan by 2012.
### Table 2: Agricultural “Four subsidy” funds in 2004 – 2012 (unit 10^8 Yuan)

<table>
<thead>
<tr>
<th>Year</th>
<th>Grain subsidy</th>
<th>Seed subsidy</th>
<th>Agricultural machinery subsidy</th>
<th>Agricultural comprehensive subsidy</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>116</td>
<td>28.52</td>
<td>0.7</td>
<td>–</td>
<td>145.22</td>
</tr>
<tr>
<td>2005</td>
<td>132</td>
<td>37.52</td>
<td>3</td>
<td>–</td>
<td>172.52</td>
</tr>
<tr>
<td>2006</td>
<td>142</td>
<td>41.54</td>
<td>6</td>
<td>120</td>
<td>309.54</td>
</tr>
<tr>
<td>2007</td>
<td>151</td>
<td>66.60</td>
<td>20</td>
<td>276</td>
<td>513.60</td>
</tr>
<tr>
<td>2008</td>
<td>151</td>
<td>123.40</td>
<td>40</td>
<td>716</td>
<td>1030.40</td>
</tr>
<tr>
<td>2009</td>
<td>190</td>
<td>198.50</td>
<td>130</td>
<td>756</td>
<td>1274.50</td>
</tr>
<tr>
<td>2010</td>
<td>151</td>
<td>204</td>
<td>155</td>
<td>835</td>
<td>1345</td>
</tr>
<tr>
<td>2011</td>
<td>151</td>
<td>220</td>
<td>175</td>
<td>860</td>
<td>1406</td>
</tr>
<tr>
<td>2012</td>
<td>151</td>
<td>224</td>
<td>215</td>
<td>1078</td>
<td>1668</td>
</tr>
</tbody>
</table>

Source: 2013 Chinese Agricultural Yearbook” and 2013 Chinese agricultural development report

#### 3.2.5 Agricultural product marketing policy

After 20 years of reform, China agricultural product market has formed a complete market circulation system by the end of the 20th century. In the new century, the main content of agricultural product market circulation included: establish diversified market main body, promote diversity of circulation modes; improve construction of various types of markets, construct nationwide circulation network; improve agricultural product quality monitor, and improve the market macro-control capacity. “The national modern agricultural development plan (2011-2015)” proposed to improve the infrastructure construction of circulation and guidance of marketing information, upgrade and reconstruct the agricultural product wholesale market; develop new forms of circulation, promote production with orders and integrate with agriculture and supermarket, implement “easy access” policy for transportation of fresh/live agricultural products, reduce costs of product circulation, and standardize and improve the agricultural futures market. In 2012, the state council issued “opinion on deepening the reform of circulation system and accelerating the development of circulation industry”, and supported to construction and renovation of nonprofit agricultural products wholesale markets, farmers markets, vegetable markets, community markets, and fair price markets, as well as major merchandise reserve facilities, large logistics distribution center, and agricultural products cold chain logistics facilities, etc. In 2013, the No. 1 document again stressed the need to “improve the efficiency of agricultural products circulation”, continue to implement “transport grain from north to south”, “transport vegetable from south to north”, “transport fruit from west to east”, rural retail network developing project, and the new rural modern circulation network project, and construct comprehensive demonstration zone of modern circulation of agricultural products.
3.2.6 Agricultural science and technology policy

Science and technology is the key element of agricultural development. Since the new century, the main content of China’s agricultural technology policy includes: make breakthroughs on major technical problems relating to agricultural economics and development, support agricultural high-tech development, strengthen the research on agricultural foundations and applications, actively promote technical achievements and advanced applicable technology, promote the development of agricultural technology enterprises, and support research on agricultural policies, etc. Major related agricultural technology includes: animal and plant genetics and breeding technology, cultivation and breeding technology, major pest and disease control technology, mid- and low-yield field improve and regional agricultural comprehensive development technology, Agricultural mechanization and facilities technology, and biotechnology. From 2004 to now, there are year-to-year differences on the focus of agricultural technology policies (table 3). For example, the focus was the construction of national agricultural technology innovation system in 2007; it was to improve the ability of the agricultural technology promotion in 2010; and it was to support agriculture with meteorological, hydrological and hydraulic technology in 2011. The core idea is about the research and development, conversion, promotion and application of the agricultural technology. And the fundamental purpose is to promote the sustainable and stable development of China's agricultural economy and rural society.

### Table 3 annual focus of China’s Agricultural technology policy

<table>
<thead>
<tr>
<th>Year</th>
<th>Focus of the agricultural technology policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>Reform of agricultural science and technology system</td>
</tr>
<tr>
<td>2005</td>
<td>Improve agricultural technology</td>
</tr>
<tr>
<td>2006</td>
<td>Greatly enhance the ability of agricultural technology innovation and transformation</td>
</tr>
<tr>
<td>2007</td>
<td>Strengthening agricultural technology innovation system construction</td>
</tr>
<tr>
<td>2008</td>
<td>Accelerate the development and application of agricultural technology</td>
</tr>
<tr>
<td>2009</td>
<td>Increase investment in agricultural technology</td>
</tr>
<tr>
<td>2010</td>
<td>Improve the promotion ability of agricultural technology</td>
</tr>
<tr>
<td>2011</td>
<td>Strengthen the support for hydrometeorology and water conservatory technology</td>
</tr>
<tr>
<td>2012</td>
<td>Develop modern agriculture relying on technology innovation</td>
</tr>
<tr>
<td>2013</td>
<td>Improve the conditions of agricultural technology innovation capacity</td>
</tr>
</tbody>
</table>

Source: No.1 Documents from 2004-2013

3.2.7 Rural finance policy

Since 2000, the state has formulated a series of policies and measures of the construction of rural financial system, including improving fiscal support policy and monetary policy support of rural finance, actively developing rural insurance and
cooperative foundations, gradually establishing rural disaster compensation system, strengthening the rural financial law system, supporting rural finance policy in the law dimension, standardizing and systematizing the finances, taxation, monetary support policy and agricultural insurance etc. Since 2004, the state has clarified the obligations of county financial institution to serve “agriculture, farmer and rural areas”, focus on improve the quality of rural service area, and vigorously implement agricultural insurance policy. Since 2007, trial operations of agricultural insurance premium subsidy were carried out in Inner Mongolia, Jilin, Jiangsu, Hunan, Sichuan and Xinjiang provinces, with 2.1 billion Yuan arranged mainly focusing on grain, cotton and oil crops and sow insurance premium subsidy. In 2011, the state-arranged agricultural insurance premium subsidy came to 2.1 million Yuan. In 2012, the agricultural insurance policy was further improved, the supporting efforts to the agricultural insurance were increased, and the types of insurance premium subsidy were increased. On the basis of present 14 types of central financial insurance subsidy, sugar plants were taken into the scope of insurance subsidy; agricultural insurance subsidy was implemented in selected trial areas; and subsidy was issued to farmers developing equipped agriculture. In 2013, the state further proposed to “improve rural financial services”, fully give play to the role of policy finance and cooperative finance, innovate financial products and services, Strengthen effective cooperation of fiscal leverage and financial policies, support the social capital to participate in the establishment of new rural financial institutions, and establish of multi-level, multi form agriculture credit guarantee system.

3.2.8 Agricultural labor transfer and employment policy

In the past relatively long time, China’s policy was to prohibit farmers to work in the cities, and implemented various policies restricting farmers to work in cities. Since 21st century, policies on rural labor transfer and employment were actively changed, including: rural labor transfer and employment service, rural labor benefit protection, rural labor transfer and employment training, rural labor living condition improvement, and solving education problems for rural labors. In January 2002,CPC Central Committee and State Council in “opinions on works related to agriculture and rural area in 2002” proposed for the first time the policies on rural labors working in cities as “Fair treatment, reasonable guidance, perfect management, good service”. In January 2003, Office of the State Council issued the "notice concerning managing and serving rural migrant workers”, and proposed to abolish unreasonable restrictions on migrant farmers employment, and arrange with multiple ways for migrant workers’ children’s education. In April 2003, the State Council announced the "Regulations of insurance for occupational injury” and the rural migrant workers for the first time were covered in the insurance scope. In September 2003, the Ministry of agriculture and other departments launched the rural labor transfer training “sunshine
3.2.9 Agricultural infrastructure construction policy

Agricultural infrastructure generally include: irrigation and water conservancy construction, rural power grid construction, rural road construction, agricultural product circulation equipment construction, commodity grain and cotton production base, timber production base and the construction of protection forest and rural education, health, drinking water, research, technology promotion and meteorological infrastructure construction. Strengthening agricultural infrastructure construction is one of the important measures to promote rural economic development, and promote the modernization of agriculture. In recent years, China strengthened agricultural infrastructure construction focusing on farmland water conservancy, increased investment in agricultural infrastructure, issued a series of policies and measures, and the main contents include: increased financial investment in agricultural infrastructure construction, implemented comprehensive agricultural development, guided social capital investment in agricultural infrastructure construction, promoted balanced regional development, and reformed rural small-scale infrastructure and other property rights system. In 2010, No. 1 document proposed to focus on the construction of water conservancy infrastructure, promotion of the construction of high standard farmland, construction of protective screen of the ecology. “The national modern agricultural development plan (2011 - 2015)” proposed the goal to “improve agricultural infrastructure and equipment conditions”. Therefore, the government will continue to increase the intensity of public finance coverage of rural infrastructure, and gradually establish investment protection and operation management mechanism.

3.3 Agricultural benefit protection policies

3.3.1 Agricultural product price protection policy

Before the reform and opening up, China’s agricultural product prices were set by the government with the low purchase price policy, and the agricultural surplus were transferred to industry through the "price scissors" approach with the price difference between
agricultural and industrial products, supporting national industrialization development. Since the reform and opening up, the agricultural product market was gradually open up, price protection policy for grain and other major agricultural products was implemented from 1990’s, and the price maintaining policy for grain and other major agricultural products was gradually established to implement the minimum purchase price (table 5). In 2009, No.1 document proposed to “keep the agricultural product price at a reasonable level”, and keep increasing the minimum purchase prices of grain. "The national modern agricultural development plan (2011-2015 years)” proposed to improve the control mechanism of the agricultural product market. Steadily increase in the minimum purchase price of rice and wheat, improve temporary collection and storage policy for corn, soybeans, rapeseed, cotton and other agricultural products. Improve the throughput of major agricultural products and regulation mechanism, improve the important agricultural products storage system, and stabilized the market with the help of major enterprise. Continue to strengthen the construction of market monitor and alert system of pigs, vegetables and other major “food basket” product, improve the control plan for pig, cotton, sugar and border selling tea, and formulate control measures of fresh agricultural products. Provincial governors and mayors held directly responsible for ensuring basic food supplies.

Table 5 Minimum purchase prices of major grain products in 2004 to 2012 (Yuan/50kg)

<table>
<thead>
<tr>
<th>Year</th>
<th>Early indica rice</th>
<th>Late indica rice</th>
<th>Japonica rice</th>
<th>White wheat</th>
<th>Red wheat</th>
<th>Hybrid wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>70</td>
<td>72</td>
<td>75</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2005</td>
<td>70</td>
<td>72</td>
<td>75</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2006</td>
<td>70</td>
<td>72</td>
<td>75</td>
<td>72</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>2007</td>
<td>70</td>
<td>72</td>
<td>75</td>
<td>72</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td>2008</td>
<td>77</td>
<td>79</td>
<td>82</td>
<td>77</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>2009</td>
<td>90</td>
<td>92</td>
<td>95</td>
<td>87</td>
<td>83</td>
<td>83</td>
</tr>
<tr>
<td>2010</td>
<td>93</td>
<td>97</td>
<td>105</td>
<td>90</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td>2011</td>
<td>102</td>
<td>107</td>
<td>128</td>
<td>95</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>2012</td>
<td>120</td>
<td>125</td>
<td>140</td>
<td>102</td>
<td>102</td>
<td>102</td>
</tr>
</tbody>
</table>

Source: 2013 China agricultural development report

3.3.2 Agricultural product trading policy

Agricultural trade policy include: import policy, export policy, regional free trade policy. In 2004, No. 1 document proposed to “to expand the export of competitive agricultural products” and further improve the policies and measures to promote export of China’s competitive agricultural products. Encourage and guide agricultural export processing enterprises to go to export processing trade zone. Strengthen international negotiation process, sign bilateral quarantine and beneficial trade agreements with major market countries and regions. Accelerate the establishment of industry and trade associations for healthy poultry, vegetables, fruits and other key agricultural exports. In 2009, No. 1
document proposed to grasp the timing and rhythm of the import and export of major agricultural products, support competitive agricultural exports, and prevent the impact of excessive imports of some varieties to the domestic market. In 2010, the No. 1 document, from the view of improving the opening up level of agriculture, supported the export of competitive products and provided convenience and benefits to export clearance, inspection and quarantine. "The national modern agricultural development plan (2011-2015 years)" issued in 2012 implemented the following policies on agricultural product trade: promote agricultural cooperation with foreign countries, improve the quality of the agricultural “bringing-in”, broaden the channels of agricultural “going-out”, strengthen the international trade of agricultural products, strengthen bilateral, multilateral and regional negotiations, formulate international trade rules relating to agriculture, establish systems of foreign operations of agricultural products and production means access which comply with WTO policies, actively respond to international trade conflicts, support industry associations to protect benefits and rights of businesses, and further improve the agricultural loss alert mechanism. Utilize relevant measures in line with WTO rules, and regulate import and export of agricultural products flexibly and effectively.

3.3.3 Agricultural resources and environment protection policy

Since the reform and opening up, China has paid great attention to agricultural resource utilization and environmental protection, has taken agricultural resources and environmental protection into the entire agenda of economic and social development, has rationally developed and effectively protected arable land, fresh water, grasslands, fisheries and agricultural waste resources, and has implemented a series of policy measures on energy saving and emission reduction. The main content includes: rational utilization and protection of water resources, rational utilization and protection of grassland resources, fishery resources utilization and ecological protection, returning farmland to forest (grass) project, farmland shelterbelt construction, rural renewable energy development, energy saving in rural life and production, and development of circulation agriculture. In 2010, No. 1 document proposed to “build strong protective screen of ecology”, continue to promote the forestry ecology project construction, vigorously increase forest carbon sink, strengthen the agricultural area pollution control, and develop circulating agriculture and ecological agriculture. In 2013 No.1 document proposed to “promote the construction of ecological civilization in rural areas”, strengthen the rural ecological construction, environmental protection and comprehensive improvement, and strive to build a beautiful countryside.
3.3.4 Rural development and poverty support policy

Since late 1970’s, Chinese government has implemented a large-scale, scheduled and organized poverty support development focusing on solving food and clothing problems for rural poor. In the 21st century, the Chinese government implemented new poverty support policy based on the national conditions that rural poverty still exists in the new stage of well-off society. In 2001, “outline Chinese rural poverty alleviation and development (2001-2010)” was published. In 2004, the state proposed to focus on solving problems of living and production difficulties of rural poverty population and disaster affected population, in 2006, the state proposed to implement the mode of all-village development according to local conditions, in 2008, No. 1 document proposed to encourage the society to participate in poverty alleviation and development, and in 2010, the state proposed to fully implement the poverty support policy for rural low-income population. In November 2011, the CPC Central Committee and the State Council issued “compendium of Chinese rural poverty alleviation and development (2011－2020)”, which was is a programmatic document guiding China poverty alleviation and development for a period in the future work. The goal was: by 2020, the rural poverty population should have no problems in food, clothing, education, basic medical care and housing. The growth rate of per capita net income of farmers in poverty areas is higher than the national average, major indicators of basic public services are close to the national average, and reverse the growing gap trend. The national poverty alleviation standard was gradually increased from 865 Yuan in 2000 to 1274 Yuan in 2010. In 2011, the state further increased the standard greatly to 2300 Yuan (355.6 US dollars).

4. THE ACHIEVEMENTS AND CHALLENGES OF CHINA'S AGRICULTURAL POLICY

4.1 Major achievements of agricultural policy

Since the reform and opening up, Chinese government has fully promoted the innovation of practice, theory and system of “Sannong”, implemented a series of important policies such as “giving more, taking less and loosening control” and “industry nurturing agriculture, city supporting countryside”, constructed frameworks of systems of agricultural production management, agriculture support and protection, rural social security, and coordinated development of rural and urban areas. Agricultural production has been greatly developed, the countryside has been greatly improved, and the peasants have got a lot of benefits. In details, the achievements are as following:

Firstly, the demand and supply of grain and other agricultural products has been stabilized. This is a contribution to all Chinese citizens as well as the world. China is raising 21% of the world population with less than 9% of the world’s farmland. From 2004 to 2013,
China’s food production has achieved continuous growth for 10 years.

Secondly, the reform of the agricultural taxes and fees has greatly reduced farmers’ burden. Since the cancellation of agricultural taxes in 2006, the burden of farmers was reduced by 133.5 billion Yuan every year. The four types of agricultural subsidy funds arranged by central finance has been increased from 0.33 billion Yuan in 2003 to 140.6 billion Yuan in 2011. At the meantime, from 2004 to 2011, grain reserve expenditure was arranged to be 208.9 billion Yuan by the central finance, which ensured the fast growth of farmers’ production for 10 years.

Thirdly, the weak financial support for agriculture has been improved systematically. The central finance expenditure for “agriculture, peasants and rural areas” was increased from 145.67 billion Yuan in 2001 to 1379.9 billion Yuan in 2013, and the average annual increment was more than 20%.

Fourthly, the food and clothing problems of rural poverty have been generally solved. In the first 10 years of this century, the national standard of rural poverty support was increased from 865 Yuan in 2000 to 1274 Yuan in 2010, and rural poverty population based on this standard was reduced from 94220 thousand in 2000 to 26880 thousand in 2010; rural poverty rate was reduced from 10.2% in 2000 to 2.8% in 2010. (New standard was established after 2011)

Fifthly, the international trade of agricultural products contributes more and more to the country and worldwide. China’s agricultural product market has been changed from a highly protected market into a free market. China has become one of the countries with minimal intervention on agricultural trade. From 2000 to 2013, the total amount of China’s imported and exported agricultural products were increased from 16.95 billion dollars to 186.69 billion dollars.

In general, it is proved that the guideline of rural reform and development formulated by CPC and the government was correct, and the policies to benefit and develop agriculture were useful and efficient.

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditure for agriculture (10^8 Yuan)</th>
<th>Total food production (10^4 ton)</th>
<th>Farmers’ net income per capita (Yuan)</th>
<th>Total amount of import and export products (10^8 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>—</td>
<td>46218</td>
<td>2253</td>
<td>269.5</td>
</tr>
<tr>
<td>2001</td>
<td>—</td>
<td>45264</td>
<td>2366</td>
<td>279.0</td>
</tr>
<tr>
<td>2002</td>
<td>—</td>
<td>45706</td>
<td>2476</td>
<td>305.9</td>
</tr>
<tr>
<td>2003</td>
<td>2144.2</td>
<td>43070</td>
<td>2622</td>
<td>403.6</td>
</tr>
<tr>
<td>2004</td>
<td>2626.2</td>
<td>46947</td>
<td>2936</td>
<td>514.2</td>
</tr>
<tr>
<td>2005</td>
<td>2975.3</td>
<td>48402</td>
<td>3255</td>
<td>562.9</td>
</tr>
<tr>
<td>2006</td>
<td>3517.2</td>
<td>49804</td>
<td>3587</td>
<td>634.8</td>
</tr>
<tr>
<td>Year</td>
<td>Expenditure for agriculture (10^8 Yuan)</td>
<td>Total food production (10^4 ton)</td>
<td>Farmers’ net income per capita (Yuan)</td>
<td>Total amount of import and export products (10^8 dollars)</td>
</tr>
<tr>
<td>------</td>
<td>----------------------------------------</td>
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<td>-------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>2007</td>
<td>4318.3</td>
<td>50160</td>
<td>4140</td>
<td>781.0</td>
</tr>
<tr>
<td>2008</td>
<td>5955.5</td>
<td>52871</td>
<td>4761</td>
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</tr>
<tr>
<td>2009</td>
<td>7253.1</td>
<td>53082</td>
<td>5153</td>
<td>921.3</td>
</tr>
<tr>
<td>2010</td>
<td>8579.7</td>
<td>54648</td>
<td>5919</td>
<td>1219.6</td>
</tr>
<tr>
<td>2011</td>
<td>10497.7</td>
<td>57121</td>
<td>6977</td>
<td>1556.2</td>
</tr>
<tr>
<td>2012</td>
<td>12286.6</td>
<td>58957</td>
<td>7917</td>
<td>1757.7</td>
</tr>
<tr>
<td>2013</td>
<td>13799.0</td>
<td>60194</td>
<td>8896</td>
<td>1866.9</td>
</tr>
</tbody>
</table>

Source: 2013 China agricultural development report and online data source

4.2 Recent challenges of agriculture development

Challenges go with the achievements. Especially in the recent 5 years, the development of China’s agriculture has faced new challenges.

Firstly, as the further accelerated development of industrialization and urbanization, the agricultural modernization was expected to keep up the pace. From 2001 to 2010, the increment of industry was increased from 4358.1 billion Yuan to 16003 billion Yuan, and the percentage of urban population was increased from 37.7% to 49.7%. However, the agricultural modernization construction was apparently lagged behind the industrialization and urbanization. The foundation of agriculture was still weak, the restriction of farmland and water resource was getting more serious, the deterioration of agricultural ecological environment has not changed fundamentally, the construction of farmland infrastructure was underdeveloped, machinery and equipment level was not high, and overall quality of agricultural management was low.

Secondly, the demand and supply of major products may keep in a tight balance, and pressure of certain varieties is further increased. From 2000 to 2010, the import of soybean, corn, cotton and oil plants was increased from 10420, 0.3, 50, and 1790 thousand tons to 54800, 1572.4, 2840, and 6870 thousand tons respectively. The demand and production gap was gradually increased.

Thirdly, agricultural product prices will remain high, and the difficulty of regulation is increased. As the fast development of industrialization and urbanization, the competition in labor forces and farmlands is getting serious between agricultural and non-agricultural production, rural and urban areas. The costs of agricultural labor and land are further increased. Influenced by the international energy price, the prices of fertilizer, machinery and pesticide are also increasing. This will lead to a continuous high price of agricultural products. At the meantime, the number of unknown factors that influence the prices is increasing, as well as the factors affecting price regulation which make it more difficult.
Fourthly, the organization, large scale and cluster of agriculture are getting more significant, and the tasks of agricultural social service system are getting heavier. With higher government support level, enhanced cooperative awareness of farmers and faster transfer of land, the number of farmer cooperative business organizations keeps increasing and the scale keeps getting larger. By the first half of 2011, the transferred land area took 6.2% of the total area of contracted farmland, which is 11% higher than that of 2007. In addition, China’s agricultural production management activities start to appear obvious trend of cluster, such as vegetable production cluster in Shouguang, Shandong, and Fruit production cluster in Yangshan, Anhui. The corresponding tasks of agricultural social service system are heavier. The infrastructure for water, power, road, gas, and housing services still cannot match with the organized, large-scale and clustered modern agriculture.

Fifthly, agricultural technology and innovation is further improved, but is still relatively underdeveloped. Although China still has a lower contribution rate of agricultural technology compared to the developed countries in Europe and America. Also, the contribution rates in different areas are unbalanced, for example, in 2010 the contribution rate of technology in Beijing was 70% while in some other regions the rates were only 30% - 40%.

Sixthly, the opening up of agriculture is further expanded, and the production security is more serious. With the higher level of opening up of agriculture, the domestic market is impacted by the low price foreign products. The foreign investments have got greater and greater control of the domestic seed and fertilizer business, and the multinational corporations have more and more influences on the import and export of China’s agricultural products. These changes not only increase the difficulty of macro-regulation of the state, but also bring greater challenges to the production security of China’s agriculture.

Seventhly, the process of migrant workers citizenry is accelerated, while the difficulties in developing rural social business and regulation are greater. With a lot of young and talented workers moving out of the countryside, the rural areas have serious problems with higher rate of aged, maternal, child, and less talented workers. This would not only affect the effective supply of rural public goods, but also bring challenges to rural pension, medical and education. In addition, the loss of rural elites would lead to risks to social stability.

Eighthly, the farmers’ income is increasing steadily, and the pressure of increasing income is getting higher. With the help of the policy of increasing agricultural product prices and farmers’ wages, the farmers’ income is increasing steadily. But the pressure to increase the income is higher: the cost of agricultural products is increasing, the space of income increase from household business is smaller, the financial crisis is challenging the stability of employment, the pressure to increase wages is higher, the reform of land property rights has
far to go, property income is still uncertain, and transferred income is limited with the restriction of WTO rules and the national finance.

5. NEW MEASURES OF CHINA AGRICULTURAL POLICIES

5.1 New agriculture development strategies

It is because of China's agriculture is facing many new challenges, the new CPC central committee and the Chinese government proposed new thoughts for further deepen reform and promote “Sannong” development. The main idea reflected in the 18th CPC congress report in 2012 and the 3rd plenary session of the 18th CPC central committee resolution in 2013. According to these political documents, the core concept of the Chinese government to promote the development of agriculture and rural economy can be summarized as “urban-rural integration”, and its official statement is “must improve institutional mechanisms, in order to promote the formation of the new agricultural-industrial and urban-rural relationship, in which agriculture is advanced by industry, rural areas is supported by cities, agriculture and industry are mutual beneficial, urban and rural areas are integrated, so that the majority of farmers can equally participate in the process of modernization and share the fruits of modern”. This concept consists of the following four aspects:

Firstly, accelerate the building of a new agricultural management system based on a mix of family, collective, cooperative and enterprise operations. Land-contracting rights will be protected. Farmers are allowed to become shareholders in the agriculture-industrialization via their land-contracting rights. Private capital is encouraged to invest in a modern planting and breeding industry, and for introducing modern production and management methods.

Secondly, farmers will be given more property rights. They are encouraged to develop a shareholding system from which they can realize benefits. Meanwhile, they can also sell a share or take it as collateral or warranty. They also have the right of succession. Moreover, the homestead system in rural areas will be improved, and farmers' usufruct rights of homestead will be ensured. A pilot program will be carried out in some areas to discover other channels for improving farmers' income. A rural property-rights trading market will be established.

Thirdly, a more balanced allocation of public resources between urban and rural areas will be promoted. Migrant workers should get the same pay for the same job. Farmers should receive a fair share of the profits from land-value appreciation. Deposits in rural financial institutions should be mainly used to finance the development of agriculture and rural areas. The agricultural subsidiary system and insurance system will be improved. Social-capital investment is encouraged for construction in rural areas.
Fourthly, build a healthy urbanization that puts people at the center. Reform of the hukou (or household registration) system will be accelerated to help farmers become urban residents. The country will relax overall control of farmers settling in towns and small cities, and relax restrictions on settling in medium-sized cities in an orderly manner. China should set reasonable requirements for rural residents to obtain hukou in large cities, and strictly control the size of population in megacities. Efforts should be made to make basic urban public services available to all permanent residents in cities, including all rural residents. This includes the affordable-housing system and the social security network.

5.2 Recent agricultural policy highlights

According to the basic thinking of "urban-rural integration", the recent major agricultural policies are mainly reflected in the No.1 document of 2014. The specific measures include the following nine aspects.

5.2.1 Food security and safety

a) Perfect the national grain security strategy under the new situation.

Holding the rice bowl firmly in own hands is a basic policy that China must be adhered to in governing the country for a long time to come. Comprehensively consider the domestic conditions of resources and the environment, the grain supply and demand pattern and changes in the international trade environment and implement a national grain security strategy that takes our side as the dominant factor, bases itself on our own country, guarantees the production capacity, imports appropriately and has the support of science and technology. At no time should domestic grain production be relaxed, the red line for farmland protection should be strictly guarded, permanent basic farmland should be demarcated, the comprehensive agricultural production capacity should be increased continuously, and basic self-sufficiency of grain and absolute grain ration security should be ensured. More actively use the international market of agricultural products and international agricultural resources to effectively regulate and supplement domestic grain supply. Make greater efforts to implement the “rice bag” governor responsibility system and more clearly define the responsibility and the division of work in grain security between the central government and the local governments. Main sales areas should also set a baseline for grain acreage and ensure a certain grain ration self-sufficiency rate. Strengthen the awareness of saving grain of the whole society and spread the use of facilities and technologies to save grain and reduce damage to grain in the whole process of production, distribution and consumption.
b) Strengthen supervision and control over the quality of agricultural products and food safety.

Establish the strictest food safety supervision and control system that covers the whole process, improve laws, regulations and the standards system and make sure local governments will assume their responsibility for administration under their jurisdiction and administration of main bodies in production management. **Support standard production, carry out risk monitoring and give early warning for key products, build a food tracing system and increase subsidies for expenses for quality and safety inspection and tests of wholesale markets.** Promote and speed up the establishment of a system for inspecting and testing the quality and safety of food products and agricultural products at the township and county level and the building of the supervision and control capability of townships and counties. Carry out stricter management of agricultural input products, make great efforts to set up horticultural crop standard park, carry out scale livestock and poultry breeding and healthy aquatic breeding and conduct other creative activities. Improve the evaluation and appraisal system for the work to ensure the quality of agricultural products and food safety and carry out experiments at selected points on building demonstration cities and counties.

5.2.2 Agricultural Management System innovation

a) Develop various kinds of scale management.

Encourage farm households which meet relevant requirements to transfer the management right of contract land and speed up improving the market for transferring the land management right and the three-tier service and management networks at the village, township and county levels. **Explore the establishment of a risk security fund system for the transfer of land for the use of agriculture to industrial and commercial enterprises and strictly ban the use of farmland for non-agricultural use.** In places where relevant conditions are available, awards and subsidies can be given to land transfer. In carrying out land transfer and appropriate scale management, it is necessary to respect the wish of the farmers and such acts should not be promoted in a coercive manner.

b) Support the development of new types of agricultural operators.

**Encourage the development of professional cooperation, shareholding cooperation and other forms of farmers’ cooperatives,** guide and standardize the operation of such cooperation and focus efforts on increasing capability. **Allow financial funds for projects to be directly invested in cooperatives that meet relevant requirements,** allow assets formed with financial subsidies to be held, managed and taken care of by cooperatives and departments concerned should establish a standard and transparent management system. **Promote experiments at selected points on financial support for the innovation of the**
farmers’ cooperatives and guide the development of joint cooperatives of the farmers’ professional cooperatives. Carry out registration of family farms according to the principle of free will. Encourage the development of leading enterprises of industrialized agriculture under mixed ownership, promote cluster development and establish closer benefits-linking relationship between these enterprises and farm households and farmers’ cooperatives. In the government annual quota of construction land, separately list a certain ratio especially for the construction of matching auxiliary facilities of a new type of agricultural management main bodies. Encourage local governments and non-government investment to set up financing guarantee companies to provide loan guarantee services for a new type of agricultural management main bodies. Make greater efforts to educate and train a new type of professional farmers and leaders of a new type of agricultural management main bodies. Implement and improve relevant tax preferential policies and support farmers’ cooperatives in their efforts to develop the processing and distribution of agricultural products.

c) Improve the agricultural socialized service system.

Stabilize agricultural public service institutions and improve the expenditure guarantee and achievement evaluation and encouragement mechanisms. By means of financial assistance, tax and fee preferential treatment, credit support and other measures, make great efforts to develop socialized services with diversified main bodies, various forms and full competition, promote cooperation-oriented, order-oriented, entrusted-oriented and other modes of services and expand the scope of experiments at selected points on whole-process socialized services for agricultural production. By means of the purchase of services by the government and other ways, support qualified business service organizations in their efforts to provide agricultural public welfare services. Support the development of farmers’ water cooperation organizations, flood control and drought relief professional teams, professional technology associations and a contingent of farmer brokers. Improve the rural grass-roots meteorological disaster prevention and mitigation organization system and provide direct meteorological services for a new type of agricultural management main bodies.

5.2.3 Agricultural land management

a) Improve the rural land contract policy

Stabilize the rural land contract relationships and maintain them for a long time to come. With the precondition of adhering to and improving the strictest farmland protection system, give the farmers the powers and functions of the occupation, use, benefits, transfer, as
well as the use of the contract land management right for mortgage and guarantee. On the basis of ensuring the collective ownership of rural land, stabilize the farm household contract right, relax restrictions on the land management right and allow to use the contract land management right for mortgage in financing from financial institutions. Departments concerned should seize the time study and put forward standard implementation procedures, establish a matching mechanism for the disposal of mortgaged assets and promote the amendment of laws and regulations concerned. Earnestly strengthen organization and leadership, firmly seize the confirmation, registration and certification of the rural land contract management right and fully depend on farmers in resolving contradictions and problems encountered in the work through independent consultation. Both the right and the land can be confirmed or the right and share can be confirmed without confirming the land. Expenses on the work of confirmation, registration and certification of the right should be included into local financial budgets with subsidy given by the central finance. Stabilize and improve the grassland contract management system and the work to confirm the right, to contract grassland and to demarcate basic grassland should be basically completed in 2015. Earnestly protect the land contract right and benefits of women. Strengthen the building of the rural operation and management system. Deepen the comprehensive rural reform, improve the reform of the collective forest right system, improve the operation and management structure of state-owned forest areas and continue to push forward the reform of the function of state farms in running the society.

b) Guide and standardize the entry into the market of rural collective operational construction land.

With the precondition of meeting the requirements of relevant programs and land use purposes, allow the transfer, renting and selling for shares of the rural collective operational construction land. Such land should enter the market in the same way as state-owned land with the same right and same price. Speed up the establishment of a property right transfer and value added profit distribution system for rural collective operational construction land. Departments concerned should put forward as soon as possible concrete guiding opinions and push forward the amendment of laws and regulations concerned. Various localities should follow unified central arrangements and push forward the work in a standard and orderly manner.

c) Improve the rural residential land management system.

Reform the rural residential land management system and improve the policy for the distribution of rural residential land. With the precondition of protecting the usufructuary right
of the residential land of farm households, select a number of points for experiments and prudently and steadily promote the use of the farmers’ housing property right for mortgage, guarantee and transfer. Departments concerned should seize the time to put forward a plan for concrete experiments at selected points and various localities should not act as they think fit or jump the gun and cross the limit. Improve the experiment at selected points on linking the increase with the decrease of construction land of the urban areas and the rural areas and earnestly ensure that the farmland area will not decrease and the quality of farmland will improve. Speed up the investigation on the rural land cadaster, including the rural residential land, and the confirmation, registration and certification of the right to use the rural collective construction land.

d) Push forward and speed up the reform of the land acquisition system.

Reduce the scope of land acquisition, standardize the acquisition procedures and improve the mechanism for the rational, standard and diversified protection for farmers whose land is acquired. Seize the time to amend laws and regulations concerned, ensure that the farmers can share in a fair manner the value-added proceeds of land and change the methods for compensating the farmers whose land is acquired. In addition to compensation for farmers’ collective land acquired, it is also imperative to ensure the housing, social security and employment training of the farmers. Take various measures, such as setting aside land for resettlement and compensation, suiting measures to local conditions, and ensure the farmers are benefited over a long time. Raise the standard for collecting fees for the restoration of forest vegetation. Improve the mediation and arbitration mechanism for land acquisition disputes and ensure the right to know, the right to participate, the right to complain and the right to supervise of the farmers whose land is acquired.

5.2.4 Production and marketing

a) Production supporting and interests protecting measures

Improve the system for the steady growth in input into “Sannong”.

Improve the policy of financial support for agriculture and increase expenditure on “Sannong.” Public finance should persistently regard “Sannong” as the key point of expenditure, central investment in capital construction should continue to tilt toward “Sannong” and give priority to ensure the steady increase in input into “Sannong.” Widen the channels for the input of funds into “Sannong,” give full play to the guiding role of financial funds and bring along the input of more financial and social funds into “Sannong” through
interest discount, awards, risk compensation, tax and fee reduction and exemption and other measures.

- Improve the agricultural subsidy policy.

In accordance with the requirements of stabilizing the stock, increasing the total amount, improving methods and making gradual readjustment, actively carry out experiments at selected points on improving the methods for subsidizing agriculture. **Continue to implement policies of direct subsidy for grain growers, subsidy for improved crop species and comprehensive subsidy for means of agricultural production and tilt newly-added subsidies toward grain and other important agricultural products, the new type of agricultural management main bodies and main production areas.** In places where relevant conditions are available, carry out experiments at selected points on subsidizing producers according to the actual sowing area or output of grain and increase the accuracy and have a correct direction for subsidies. **Increase the subsidy for the purchase of farm machinery, improve subsidy methods and continue to promote the experiment at selected points on subsidizing the discarding and updating of farm machinery.** Increase subsidies for key technologies for guarding against and relieving disasters and stabilizing and increasing output of agriculture. Continue to implement the policy for subsidizing improved varieties of livestock.

- Speed up the establishment of a benefit compensation mechanism.

**Increase the financial transfer payment for main grain production areas,** increase awards and subsidies to big commodity grain production provinces and big grain, edible oil and hog production counties, encourage main sales areas to make investment in main production areas to build grain production bases through various ways and to undertake more tasks of national grain reserves and improve the benefit compensation mechanism of main grain production areas. **Support main grain production areas in their efforts to develop the grain processing industry.** Lower or cancel matching funds directly used for grain production construction items and other construction items in big grain production counties. Improve the compensation system for forests, grassland, wetland, water and soil conservation and other ecological compensation, continue to implement the subsidy and award policy for public welfare forest compensation and grassland ecological protection, and establish an ecological compensation mechanism for important river source areas, important water ecological restoration and improvement areas and flood storage and detention areas. Support localities in their efforts to provide compensation for farmland protection.
- Improve the supervision and protection mechanism for farmland irrigation construction.

Deepen the reform of water conservation project management structure and speed up the implementation of the policy of financial subsidy for expenditure on the operation and maintenance of irrigation and drainage projects. Carry out experiments at selected points on the reform of the property right system of farmland irrigation facilities and on innovating the operation management and maintenance mechanism and define the management and maintenance main bodies, their responsibility and the expenses of small irrigation projects. By means of replacing subsidies with awards, putting construction before subsidies and other ways, explore a new mechanism for the farmland irrigation capital construction. Push forward the in-depth comprehensive reform of the price of water for agriculture. Increase the input of governments at various levels into water conservation construction, implement and improve the policy of setting aside funds for farmland irrigation from land transfer proceeds, raise the standard for collecting water resource fees and increase such fees. Improve the policy of compensation for acquiring land for the construction of medium and large water conservation projects. Make plans for the construction of a number of large water conservation projects that have a bearing on the the national economy and the people's livelihood, strengthen the construction of water source projects and the use of rain and flood resources, activate the implementation of a national drought resistance program and increase the capability of agriculture in resisting droughts and floods.

b) Marketing and trade strategies

Recent related focus is not on the trade liberalization countermeasures, but on the agricultural prices mechanism improvement and domestic markets construction. There are three main aspects.

- Improve the price formation mechanism for grain and other important agricultural products.

Continue to adhere to the market pricing principle, explore and promote the reform of linking the price formation mechanism for agricultural products with government subsidies, gradually establish a target price system for agricultural products, subsidize the low-income consumers when market prices are too high and subsidize the producers when market prices are lower than the target prices according to price differences and earnestly ensure the farmers’ benefits. In 2014, launch the experiment at selected points on target price subsidies for soybeans in Northeastern China and Inner Mongolia and for cotton in Xinjiang, explore the experiment to be carried out at selected points on target
price insurance for grain, hogs and other agricultural products and launch the experiment at selected points on loans for the operation and sales of scale management main bodies of grain production. Continue to implement the policy of the minimum procurement prices for rice and wheat and the policy of the temporary purchase and reserve of corn, rapeseed and sugar.

- Improve the system for regulating and controlling the agricultural product market.

Comprehensively use taking in and sending out reserves, regulating import and export and other means to rationally set the fluctuation regulation and control range of prices for different agricultural products and ensure basic stability of the market of important agricultural products. Scientifically determine the reserve function and scale of important agricultural products strengthen the reserve responsibility of localities, especially the main sales areas, and optimize the regional layout and variety structure. **Improve the central reserve grain management structure and encourage qualified main bodies of diversified markets to participate in policy-related purchase and reserve of agricultural bulk products.** Improve the evaluation and encouragement mechanism of the “vegetable basket” mayor responsibility system, improve the system for regulating and controlling the prices of the hog market and properly grasp the production and supply of beef and mutton. Further conduct government direct statistical investigation on big agricultural counties. Formulate and promulgate authoritative price indexes of agricultural products.

- Strengthen the building of the market system of agricultural products.

Make efforts to strengthen institutional construction to promote fair trade in agricultural products and improvement in the efficiency of distribution, speed up the formulation of a national program for developing the market of agricultural products, implement a coordination mechanism between departments, strengthen the building of a distribution network with large wholesale markets of agricultural products as the backbone that covers the markets across the country and carry out at selected points experiments on building wholesale markets of agricultural products of a public welfare nature. Improve the futures trading variety system of bulk agricultural products. **Speed up the development of modern storage and logistics facilities for bulk agricultural products in main production areas and improve the cold chain logistics system for fresh and living agricultural products.** Support the building of small collection markets and collection and distribution centers of agricultural products in places of production. **Improve the rural logistics service system, promote the establishment of comprehensive demonstration zones of the modern distribution of agricultural products and speed up the building of comprehensive**
platforms for the postal system to serve “Sannong.”

➢ Rationally make use of the international market for agricultural products.

Seize the time to formulate an international trade strategy for important agricultural products, strengthen planning and guidance for importing agricultural products, optimize the layout of places of origin of import and establish stable and reliable trading relationships. Departments concerned should closely cooperate, strengthen the entry-exit veterinary and plant inspection and quarantine, crack down on smuggling acts in the import and export of agricultural products and ensure the quality and safety of imported agricultural products and domestic industrial safety. Speed up the implementation of the going global strategy for agriculture and cultivate large grain, cotton and edible oils enterprises with international competitive power. Support carrying out mutually beneficial and win-win cooperation in agricultural production and import and export abroad, especially such cooperation with neighboring countries. Encourage financial institutions to actively innovate financial products and ways to provide services for international trade in agricultural products and for agriculture to go global. Explore the establishment of an international trade fund for agricultural products and an overseas agricultural development fund.

5.2.5 Environment and natural resources

a) Promote the development of eco-friendly agriculture

Implement the strictest farmland protection system, the economical intensive land-use system, the water resources management system and the environmental protection system and strengthen supervision, checking, stimulation and restraints. Promote large-scale high-efficiency water-saving irrigation actions in different areas. Make great efforts to promote mechanized deep plowing and deep loosening of soil, returning stalks to soil and other comprehensive utilization, speed up the implementation of projects to subsidize soil improvement with organic matters, and support carrying out green prevention and control of insect pests and harmless treatment of diseased animals and poultry. Make greater efforts to prevent and control agricultural widespread pollution and support the use of high-efficiency fertilizer and low-residual pesticide, the use of livestock and poultry manure in large breeding farms as a resource, the use of organic fertilizer in new agricultural management main bodies, the spread of the use of high-standard agricultural plastic films and the experiment at selected points on the recovery of used and residue agricultural plastic films and other experiments.
b) Carry out the experiment at selected points on the recuperation and building up of strength of agricultural resources.

Seize the time to formulate a general program for dealing with outstanding problems in the agricultural environment and for the sustainable development of agriculture. Activate the experiment at selected points on the restoration of farmland polluted by heavy metals. **Beginning 2014, continue to implement the reversion of farmland on steep slopes, seriously desertified land and land in important water source areas to forests and grassland.** Carry out experiments at selected points on comprehensively improving, the funnel areas caused by excessive drawing of underground water in North China, wetland ecological benefit compensation and the reversion of farmland to wetland. By means of financial awards and subsidies, structural readjustment and other comprehensive measures, ensure the level of the overall income of the farmers in the restoration areas will not be lowered.

c) Make greater efforts to ecological protection construction.

Seize the time to draw a red line for ecological protection. Continue to implement projects to protect natural forests, the second-phase project to harness sources of sandstorms in Beijing and Tianjin and other important projects. **Carry out the experiment at selected points on stopping the felling of trees in natural forests for commercial purposes in key state-owned forest areas of Northeastern China and Inner Mongolia.** Push forward the construction of fire-prevention facilities in forests of forest areas and the restoration of vegetation in mining areas. Improve the policy for subsidizing the planting of excellent species of forest trees, tree-planting, forest-tending and other aspects. Strengthen the closure of desertified land for protection. **Make greater efforts to implement projects to revert grazing land to grassland on natural grassland and activate projects to develop and make use of grassland and projects for the construction of the natural grassland protection areas in the southern part of China.** Support the species improvement, the water conservation construction, the prevention and control of rodents, insects and poisonous weeds in fodder bases. Make greater efforts to protect the marine ecology and strengthen the construction of basic facilities on islands. **Strictly control fishing intensity and continue to implement the policy to subsidize marine breeding and releasing and the restoration of the ecological environment for aquaculture.** Implement key projects to comprehensively harness rivers and lakes and to conserve soil and water and carry out the construction of ecological and clean small river basins.
d) Make improvement in the human residential environment of villages.

Speed up the formulation of village programs, implement the policy of promoting improvement with awards, take the disposal of garbage and sewage as the key points and improve the human residential environment of villages. Implement projects to harden the roads in villages, strengthen operation management and maintenance of inner-village roads, water supply and drainage and other public facilities, and in places where relevant conditions are available, establish a management and maintenance expenses guarantee system that integrates household payment, village collective subsidies and financial subsidies. Formulate traditional village protection and development programs, seize the time to list traditional villages and dwellings with historical and cultural value in a protection catalogue and earnestly increase input and make greater efforts to protect them. Raise the standard for the construction of rural safe drinking-water projects, strengthen monitoring and protection of the water quality of water sources and in places where relevant conditions are available, extend water supply pipeline networks of towns and cities to the rural areas.

Take the western region and concentrated contiguous areas with special difficulties as key points, speed up rural highway construction, strengthen rural highway maintenance and safety management and promote integration of passenger transportation between urban highways and rural highways. Develop household marsh gas and large-scale marsh gas, suiting measures to local conditions. Implement rural house earthquake safety projects in high-risk earthquake areas. Speed up the rural Internet infrastructure construction and enable information to enter villages and households.

5.2.6 Rural finance and agricultural disaster insurance

a) Strengthen the responsibility of financial institutions in serving “Sannong."

Stabilize the county network points of medium and large commercial banks, expand the service networks in townships and towns and establish special organizations and independent operation mechanisms which are in keeping with the needs of “Sannong” according to their own business structure and characteristics. Strengthen the capability of commerce and finance to serve “Sannong” and the micro and small enterprises in counties, expand the business authorization given to their branch institutions in counties, constantly increase the loan-to-deposit ratio and the percentage of agriculture-related loans and include the situation of agriculture-related credit availability into the assessment on the results of credit policy guidance and the comprehensive evaluation system. Steadily expand the experiment at selected points on the reform of the Agricultural Financial Service Department of the Agricultural Bank of China. Encourage the Postal Savings Bank of China to grant medium and long-term loans for agricultural development and the construction of the
rural infrastructure and to establish a differential supervision structure. **Strengthen the function of the rural credit cooperatives to provide services to support agriculture and maintain long-term stability of their county legal person status.** Actively develop village and town banks, gradually realize full coverage of county cities and appropriately readjust the shareholding ratio between major initiating banks and other shareholders. **Support the establishment of small and medium banks and financial leasing companies at the county level that serve “Sannong” initiated by the social capital.** **Small-loan companies should widen financing channels, improve the management policy, speed up their convergence with the credit reference system and play the role of supporting agriculture and small enterprises.** Support the stock issuance and listing of qualified agricultural enterprises in the main board and the second board markets, supervise and urge listed agricultural enterprises to improve their corporate governance structure, guide high-growth and innovative agricultural enterprises that are not yet qualified for listing to be openly quoted and transferred in the national system for the transfer of the stocks of small and medium enterprises and push forward the development of individualized products suitable for “Sannong” by securities and futures business institutions.

b) **Develop a new type of rural cooperative financial organizations.**

On the basis of the farmers’ cooperatives and the supply and marketing cooperatives with democratic management, standard operation and a strong pulling force, cultivate and develop rural cooperative finance and continuously enrich the categories of rural local financial institutions. **Adhere to the membership system and the closure principle and with the precondition of not absorbing deposits from or granting loans to outsiders and not paying out fixed returns,** promote the development of community rural funds mutual-aid organizations. Improve the rural local financial management structure, clearly define the function of local governments in supervising and controlling the new type of rural cooperative finance, encourage the establishment of a local risk compensation fund and effectively guard against financial risks. Formulate at an appropriate time procedures for managing the development of rural cooperative finance.

c) **Make greater efforts to support agricultural insurance.**

**Increase the ratio of the central and provincial financial subsidy for the premium of the insurance for major grain crops, gradually reduce or cancel the subsidy for insurance premium at the county level of big grain production counties, and continuously increase the coverage of insurance for the three major grain varieties of rice, wheat and corn and raise the risk protection level.** Encourage insurance institutions
to provide insurance for agricultural products with the advantage of having special characteristics, provide insurance premium subsidy in places where relevant conditions are available and central finance should give support through replacing subsidy with awards and other means. Expand the scope and coverage areas of insurance for livestock products and forests. Encourage the provision of various forms of mutual cooperative insurance. Standardize the management of serious disaster risk reserves for agricultural insurance and speed up the establishment of a financial-supported serious disaster risk dispersion mechanism for agriculture insurance. Explore opening the business of loan and guarantee insurance and credit insurance in the agriculture-related financial area.

5.2.7 Agricultural science policies and technology development

a) Push forward agricultural science and technology innovation.

Deepen the reform of the agricultural science and technology structure, implement the legal person responsibility system and the commissioner system for projects that meet relevant requirements and implement a national science and technology reporting system in the area of agriculture. Clearly define and protect the property rights of scientific research achievements made with financial aids, innovate the scientific achievement transformation mechanism and develop entrustment centers and trading markets for agricultural science and technology achievements. Use various ways to guide and support joint research and development of scientific research institutions and enterprises. Make greater efforts to build agricultural science and technology innovation platforms and bases and to integrate and spread technology, promote the development of collaborative innovation strategic alliances of national agricultural science and technology parks and zones and support the building of a modern agricultural industrial technology system. Strengthen basic research and biotechnology development with molecular breeding as the key point, build an agricultural whole-process informatized and mechanized technology system with the agricultural Internet of Things and precision equipment as the key points, push forward technical research and development of the emerging industries with facility agriculture and the refined and deep processing of agricultural products as the key points and organize the tackling of important and difficult agricultural science and technology problems. Continue to develop high-yield crops and make greater efforts to spread and apply advanced and applicable agricultural technology and to give technical training to the farmers. Give play to the leading role of agricultural demonstration zones. Strengthen the building of agricultural aviation. Regard agriculture as a prioritized area for financial, science and technology input and guide credit financing and risk investment to enter the area of agricultural science and technology innovation. Implement a science and technology
commissioner system and give play to the role of institutions of higher learning in agricultural scientific research and in spreading agricultural technology.

b) Speed up the development of the modern seed industry and agricultural mechanization.

Establish a breeding innovation system with enterprises as the main bodies, promote the flow of capable personnel, resources and technology toward enterprises, make seed enterprises that integrate breeding, multiplication and spreading bigger and strong, breed and spread a number of new high-yield, high-quality and stress-resistant species of a breakthrough nature that are suitable for mechanized production. Implement an entrusted management system in seed enterprises and strengthen the whole-process traceable management of seeds. Speed up whole-process mechanization of field crop production, mainly tackle mechanized transplanting of rice seedlings, mechanized cotton picking, mechanized sugarcane harvesting and other weak links and realize integration and matching of crop species, cultivation technology and machines and equipment. Actively develop socialized services for farm machinery operation, maintenance, repair, leasing and other aspects and support the development of farm machinery cooperatives and other service organizations.

5.2.8 Rural public services

Although there is no specific policy for farmers retirement plans, but measures of “rural-urban integration”, especially rural public service policies, will lay the foundation for professional farmers fostering and old farmers’ exit from agriculture under conditions of population aging.

a) Push forward equalization of basic public services between the urban areas and the rural areas.

Speed up improvement in the basic conditions for running schools of rural schools which are weak in providing compulsory education and appropriately raise the standard of the average public expenses for students receiving rural compulsory education. Make great efforts to support the development of pre-school education in the rural areas. Implement the policy of government aid to secondary vocational education, and, in close connection with market demand, strengthen rural vocational education and skill training. Increase the percentage of rural students enrolled by key institutions of higher education. Effectively
streamline various kinds of rural cultural projects and resources for benefiting the people and promote the construction of public cultural and sports facilities and the building of service standards of townships and counties. Deepen the comprehensive reform of the rural grass-roots medical and health institutions and implement a general practitioners special post plan in the western and central regions. **Continue to raise the financing standards and protection level of a new type of rural cooperative medical service, improve the insurance and assistance system for major diseases and promote unified urban-rural planning for the basic medical insurance system.** Stabilize the network and the contingent of workers for rural family planning and carry out the experiment at selected points on the equalization of public services for family planning and health between the urban areas and the rural areas. **Streamline the basic old-age insurance system for the urban and rural residents, gradually establish a mechanism for the normal readjustment of the basic pension standard and speed up the establishment of a rural social old-age care service system.** Strengthen the standard management in ensuring a minimum standard of living in the rural areas. Carry out the experiment at selected points on the standardization of public services. Make efforts to innovate the working mechanism for poverty-relief through making development, improve the procedures for evaluating the work of the government in poverty-relief through making development in key counties, increase the precision of poverty-relief and firmly carry out key work in poverty-relief through making development.

b) Promote and speed up the urbanization of the population transferred from agriculture.

Actively push forward the reform of the household registration system, establish a unified urban-rural household registration system and promote the orderly realization of the urbanization of the resident population who are able to legally work and live in towns and cities in a stable manner. **Comprehensively implement the resident card system for the migrant population, gradually push forward the work to enable the resident card holders to be entitled to the same basic public services as the residents of their places of residence and ensure equal pay for equal work of the migrant workers.** Encourage various localities to formulate relevant policies, proceeding from reality, and properly resolve the issue of the population transferred from agriculture of settling down in local towns and cities under their jurisdiction.

6 · CONCLUSION AND PROSPECTS

Institutional innovation is an important power for promoting the development of agricultural economy (Lin, 1992). Over 30 years’ practice of China's reform and opening up has proven this. In this process, China has initially formed a complete agricultural policy
framework, but new challenges require Chinese government continues to promote innovative agricultural policies. Based on the above analysis, we can see that, the emphasis of China's future agricultural policy will be placed on new food security strategy, agricultural land policy, agricultural marketing, rural finance, new agricultural management system, farmers’ income growth, etc. The corresponding main tasks can be summarized as follows:

- Accelerate the transformation of agricultural development, and vigorously promote the development of modern agriculture;
- Adhere to double leverage of scientific-technological drive and system protect, steadily improve agricultural production capacity;
- Strengthen research and regulation of agricultural prices, create a good public opinion environment for agricultural prices;
- Support new agricultural operator, construct efficient agricultural social service system;
- Fast agricultural science and technology innovation, and further nurture new farmers with better quality;
- Strengthen the policies linkage and local agricultural enterprises nurturing, protect the agricultural industry security;
- Continue to deepen the reform of the household registration system, to promote the equalization of urban and rural public services;
- Adjust national income distribution, make efforts to broaden the channels for farmers' income.

Anyway, the economic and social development of China is in a transformation period and the rural reform and development are faced with a more complicated environment and increased difficulties and challenges. It is impossible for China to achieve a high level of agricultural modernization within a short period of time. So Chinese government will comply with the following principles in policy implementation:

- adhere to the direction of the socialist market economy reform,
- properly handle the relationship between the government and the market
- stimulate the vitality of the rural economy and society;
- support localities to be the first to implement and experiment
- respect the practice and creative work of farmers;
- suit measures to local conditions, make progress gradually and in an orderly manner;
- avoid rigid uniformity, do not seek settling a matter at one go and permit making differential and transitional institutional and policy arrangements.
Thereby, the trend of China agricultural development in long term, we can forecast that:

- New types of agricultural operators such as cooperatives, family farm, agricultural enterprises and so on, will be fast growing and play a more important role in China agriculture.
- Agricultural production is likely to maintain momentum of stable growth,
- Farm product price hikes are expected to ease,
- The deficit in agricultural trade would widen,
- Farmers’ earnings are expected to see rapid growth.

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