

## ESTABLISHMENT AND OPERATION OF CHINA'S RABBIT PRODUCTION COOPERATIVES

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### ABSTRACT

China is now the world's largest rabbit farming country. The percentage of its rabbit meat production in total meat production has increased year by year. In addition, rabbit farming regions are widely spread across the country with vast numbers of both micro- or small-scale backyard rabbit breeders. The main problem of the small-scale rabbit farming system is the lack of marketing ability and the difficulty of applying new technologies. The key solution to address this problem is to develop reasonable and effective organization of large numbers of small-scale farmers so that they can collectively deal with market demand and also achieve technical progress by forming rabbit farming cooperatives. There are three major types of rabbit farming cooperatives in China, each with different structure and marketing modes (according to the composition and management areas) cooperative members that can most effectively meet the growing market demand. Along with the development of China's rabbit farming industry, rabbit farming cooperatives will likely exist for many years, but will continue to adjust in accordance with the development of the domestic and global market and economy.

**Key words:** Rabbits, production, farming cooperatives, China.

### INTRODUCTION

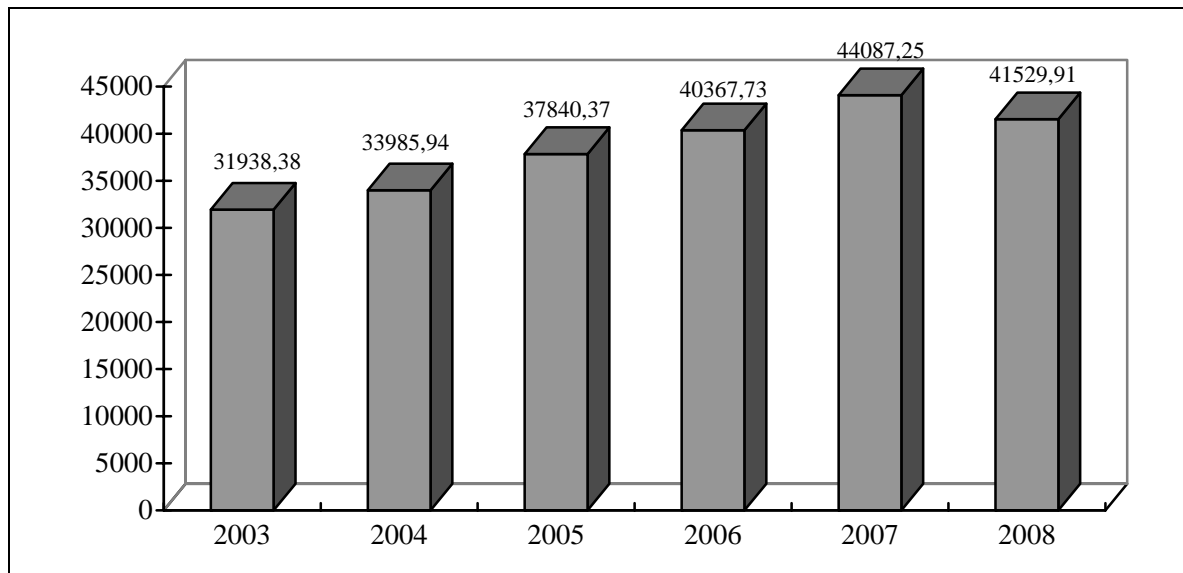
The Chinese rabbit industry is now the largest one in the world (Chen *et al.*, 2009). In 2008, the production of rabbit meat in China was 660,000 tons, out of which 10,340 tons were exported (China Agricultural Yearbook, 2009; China Customs Statistical Yearbook, 2009; FAO, 2012; China Agricultural Industry Technology Development Report, 2010). Rabbit farming regions are widely spread in China (Qiao, 2008; Table 1). The low percentage of exports relative to total production shows that Chinese rabbit meat mostly supplies the domestic market demand. In 2009, China's per capita consumption of rabbit meat was 507 grams (FAO, 2012).

**Table 1:** The number of slaughter rabbits in the 10 major provinces in China in 2007.

Rank	Province	Number of rabbits slaughtered (000)
1	Sichuan	174,984
2	Shandong	83,390,
3	Henan	39,922
4	Hebei	30,259
5	Jiangsu	28,499.1
6	Chongqing	19,928.8
7	Fujian	15,284
8	Zhejiang	7,588.5
9	Shanxi	4,886.9
10	Hunan	4,647.7

In recent years, infectious animal disease outbreaks in different countries, such as foot-and-mouth disease and Asian bird flu, as well as the occurrence of food-borne contamination of animal origin,

such as the Dioxin incident in Europe in 1999, which makes consumers more concerned with food safety, especially involving meat from pigs, cattle, and poultry. This growing food safety concern has indirectly promoted rabbit meat consumption in China, resulting in a steady increase in rabbit meat consumption in China year by year (Shen, 2008; Figure 1). In addition, during the past thirty years, China's economy has developed rapidly and people's income and living standards have improved. But in most rural areas, especially in remote and least developed rural areas, farmers still have few opportunities to make a fortune. Rabbit farming has enormous advantages of low investment and quick returns, low risk of environment pollution, as well as making full use of surplus rural labor. So, rabbit farming has become nowadays an important way to reduce poverty and increase farmers' income in rural areas (Zhang, 2010; Gu, 2010).



**Figure 1:** Annual number of slaughter rabbits in recent years (China Agricultural Yearbook, 2009).

Arable land in China is relatively limited. Even though China has 7% of the world's total arable land, it has to feed 22% of the world's population (Wang, 2010). Therefore, it is an important strategy for China to fully utilize its non-arable land. Based on years of research, the Chinese government has put forward a strategy to stabilize and control the grain-consuming livestock industry sector, and to develop and promote grain-saving practices, which includes rabbit farming (Xu, 1997). Many local governments also give priority to rabbit farming, based on support from agricultural policies, financial incentives, and funding for scientific research projects. The government also fully supports the formation of cooperatives using the system of "State Law on Farmers' Professional Cooperatives" (Zhu *et al.*, 2009).

## MATERIALS AND METHODS

### The status of small-scale rabbit farming in the Chinese meat rabbit industry

Although China is a major rabbit farming country, a majority of rabbit breeders are micro- or small-scale farmers (Chen *et al.*, 2009). The large number of small-scale individual backyard rabbit farmers is still a significant feature of the Chinese meat rabbit industry. Their status and degree of organization will continue to play a critical role in the future development of China's rabbit industry.

In Table 2, the results of an official survey conducted by the livestock department of Shandong province in 2002, revealed that most breeders kept less than 50 breeding rabbits, and only a few breeders had more than 500 rabbits.

The advantage of small-scale rabbit farms is of course the small management unit with lower economic costs per rabbit and less economic risk. Even if they ended in failure, the loss will be small (Ling *et al.*, 2009). Also, because they are small, they have better flexibility or adaptability to market

change. Small-scale farmers have the flexibility to easily change their farming practices, for example from one type of rabbit to another, for better profit when they are facing a weak market for their products. However, scattered and small-scale rabbit farming also have many disadvantages (Zhang *et al.*, 2009), mainly in marketing and technology application as enumerate below:

**Table 2:** Scales of production of rabbit farms in Shandong in 2002 (Qin, 2010).

Number of rabbits raised	Number of meat rabbit farms	Percentage	Number of Angora rabbit farms	Percentage
50 - 99	9,960	80.98	29,117	90.88
100 - 299	1,522	12.37	2,285	7.13
300 - 499	479	3.89	484	1.51
500 - 999	242	1.97	106	0.33
1,000 - 2,999	66	0.54	41	0.13
3,000 - 4,999	15	0.12	7	0.02
5,000 - 9,999	12	0.10		
10,000 - 49,999	4	0.03		
<b>Total</b>	<b>12,300</b>	<b>100</b>	<b>32,040</b>	<b>100</b>

First, the sales price of the rabbit product paid to farmers is affected by a large number of middle dealers (between individual breeders and final processing companies) and may not truly reflect market supply and demand, which influences the income of breeders. Second, the status of a vast number of scattered small-scale individual rabbit farming will limit the diffusion rate of new breeding technologies, which ultimately affects their potential level of rabbit production, as well as breeding efficiency (Wei, 2009). Third, widely scattered small-scale and unorganized individual farms can neither ensure overall quality control or a timely market supply. This situation also discourages the establishment of rabbit processing plants and development of rabbit consuming markets in local areas, which will limit the development of the local rabbit industry. So the large number of small-scale rabbit farms need to be effectively organized so as to reach their maximum potential and to avoid the previously described disadvantages. The key especially lies in the development of rabbit breeders' cooperatives in China.

## RESULTS AND DISCUSSION

### Major types of rabbit breeder cooperatives

Rabbit breeders' cooperative is a new activity in China, having only about 15 years of history. It can be divided into three major types (Gu *et al.*, 2009). The first type is the classical rabbit farmers' cooperative. This type of cooperative is a basic one that is co-financed by members with different amounts of funding. It has a strict constitution and regulations and membership requirements. It often unites all parties related with the same part of the rabbit industrial chain to form a community with common interests. This type of cooperative employs a professional management team, and all members enjoy from the profit-sharing scheme of the cooperative, based on annual operational or production results. The most typical cooperatives of this kind is the *Zhejiang Xinchang Angora Rabbit Farming Cooperative* (Chen, 1998; Guo *et al.*, 2001).

The second type is the combined rabbit farming cooperatives, also known as "processing company + breeding base + farmers" cooperatives. The funds for this type of cooperative come mainly from the company who sponsors the cooperative. The entire production components, such as rabbit buildings, cages, breeding stock, feed, and drugs, are basically invested by the processing company. Other members of the cooperative only contribute their labor and submit some security payments. Breeding stock, feed, and drugs are sold to farmers on credit. When the rabbits are ready to slaughter, the company will purchase them back, and the initial cost of stock, feed, and drugs are deducted from the sales. In this type of "vertical integration" cooperative, the processing company normally adopts the "five unified" management system, that involves inputs of breeding stock, standard feeds and drugs, technical training and disease epidemic prevention, and standard product recalls (Wang *et al.*, 2008). The processing company supplies these inputs to farmers at a low price, as well as for the recall of any

rabbit products. The most typical representation of this type of cooperative is the *Xinjin Yuanshan Rex rabbit cooperative* in Sichuan province.

The third type is a common cooperative, also known as “processing company + farmers’ cooperatives” (Ci, 2008). This type of cooperative is very common in China. Farmers join the cooperative under certain conditions. The cooperative provides the breeding rabbit stock, feed, and vaccination service to all farmers of the cooperative, and offers standard product selling and recall prices. The processing company also provides standard technical guidance to all cooperative members. However, because the cooperative membership is usually large, and widely scattered, the company has limited control over farmers. This type of cooperative generally acts as the bridge between farmers and processing companies. The processing company in the downstream normally enjoys financial and policy support from the local government. Farmers have certain options in selling their rabbits, especially when the market price is high. The most typical representation of this type of cooperative is the *Jiaonan Zhongbang Farming cooperative* in Shandong Province.

### **Marketing mode of different rabbit farming cooperatives**

One of the most important reasons for setting up rabbit farming cooperatives is to organize the individual small-scale farmers to improve their ability to deal with market fluctuations in selling their products to improve their income. Therefore, the marketing mode for farming cooperatives is very important (Ren *et al.*, 2008). Different types of cooperatives each have a different organizational structures, management operations or systems, and different marketing modes.

The first type - the classical cooperative type, is mostly located in economically developed areas. Among the cooperative members, there is a specialized marketing company; therefore, the sales plan is collectively decided upon by the management team and operated by the marketing member company. The combined relationship within the organization often guarantees effective operational management to produce good product quality, as well as ensuring the availability of the product supply to meet the market demand. Cooperative members typically enjoy the better economic benefits.

For the “processing company + base breeders + farmers” cooperatives (type two), the marketing mode is completely decided upon by the company who sponsors the cooperative. The members of the cooperative do not sell their products directly, but depend on the company to sell their products. The company will speed up the sales when market conditions are good; however, when market conditions are less favorable, the company only performs minimal processing and stores the product while waiting for better market conditions.

For the “processing company + farmers’ cooperatives” (type three), the cooperative serves as a bridge between farmers and the downstream processors. They normally sign contracts with the processors to guarantee the sales of the products to its members. Moreover, in order to ensure a stable supply of products, the processors normally give cooperatives a favorable price for the product. In this way, the sales of their members’ products are guaranteed, but for the members themselves, they do not have the power to decide the selling price of their products.

## **CONCLUSIONS**

In China, rabbit farming is gradually progressing from scattered small-scale individual breeding into medium- to large-scale breeding. Although the per capita consumption of rabbit meat in China is still low, there is great potential ahead for developing the rabbit industry. While local economic development and weather conditions vary in different areas of China, farmers can choose the best scale level of rabbit farming in different areas. These factors also determine the different types of cooperatives that can co-exist in the future to satisfy the growing demands of breeders involved in the development of rabbit industry. It will also require more time and coordination to further improve the development of cooperatives among all groups of regional rabbit farmers and advance the state of China’s meat rabbit industry.

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