

# Study on the Development of Modern Animal Husbandry in Xinjin County

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**Abstract**—This paper aims at studying on the development of modern animal husbandry in Xinjin county. To achieve it, we conducted a field survey on the development of modern animal husbandry in Xinjin County. The result show that the last decades saw Xinjing has made great achievements in modern animal development. Xinjing should actively carry out comprehensive utilization of resources on the basis of implementing scientific planning, regional layout and total amount control, and promote the coordinated development of livestock and poultry breeding to increase marketing supply.

**Keywords:** *modern animal husbandry, agricultural development, Xinjing County*

## I. INTRODUCTION

Xinjin County, under the jurisdiction of Chengdu City, is located in the west of Sichuan Basin and the south of Chengdu City. Xinjin County is connected with Shuangliu District in the east, Meishan City in the south, Qionglai City in the west, Dayi County and Chongzhou City in the north. It is the South Gate of Chengdu City. Xinjin covers an area of 330 square kilometers and covers 6 streets, 5 towns and 1 Township with a total population of about 320,000. Xinjin County is a big county of animal husbandry industry, and animal husbandry industry plays an important role in the whole national economy. In recent years, with the comprehensive implementation of environmental protection policy and the implementation of Chengdu City's strategy of expanding southward, the development of animal husbandry industry in Xinjin County urgently needs transformation and upgrading. Different scholars have different views on the path dependence of modern animal husbandry development. Some scholars believe that the development of modern animal husbandry should be adapted to local conditions, and the choice of development path of modern animal husbandry industry should consider the integration of animal husbandry and other local industries [1]. Some scholars think that the surrounding areas of big cities are restricted by the capacity of ecological environment and strict environmental protection policies. They should abandon the low-end industries and focus on the high-end industries such as deep processing [2]. Other scholars believe that with the development of social economy, China is facing high labor costs, high environmental

costs and high land costs. According to the principle of comparative advantage, we should gradually abandon the traditional animal husbandry and transfer the demand of pork, beef and mutton to the international market [3]. Some scholars have also raised objections to the long-standing farmer pig free-range farming model in China, believing that although this model is conducive to calming pork price fluctuations, it is not conducive to environmental protection, nor is it conducive to reducing the cost of farming. Therefore, the development of large-scale pig farming is the way China's pig farming industry should choose [4]. We believe that the animal husbandry in Xinjin County should actively carry out comprehensive utilization of resources on the basis of implementing scientific planning, regional layout and total amount control, and promote the coordinated development of livestock and poultry breeding to increase marketing supply. This paper unfolds as follows: section II analyses the performance and experiences of animal husbandry development in Xinjin County. Section III analyses the favorable conditions for mountainous areas modern agricultural development in Xingwen County. Section IV explores the realistic problems of that. Section V puts forwards some policy suggestions. The last section draws conclusion.

## II. THE ACHIEVEMENTS OF MODERN ANIMAL HUSBANDRY DEVELOPMENT IN XINJIN COUNTY

In recent years, the modern animal husbandry in Xinjin County has entered a stage of sustained and rapid development. The output of livestock products has continued to grow. The further processing of primary livestock and poultry products has continued to grow. The supply of livestock and poultry products in urban and rural markets is adequate, and the quality of livestock and poultry products has continuously improved. The development of modern animal husbandry in Xinjin County has played an important role in enriching people's lives, increasing farmers' income, developing rural economy and promoting industrial integration.

### A. Significant Improvement in the Quantity and Quality of Livestock and Poultry Products

In recent years, guided by the principles of modern animal husbandry development, such as breeding according to law, total amount control, standardized management and discharge

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up to standard, Xinjin County has subdivided responsibilities, strengthened propaganda and guidance, deepened pollution control, optimized incentive mechanism, strengthened law enforcement and inspection, continuously promoted the construction of large-scale ecological livestock and poultry breeding, and strived to realize livestock production high quality development of animal husbandry. As of June 2016, there are about 850 farms of all kinds in the county, and about 50 cooperatives of livestock and poultry breeding have been established, with a total stockpile of about 6 million livestock and poultry. Among them, there are about 160,000 live pigs, 101,000 cattle, 55,000 sheep and 5 million poultry in the county. The output value of animal husbandry reached 1.5 billion Yuan, accounting for 52.77% of the total agricultural output value. Livestock and poultry breeding has become an important part of rural economic development in Xinjin County.

*B. The Development of Animal Husbandry Industrialization has been Further Upgraded and Its Contribution to Farmers' Income has been Further Increased*

The growth mode of animal husbandry has changed from single farming to industrialized management, and the market influence of animal husbandry industry in Xinjin County has increased significantly. At present, there are 9 leading animal husbandry enterprises with a total of over 100 million yuan in the county, 2 leading national industrial enterprises, 2 well-known national trademark enterprises and 3 leading animal husbandry industrialization enterprises at or above the provincial level. In 2015, the processing output value of animal husbandry products in Xinjin County was 14.5 billion yuan, leading the whole province. At the same time, the output value of animal husbandry in the county reaches 1.5 billion yuan. The rapid development of animal husbandry has led to the development of related industries such as feed, veterinary medicine, animal products processing, and food and so on, and has absorbed a large number of rural labor force. The employment of rural labor force plays an irreplaceable role in increasing their income.

*C. The Animal Husbandry Feed Industry has Gradually Formed a Cluster Development*

As of August 2016, there were 25 feed enterprises in Xinjin County, including 5 single feed factories and 5 additive premixed feed factories. In 2015, the output and sales of feed processing enterprises in the county reached more than 1 million tons, and the output value reached 3.5 billion yuan. Production and sales in recent years ranked first in Chengdu City and first in Sichuan Province. The development of modern animal husbandry has brought about the centralized and cluster development of animal feed industry.

*D. Further Optimization of Animal Husbandry Industry Structure*

During the Twelfth Five-Year Plan period, Xinjin County has always taken optimizing the industrial structure, production structure and variety structure of animal husbandry as an important measure to enhance the driving force of development, reducing the scale of traditional livestock and

poultry, increasing the number of high-quality varieties, improving the quality of livestock and poultry products, and effectively promoting the economic, ecological and social benefits of animal husbandry industry. On the other hand, through extensive publicity, the establishment of demonstration farms and the promotion of improved varieties and good laws, a good effect of scientific and technological popularization and application have been formed, and the popularization rate and contribution rate of animal husbandry science and technology have been greatly improved. On this basis, we will speed up the development of large-scale, specialized and industrialized livestock and poultry farming, increase the number of large-scale farmers and expand the scale of livestock and poultry farming, promote the standardization and standardization of livestock and poultry farming methods, and gradually promote the transformation of traditional farming to modern farming production methods.

**III. ANALYSIS ON DEVELOPMENT ENVIRONMENT OF MODERN ANIMAL HUSBANDRY IN XINJIN COUNTY**

*A. Sustained Economic Growth*

Rapid economic development and steady growth of people's income have led to rapid growth in demand for high-quality livestock products. In recent years, Xinjin County has witnessed rapid socio-economic development, steady growth of people's income and urbanization level. According to the experience of developed countries in the world, with the improvement of economic development level, people's demand for livestock products will continue to increase. At present, the level of animal protein consumption in China is 25 grams per person per day, not reaching the world average level of 30 grams per person per day, and there is a big gap between urban and rural consumption levels. Therefore, with the improvement of farmers' income level and the promotion of urbanization level, rural residents will become the main body of future consumption growth of livestock products, and the market demand for high-quality livestock products is still huge.

*B. Continuous Improvement of Large-scale Production and the Level of Industrialized Livestock and Poultry Management*

In recent years, Xinjin County has continuously adjusted its aquaculture structure and industrial layout, promoted healthy and ecological aquaculture models, accelerated the construction of standardized scale aquaculture bases, and promoted the transformation of animal husbandry from quantitative to quality-benefit, extensive to intensive, resource-consuming to recycling. The county actively promotes moderate scale farming, encourages and supports the construction of livestock and poultry farming community, and effectively promotes the transformation of modern production mode of livestock and poultry. On the other hand, driven by a number of powerful key leading enterprises in animal husbandry products processing, such as New Hope Group, Good Food and Wutian Food, the competitiveness and driving capacity of animal husbandry industry in Xinjin County have been significantly enhanced.

### *C. Increasing Operating Pressure and Less Efficiency*

On the one hand, the livestock and poultry industry is changing from the traditional scattered feeding of thousands of households to the mode of scale, specialization and standardization, which brings a strict external environment to the management of animal husbandry. In addition, the livestock product market has completed the transformation from seller's market to buyer's market, and the contradiction between the unreasonable variety and quality structure of livestock products is prominent. On the other hand, it faces the double pressure of reducing cost and improving quality. Cost, quality and brand are the main factors of market competitiveness. The feed cost of livestock and poultry farming in Xinjin County is obviously higher than that in the main grain-producing provinces and regions, and the product quality needs to be improved. What's more, the structure of livestock products is unreasonable, the variety is relatively single, and the famous brands that can occupy the market share of the whole province are less.

### *D. Threats to Internal and External Risks*

On one hand, the development of modern animal husbandry in Xinjin County is facing the threat of natural disasters and trade risks. With the openness of major animal diseases and the intensification of competition in agricultural trade, the natural and trade risks of livestock and poultry breeding have been increasing. Potential epidemics pose a serious threat to livestock and poultry farming. Once zoonosis or category A disease prescribed by the World Veterinary Health Organization occurs, it will cause a devastating blow to the development of livestock and poultry farming. On the other hand, there are double risks of insufficient capacity and investment. Generally speaking, the status of animal husbandry weak industry has not changed, and farmers are still the main practitioners of animal husbandry. Farmers have poor economic conditions and weak ability to invest in livestock and poultry breeding. With the development of large-scale production and greening, the demand for investment in animal husbandry industry is increasing. Under the background of the decline of economic growth and the decrease of government investment, the sustainable development of animal husbandry industry in Xinjin County is restricted.

## IV. DEVELOPMENT PLANNING OF ANIMAL HUSBANDRY INDUSTRY IN XINJIN COUNTY

### *A. Overall Positioning of Animal Husbandry Industry*

According to the overall requirements of the construction of satellite city and the development of modern urban agriculture in Xinjin, and considering the current situation of animal husbandry development and regional division, the development of modern animal husbandry in Xinjin should focus mainly on the upgrading of animal husbandry industry, focusing on improving the centralized livestock breeding rate, and promoting the standardization, intensification and scale of animal husbandry. Pig farming should be regarded as a pillar industry and two auxiliary industries, poultry farming and characteristic farming, should be supported. With Yongshang

and Puxing townships as the core, we should focus on building standardized pig farming areas and improving the standardized production level of pig farming bases; with Yongshang and Jinhua hilly areas as the focus, we should build under-forest poultry farming bases, focus on improving ecological poultry farming technology and building poultry breeding farms; and with Xinping and Anxi as the core, we should build quail farming demonstration bases to highlight County characteristics.

### *B. Pig Industry Development Planning*

On one hand, Xinjin County should strengthen policy guidance and project support, develop large-scale management, establish standardized and large-scale intensive pig farms, and take pig farming as the pillar industry of animal husbandry to develop steadily. We should focus on the consolidation and development of the breeding and extension system for the breeding of good breeds, and promote the popularization and application of standardized production techniques, and promote the construction of nuisance free pig producing areas. We should focus on the development of large and medium-sized pig slaughtering and processing enterprises, focus on intensification of comprehensive utilization of resources, and gradually realize the trend from quantitative to mass and traditional pig breeding to modern pig breeding. Change, improve product quality and market competitiveness, ensure product quality safety and people's health, increase farmers' income, and promote agriculture and rural economy. On the other hand, through standardized production, disease prevention and control, environmental control, supervision and management and socialized services, optimizing breed structure, cultivating brand products and other measures, pig breeding has become a pillar industry of animal husbandry. We will further increase the proportion of pigs raised on a large scale. By 2020, more than 90% of pigs will be raised on a large scale, 30 large-scale farms will be built and 350,000 pigs will be produced annually.

### *C. Planning of Poultry Breeding Industry*

On one hand, Xinjin County should take poultry breeding industry as the dominant animal husbandry industry in the county to develop. By means of industrialization, relying on leading enterprises and using science and technology as driving force, we will promote the transformation of modern production mode focusing on laying hens, broilers and quail farming, vigorously open up markets, improve industrial efficiency, highlight the strengthening of poultry breeding system construction, and realize large-scale production, leading and production-marketing cooperation. Efforts should be made to develop regional, industrialized and specialized poultry producing areas. On the other hand, 35 large-scale farms have been built in 6 townships, 23 villages and communities. Strive to achieve 9.3 million poultry a year. Among them, 3.3 million hens, 6 million broilers and 20,000 tons of eggs.

### *D. Planning of Special Aquaculture Industry*

Xinjin County should focus on quail development, take into account the development of herbivorous animal

husbandry such as geese, and promote large-scale farming in accordance with the model of farmers' professional cooperatives or "company + base + professional households". On the basis of the original aquaculture industry, we should highlight the characteristics of quail, expand the scope and quality of quail aquaculture, realize the leading role of production and marketing cooperation through specialized aquaculture bases, build a complete industrial chain, realize industrialization development and form brand products with regional advantages. In addition, efforts have been made to form quail breeding as the main characteristics of herbivorous livestock farming, with an overall annual output of 1.9 million rabbits, 0.1 million beef cattle and 0.9 million mutton sheep.

## V. CONCLUSIONS AND POLICY SUGGESTION

The development of modern animal husbandry in Xinjin County has made considerable progress, but it also faces internal and external risks and challenges. The development of modern animal husbandry in Xinjin County should focus on improving the level of animal husbandry industrialization in accordance with the overall requirements of satellite city construction and modern urban agriculture development in Chengdu. Xinjin should comprehensively consider the current situation of animal husbandry development and regional division provisions, focusing mainly on the upgrading of animal husbandry industry, focusing on improving the centralized livestock breeding rate and raising the level of standardized, intensive and large-scale production of animal products. Pig farming industry will be developed as a pillar industry, and poultry farming and characteristic farming industry as auxiliary industries.

### A. Rational Planning and Utilization of Land

On One hand, in accordance with the provisions of the Animal Husbandry Law, the development of livestock and poultry farming land is included in the overall land use planning of towns and villages. We will actively explore a new mode of planning and supporting the construction of livestock and poultry scale farms and farming communities in conjunction with basic farmland, and take the road of combining agriculture with animal husbandry and forestry with animal husbandry. On the other hand, farmers are allowed to rebuild and expand livestock and poultry pens around their homesteads and develop appropriate scale farming. Farmers should be properly guided and actively encouraged to make full use of barren hills and wasteland to develop large-scale farming.

### B. Actively Guide and Support Banks to Support Large-Scale Breeding and Processing Financing

To guide credit departments to actively implement the liquidity funds for large-scale livestock and poultry farming, and to allow mortgage and loan of fixed assets such as built pens and houses for large-scale livestock and poultry farms that have completed civil engineering projects. Rural micro-credit should be as inclined as possible to support the development of large-scale farming by farmers approved by the agricultural sector. Rural credit banks provide closed loans to farmers and leading enterprises and increase micro-loans.

### C. Establishment of Financial Input Support Mechanism for Animal Husbandry

Increase public financial investment in animal husbandry and form a support mechanism for steadily and significantly increased financial investment. Integrating agricultural-related funds and increasing investment in animal husbandry. Increase the investment of environmental protection funds in the construction of large-scale livestock and poultry manure treatment facilities. Preferential policies should be adopted to encourage social funds to invest in animal husbandry.

### D. Explore Actively the Pilot Project of Establishing Livestock and Poultry Breeding Insurance System

Establish a policy-oriented insurance investment system. Actively introduce commercial insurance companies to develop animal husbandry insurance. An insurance fund shall be established for the disposal of epidemic situation in the event of major epidemics and for compensation in the event of major livestock and poultry deaths.

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