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The Research on Countermeasures of Green Agricultural Development in Jiangsu Province

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Abstract Firstly, the thesis introduces the connotation of green agriculture, indicating that the green agriculture has 4 characteristics, namely openness, continuity, high efficiency and standardization, compared with the traditional agricultural development model. Secondly, the advantages of developing green agriculture in Jiangsu Province are discussed, namely rich agricultural resources, notable technological advantage, solid agricultural foundation, high quality of agricultural products, great market prospect of green consumption, and notable policy advantage. In view of the increasing shortage of natural resources, increasing restriction of rural labor force, increasing deterioration of rural environment, inadequate popularization of green agriculture, and fierce competition at home and abroad, the restricted factors of developing green agriculture in Jiangsu Province are introduced. Finally, in view of the agricultural concept innovation, green agricultural system innovation, agricultural technology innovation, agricultural management innovation, operation system innovation, ecological system innovation, development of tourism agriculture and regional differentiation development strategy, the relevant countermeasures and suggestions are put forward, in order to explore a new agricultural development model for Jiangsu's modern agricultural development.

Key words Green agriculture, Advantages, Restricted factors, Development countermeasures, China

Green agriculture is the highest form of modern agricultural development and a kind of standardized agriculture with the objective of agricultural products security. It has absorbed the essence of traditional agriculture, integrating non-pollution agriculture, organic agriculture, ecological agriculture and so on. Meanwhile, it is a new model of agricultural development and becomes continuation of recycling economy and sustainable agricultural model^[1]. Jiangsu Province, one of main production areas of grain, cotton, oil in China, is both a developed province along coast, and a traditional agricultural province. For a long time, the agricultural development in Jiangsu has not yet changed the conventional model of high investment, high consumption and high output, which makes the agricultural development confront with enormous pressure of resources and environment. From strategic thinking and universal viewpoint, the green agriculture, more comprehensive, scientific and meaningful, in comparison with other agricultural models, indisputably proves to be the most optimal model of modern agriculture. Endowed with marvelous advantage and condition of green agricultural development by nature, Jiangsu Province should regard green agriculture as dominant model of modern agricultural development, which tends to be the necessity of agricultural development with Jiangsu characteristic.

1 The connotation and characteristics of green agriculture

1.1 The connotation of green agriculture In the process of developing modern agriculture across the world, there exist contradiction between the quantity security and quality security

of agricultural products, and irreconcilable conflict among ecology, resource and economic benefit prevalently. In view of this circumstance, the experts of green food in China analyzed the merit and demerit of modern agricultural development worldwide, and put forward this novel concept of green agriculture based on the experience of developing green food over the past decade. Having pointed out the direction of Chinese agricultural development, this is a new model of agricultural development with profuse connotation and rationality, which conforms to the reality of China. By means of advocating the standardization of agricultural products, the green agriculture is a model of agricultural development, for the purpose of promoting comprehensive, coordinated and sustainable development of society and economy. It employs the advanced technology, industrial equipment and management concept to redound to the coordination between security of agricultural products, ecology and resources, and overall economic efficiency.

1.2 The characteristics of green agriculture Compared with the preceding model, green agriculture has four characteristics: openness, continuity, high efficiency and standardization. Firstly, the openness signifies that we should take advantage of human civilization and progress, especially the accomplishments of technological development, and depend on technology and material investment, in order to enhance the capacity of producing agricultural products. Meanwhile we have to pay attention to the quality and hygiene of agricultural products, in order to meet human need in terms of quantity and quality. Secondly, the continuity, namely that we draw on the energy transfer in the biological system of the plant, animal and microbe, so as to minimize the loss during the process of transfer; we give the priority to rational use and protection of resources to maintain good environment. Thirdly, high efficiency refers to the extreme coordination of social benefit, economic

benefit and ecological benefit. The green agriculture focuses on reasonable development of resources, environmental protection and food security. Also the green agriculture pays attention to the development of agricultural economy, especially the comprehensive strength of developing countries. Fourthly, standardization means that the green agriculture entails the whole control of standardization over agriculture, and stresses the terminal products of agricultural development, namely standardization of agricultural products. By such standardization, we can enhance the image and price of products, regulate the market order, and promote the international competitiveness of agricultural products^[2].

2 Advantages of developing green agriculture in Jiangsu Province

2.1 Rich agricultural resources Jiangsu Province, with approximately 1 000 kilometers coast line, located in the eastern coastal region of China and downstream of Changjiang River, has a prominent climate, namely the monsoon climate of transitional zone between subtropical climate and warm temperate climate, featuring equable climate, moderate rainfall and distinct four seasons. It boasts rich agricultural resources, vast plain and fertile soil, so the good natural conditions greatly boost the development of grain crops, cash crops and aquaculture, obtaining a good reputation of a land of milk and honey. Meanwhile, it abounds in famous, special, good and rare agricultural products resources, for instance, the world famous Yangcheng Lake crab, Taihu whitebait, Wuxi juicy peach, and Nanjing salted duck. Jiangsu Province has rich culture of agricultural cultivation and diverse ecological types, which renders the agricultural resources of tourism and recreation abundant. There are gardening and forestry for tourism of feasting one's eyes on flowers and leaves, plucking fruits and tasting teas. Surely there are animal husbandry for tourism of participation of feeding and hunting, and leisurely fishery integrating angling and dining too. For the time being, the whole province has 1934 agricultural tourism spots, three-fold that of the year 2005, with different reception conditions and scales, and annually adds 800 yuan to the farmer's per capita income. Among the spots, there are 515, 26.6 percent of the total, can obtain profit over 5 million yuan. It has 365 modern agricultural technology parks, 391 agricultural plucking parks, 615 leisurely villages, 592 rural home inns, 99 national agricultural demonstration points, 14 national forest parks, and 5 wetland parks. The number of agricultural tourism spots ownership in Jiangsu Province is always in the forefront of China.

2.2 Outstanding advantages of technology Jiangsu Province has lots of concentrated scientific research institutions, with remarkable technological manpower and high scientific research level, of which there are 50 agriculture-related scientific research institutions and colleges. Some state and provincial level key laboratories, project centers, high technology parks and so on, scatter around the province. Due to having reinforced technology innovation and implemented the strategy of revitalizing China through science and education, the contribu-

tion rate of technology in Jiangsu Province reached 55.7 percent in 2006, 8 percentage points higher than national average level^[3]. In practice, Jiangsu Province emphasizes agricultural development with distinctive local characteristics and agricultural technological industry, and has initiated 3 updated projects of agricultural varieties, technology and knowledge.

During the Tenth Five-Year Plan period, the province has developed 243 new varieties, 54 percent more than that in the Ninth-Year Plan period. Every 3 to 5 years, the agricultural principal varieties are to be updated and the update rate is over 85 percent. Jiangsu Province has not only introduced agricultural production technology with high efficiency and security, but also has developed advanced agricultural application technology and a batch of environment-friendly products by means of integration and assembly. Now development system of agricultural technology in Jiangsu Province is taking shape; the technology service system is perfected day by day; the industrialization pace of technological achievements continuously quickens; the technological innovation ability is strengthened notably.

2.3 Solid foundation of agriculture Since the past two decades, Jiangsu Province has confirmed the objective and direction of developing high-output, high-efficiency, and high-quality agriculture. Then it initiated the agricultural structure adjustment vigorously across the entire province. During the Eleventh Five-Year Plan period, Jiangsu provincial party committee and provincial government put the development of high efficiency agriculture on the top agenda to construct socialist new village. At the end of 2008, the high efficiency agricultural areas in the aggregate, reached 141 million hm², accounting for 29.8 percent of the entire provincial cultivated land area. The agricultural areas with high efficiency facility reached 32.6 million hm², accounting for 6.9 percent of the cultivated land area. Then the concomitant considerable change of agricultural operating model was coming up, namely the preceding decentralized management was transformed into the model of cooperativeness, scale and specialization. For the nonce, in Jiangsu Province, manifold models of organization, for instance, "able-person plus household", "cooperative economic organization plus household", "company plus household" and "company plus cooperative organization plus household", are mushrooming, resulting in the increasing agricultural systematism degree. At the end of 2008, the members of agricultural economic cooperative organization increased to 290 million; there were 680 rural land joint-stock cooperative associations; the members of rural community joint-stock cooperative association reached 345 million. The national level agricultural leading enterprises reached 43 in the entire province, ranking the second in China. With annual production value over 1 billion yuan, the county agricultural industries with local characteristics increased to 62. In consequence, clustered industries become the pillar of county economy.

2.4 High-quality agricultural products Jiangsu Province takes the development of high-quality agricultural products as the breakthrough point of agricultural structure adjustment and

grain production stability. In 2006, total output of grain in Jiangsu Province reached 3 100 million t, of which the high-quality and specific grain accounts for 80 percent. In order to further elevate the quality and security level of agricultural products, reinforce the market competitiveness, ensure the security of people's health and consumption, enhance the agricultural efficiency and increase peasants' income, Jiangsu Province has implemented the project of agricultural products quality and safety across the entire province. It emphasized the promotion of agricultural standardization, and enacted 280 provincial level agricultural local standards and the production technology regulations; it also emphasized strict control over admittance of exit and enter of agricultural products, conducted admittance test of the 500 agricultural product markets and realized the overall coverage of supervision of agricultural product wholesale markets in large and medium-sized cities; in 2008, non-pollution agricultural products varieties reached 3839, green food 2116 and organic agricultural products 545, rendering the certified number of products ranking the first in China; it has built 2 653 thousand hm^2 non-pollution agricultural products bases, 692 thousand hm^2 green food bases, 20 thousand organic agricultural products bases and 373 thousand hm^2 agricultural products export bases. The growing area of non-pollution, green, and organic agricultural products accounted for 55.9 percent, and the aquaculture output accounted for 40 percent. Meanwhile, Jiangsu Province consolidated the construction of agricultural products market system for enhancement of market circulation. The turnover of 30 provincial level key agricultural products wholesale markets reached unprecedented 70 billion yuan. The export value of agricultural products reached 1.979 billion dollars, 20.8 percent higher than that of the previous year, the rise margin making it rank the first among top ten agricultural product provinces.

2.5 The great market prospect of green consumption As the paces of realizing all-round well-off society quicken in Jiangsu Province, urban and rural residents' awareness of health is strengthened. They become more sensitive about the problem of quality and safety of agricultural products and food, not only pursuing the well-fed life condition, but also pursuing the scientific diet. In a nutshell, they are especially concerned about healthiness, nutrition, safety, and ecology pertaining to food, the impact on ecological environment imposed by agricultural production, and the impact on quality of agricultural products imposed by production environment. Extensive model of agricultural production can no longer meet people's need of high standard of living. According to the statistics^[4], the turnover of green products in the global market reached more than 280 billion dollars in 1993, breaking through 600 billion for the nonce. This year it may reach unprecedented 1 000 billion dollars. A few years from now on, the annual consumption output of green products in developed countries will increase at 25 percent annual growth rate. 83 percent consumers will be willing to purchase considerable green products. However, China's output value of green food is so small a share in the global market. But it grows at the rate of 30 percent to 40 percent, indicating

the enormous space to develop green industry. In the mean time, the advantage of price and value expansion of products, can bring prodigious profit and remarkable economic benefit to the leading enterprises in the industrialized system^[5]. Jiangsu Province should take advantage of high-degree economic globalization, endeavor to develop the overseas and domestic market, spare no efforts to promote green agriculture, expand market share of green agricultural products incessantly, and enhance Jiangsu's economic level.

2.6 Good strategic basis and policy opportunity Since the past 3 decades, Jiangsu Province has practised the ecological agricultural construction. It implemented *Jiangsu Province Agricultural Environmental Protection Statute*, and commenced the construction of ecological agricultural demonstration county. During the Ninth Five-Year Plan period, the whole province started 4 country level and 25 provincial level construction of ecological agricultural demonstration counties; during the Tenth Five-Year Plan period, the province started 13 provincial level construction of ecological agricultural demonstration counties. At the end of 2008, Jiangsu Province constructed 29 ecological agricultural demonstration counties in the aggregate with prominent effect. In 2005, the provincial government issued *Jiangsu Province Recycling Economic Development Plan*, and enacted specific development plan of recycling agriculture based on the construction of ecological province in order to solve the problems of rural environmental protection and key techniques of preventing pollution^[6]. In the period of the Eleventh Five-Year Plan, Jiangsu Province will popularize 100 key technique models of recycling agriculture in different areas, foster 60 leading enterprises of recycling agriculture as trailblazers of regional development, and build 30 demonstration parks of recycling agriculture with regional characteristics. All these measures will conspicuously tend to lop the amount of pesticide and fertilizer in agricultural system, and enhance the efficiency of using agricultural resources, the use rate of wastes and agricultural products safety.

3 Restricted factors of green agricultural development in Jiangsu Province

3.1 The increasing shortage of natural resources In 2006, the per capita area of cultivated land in Jiangsu Province was 0.066 hm^2 , 65 percent of the national average level, 0.037 hm^2 lower than that of the year 1995. There may be 0.05 hm^2 per capita area of cultivated land in 2010, indicating the acute human-land contradiction. Meanwhile, the cultivated land in Jiangsu Province degenerates all the while, resulting in the 7.40 index of land degeneration, second only to Shanghai. Due to the complex topography, severe problem of water loss and soil erosion in some areas still exists. The annual average water amount in transit in Jiangsu Province is 30 times as much as the local water resources amount. However, the per capita amount of local water resources is 432 m^3 , only 20 percent of the national average level. The per capita woodland area is just 0.01 hm^2 , 9 percent of the national average level. Besides, the forest coverage is only 6 percent of the world average level^[7].

3.2 The increasing restriction of rural labor force On one hand, the cost of labor force is so high. According to the result of survey, the cost of agricultural labor force in Jiangsu Province was 15 yuan per day in the 1990s, which rose to 70 yuan per day in southern Jiangsu and 50 yuan per day in northern Jiangsu. On the other hand, due to the quickening process of urbanization and considerable transfer of rural labor force, a large number of energetic, literate and knowledgeable "rural elite" drain, leading to the rural "empty nest" phenomenon. According to statistics of the second agricultural census^[8], at the end of 2006, among 12.507 million people engaged in agriculture, the female account for 61.7 percent; those aged over 41 account for 71.0 percent and those aged over 51 account for 46.1 percent; those with secondary education or lower account for 95.4 percent; those with primary school education and illiterates account for 55.7 percent. Low quality, stereotyped concept, ingrained habit, and the poor ability of assimilation of the modern agricultural technology and operating mode, influence the continuous and healthy development of green agriculture.

3.3 The increasing deterioration of rural environment In rural areas, the situation of pollution is serious and the sewage discharge directly without disposal. In addition, straw burning, littering, and filth are ubiquitous. The pollution of surface water becomes increasingly serious. As a matter of fact, the cultivated land area of Jiangsu Province accounts for 3.8 percent of national cultivated land area, but the usage amount of agricultural chemical is 2.37 times than the national average level, with 24.15 kg usage amount every one hm^2 farm land. The usage amount of chemical fertilizer every one hm^2 farm land reaches 600 kg, equivalent to 2 times of the national average level. The non-hazardous disposal rate of poultry and animal feces is lower than 5 percent, and the use rate is lower than 60 percent. Arising from rural non-point pollution, the COD, ammoniacal nitrogen, total nitrogen and total phosphorus account for 45.2 percent, 43.4 percent, 51.3 percent and 67.5 percent respectively, and they are the main source of pollution in Taihu Lake valley^[9]. Consequently, if Jiangsu Province is to develop green agriculture, it should confront the environmental damage inflicted by industrialization and the problem along with the extensive operation of traditional agricultural production model.

3.4 Inadequate popularization of green agricultural technology Firstly, the green agricultural technology is not adequately developed. There is shortage of advanced green agricultural technology concerning prevention of agricultural pollution and pest. At present, 600 kinds of agricultural chemicals are registered in China, and 1 500 kinds of veterinary medicines are itemized in national pharmacopoeia, each kind with strict technical norm of using. Some survey shows that when using pesticide and veterinary medicine, approximately 50 percent of the farmers cannot obtain effective technical instruction, and master limited production techniques of green and organic food. China's test equipments of agricultural products mainly depend on import, for want of innovative test equipments. There are constantly a dearth of personnel, means and funds in the process of green agricultural construction. The shaky founda-

tion of quality and safety test system of agricultural products, and low work efficiency, especially the poor performance of local test agency, often cause problems of inaccurate test results. Meanwhile, the flawed standard system of agriculture, inadequate popularization of agricultural standardization, ubiquity of neglect of standard implementation, and farmers' poor ability to understand and accept standardization, are all responsible for the frustrated popularization and construction. Even if the green agricultural products have been authenticated, some of which still adopt the traditional approach, devoid of technological content and standardization in the process of production, packaging, circulation and so on.

3.5 The fierce competition between overseas market and domestic market The problem of industry of Jiangsu's agricultural development is yet to be solved, for instance, the-small scale leading enterprise of agriculture, worse organized farmers, inefficient interlock between enterprise and farmers, and poor brand recognition of agriculture, bringing about the disconnection of industry chain, separation of production, supply and sales, and fracture between production and market. Lacking market incentive mechanism, the high-quality agricultural products often don't sell well. As China has joined the WTO, export of agricultural products will hold sway over the economic development of Jiangsu Province day by day. However, the green barrier in the international trade nowadays is extended, and many countries set more and more intricate and strict environmental protection standards of importing products, the highest standard of which is food. Especially the developed countries and areas, such as the EU, America, Japan, Canada, and Australia, are too critical of the standard of the pesticide residual and noxious material content in food^[10]. All these factors pose a great market hazard to the green agricultural development in Jiangsu Province.

4 Countermeasures and suggestions of developing Jiangsu's green agriculture

4.1 Propel the innovation of agricultural concept and change the pattern of agricultural growth Innovation of concept is the prerequisite of developing green agriculture. We must break through the traditional concept of incompatibility between the modern petroagriculture and ecological agriculture, so as to propel the innovation of agricultural concept. Meanwhile, we should reinforce the propaganda and education to the agricultural producers. Farmers, as the direct agricultural producers, should have corresponding environmental protection awareness, and strong green production concept. So the government should strengthen the green environmental production education of village cadres and the masses, in order to make them know the fact that developing green agriculture tends to boost local economic development and improve people's life. In addition, by invoking the poignant history of developing petroagriculture in developed countries, the government, should make the farmers aware that any activity inconsistent with sustainable development will reduce the income and even inflict damage on the human health and ecological balance. Through

training and instruction, the farmers engaged in green agriculture become voluntary; enterprise participation becomes paragon; green consumption becomes a fashion. In the whole society, we should foster awareness of green consumption and health, create a good environment of green consumption, expand consuming market of green agricultural products, and develop a sense of green agricultural consumption among the consuming body in the future. On this basis, it is necessary to push the market environmental change, in order to anchor stable consumers for the development of green agriculture.

4.2 Propel system innovation of green agriculture and perfect policy security system At present, developing green agriculture in Jiangsu Province, entails a set of green agricultural policy support and security system, which not only conforms to the reality of Jiangsu, but conforms to the WTO rules. Developing green agriculture should be incorporated into the Twelfth Five-Year Plan of Jiangsu Province. We need to modify, enact a series of relevant specific plans pertinently based on the combination of different agricultural models, non-pollution bases, green food development, construction of water conservancy works, rural energy construction and the new village construction; we need to strengthen the legal modulation of green agricultural development, strictly separate duties of producers, operators, consumers, and managers in the process of developing green agriculture, in order to ensure the orderly operation of agricultural economy, administer according to law, and vindicate legal rights; we need to lay down a detailed plan of agricultural clean production management, rural environmental clean standard, and policy of agricultural products admittance and management, prohibit abuse of noxious chemicals, and change traditional agricultural development model of high consumption, high investment and high pollution, in order to protect agricultural ecological environment; we need to enact and perfect policy security system of supporting green agricultural development, and offer necessary support and policy preference in terms of financial revenue, land use, financial credit and capital investment, especially at an early stage; we need to build a system of GDP calculation and checking, and establish performance evaluation system of officials, regarding whether it is beneficial to green agricultural development as an important index of performance evaluation.

4.3 Propel agricultural technology innovation and popularize new green agricultural technology Different from traditional agriculture, the green agriculture not only pursues output, safety, health and nutrition of agricultural products, but tries every possible means to eliminate the negative impact on environment arising from production. Only by technological progress and innovation, do we realize such goal^[11]. In fact, because the green agriculture in Jiangsu Province is still in the demonstration and pilot phase, so we should emphasize the green agricultural technology innovation and popularization based on the stable increasing technology investment, and expedite the introduction of green technological achievements for assimilation concerning selection of new varieties of animal and plants, prevention of insect pest and plant diseases, compre-

hensive use of agricultural products, basic research of agricultural development and environmental protection, and high technological research. We also need to establish new agricultural technological service system and propel system reform of local agricultural technological popularization. According to principles of public welfare and operative service, we need to innovate organization form, define function orientation, set up agencies scientifically, tighten up funds security and solve the history leftover. Accompanied by intensification of the popularization team of public welfare agricultural technology, we should actively foster agricultural technology service organizations, encourage agricultural leading enterprises and farmer cooperative associations to popularize agricultural technology, and build vigorous agricultural technology service system. According to the requirements of green agricultural development, new varieties, technology and machine are popularized in order to enhance agricultural technology conversion rate. We also should take steps as follows: firstly, we need to tighten up farmers' quality training, and practise training project of rural labor force quality and green certificate; secondly, we need to build and perfect farmers' technology training system; finally, we should incessantly enhance the farmers' quality and production skills.

4.4 Propel agricultural management innovation and establish green agricultural service system Management innovation can secure the green agricultural development. Based on the fundamental role of market system, namely allocation of agricultural resources, and the guidance of policy, the government should propel agricultural marketization, and offer policy support and legal security for the allocation and marketization of agricultural resources; the government need to perfect agricultural products market logistics system, develop a batch of big agriculture-related commercial corporations, establish various agricultural products wholesale markets and modern agricultural logistics centers, and gradually form chained distribution system and electronic commercial network of agricultural products covering entire country; the government need to implement brand strategy of agricultural products, foster several famous agricultural products brands across the world, and protect geographical indication of agricultural products; the government need to promote standardized production and management, reinforce environment and quality test of agricultural production, and build traceable system of agricultural products quality and safety; the government needs to propel agricultural informatization, effectively integrate various kinds of information network service resources, and provide convenient information service to farmers; the government needs to actively innovate agricultural service forms, greatly propel the service unification system of farmer specialization cooperative association, supply and marketing cooperative and rural credit cooperative, and construct new agricultural service platform secured by the service and management of government departments, integrating technology, information, finance and marketing.

4.5 Propel operation system innovation and expand green operating body For the development of green agriculture, we should take systematism, scale and industrialization

as development direction, use industry concept to operate agriculture, innovate agricultural operating system, practise professional production, scale operation, brand marketing, market operating, enterprise management, socialized service, and enhance the agricultural systematization level and agricultural industrialization operating level. We should foster agricultural leading enterprises, expedite technological transformation, propel management innovation, integrate factors of production, expand enterprise scale, improve the grade of products, focus on brand development, expand markets home and abroad, and improve the processing level and export profit-making ability. According to the principles of government support, department direction, standardized management and market connection, when multi-departments enhancement, multi-layered development, multi-body participation, multi-areas expansion take place at the same time, we must speed up standardization construction of farmer specialization cooperative association, lay down standard, build inner management and operating system, expand service fields, construct cooperative network, and improve the systematization level in the process of developing green agriculture. We must stick to the principles of adjusting measures to local conditions, scale operating, feature and high efficiency, build lots of green agricultural demonstration bases with new start, high standard and high requirements, divert competitive industries to competitive production areas, and reinforce the functions of demonstration, leading and radiation. We must stick to the principles of abiding by law, voluntariness and profit, fully exert the advantage of high level industrialization and urbanization, build land-use right circulation mechanism of market operation on the basis of stable land contract relationship, enhance agricultural resources to concentrate in competitive farmers, expand operating scale, and improve scale level of green agriculture. We must stick to the principles of resources optimization, complementary strengths, factors integration and market expansion, encourage the enterprise and cooperative to implement the agricultural "going outward" strategy, build bases, practise trans-regional operating agriculture, expand the agricultural development space, and develop a new green agricultural path in Jiangsu Province.

4.6 Propel ecological system innovation and create good environment

The ecological environment is the basis of developing agriculture, while development of green agriculture poses high environmental standard. In view of the status quo of environmental deterioration, low use rate of resources and small environmental carrying capacity of wastes, we should further establish the concept of giving priority to environment, emphasize the development of recycling economy and ecological agriculture, use resources rationally, combine the environmental protection and ecological construction, take actions that suit local circumstances in different areas, and popularize recycling agricultural ecological model. We should not only develop the ecological technology and new recycling agricultural ecological model based on the combination of resources conservation and recycling economy, but research the recycling agricultural development model under circumstances of new industrialization,

rural urbanization and agricultural modernization in Jiangsu Province; we should not only transform the traditional initial recycling agricultural model, but research and popularize the new model of recycling agriculture characterized by the applied technology of biogas energy, wind energy, solar energy and biology energy, and beneficial food chain technology; we should explore the new path of developing ecological economy in entire area^[12], regarding ecological agricultural demonstration county construction as vehicle, in order to build the system of rural environmental safety evaluation, prediction, monitoring and security; we should establish compensation mechanism, construct agricultural ecological system and create good ecological environment in terms of control, monitoring, treatment, protection, rational use and improvement.

4.7 Advocate green consumption concept and develop tourism agriculture

Based on protection of ecology and humanistic resources, full exertion of industry and tourism advantage, and development of agricultural dominant industry, the tourism agriculture is a new operation model of green agriculture, thriving in Jiangsu Province after the introduction of modern travelling and green consumption concept. Development of tourism agriculture involves agricultural operation, rural culture development, protection of rural natural resources and so on. So we must adhere to scientific view of development and people-oriented concept, advocate green consumption concept, develop tourism agriculture based on agricultural production, processing and marketing, and realize mutual complementation and coordinated development in order to increase farmers' income. We must also focus on the protection of natural resources and environment, improve rural environmental quality, prevent agricultural pollution and eradicate any damage. It is necessary to focus on protection of humanistic resources, combination of the development and protection of rural humanistic resources, and blend of inheritance and development. In addition, we need to implement the strategy of unification of the city and the countryside development, lay out regional agricultural travelling programs rationally, circumvent overlapping constructions, reduce investment mistake, and promote developing benefit. Finally, we should take advantage of urban funds and technology, increase investment, advance development of tourism agriculture and propel new village construction.

4.8 Propel development strategy of regional differentiation and build harmonious green new village

There exist conspicuous regional differences about rural environment and rural economic development in China. The hindering factors are diversified in terms of economic development level and green agricultural construction^[13], in southern Jiangsu, central Jiangsu and northern Jiangsu. In the light of propelling green agricultural development strategy, we also should consider the regional feature, and carry out green agricultural development strategy of regional differentiation. According to the problems exist in the green agricultural construction, southern Jiangsu should use technological and economic advantage to innovate the industrialized operating system of "company plus bases plus farmer", exert the function of agricultural leading enterprises,

and reinforce base construction of non-pollution agricultural products, green food and organic food; it also should strengthen rural greening, improve rural resident's life level in order to raise the green agricultural development level fundamentally in southern Jiangsu. Because the technological and economic strength of central Jiangsu is at the medium level, and there are restricted factors including economic factor and ecological factor in the green agricultural construction, so central Jiangsu should pay attention to the development of economic construction and ecological construction in tandem. We should propel agricultural industrialization development, and improve agricultural production scale and technology level; according to land condition in central Jiangsu, we should crystallize the direction of land use, adopt advanced technology and promote land use rate; we should increase the investment of afforestation in consideration of the problem of low forest coverage rate, poor ecological protection ability, and serious natural disaster. Northern Jiangsu's ecological environment is good, but the economic technological foundation is shaky. Hence, Northern Jiangsu's green agricultural development should give priority to economic development. Firstly, it should promote use rate of agricultural resources, adjust agricultural industry structure reasonably, extend initial agricultural products processing chain, and increase the added value; it should strengthen the investment of urban pollution governance, protect the rural environment, intensify the rural environmental protection awareness, improve farmers' quality through technology training, reduce the environmental vandalism during agricultural production, enhance sustainable development of green agriculture, and construct harmonious green new village.

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