

Research on the Integrated Development of Industry and Ecology Under the Background of Rural Revitalization—Taking Fufeng Village as an Example

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ABSTRACT

The integrated development of industry and ecology has become an important support for Rural Revitalization. Under the background of rural revitalization, this work firstly discussed the problems existing in the process of the integration and development of Fufeng industry and ecology, then analyzed the reasons that hinder the development of the integration of industry and ecology, and finally put forward we should change backward concepts and improve government services; implement the concept of green development and speed up the development of ecological agriculture; actively introduce appropriate technology to promote the development of the ecological industry; establish a talent incubation platform to improve the guarantee of green technology; strengthen rural ecotourism; optimize the layout of rural industries to promote the integration of three industries; tap brand culture and establish a sound brand Mechanism and other countermeasures to promote the integrated development of Fufeng industry and ecology, and promote the comprehensive revitalization of Fufeng village.

Keywords: *Rural revitalization; Industrial and ecological integration development; Green development;*

Fufeng

1. INTRODUCTION

Under the background of the new era, the integrated development of rural industry and ecology has become an important support for Rural Revitalization. It is an inevitable choice to promote industrial ecology and ecological industrialization to realize the high-quality development of rural industry and strengthen the construction of ecological civilization. At present, the academic research on the integration of industry and ecology is still in its infancy. The theoretical research results mainly focus on defining the connotation of industrial ecology and ecological industrialization. In terms of empirical research, in the provincial research, we have not seen the research results of Shaanxi industrial ecology and ecological industrialization, and there is no research results on the integration of industry and ecology in Fufeng County. In recent years, Fufeng County has made some achievements in the integration of rural industry and ecology. However, at present, there are still some problems, such as the insufficient transformation of regional ecological advantages to industrial advantages, limited support for green industries, inadequate green management, and incomplete construction of ecological economic system with industrial ecology and Ecological Industrialization as the main body, which restrict the development of supporting wind industry and ecological

integration and rural revitalization to a certain extent. Therefore, based on revealing the problems and analyzing the causes, this paper puts forward relevant policy suggestions to provide intellectual support for the rural revitalization and the integrated development of industry and ecology in Fufeng County.

2. PROBLEMS IN THE DEVELOPMENT OF FUFENG INDUSTRY AND ECOLOGICAL INTEGRATION

2.1. The Structure of Agricultural Products Is Single and the Exploitation of Ecological Resources Is Not Enough

The agriculture of Fufeng County is represented by grain and apple, and its development is optimistic. In 2019, the total grain output will be 256168 tons, including 150652 tons of summer grain and 105516 tons of autumn grain; the total output of Apple will be 314395 tons, accounting for 89.78% of garden fruits. As shown in Table 1. However, the planting industry in Fufeng village blindly follows the trend, the types of agricultural products are similar, and the local ecological resources are not fully explored, which leads to the industrial structure of Fufeng village too single,

which hinders the development of local industry and ecological integration.

Table 1. 2019 Output and growth rate of main agricultural products in Fufeng County

Indicators	Output (ton)	Increase over the previous year
Foodstuff	256168	-0.46
Summer grain	150652	-2.94
Autumn grain	105516	3.32
rapeseed	533	-5.83
Vegetables and edible fungi	40776	4.43
Garden fruit	350202	4.10
Apple	314395	3.91
Kiwifruit	23043	6.14
Peach	10871	6.27

Data source: statistical bulletin of national economic and social development of Fufeng County in 2019

2.2. Green Management of Rural Ecological Industry Is Not in Place

It is very important to formulate appropriate management measures and methods for the integrated development of rural industry and ecology. In other words, relevant policies and regulations and management methods play an important role in promoting the integration of rural industry and ecological development. However, at present, for Fufeng village, the first is that the management method of ecological economic development needs to be improved; the second is the lack of comprehensive follow-up management after the completion of ecological industry projects; the third is that the investment policy of ecological industry is not perfect.

2.3. Lack of Green Design of Industrial Chain

In the development of rural industry in Fufeng, the integrated development chain of industry and ecology needs to be further extended. For example, in the production of Fufeng agricultural products, due to the lack of professional leading enterprises, there are few cases of deep processing into end products. To be specific, most of the villagers live by planting agricultural products such as apples, peaches, wheat, corn and so on. They lack the green product design and production process of the whole industrial chain, and agricultural products cannot be processed to the end products nearby. For example, the garden fruits can be transformed into canned fruits, juice drinks, dried fruits, etc., which meet the requirements of green products, so as to increase the added value and economic benefits.

2.4. The Ecology of Industrial Technology has Been Neglected

To solve the ecological problems caused by industrial technology, it is necessary to realize the ecological industrial technology. At present, the development of new industries in Fufeng township has not been improved obviously. The main problems are the lack of environmental protection and ecological agriculture cultivation technology of township enterprises, and the environmental protection technology of township enterprises is not up to standard, resulting in certain productive pollution of township enterprises. These problems, to a certain extent, restrict the integrated development of Fufeng industry and ecology.

2.5. Industrial and Ecological Integration Development Is Not High

At present, Fufeng rural industry and ecological integration development is still in the exploratory stage, and the integration degree of primary industry, secondary industry and tertiary industry and ecological elements is low. At present, ecological agriculture has been reflected in Fufeng village, and has achieved a little bit, but the integration of ecology and the secondary industry and the tertiary industry is less, and the degree of integration is low. For example, in recent years, Fufeng has attached great importance to the exploitation of wetland ecological resources and environmental protection, but it still needs to promote and introduce the rural industry and ecological integration development, such as rural e-commerce, rural tourism, leisure and health, cultural and food experience.

2.6. Insufficient Integration of Ecotourism Resources

At present, the industrial chain of rural tourism in Fufeng is too short, and the integration of tourism resources such as ecology, culture and food is not enough, which can not give full play to the relevance of industrial chain and local ecological advantages. For example, the tourism spots in Fufeng Township failed to provide all-round services of clothing, food, housing and transportation for tourists. Specifically, the sales of tourist attractions, farmhouse entertainment and special products are relatively scattered and not concentrated. Scattered tourism resources restrict the cluster of ecotourism industry, which is not conducive to the formation of the extended industrial chain of catering, transportation, accommodation, shopping, entertainment, etc., and affects the economic growth of Fufeng township.

3. THE MAIN FACTORS RESTRICTING THE INTEGRATION DEVELOPMENT OF RURAL INDUSTRY AND ECOLOGY IN FUFENG

3.1. The Consciousness of Green Development Is Weak and the Green Management of Industry Lags Behind

Due to the slow economic growth rate of Fufeng Township in history, the local government paid more attention to the local economic growth. Under the influence of one-sided concept of development, villagers only consider improving family economic income and living standards, and pay little attention to ecological problems in production activities [1], which have caused damage to the local ecological environment, and these ecological problems have been ignored for a long time.

The green development consciousness of industry is poor, and the cultivation technology and method of new agricultural products are slow to accept. Marx believed that the harmonious relationship between man and nature is realized through certain social forms[2]. Therefore, relevant government departments should increase support for local industrial and ecological integration development projects, provide financial support for ecological industrialization projects and industrial ecological projects, and continuously introduce appropriate green cultivation and cultivation technologies. Villagers should also be fundamentally aware that the integrated development of industry and ecology is the best way to get rich. Only by making rational use of the local ecological resources and protecting the ecological environment can they bring economic wealth to the local people and themselves.

3.2. Farmers Scattered, Lack of Leading Enterprises

Rural farmers in Fufeng County are mainly individual farmers, and the planting areas are scattered and not contiguous. This small-scale family production has hindered the improvement of the production capacity of green pollution-free agricultural products to a certain extent. Due to the lagging implementation of land transfer policy and other uncontrollable factors, the development of ecological agriculture is slow.

3.3. Lack of Professionals

The integrated development of agricultural industry and ecology involves the cultivation of new products, product processing and other professional technology support. In recent years, due to a large number of young labor force to the big city employment and entrepreneurship, rural mainly

left behind elderly and children. However, the rural elderly are mainly to maintain survival, and are subject to the traditional planting concept. They are slow to accept new green cultivation technology and are not interested in it.

3.4. Product Brand Protection Awareness Is Not Strong

In Fufeng village, the output value of agricultural products such as seedlings, vegetables, flowers and fruits is large, but their awareness of green product brand creation and protection is weak, which affects consumers' perception of Fufeng agricultural products to a certain extent. The reasons for the lack of brand protection awareness of enterprises and farmers are as follows: first, the awareness of green product brand building is not strong. Some local market players in Fufeng have a misunderstanding on brand building, believing that only large enterprises are qualified for brand building, while small enterprises and even self-employed enterprises are not necessary to carry out brand building. In this way, even if there are relatively good green products, it is difficult to have corresponding benefits; second, township enterprises and self-employed households are not strong in protecting the brand of green products. Not aware of the role and value of product brands. Third, the protection mechanism of the product brand is not perfect. The coverage of relevant brand protection mechanisms in Fufeng village is narrow.

4. COUNTERMEASURES AND SUGGESTIONS ON PROMOTING THE INTEGRATION OF RURAL INDUSTRY AND ECOLOGY IN FUFENG

4.1. To Change Backward Concept and Improve Government Service

Local governments at all levels in Fufeng should first change their backward ideas and guide producers to establish the concept of green development. Based on consolidating the existing industries, Fufeng village should speed up the development of new-type characteristic green agriculture suitable for the local area. This requires the rural areas to combine the local ecological advantage resources and use the new green planting advanced technology to transform the ecological value into economic benefits, and produce green organic agricultural products without pollution, pollution and addition.

First of all, the relevant government departments can issue guidance on industrial and ecological integration development through websites and WeChat public service platforms to guide local producers to implement green production; secondly, organize scientific and technological personnel to go deep into rural areas to provide consulting

services and technical support; finally, through scientific and technological publicity, promote technological achievements and accelerate the transformation and application of agricultural scientific and technological achievements.

4.2. To Implement the Concept of Green Development and Speed up the Development of Ecological Agriculture

We should implement the concept of green development, vigorously carry out pesticide and chemical fertilizer reduction actions, and guide and encourage the implementation of green production mode for agricultural products. On the basis of ensuring the stable increase of grain production, we should take effective measures to promote the reform of agricultural supply side, promote the continuous optimization of agricultural industrial structure, and promote the integrated development of rural industry and ecology in Fufeng. For example, Tiandu town can use green technology to plant apples, focus on promoting the quality and efficiency of the apple industry, and create a national ecological demonstration town of "one village, one product"; Wujing town should seize the opportunity of Shaanxi fruit group's 10000 mu kiwi fruit demonstration base and intercity railway construction, cultivate Weibei special monkey peach with green planting, build characteristic towns, and improve tourism service capacity.

4.3. Actively Introduce Suitable Technology to Promote the Development of Ecological Industry

By inviting major agricultural and forestry colleges, agricultural and forestry research institutes, agricultural technology extension agencies and other institutions into the village to popularize the knowledge of ecological green products and cultivation technology. Speed up the integration and demonstration of mechanization technology in the whole process of main crop production in Fufeng village, optimize the allocation of rural production factors, strive to solve the "short board" problem of equipment in weak links, and speed up the integration and matching of mechanization technology in such links as efficient plant protection, drying in production areas, straw processing, and agricultural product processing[3]. We should encourage the promotion of machinery and technologies such as conservation tillage and straw composting, such as straw fertilizer, feed, basic material, raw material and fuel utilization, precision sowing, efficient fertilization, residual film recovery, harmless treatment of dead livestock and poultry, and resource utilization of livestock and poultry manure.

Strengthen technology research and development on the basis of the ecological industry and update [4], the transformation of the mode of the original industry and to solve ecological problems, the development of green

ecological agricultural products, green organic food and ecological tourism, using suitable planting method and production technology in ecological planting, breeding, tourism, and exert ecological demonstration base of demonstration and the cluster effect, promote the country for the first, second and third industry combined with ecological factors of common development.

4.4. To Establish Talent Incubation Platform and Improve Green Technology Support

By signing long-term strategic cooperation agreements with the Academy of Agricultural and Forestry Sciences, Northwest Agricultural and Forestry University, we can indirectly introduce relevant technical talents through various ways, such as temporary post and part-time work, consultant guidance, project construction, etc. Learning from the development experience of "five treasures" characteristic industries in Longxian County, 9 masters and doctors of dairy goat breeding, disease prevention and control, and industrial development, and 6 researchers and professors in fruit tree cultivation and management were employed to establish platforms such as "milk goat industry research institute", "walnut experimental demonstration station in Longxian County of northwest agricultural and Forestry University" and "Sushan poverty alleviation Industrial Park"[5].

First, we will indirectly attract high-level professional and technical personnel, support scientific and technological personnel to become shareholders of agricultural enterprises with their scientific and technological achievements, and establish and improve the mechanism of double recruitment of scientific and technological researchers jointly built by universities and enterprises and colleges and enterprises; second, carry out the pilot training of Rural Revitalization talents, attract college graduates, especially encourage students of Fufeng nationality to return home for entrepreneurship and employment, and advocate various fields; the third is to increase support for rural technical personnel to study and apply new technologies.

4.5. To Strengthen Rural Ecotourism

Relying on the resources advantages of green water and green mountains, rural scenery, local culture, characteristic agriculture and historical culture, Fufeng mainly focuses on ecological natural scenery and historical culture, and on the basis of renovating and constructing rural ecological environment, develops tourism products and scenic spots according to local conditions, and promotes rural tourism projects such as farmhouse, home-stay, fishing, sightseeing and experience. It can be considered to plan and build characteristic agricultural leisure experience areas, ecological agricultural products picking garden, leisure tourism circle, leisure and sightseeing park, rural home-

stay, leisure and health care base, and create 1-2 leisure agriculture demonstration towns.

4.6. To Optimize the Layout of Rural Industries and Promote the Integration of Three Industries

Develop modern agriculture, promote the integrated development of industry and ecology, and form the "agriculture plus" multiple formats development trend. We will promote the integration of large-scale planting with forestry, animal husbandry and fishery, and develop the combination of fruit, biogas, livestock, rice, fish and shrimp, and planting and breeding under the forest. We will promote the integration of the agriculture and processing circulation industry, promote the production and marketing docking of agricultural supermarkets, agricultural cooperatives and agricultural enterprises, and develop production processing, warehousing and logistics, and direct supply and direct marketing. We will promote the integration of agriculture and culture, tourism, education, and health care industries, and develop creative agriculture, functional agriculture, and leisure agriculture. We will promote the integration of agriculture and information industry, and develop digital agriculture and smart agriculture.

4.7. To Excavate Brand Culture and Establish Perfect Brand Mechanism

In the integrated development of industry and ecology, relying on agricultural parks and one village and one product village, accelerate the cultivation of agricultural enterprises, farmer's cooperative, the family farms, agricultural products e-commerce and other agricultural brand building entities, guide and support new business entities to carry out trademark registration and safety certification.

Based on local conditions, deeply explore historical geography, celebrity anecdotes, food culture and other themes, innovate agricultural cultural elements, enrich the connotation of agricultural brand, and establish "local brand" and "rural brand" characteristic product brand. Actively promote the deep integration of agricultural industry development with agricultural intangible cultural heritage, folk skills, rural customs and beautiful rural construction, strengthen the protection and inheritance of time-honored brands, old varieties and traditional crafts, and cultivate Fufeng agricultural brand with profound cultural heritage.

5. CONCLUSION

The integrated development of industry and ecology is the combination of ecological economy and ecological efficiency, and the development of mutual balance and coordination between economy and ecology. To improve the rural industrial ecosystem of Fufeng, improve the local ecological economic system, and enhance sustainable development ability, change the extensive development mode, maximize the use of ecological resources, improve the quality of rural ecological environment, enhance the ability of green industrial development, constantly promote the healthy development of regional economy and society, and achieve the strategic goal of Rural Revitalization.

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