Research on the Measurement of Agricultural Circular Economy Industry

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Abstract: At present, the development of China's agricultural circular economy industry is still in its infancy, the agricultural industry is relatively fragmented, and the upstream and downstream industries need to further extend and expand each other. Therefore, it is important to examine the positioning and development of all aspects of agricultural industry from the perspective of industry as a whole, and to measure the development status of agricultural industry. It is of great significance to grasp the inherent laws of modern agricultural development and meet the various needs of agricultural products for national economic and social development.

1. Definition of agricultural circular economy industry

As an ecosystem, the agricultural circular economy operates through the reduction, reuse and recycling of every link in the system to realize the material and energy cycle and information exchange between the enterprise and the enterprise. We can define the agricultural circular economy industry as a means of resource recycling as a means, value-added orientation, and meeting the material and environmental needs of users in the same industry or in different industries, based on technical logic and space-time layout. The organizational model of the upper and lower associations. As different links of the industrial chain, different sectors of the agricultural circular economy industry use the “raw material-product-waste-material“ cycle to build a “zero-emission“ industrial chain for recycling internal resources. The agricultural circular economy industry connects agricultural enterprises or industries related to markets, resources or technologies in series to form waste and raw material conversion, and realize effective recycling and comprehensive utilization of resources.

2. Agricultural circular economy industry measurement model

At present, the development of China's agricultural circular economy is not perfect, and there is a lack of linkage between industries. Judging from the existing literature, the predecessors have relatively few researches on the agricultural circular economy industry, and even more so in their extension and expansion studies, so construct a measurement model of the agricultural circular economy industry in line with China's actual conditions, and Actual operation

2.1 Agricultural circular economy industry measurement index system

By querying the literature and the LBCT measurement system proposed by the predecessors, this paper believes that the agricultural circular economy industry can be studied from the length of the agricultural circular economy industrial chain, the width of the industry, the degree of association between enterprises and the thickness of each enterprise. .

2.1.1 Agricultural circular economy industry length measurement index system

The extension of the length of the agricultural circular economy industrial chain relies on technological innovation and the development of new industries, fully exploiting natural resources such as water and minerals, and investing natural resources and energy as raw materials in industrial production to meet people's daily needs through processing. To make the agricultural circular economy industrial chain backward or forward, and extend the upstream and downstream industrial

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chain from point to belt. The industrial chain is the way to produce, process and consume agricultural products. The extension of the industrial chain can integrate the first, second and third industries to enhance the industrial strength. At present, there is no reasonable way to evaluate the length of the agricultural circular economy industrial chain. The agricultural circular economy industrial chain length is measured in three directions.

Investigate from the integrity. The integrity of the agricultural circular economy industrial chain can be measured to measure the production, processing, intermediate product processing and sales of agricultural products in the agricultural circular economy industrial chain. The more complete the industrial chain, the more value will be created in each link of the industrial chain. The more favorable it is to the production and processing of agricultural products, the more it can promote the development of agricultural circular economy.

The integration of agro-industry can reflect the length of the industry. Industrial integration begins to extend forward and backward from the source of the industry, reflecting the integrity and integration of the industry. Industrial integration is conducive to achieving economies of scale and improving control.

From the aspect of the value-added ability of agricultural products, the length of the agricultural cycle through the industrial chain is evaluated. The value added shows that the industry tends to develop reasonably and the value increase is small, indicating that the vertical development of the industry is not reasonable enough.

2.1.2 Width measurement index system of agricultural circular economy industry

The breadth of the agricultural circular economy industrial chain refers to other industries derived from the original agricultural industry, reflecting the development level of various industries at the industrial chain. The expansion of the width can increase the scope of business, make full use of resources, increase the comprehensive strength of various industries in the industrial chain, improve the stability and competitiveness of the agricultural circular economy industrial chain, and promote the development of the circular agricultural industry.

At each node of the industrial chain, the growth rate of enterprises related to the agricultural circular economy can indicate the growth of the width of the industrial chain. The number of enterprises on the industrial chain node has increased, and it is possible to expand the original field and seek new breakthrough directions. In this perspective, the breadth of the agricultural circular economy industry can be assessed.

The growth potential of the agricultural circular economy can evaluate the agricultural circular economy industry in the development direction. The greater the development potential of the agricultural circular economy, it shows that there are more opportunities to expand the industry.

The comprehensive utilization rate of agricultural circular economy products can be used to indicate the utilization status of by-products and wastes generated when processing agricultural products. The higher the utilization rate of agricultural recycling economy products, it means that in the processing of agricultural products, the circular economy The better the development

2.1.3 Index system of thickness of agricultural circular economy industrial chain

After the production rate of agricultural products is tested, it needs to be tested. The proportion of qualified products in the total product is called the product qualification rate. From the thickness of the agricultural industry, the higher the qualified rate of agricultural products produced, the more reasonable.

Agricultural carbon emissions Low carbon economy refers to the reduction of greenhouse gas emissions and economic and social development and ecological environment through technological innovation, institutional innovation, industrial transformation, and new energy development under the guidance of the concept of sustainable development. A form of economic development that protects a win-win situation.

Leading industry scale leading industries and agricultural economy have extremely important links, which can promote the development of regional agriculture. It is the core of modern agriculture and closely related to industrial relevance. Its size can reflect the performance of the

company from the thickness

2.1.4 Index system of the correlation degree of agricultural circular economy industrial chain

Generally speaking, the degree of industrial relevance refers to the need for companies to use other products during production. Based on such relationships, different industries have a connection. It can be used to illustrate the coordination between industries, but also to explain the stability of the industry chain. The higher the correlation between industries, the better the coordination, the healthier the industry chain, and the better the development.

The ecological contribution rate of the agricultural industry can explain the contribution of the agricultural circular economy industry to society, ecological environment and economic development.

The level of informationization of the agricultural industry .The level of informationization of the agricultural circular economy industry represents the link between industries, the level of informatization is high, and the industries are closely linked.

2.2 Design principle of measurement index system

Using the evaluation index system of agricultural circular economy and appropriate evaluation methods, we can timely understand the effects of agricultural industrial construction and sum up experience, and analyze the deficiencies. In selecting indicators, we should fully consider these factors in accordance with the principles of system optimization, guidance, according to the consistency of evaluation and target, scientific line and feasibility, and quantitative qualitative, so that the indicator system comprehensively reflects the construction of agricultural circular economy industrial chain. Status and development potential

2.2.1 Systematic principle

The agricultural circular economy is a complex system. To evaluate it, it is necessary to avoid the indicators being too complicated, and to avoid missing important aspects due to too few indicators. The overall optimality or satisfaction of the evaluation index system should be pursued. In order to realize system optimization, the general index is decomposed into secondary indicators, and then the secondary indicators are decomposed into three-level indicators, and the indicator system of the tree structure is formed. It is the system's more important book and its horizontal structure can meet the system optimization requirements.

2.2.2 Guiding principle

The social and economic aspects of agriculture cover a wide range, including agriculture, industry, and service industries. They have their own industry standards and resource utilization characteristics. Therefore, indicators and evaluation methods should be established according to specific industries. This paper studies the industrial chain of agricultural circular economy, so it reflects the development of circular economy and the degree of circulation from the whole industry of agriculture..

3. Conclusion

As an ecosystem, the agricultural recycling economy is linked to all aspects of the agricultural recycling industry. Through the reduction, reuse and recycling of each link of the system, the material energy cycle within and between enterprises is realized. Exchange of information. This paper proposes a systematic measurement analysis of the length, width and thickness of the agricultural industry. In practical applications, the fuzzy comprehensive analysis method and analytic hierarchy process can be used to verify the measurement results, which is an analysis of the development of agricultural circular economy. Make a reference.

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