Research on the Path Selection and Promotion Strategy of the Wisdom Agriculture

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Abstract: The development of wisdom agriculture with agricultural found Chinese demand. The development of wisdom agriculture has the characteristics of integrity, functional and systematic. The article analyzes the main issues and influencing factors according to the current wisdom agriculture in China, such as the gap between domestic and abroad, wisdom, the wisdom agriculture rural development e-government management system, and infrastructure construction. The path of wisdom agriculture development including agricultural super docking, logistics optimization, family farms and wisdom industry docking was discussed, and it puts forward the promotion strategy according to the characteristics of agricultural development in China: innovation wisdom agricultural financial services, innovation of wisdom agricultural circulation and channel optimization, wisdom technology intelligence support for the agricultural product logistics, and the increase of logistics efficiency.

Keywords: The wisdom agriculture, The internet of things, Path

Introduction

Wisdom agriculture is the tendency of Chinese modern agriculture. Urban integration process is accelerated causes reducing professional farmer and shortage of manpower in agriculture. But wisdom agriculture implementation can improve output ratio; agriculture operation is not alone and traditional industry, industrial development not only provide product; but realize green; environmental and recycle, promote the agricultural resource efficiency and risk resistance. During the rapid development of Chinese agriculture, scientific reason is becoming negative items based on the market data. The modern agriculture machine mass utilization, and high-performance agricultural chemicals mass was used to promote yield; but ignore the development balance nor ignore personal value orientation. Wisdom agriculture is the target of modern agriculture development. But how to select the routine is one of the most important problems of modern agriculture development.

1 Concept and Intention of Wisdom Agriculture

1.1 Concept of wisdom agriculture
Wisdom agriculture is the most important to establish wisdom countryside. It has big effect to living style, living level and living quality of farmers. Substance extensive-use in countryside provides wide space for modern agriculture. Countryside management style, farm product management, agricultural information service’ intelligence can integrate agriculture resource, promote agriculture production efficiency, change farmer’s idea, and improve farmer’s living quality. Wisdom agriculture is to take industrial production under comparable control condition, to realize integrated, high-efficiency and sustainable development modern agricultural production. It is the production with advanced equipment matching land, high technical standard and high-performance integrated big scale management.

1.2 Intension of wisdom agriculture
1.2.1 Integrity
Regard ecology resource and countryside production resource as one group. Modern agriculture is based
on harmonious development and well-being for human and nature, this is the integral requirement to Chinese agriculture industrial development, and it is aloes the guide thinking of modern wisdom agriculture. Agriculture resource system is not the isolated and lonely working unit again. It is based on network of things, all things are related, information is communicated with each other, it also emphasis all the biological circle should be integrated together.

1.2.2 Intelligence
Chinese agriculture is based on urban integration rapid process, professional farmer quantity is reducing, Chinese future agriculture will try more to manage family farm with modern management style. So it is the new requirement to realize the wisdom agriculture production, the intelligence means by self-adjustment and systematically modern management, monitoring, control, management and visual management based on modern high technology.

1.2.3 Systematicness
Chinese agriculture production system is composed with agriculture substance items, agriculture environmental items, agriculture technical items and agriculture marketing items, every item is related isolated system, but all the sub-system are mutual restricting, cooperating and relying on. Modern agriculture requirement reflects by utilizing modern digital simulation and sensor technology, establishing agriculture expert consultant system, agriculture group decision system, agriculture automotive management system and college-enterprise cooperation expert consult system, the manager of all the system can check and forecast agriculture future tendency by analyzing and simulating agriculture production and process.

2 Main Problem Analysis of Chinese Wisdom Agriculture

2.1 Big gap with overseas
Compare with the wisdom agriculture in western developed countries, Chinese one is relative delayed, there is big space in production size, information technology and social cognition. Compare with Chinese inland farmers, those living in eastern area have high education and high cultivation technology, computer and network are widely used in eastern area of China, but it is still much difficult to implement the wisdom agriculture to every countryside village. The farmers in some areas of China have not enough education to meet wisdom agriculture basement requirement, they cannot yet correctly use, maintain, recognize and understand modern information technology.

2.2 Wisdom agriculture is just used in production area, wisdom countryside living slowly development
Chinese wisdom agriculture development is to use the network of things, to integrate agriculture resource and to solve “agriculture, farmer and rural area” issue. Wisdom agriculture development is not only to solve plant on the earth and aquiculture; but it is a systematical engineering, an interactive and correlative promotion industrial circuit. Wisdom agriculture includes wisdom production, logistics, market and living and so on. Production process just related to how to utilize network of things technology, manage, control and survey plant and animals, but if Chinese citizen want to enjoy wisdom agriculture product, the green product must be on time sent to customer’s basket by wisdom logistics. Fresh farm product easily decomposes; deteriorate, not easily to be stored, quality is related to region and so on should be solved, push to implement “agriculture and marketing” strategy. For consumer, they sometimes reject to buy agriculture product because of single direction information or lemon effect, this is also the urgent and big problem for Chinese agriculture product marketing. So, Chinese wisdom agriculture should try wisdom sale to solve this issue. Wisdom agriculture can improve the output ratio, promote product quality, reduce the gap between urban and rural area and improve farmer’s living, but Chinese wisdom agriculture does not go deeply into countryside live, it does not optimize traditional farming style, does not reduce farmer’s burden, does not enrich farmer’s culture living. Wisdom agriculture does not break in communication and information exchange on time; control the agriculture
production intelligent equipment on line.

2.3 Wisdom agriculture government administration needs further improvement
It is not long to introduce “wisdom agriculture” in China; there is blind development and duplication during populization and application. Chinese current agriculture government administration cannot synthetic and deeply audit project, cannot control the data compare and advanced management system on time at the beggning of the project.

2.4 Current agriculture production management style restrict network of things scale development
It needs a long time to change Chinese traditional agriculture production style because of long history. It is popular for isolated, lonely and decentralized management in China for long time, this seriously block agriculture production communication and technical communication between farmers. In some rural areas the infrastructure is not enough, network, electronic commerce and agriculture information data basement establishment need planning.

Chinese wisdom agriculture carry forward should depend on specified government’s department, unified plan and systematically manage agriculture earth and production operation. Chinese abundant single, isolated farming is not good for Chinese wisdom agriculture development. It is forced to carry on network of things, but it is obvious for high cost, huge risk and low efficiency. So the traditional agriculture operation is the essential problem for wisdom agriculture development and network of things application.

2.5 It is difficult for popularization because of high cost of network of things application basic equipment construction causing
Sensor is the key item for substance application. Comparing with industrial sensor, few companies can produce agriculture sensor, so the cost is very high causing it is difficult to implement network of things in agriculture. Farmers will not buy and implement agriculture sensor because of the low output ratio, if we charge the cost to finial product, the price will be high which will affect citizen’s daily living. So those with high added value, not sensitive, mass needed crops are rapidly applied. PAN, LAN and WAN and other platform are established and developed during network of things development and application for Chinese wisdom agriculture, but interface among the agriculture environmental decoding technology is seldom developed, this is the shortage of Chinese wisdom agriculture development. It need overall coordination among meteorology, inspection, environment and management and so on, during integration and coordination there is many information transferred, data shared, analysis for decision, any process with low efficiency or breakdown will postpone whole wisdom agriculture development.

3 Development Route Selection of Chinese Wisdom

3.1 Move forward interface between agriculture production and market to improve the dinner quality
“Interface between agriculture production and market” is the production and management director get the agreement or get the preceded agreement with terminal sales of purchase or delivery for specified type, quantity and quality agriculture product. The product is directly sold by terminal seller based on related profit. As the urban integration grow faster and higher, interface between agriculture production and market “is one of the most important links for Chinese agriculture product and market. And it is growing fast recently. But there are many problems during interface between agriculture production and market “implementation because of the easily deterioration and price variation, in order to well solve these problem, must take care of wisdom agriculture idea embedding” interface between agriculture production and market”, reduce agriculture product sale cost, ensure cheap, healthy and fresh crops can easily be bought and eat to promote citizen’s happiness, at the same time, popularize wisdom network of
things for crops safety traceability, track the crops information covering all the process.

3.2 Improve wisdom logistics, optimized delivery route
Wisdom agriculture logistics should establish wisdom between farmer and consumer, remove the human’s obstacle because of the asymmetric information, and build Chinese food safety data basement by recognizing electric label “identification” through crops radio. Wisdom agriculture network of things technology is more intensive than traditional technology perception, it can feel on time, transfer and collect information, measure and capture data, and it also can modify and update agriculture logistics equipment, system and process at any time. The modified result is kept in the database; it can automatically be taken out as reference when the similar issue happens again. Network of things is more wide in the agriculture network of things, Chinese future wisdom agriculture logistics should be more sharing, optimize delivery route, the crops is positioned from land to home at any time, logistics distribution and environment and temperature of the crops can be inquired at any time.

3.3 Go deep into family farm, guide modern agriculture
Family farm is the new requirement from 18th CPC National Congress, it is the moderate scale, integrated and Merchandizing management, and it is the new agriculture production management which depends on agriculture incoming. The obvious good result are got to develop family farm in Shanghai, Wuhai and Zhejiang. In the aspect of modern agricultural development they has played a leading role, China family farm is still at the starting stage, there are various difficulties in the specific implementation and development process, there is no also the detailed guiding principle of specified subsidy for family farms. Chinese family farm pay attention to “moderate” scale, cannot just copy other farm, should explore the regional unique characteristics of China, ideas should be changed to develop many kind of management style, make the family farm intelligence, creativity, novelty, experience, giving new meaning of family farm. Relying on science and technology to improve the potential development and stamina of a family farm, it is not only enhances the competitiveness of the family farm, also helps to promote agricultural industrialization development, increase the income of peasants, accelerate rural independent innovation, lead the villagers to get rich.

3.4 Joint intelligence industry, provide agricultural science and technology service
Modern agriculture should be armed with wisdom, but not isolated, the wisdom agriculture should joint with the cultural industry and wisdom tourism industry, improve the agricultural science and technology service quality. In the field of intelligence management system, intelligent agriculture should not be limited to single cropping and common grain crop production, should cooperate more with leading enterprise and local farmers professional cooperatives, form “industrial community”, large agricultural or leading enterprises are more close to the market information, can provide newly detailed data information for the wisdom agriculture in brand building and industry chain docking, farmers’ professional cooperatives provide coordination and service for the modern agriculture industry chain, the main task is to construct rapid and convenient tunnel for “agriculture and supermarket docking”, under the multi-party cooperation and coordination, the wisdom agriculture can improve market information acquisition ability, provide original sufficient data for the smooth operation of the intellectual management database.

4.1 Financial services of innovation wisdom agricultural
During the process of Chinese agricultural enterprises development, one of the main problems of financing restricts the development of enterprises and agricultural town, community good operation over past years. How to integrate the wisdom thinking and related technology, innovate agricultural finical products, change rural financial service model, is an important measure for Chinese wisdom agricultural
push modern agricultural development. The wisdom financial service system should focus on the whole process of agricultural financial service, develop and promote series financial innovation product into intelligent, feedback and network. Agricultural finance related to guarantee, credit application, insurance, machinery leasing, trust, purchase of recombinant, financing system, fund, franchise right pledge etc., for applications subject to review, identify and monitor is more complicated. Innovation wisdom agricultural financial services should be based on a one-stop financial services platform as the basis, pay attention to the specific character of agricultural enterprises, farmers and farmers’ professional cooperatives, in the diversified financial product selection, prediction and evaluation of risk, financial demand analysis, credit application program and agricultural machinery rental and so on to provide intelligent services, making the diversity of standard with based on isolated characteristics.

4.2 Innovation wisdom agricultural circulation and channel optimization
The application and popularization of the substance Internet technology cannot do without the auxiliary function of Internet, Chinese wisdom agriculture should integrate network of things technology and Internet technology, structure agricultural electronic commerce network, integrate the circulation of agricultural products and the rural consumer market existing logistics, information, capital channel, create high-quality products special channel in the logistics channels, use two-dimensional code recognition technology to automatic sorting out different levels of agricultural products from the large quantities of products, through the proper channels allocated to different markets, reducing agricultural products classification and sorting cost, improve efficiency, different level quality products are sold in different price, realizes the different quality levels, and ensure the food information is true. China will develop wisdom agriculture logistics circulation pattern, develop more extensive order agriculture, personalize products according to consumer requirements, increase the income of farmers, and realize personal consumption of the agricultural products, also can promote the development of the agricultural products supply chain diversification.

4.3 Intelligence support to agricultural products logistics process using intelligent technology, improve logistics efficiency
China’s wisdom agricultural logistics should make personal electric communication equipment interactive and sharing with agricultural enterprises, farmers professional cooperatives and government departments, make intelligent more deeply, during monitoring the logistics environment and process, with the help of data mining and information analysis tool, rapidly establish scientific data model, collect and calculate full range of information of logistics by enabling operational system, integrate and analysis cross regional, cross industry agriculture logistics information to provide intellectual support for the logistics strategy. In addition, Chinese wisdom agricultural logistics should also solve the logistics system function data network fault, agricultural products logistics system simple, the Internet of things technology cognition difference, agricultural logistics service platform shortage, put forward proper solutions for agricultural production and circulation of products, promoting intelligence development of agricultural product logistics.

5 Conclusions
The wisdom agriculture development is benign development based on recycling, so the network of things should so we should scientific design the protection of the natural environment and waste handling during paying attention to agricultural development to achieve “service environment and build a beautiful China”. The Internet of things technology should be widely applied in the composition of the soil and atmosphere, forest ecological and water quality improvement, pest risk and natural disaster forecasting etc., by means of intelligent and wireless data transmission, let technology to play a greater role in the wisdom agriculture.
References