Survey on Agricultural Informization in Hebei Province – Current Situation and Countermeasures

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Abstract The agricultural informization is the important symbol of the agriculture modernization and it also plays an important role to the agricultural industry development. This article has carried on the analysis to the present situation and the existence main question of agricultural informization in HeBei province and proposed some development countermeasure to the informization construction

Key words Hebei Province; Agricultural informization; Agriculture modernization

1 Instruction

The modern agriculture is the agriculture that applies the modern agricultural science, the modern technology equipment and implements the modern management. Its development must depend upon the agricultural science and technology revolution, and take the modern biological technology and the information technology as the support. The agriculture information technology is the important technical support to the modern agricultural development. The agricultural informization is important symbol of modern agriculture in the new century.

The smooth transition from the traditional agriculture to the modern agriculture must rely on the comprehensive application of each agriculture information technology that informization, the digitized technology and the digital agriculture requests. “The agricultural science and technology development summary (2001-2010)” the State Council issues advocated developing the agriculture information technology vigorously, and doing some research on agriculture information system platform that suits the agriculture characteristic of our country. It indicates that the agricultural informization have been getting on more and more important in the economy and the social development in our country.

The beginning of the agricultural informization construction in Hebei Province is so late that we have big disparity in the software and hardware construction, the fund investment, the information resource development, technology research and so on compared with Beijing, Guangdong and Shanghai. Therefore, the analysis to the present situation the of agricultural informization construction in Hebei Province and the discussion on the questions exists at present and the countermeasure to solve the question means great significance to the development of agricultural informization construction in Hebei province.

2 The present situation of agriculture informization development in Hebei province

the recent years, the government takes the construction of modern agriculture, developing the rural economy, increasing the farmer and so on as the significant duty. The informization provides great impetus to agriculture modernization, and promote the fast healthy development of agriculture in rural area. We take the application of the information technology in the agricultural as the new power to optimize resources disposition, to promote the tradition industry, to enhance the labor productivity, and to transform economy growth way. The agricultural informization construction has obtained the considerable development, which mainly displays in following several aspects:

2.1 agriculture information network and the website construction wins initial success

The government attaches great importance to the construction of agriculture information network. Until the end of the 2006, we have completed 15 city-level agriculture information website, county-level
146 agricultural information website, including the agriculture information network of Hebei, and the farming & forestry academy of science website of Hebei that are comprehensive and specialized. A batch of websites that enjoy the high well-known domestically and have the economical character, have also been established, such as the Chinese chestnut, the edible fungus in the North, the fruits and vegetables in the east of Hebei Province, the Chinese agriculture network of huailai and so on. It has displayed the positive promoter action to the fast development of pillar industry in Hebei Province.

With the implementation of “electron government affairs 112 projects of hebei”, the agriculture information network construction in Hebei Province obtained the Leap Forward development, which has also completed constructing the agriculture information network that covers the entire province taking the province agriculture information network center platform as the main item, the city county network the backbone, the village information service station for the foundation. This network has connected 12 agro-related department, 11 locally administered level, 138 county bureaus of agriculture, 34 large and middle scale agricultural product wholesale market, 1450 main leading enterprises, 4500 intermediary organizations, 100,000 agricultural production powerful farmer and farmer’s broker, and has formed the network hardware platform of province-wide. We have completed 163 websites that cover the province, the city, and county. The information which the website issued has involved nearly each aspect of Hebei Province agriculture. According to incomplete statistics, the quantity accumulation of the information issued by the entire province reached 1.2 and year click quantity achieved 110,000,000.

2.2 The channel gathering agricultural information forms initially.

We have established more than 30 trans-department information gathering channels and more than 500 information gathering spot, and have initially formed the more perfect information gathering system. The first, comprehensive information gathering channel taking agricultural basic point investigation, agricultural production investigation, agricultural price investigation and so on as representative; The second, specialized information gathering channel taking seed, chemical fertilizer, plant protection, farm machinery and so on as representative; The third, farm price information gathering channel taking large-scale agriculture product wholesale market as representative; The fourth, basic information-gathering channel taking the meteorology, price, grain departments and so on as representative; The fifth is information communication channel with the National Related Ministries and commissions and other provinces.

2.3 Information technology obtains certain development and application in the field of agriculture

Since the ninth five-year plan, the various agricultural universities, the research organizations and the enterprise of information technology in Hebei Province have carried out the research on agricultural information technology , and a batch of achievements were achieved, such as “the service system monitoring and forecasting the agricultural disaster by satellite remote sensing” developed by meteorologic bureau of Hebei; “the decision-making system preventing the diseases of the apple and pear” developed by Agriculture University of Hebei; “the application of GIS in the precise fertilizer of the crop “developed by Hebei Academy of Agricultural and Forestry Science; “the household association platform of countryside information” developed by DaHuaXiaShenNong information technology limited company of Langfang in Hebei Province, etc. Moreover, under the plan of the national high-tech development plan (863 plans), “the demonstrational project of intellectualized application of agricultural information”.24 agronomic expert systems with regard to the wheat, the corn, the cucumber, the anti-insect cotton, the soybean, the paddy rice and so on have been developed in Hebei Province.

2.4 The gradually perfection of information service organization system of agriculture

In June 1998, the network service center regarding agriculture information of Hebei had been established, 12 agricultural department of provincial level, 11 cities, 138 county bureaus of agriculture and 980 technical service stations of agriculture in villages and towns had established the specialized agency concerning the information management and the system construction. At present, owning the special information service troop composed of 700 people and the rural information personnel troop composed of more than 3500 people, the agriculture departments of provinces, cities and county all have
established the agricultural organization concerning the agricultural information service. It has laid the good foundation for the agriculture information construction of Hebei.

3 The main problems on the agriculture informization construction of Hebei

3.1 The public resource was wasted seriously owing to establishing website by numerous departments

At present, there are nearly 200 websites concerning agriculture in Hebei Province, but only the website of agricultural information of Hebei and the website of agricultural university of Hebei joined the ranks of “the 100 formidable networks” in large-scale evaluation sponsored by the website of agriculture exposition, the farmer Daily and the CCTV agriculture channel in 2004. The majority of agricultural websites are small, thin profit. Especially the information resource is monopolized and divided respectively by different agro-related department. The information resource is disperse, nonstandard, unable to be shared. Simultaneously, there are some problems in the majority of agricultural information websites, such as the uncertain origin of information, update late, the humdrum content of information, the unsmooth channel of service and so on. The phenomenon of the “isolated island of information” is serious, for example, some websites are lack of information resource seriously, the information can’t be updated in time, and even less than 10 items that mainly depend on editing the information from government agriculture network is updated a day, which causes the waste of the government investment.

3.2 The burden of dear fees on users of network

The primary factor, online with high expense, restricts the farmer to use the network information resource. At present, the expense of online so high that the farmer can’t withstand. The cost of online by wide band is at least 50-60 RMB per month in the basic station of information service, and generally 80-200 RMB per month; The cost of online by dialing is at least 60-80 RMB per month, generally 120~300 RMB, and the highest above 800 RMB. The most service stations withstand it with difficulty. According to the number of bulletin concerning national economies and social development published by Sichuan Province in 2006, the farmer’ average income of Hebei is 3801.8 RMB per year. The income is so low that the farmers are unable to withstand the burden.

3.3 Weak information infrastructure of agricultural

In the recent years, a large of fund was invested in the foundational construction of farmland, the construction of water irrigation and rural road. The mechanization of agriculture, the irrigation and the facility had the great improvement. But in the areas of Northeast, the agriculture is still at the stage depending on the nature for life. The accumulation of material capital demanded by the agricultural informization especially by the agricultural automation is scarce, which restricted the healthy development of agricultural informization.

The weakness of the agriculture informization infrastructure is displayed in many aspects, such as the information carrier by paper, a few information database, the small capacity of information and so on. In the aspect of informational transmission, the data transmissible network appears wrong in the countryside, especially among villages, towns and farmers, so the information can’t arrives at the end-user successfully.

3.4 The low-level industrialization of agriculture and the insufficient demand for information

At present, the agricultural production is still at the stage of small-scale management, the level of industrialization of agriculture is low, and the benefit is small comparing with the high investment on information technology. Therefore, the informational construction is hindered seriously.

3.5 the lack of talent of agricultural informization

At present, the agency engaging in research and application of agricultural information technology is only a few in Hebei Province. Especially the multi-skill talented who understand both the agricultural
science and computer technology is deficient seriously, which has affected the advancement of the construction of agricultural informization seriously. The lack of talent mainly manifests in three aspects: the first, the personnel gathering agricultural information is scarce, so that it can’t meet the demand of information under the market economy condition; the second, the specialists processing agricultural information is so lack that the deep development and the effective using of information is insufficient, which cause that the demand of the agricultural production and management cant be met; the third, the specialists who is engaged in the research and development of agriculture information technology in different agricultural departments is scarce. It causes that the agricultural informization couldn’t come into being without difficulty.

4. The countermeasure of speeding up the construction of agriculture informization in Hebei Province

In the year of 2005, " the Central Committee of the CCP and the State Council of Certain Policies Opinion about Strengthening Rural work To enhance Agricultural Comprehensive Production Capability " explicitly emphasized on enhancing agriculture informization construction firstly, moreover, the first major document of 2006 and 2007 all took the agriculture informization development as the important content of developing modern agriculture and promoting socialism new rural area construction. It fully indicates that the party and the government have attached much importance to advance the agricultural informization and solve" Issues of the Agriculture, Countryside and Farmers ".As a big agricultural province, we must grasp this golden opportunity and speed up the step of the agriculture informization construction.

4.1 Enlarging investment, and strengthening the information infrastructure construction of grass roots level in countryside.

The basis of agricultural information infrastructure is to take all levels of agriculture department as the backing, and construct information backbone network system of central - province - city - county. It mainly takes the national Ministry of Agriculture information center as the core, takes various provinces (city) as the key position, takes the county (city) as the mesh point interconnecting with other network, thus Omni-directional agricultural resources and the rural economy information network system come into being. Of course, villages and towns as the most grass roots must integrate into this network system. It is requested the massive investment, only in this way can we cause the villages and towns spreading all over the country to form the countryside information network with crosswise connection and Longitudinal penetration.

4.2 Establishing and formulating mechanism, technology, standard, standard and policy laws and regulations of information sharing and the data renewing.

The agriculture information resource is extremely abundant in Hebei province, so we should solve the question of "the information isolated island" crosswise and "the website is identical" longitudinal in the aspect of the development and the conformity information resource. We must strengthen the communication and the coordination with agro-related department, establish the system of information exchanging and implement information sharing. In addition, the agriculture department also need establish a perfect information-gathering indices system according to the request of department level, institute a standardized and data updating system, and draw up agricultural informization policies and regulations which match the case of this province to guide and instruct all levels of departments, so that they carry out the work of agriculture informization effectively.

4.3 Speeding up the cultivation and introduction of agriculture information talent

The agricultural informization construction needs one large quantities of the multi-skill talents who know the modern information technology and understand the agricultural production management. Thus on the one hand we request that the decision-making leaders and the agriculture technical personnel can fully use the existing agricultural information infrastructure and the agriculture information resource,
study and digest advanced agriculture information technology. On the other hand, we must speed up cultivation of agricultural talents. Agricultural university of Hebei, college of Agriculture Sciences and other scientific institutions are the base of cultivating agricultural information talents of all levels. In addition, we may get benefit from the fundamental mode of the Germany vocational education—the way of "the binary cell system" in training agriculture information talent, placing center of gravity on the general countryside, taking a township, a town and a village as the school unit, developing the union school according to local actual demand, and then solving the difficult problem of the shortage of agriculture information talent in the countryside. Certainly, we can also provide the favorable policy, introduce the talents of agricultural technology, the network technology and other aspects to enrich the troop of information talents in the countryside.

4.4 Advancing the industrialization of agriculture vigorously

The agricultural informization is based on the industrialization of agriculture, only at high degree of agricultural marketability can it obtains development quickly. Therefore, the intense demand for the information can be formed only by getting rid of self-sufficient and realizing industrialization. At present, the majority of farmers in Hebei Province have not extricated completely from the Small-scale economy, using the few information technology and forming the scale effect with difficulty, thus the agricultural informization development was limited. At the same time, we must keep balance in developing the agricultural informization and the agricultural industrialization, so we can make essential progress in agriculture informization. Therefore, we must speed up the pace of the network extending to the villages and towns, put up a communication bridge between the information and the farmer through intermediary organization. At the same time, the troop of information personnel in the countryside should be enlarged as soon as possible, acting as the information intermediary between the agriculture departments and the farmers. The information personnel must take the Cadres in Rural, the farmer’s broker and the powerful farmers as the main object, and combine with the extended network to carry on the construction of agriculture informization.

References