

Role of Advisory Services in Regional Agricultural Development

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Abstract

Agriculture is the basic industry of a country's economy, access to agricultural advisory services is essential to improve the productivity of agricultural development in Gansu Province. It already has a good foundation and environmental development, and a network service covering the province has been preliminarily established. However, with the advancement of technology through the Internet, especially in the field of agricultural science and technology development, there are still many problems with agricultural advisory services in Gansu province. Based on this, this paper studies the role and countermeasures of agricultural consulting services in the development of the agricultural sector in Gansu Province, intending to promote the further development of agriculture in Gansu Province.

Keywords: agricultural consulting services, agricultural sector, development, Gansu Province

1. Introduction

Agricultural consulting services are also a convenient and efficient way to transform agricultural scientific and technological achievements into real productivity and are an incubator and booster for the development of agricultural industries. High-quality and efficient information services can improve the cultural quality and skills of farmers, optimize the industrial structure and layout of rural areas, enhance the market competitiveness of agricultural products and agricultural enterprises, increase farmers' incomes, and improve farmers' living standards (Zong, 1994). Gansu is an economically underdeveloped province in western China, with a rural population of 15.7875 million, accounting for 61.25% of the province's total population, and a rural per net income of 45.067 Yuan. With the continuous advancement of industrialization, urbanization, and agricultural industrialization, there have also been bottlenecks in the development of traditional agriculture. There is an urgent need to use the transformation of modern information technology to continuously enhance the market competitiveness of agricultural products and agricultural enterprises, expand employment, increase farmers' incomes, and improve farmers' living standards (Li, 2021). Strengthening agricultural advisory services, improving the cultural quality and skills of farmers, optimizing the industrial structure and layout of rural areas, establishing an equal exchange mechanism for urban and rural elements, and narrowing the development gap between urban and rural areas and the income distribution gap of residents are important issues for the development of the agricultural sector in Gansu Province.

2. Methodology

This paper mainly uses literature research methods and field research methods.

Literature research methods: this article searches for relevant literature on agricultural consulting services on <url>, Google, 360 Search, Baidu Academic, and other platforms, and interprets the relevant policies of agricultural consulting services in Gansu Province, to provide a theoretical basis for the research of this article. On-site visit method: this article uses on-site visits to randomly visit the country, township, and village-level agricultural consulting service departments with regional characteristics such as Jingning, Huining, Lanzhou, and Wuwei. The research content mainly includes the level to which the unit belongs; farmers most need agricultural advisory service facilities with regional characteristics; carry out agricultural Consulting service work with regional characteristics for farmers; the frequency of updating agricultural data and information with regional characteristics by the unit; whether working conditions and equipment can meet work needs; the main factors restricting the development of agricultural advisory service with regional characteristics; what knowledge needs to be supplemented to improve information service capabilities; the best way for the government to support

information services for agricultural industries with regional characteristics, etc. (Li, 2021). The study will attempt to obtain an established topic on information and knowledge and method to carry out sustainable development through the implementations of agricultural consulting in the sector of agronomy.

3. Object

With the gradual development of China's market economy system, agricultural consulting services, as an important part of the consulting industry, play an important role in agriculture and the rural economy (Fokou, 2020). At present, China's agriculture is undergoing a new stage of transformation from traditional agriculture to modern commercial agriculture and is in a new period of transformation from a planned economy to a market economy. Under this new situation, agricultural consulting services are not only facing serious challenges but also encountering once-in-a-lifetime development opportunities (Huang, 2018). The service areas of agricultural consulting services are mainly agricultural science and technology and rural markets. It is of great practical significance to carefully analyze the characteristics of agricultural consulting services and discuss their operation methods and development ideas. This article mainly uses Gansu Province as a case study, to study the role of agricultural consulting services in the development of the agricultural sector.

4. Objective

Focusing on the development of agricultural technology information service resources and serving "agriculture, rural areas, and urban areas", with information service quality and efficiency as the core, we comprehensively use telephone, television, radio, the Internet, mobile phone SMS, and other channels to realize an agricultural technology information service system with information resource sharing, in-place services, flexible mechanisms, and sustainable development capabilities (Baffoe, 2021). Agricultural consulting services are divided into the following 11 sections: agricultural science and technology; agricultural practical technology; animal husbandry practical technology; agricultural engineering; means of production; supply and demand information; market information; rural education; agricultural laws and regulations; characteristic agricultural products (Dimitrijević, 2019).

5. Literature Review

The Agricultural Advisory System allows any farmer who wishes to receive advice on the management of land and farms, in particular on the contribution to agricultural development; it is in this logic that the construction of agricultural advisory services began in the 1970s. After decades of continuous development, and agricultural consulting service system covering all walks of life has been formed.

The forms of agricultural production abroad are quite different from that of our country, especially in developed countries such as Europe and the United States. They are generally operated on large farms and use mechanized and high-tech technologies for production. Foreign agricultural production has entered the industrial stage, integrating sowing, and maintenance, picking, processing, and trading. Foreign farmers are both farmers and farm managers. Without the support of information technology, it is almost impossible to complete agricultural production (Dimitrijević, 2019). Therefore, foreign software companies have provided farmers with a set of full-process solutions to provide technical support for agricultural planting, conservation and management, and agricultural product processing (Baffoe, 2021). Some foreign consulting companies provide farmers with legal and policy advice, information services, and professional training in agriculture, but due to the large gap between the organizational structure of foreign governments and China, there is no government organization to build an information consulting system (Baffoe, 2021).

Gansu province faces several problems in agricultural mechanization; one is an insufficient investment. Both at the national policy level and the social level, the enthusiasm for agriculture is generally low, and the basic conditions are relatively poor. Second, the phenomenon of information silos is widespread. Due to the limitations of information technology, information systems were built in some areas in the early stages of development, but due to reasons such as pre-planning, system architecture, and development technology, information systems could not be effectively shared, forming information silos (Zhong, 2001). The third is the lack of top-level design. Compared with other industries, there are almost no top-level plans for government industrialization such as financial insurance, financial taxation, and financial wealth at the national level. The construction of agriculture is generally dominated by the provincial and municipal levels. This is one of the main reasons for the lag in the construction of agricultural mechanization (Zhong, 2001). Fourth, there is a serious shortage of agricultural computerization construction teams. Industrialization is one of the weaknesses in Gansu province service work, and there is a general lack of mechanization talents in grassroots governments. However, agriculture is mainly managed at the grassroots level, and the treatment conditions at the grassroots level are less attractive to talents, and talents cannot be retained.

6. Results and Discussion

Results

The development of agricultural consulting services in Gansu province has been significantly accelerated, showing a trend of diversification of service subjects, expansion of service objects, diversification of service methods, and full-service content. But in general, its overall level of development is still relatively low. In addition, there are still some problems with agricultural consulting services in Gansu Province, such as insufficient understanding of agricultural consulting services, cumbersome material conditions and light development and use of resources; lack of talent in agricultural consulting services and low level of consulting services; insufficient investment in agricultural computerization and the consulting service system is not strong enough; the majority of farmers are limited by economic conditions and cultural level, and it is difficult to get useful information. However we find the various hazards caused by excessive fertilization, expressed by the variable $Harm > 0$, Harm can be regarded as a negative external effect of an enterprise providing agricultural consulting services. Of course, this negative external effect only occurs when an enterprise induces farmers to purchase excessive fertilizers, and it does not necessarily exist. It is assumed that the utility loss caused by the harm of Harm to the government is $-\Delta UG(Harm)$, and $UG(\square)$ is the utility function of the government. For governments that value NATIONAL HEALTH, environmental resources, and farmers' livelihoods, $\Delta UG(Harm)$ if a fairly large government wants to weaken or even eliminate this negative external effect, it can train grass-roots agricultural extension workers to understand the appropriate amount of fertilizer to be applied, and then pass it on to farmers in agricultural promotion work. Farmers with correct cognition are not easy to be misled. In addition, there is another way that is likely to be more efficient. That is, the government-funded agricultural university will train rural extension workers for e-commerce. The training content is the same as above, and then the rural extension workers will work part-time to provide farmers with simple technical consulting services, such as the scientific dosage of fertilizers. However, the OECD Producer Indicator provides a measure of budget transfers to support advisory services to the agricultural sector. It includes agricultural research and development, education and training, inspection management, and infrastructure investments, all of which could have a positive long-term impact on agricultural innovation and productivity growth in Gansu.

Discussion

In the process of implementing the rural revitalization strategy, we must adhere to the priority development of agriculture and rural areas. Agricultural advisory services play an important role in the development of the agricultural sector, which is specifically reflected in the following aspects:

The first is to optimize the rural industrial structure. Agricultural consulting services are planned and classified according to the actual situation of the countryside's geographical conditions, resource endowments, and economic status quo. Based on reality, they will explore and develop and strengthen emerging industries, create new business models, and choose to develop agricultural industries that are suitable for the region, have application and development prospects, and have natural advantages, to ensure that the planned industries are what farmers are willing to develop, and at the same time make the industrial structure more reasonable.

The second is to revitalize rural ecological resources. The core resources of rural areas are ecological resources, which have value and attractiveness unmatched by other resources. In the pre-planning and implementation process of agricultural consulting service projects, the principle of ecological priority should be followed, and the scope of village development, agricultural industry development, natural ecological space, permanent farmland land, environmental capacity, etc. should be rationally planned following the basic requirements of land distribution characteristics, the number of original farmland, water resources, and soil and water conservation, and the ecological restoration protection and governance plan and specific pollution prevention measures should be considered in a comprehensive manner (Liu, 2019). At the same time, in the process of preparing the project plan, we will provide a suitable sustainable development model for rural construction and development, avoid the pollution and destruction of rural ecological resources, and make suggestions for the improvement of the rural environment to solve the substantive problems of the rural environment.

Finally, it is to provide intellectual support and technical service construction. Infrastructure can effectively drive economic growth, increase the overall benefits of rural industries, and improve the rural environment and the quality of life of residents (Wang, 2016). In the pre-consultation of agricultural engineering projects, it is necessary to clarify the overall layout of the village, basic conditions, and the inherent living habits of local farmers. On this basis, combined with the township master plan, we propose infrastructure construction plans that meet the actual situation of the countryside and meet the development needs, and support the corresponding supporting functions of industrial development and residents' lives, so that rural infrastructure can be improved.

The challenge is mainly attributable to improving access to agricultural services for producers. These services are part of a diversified service chain involving the actors involved in the sectors, and range from technical and economic training of producers to the commercial promotion of agricultural products through the dissemination of more efficient production and post-production techniques, the organization of producers, and access to financing. In this context, coordination becomes a central issue to co-build access to agricultural services through public-private partnerships or other forms of contractual relations involving public, private, and local associative actors. Small family producers are the main targets, at least in the short and medium-term. Agricultural development (especially food production) and food security are closely linked to their evolution. Support for them is, therefore, crucial to facilitate their links with actors in the upstream and downstream sectors, to boost their productivity.

7. Conclusion

Agricultural consulting services play an irreplaceable role in the development of agriculture and through science and technology. Agricultural information workers should give full play to their advantages of broad perspective and comprehensive information, have a sense of urgency and responsibility, actively participate in the tide of local economic construction, and make due contributions to promoting the development of the local economy. This is not only an objective need for rural economic development under the new form of the market economy but also an important sign for agricultural consulting services to face the society, realize self-worth, seek development, and survive. The agricultural sector should pay attention to the construction and development of agricultural consulting services, to promote the further development of Gansu Province's rural economy.

8. Recommendation

In the face of the new situation, the development ideas of the agricultural consulting service industry are worthy of serious consideration by the agricultural development department. This is not only related to the development of agricultural consulting services, but also to the major issue of how agricultural science and technology information service units can survive and develop in the market economy. This article mainly puts forward relevant suggestions from the following aspects:

First of all, raise the awareness of the whole society and expand the information user base. At present, the top priority is to use all methods and media to provide them with real and reliable agricultural technology, agricultural product processing technology, and market forecasting and analysis consulting services. For example, the Gansu Provincial Government can use broadcasting to disseminate new varieties, new pesticides, and new machinery information to farmers on time according to agricultural hours, and to teach scientific cultivation techniques and methods of using fertilizers and pesticides, which are welcomed by farmers

Secondly, actively cultivate the rural information market and establish and improve market laws and regulations. An information market is a place for consultation and exchange, and it is the sum of the information commodity exchange relationships generated by the circulation, exchange, and service of information commodities. At present, although the rural information market in Gansu Province has been preliminarily formed, it is far from meeting the needs of the rapid development of the agricultural consulting industry. Agricultural information workers must completely reverse the passive situation of waiting for customers to come to the door and relying on the government to ask for projects and funds, leave the market, take the initiative to find projects and carry out tracking services, track market demand, and market changes, and expand the market in all directions. At the same time, Gansu Province should also strengthen the formulation of laws and regulations on the rural information market, standardize and organize its operation, prevent false information, and stop illegal acts.

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References

- Baffoe, B. A., Martin, D. T., & Mrema, F. (2021). Agricultural extension and advisory services strategies during COVID-19 lockdown[J]. *Agricultural & Environmental Letters*, 6(4). <https://doi.org/10.1002/ael2.20056>
- Dimitrijević, M. (2019). Impact of agricultural advisory service on development of agricultural production[J].

- Ekonomika poljoprivrede*, 66(2). <https://doi.org/10.5937/ekoPolj1902617D>
- Fokou, A. B. T., Engwali, F. D., & Norbert, L. T. (2020). Impact of access to agricultural advisory services on rural development in the West Region of Cameroon[J]. *International Journal Of Rural Development, Environment And Health Research*, 4(1). <https://doi.org/10.22161/ijreh.4.1.3>
- Huang, Q., & Bao, W. (2018). Analysis of Agricultural Extension Consulting Service and Agricultural Innovation System [J]. *Modern Agricultural Science and Technology*, 20, 255+257.
- Li, Y. T. (2021). Discussion on agricultural science and technology consulting services in the context of rural revitalization [J]. *Southern Agricultural Machinery*, 52(12), 110-111.
- Liu, Z. X., Shi, Y. Q., & Zhao, Y. L. (2019). A Preliminary Exploration of Engineering Consulting Services for Agriculture to Go Out [J]. *Agricultural Engineering*, 9(05), 121-123.
- Wang, Y. B., Bo, J. Y., & Liu, X. Y. (2016). Design of Agricultural Information Service Platform Based on Mobile Technology [J]. *Agricultural Science and Technology and Information*, 23, 84-89.
- Zhong, C., & Jia, K. (2021). Research on countermeasures to enhance agricultural science and technology services and innovation capabilities [J]. *Agricultural Economics*, 5, 2-5.
- Zong, H. L. (1994). Agricultural Consulting Service in Denmark [J]. *World Agriculture*, 3, 2-5.

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