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Analysis on the Operation and Management of the Leading Enterprise of Selenium Rich Functional Agriculture in Fengguyuan, Shanxi Province

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Abstract: With the proposal of rural revitalization strategy and healthy China strategy, selenium rich functional agriculture has received unprecedented development opportunities and speed. This article takes Fengguyuan Agricultural Enterprise in Yuci District as an example to analyze the current situation of China's selenium rich industry and the basic situation of Fengguyuan's enterprises. It is found that there is a low market recognition and limited professional talent in Fengguyuan's selenium rich industry; The construction of self-owned brands is incomplete, sales channels are limited, there are many market substitutes, and the land is abandoned for a long time. Corresponding countermeasures are proposed to address the current problems, with the aim of promoting the development of Fengguyuan Enterprise and providing a better sales market for the selenium rich black millet produced by the enterprise, providing reference and reference for Fengguyuan Enterprise.

Keywords: Functional Agriculture; Selenium Rich Millet; Fengguyuan Agricultural Enterprise; Operations and Management

1. Overview of Selenium Rich Functional Agriculture

Strengthening research on modern biology and nutritional enhancement technologies, and exploring the development of food with health functions, is one of the measures to develop new business formats in rural areas. Functional agriculture was first proposed by Academician Zhao Qiguo of the Chinese Academy of Sciences in the Roadmap of Agricultural Science and Technology Development from China to 2050 in 2008. It has been 15 years since functional agriculture was proposed in 2008. Functional agriculture is defined as: growing in a natural soil environment rich in beneficial ingredients or realizing one or more beneficial health ingredients in agricultural and sideline products through biological nutrition enhancement technology and other biotechnology cultivation, for example, minerals and biological compounds, standardized and optimized production practices based on human health needs. The saying "Food is the top priority for the people" explains that in today's society, people's dietary habits have changed from "not being full" in the 1960s to not only being full but also having to eat well today. Since the founding of the People's Republic of China, agriculture has mainly solved the needs of people to have enough to eat, green agriculture has solved the needs of "eating with peace of mind", and functional agriculture has mainly solved the needs of "eating healthily". Functional agriculture is currently the third stage of agricultural development [1]. Functional agriculture mainly helps consumers solve the problem of "hidden hunger" caused by the lack of trace elements through "dietary supplementation", thereby achieving the goal of "supplementing what is lacking". There are 22 beneficial elements for the human body in trace elements, of which 18 are essential elements. The scope of functional agriculture includes 22 minerals that have health effects on the human body, as well as plant beneficial compounds such as anthocyanins and carrots. Over the past decade, selenium rich functional agriculture has received significant attention and investment from various sectors, with selenium rich agricultural products as the core. The selenium rich industry has played a good role in driving functional agriculture.

With the development of the functional agricultural product market, there are currently 20 provinces in China actively laying out and developing functional agriculture. Due to different development stages and relying on local land, varieties and other characteristic resources, each province and city produces different selenium rich products. Fengguyuan Agricultural Leading Enterprise in Yuci District, Jinzhong City, Shanxi Province is one of the first batch of agricultural enterprises in Jinzhong City to focus on functional agriculture as the leading industry. Through research, interviews with enterprise leaders, and online research, the current situation, existing problems, and response measures of the enterprise were analyzed one by one.

2. Current Situation of Selenium Rich Functional Agricultural Leading Enterprises in Fengguyuan, Shanxi

2.1 Overview of the Basic Situation of Fengguyuan Agricultural Leading Enterprises

Shanxi Fengguyuan Agricultural Development Co., Ltd. was established in May 2017. It is one of the first agricultural enterprises in Jinzhong City to focus on functional agriculture as the leading industry. Based on Shanxi's organic dryland agriculture, it has formed an industrial model of "functional agriculture+rural revitalization". Since 2015, we have collaborated with the postdoctoral team of the University of Science and Technology of China and Suzhou Selenium Valley Technology Co., Ltd. to build a 10000 acre selenium rich miscellaneous grain base in Jinzhong, helping farmers change their planting structure, improve the quality of agricultural products, solve the problem of selling high-quality selenium rich agricultural products, increase agricultural income, and form a production and sales loop of selenium rich functional agriculture. The company adopts a mechanism of "company+cooperative+farmer+base" and a "order agriculture+half support management" model. Through the management of "unified agricultural inputs, unified training, unified management, unified acquisition, and unified sales", more than 1600 villagers are trained to embark on the path of selenium rich functional agriculture, and more than 260 households are encouraged to plant selenium rich black millet. The company creates selenium rich functional agricultural products represented by Shanxi black millet. This variety far exceeds ordinary millet in terms of various trace elements and vitamins, with a selenium content of over 200ug/kg and a human absorption and conversion rate of up to 98%. It is very suitable for babies, pregnant women, and the elderly to consume. At the launch ceremony of the "National Innovation and Entrepreneurship Week" on October 15, 2020, after multiple rounds of selection, Hao Weifang, Chairman of Fengguyuan Agricultural Enterprise, reported on the company's agricultural development process and achievements to the Prime Minister through a cloud video dialogue. The Premier gave full recognition and encouragement to the development of Fengguyuan Enterprise, stating that you have increased the income of the villagers and made significant contributions to their poverty alleviation. In addition, the company's agricultural projects have also won first prize in provincial and municipal entrepreneurship competitions and have been featured in the "Entrepreneurial Heroes Collection" program of CCTV, receiving unanimous praise from buyers nationwide. At the same time, Hao Weifang and her husband also vigorously developed circular agriculture, using straw from foxtail millet to feed cattle and sheep, and using bran to brew vinegar, increasing the added value of foxtail millet. In addition, by deep processing selenium rich black millet into selenium rich black millet Guoba, not only did they extend the industry chain of selenium rich black millet, but they also expanded the food processing industry. They collaborated with the functional agriculture professional team of Shanxi Agricultural University to create selenium rich rice stalks Research on standard breeding techniques for selenium rich sheep using bran as raw material.

2.2 Analysis of the Supporting Conditions for the Development of Functional Agriculture in Fenggu Source

2.2.1 Basic condition analysis

Yuci District, Jinzhong City, Shanxi Province, is rich in natural resources. Due to factors such as large temperature differences between day and night, long light exposure time, and soil conditions, the growth period and frost free

period of crops are longer and the quality is better, making it suitable for the development of functional agriculture[2]. The overall level of agriculture in Shanxi Province is relatively low, mainly in hilly and mountainous areas. It is precisely because of these that Shanxi has become one of the famous producing areas of miscellaneous grains. Not only is the yield high, but the variety is also rich, with Qin County's yellow millet being famous. Due to its rich nutritional value and various health benefits, Xiaomi is a pure natural crop species. Using Xiaomi to develop functional agriculture is the best choice. Fengguyuan Agricultural Enterprise also discovered this characteristic of Xiaomi and developed selenium rich black Xiaomi on the basis of Xiaomi, thus developing functional agriculture in Shanxi Province. Selenium is known as the "king of anti-cancer, longevity element, insulin in trace elements, guardian of the heart, natural antidote to liver disease, bright messenger, and spark of life". In addition, compared to ordinary millet, selenium rich black millet has the characteristic of being free from washing, in addition to being rich in selenium elements. That is, the surface of millet is naturally water-soluble anthocyanins, which are easily absorbed by the human body. After washing, the skin will discolor, and anthocyanins and trace elements will be lost; The nourishing function has a high content of trace elements, protein, dietary fiber, and fat. Regular consumption of selenium rich black millet can improve the body's immunity, nourish the spleen and stomach. Hao Weifang, Chairman of Fengguyuan Agricultural Enterprise, made good use of the characteristics of coarse grains and actively carried out functional agriculture, accelerating the development of selenium rich black millet, and doubling the income of farmers.

2.2.2 Policy opportunity analysis

It has been repeatedly proposed that solving the "three rural" problems should always be the top priority of work. It is necessary to accelerate the transformation of agricultural production methods, build a modern agricultural system and industrial structure, and increase rural reform efforts. Meanwhile, miscellaneous grains are currently the main crop for selenium rich functional agriculture. In the "Healthy China 2030" Plan Outline, "Healthy China" is first proposed as a strategy, emphasizing the importance of the health industry. It not only elaborates on the need for a healthy lifestyle and optimized health services, but also emphasizes the construction of a healthy environment and the development of the health industry. The selenium rich industry effectively interprets the concept of healthy living. Faced with these policies and opportunities, Fengguyuan Agricultural Enterprise, driven by the local government, has taken small grains as the main breakthrough point to develop functional food and new industries in functional agriculture. This not only broadens the agricultural industry chain, but also increases the income of farmers.

2.2.3 Support for agricultural technology

With the rapid development of Shanxi Xiaomi industry, market sales have been increasing year by year. Universities and research institutes such as Shanxi Academy of Agricultural Sciences, Shanxi Agricultural Valley Biotechnology Research Institute, and Shanxi Agricultural University actively provide agricultural technology support and guidance for Fengguyuan agricultural enterprises, providing high-quality resources for seed breeding work. In terms of foxtail millet breeding, there is a strong research team and fruitful research results. Jingu 21 is a foxtail millet cultivated by Shanxi Academy of Agricultural Sciences, which has strong adaptability and high drought resistance. In addition, the Functional Agriculture Research Institute of Shanxi Agricultural University has hired Academician Zhao Qiguo, the founder of functional agriculture, and Dr. Yin Xuebin, the leader of functional agriculture, for technical guidance. Then, Shanxi Agricultural University has provided technical guidance to its Fengguyuan agricultural enterprise, making selenium rich black millet not only grow well, but also have high yields, stronger resistance to wind, rain, and drought [3].

3. Problems in the Operation and Management of Selenium Rich Functional Agricultural Leading Enterprises in Fengguyuan, Shanxi

3.1 Low Market Recognition of Selenium Rich Products and Limited Professional Talents

The market recognition of selenium rich

products is not high. According to the information consulted, most people still lack understanding of trace elements, let alone selenium, the nutritional value that selenium provides to people, and have not realized the harm of selenium deficiency in the human body. According to data collected by scholars, 70% of people are not aware of the relationship between selenium and health, 18% hold a skeptical attitude towards selenium rich products, and only 12% agree with the consumption concept of selenium rich products [4]. Therefore, improving market recognition is a key measure to open up the sales channels of selenium rich products. In addition, Fengguyuan Agricultural Enterprise also faces a shortage of professional talents. Currently, the entire team only has less than 10 people, and it only raises manpower from nearby farmers during the millet planting season. The personnel needed for planting, manual weeding, fertilization during the millet filling period, as well as manual harvesting and natural drying after the millet ripens, are not fixed. In addition, there is a lack of professional researchers for selenium enrichment technology, as a result, the cultivation and harvest of selenium rich black millet are affected [5].

3.2 Incomplete Self-Owned Brand Construction and Limited Sales Channels

With the development of the economy, more and more consumers are paying attention to product brands when it comes to product purchases. In the process of brand building, the most important thing for enterprises is to establish trust relationships with consumers. Although Fenggu Yuan has gradually established a brand with local characteristics in recent years, its brand influence still needs to be improved. The Fengguyuan brand has not yet penetrated the selenium rich market and there is still a certain distance between it and consumers. Currently, there is no regional public brand or well-known brand in the selenium rich market. Strengthening brand building may become a key focus of Fengguyuan's future development. In addition, the sales channels of Fengguyuan are limited, and it can only be sold in the circle of friends, its own official account, Taobao online store, or through the platform set up by researchers from Shanxi Academy of Agricultural Sciences, Shanxi Agricultural University and other researchers. These sales methods can only be limited to consumers with demand in this regard. However, most consumers still do not know much about selenium rich black millet, thus inhibiting the circulation of selenium rich black millet [6].

3.3 There are Many Substitutes in the Market, and the Land Abandonment Period Is Long

For the selenium rich black millet produced by Fengguyuan, there are many market alternatives. At present, there are many types of selenium rich products on the market, such as selenium rich potatoes from Gaocheng, Hebei; Selenium rich rice and selenium rich black beans from Shuguang Farm in Heilongjiang Province; Selenium rich black fungus from Jilin; Selenium rich rice from Jiangxi Province; Enshi is known as the "selenium rich city" and its selenium rich tea is quite famous; Ankang, Shaanxi is known as the "selenium valley of China". Its selenium rich agricultural and sideline products, such as konjac and walnuts, are relatively abundant; Selenium sand melon from Ningxia Hui Autonomous Region; The selenium rich eggs in Sungezhuang, Jixian County, Tianjin, as well as the local selenium rich rye noodles, selenium rich aged vinegar, selenium rich Baijiu, etc., are all good in terms of output value and sales in the selenium rich industry nationwide [7]. If Fenggu Yuan does not upgrade its own products, it will inevitably lead to a decrease in sales of selenium rich black millet, which will be replaced by other selenium rich products. In addition, according to the operator of Fengguyuan Agricultural Enterprise, the planting, growth, and harvest period of millet is approximately from May to October each year. During this period, the land has been in the utilization stage, and from November to March of the following year, the land is in the abandonment stage, with a longer time interval. If the enterprise can make better use of the land during this period, it is also a good choice for improving the efficiency of the enterprise.

4. Cracking Path for Leading Agricultural Enterprises with Selenium Rich Function in Fengguyuan, Shanxi

4.1 Strengthen the Promotion of Selenium Rich Products and Attract more Agricultural Talents

In response to the low market recognition of selenium rich products, it is necessary to vigorously promote selenium rich products. The nutritional value and efficacy of selenium rich products can be promoted through television, online media, and other means, so that selenium rich products can enter people's vision faster and integrate into people's lives more quickly. Only in this way can selenium rich products produced by agricultural enterprises such as Fengguyuan be better sold and improve people's physical fitness. In addition, Fengguyuan also needs to attract more professional talents [8], which can be achieved through the local government's improvement of policy subsidies for agricultural talents, or by attracting some local talents who are wandering abroad to return to their hometowns. It is truly hoped that more professionals can truly return to their respective hometowns and contribute to the rural revitalization and construction of their hometowns.

4.2 Improve Self Owned Brand Construction and Expand Sales Channels

In response to the limited influence of self-owned brands, which leads to a single sales method for products, further improvement should be made in self-owned brand construction and increased publicity efforts for the brand. We can utilize various media methods such as online platforms and community group buying platforms to promote selenium rich black Xiaomi to more consumers through activities such as agricultural exhibitions and trade fairs, continuously enhancing brand awareness and influence. Its sales channels can also be expanded to other industries, such as processing and tourism [9]. For brand building, Fengguyuan Agricultural Enterprise can also rely on the regional brand already established - Qinzhou Yellow Xiaomi to develop its selenium rich black Xiaomi. This can not only meet the needs of some consumers for the brand, but also better launch selenium rich products. If Fenggu Yuan can build its own brand story, tell the brand story well, enhance brand culture, and make the brand bigger and stronger, it is the most important thing.

4.3 Enhance Product Features and Make Reasonable Use of Marketing Methods

For the numerous selenium rich products on the market. In order for the selenium rich black millet produced by Fengguyuan Enterprise to gain consumer recognition, it is necessary to enhance the product's characteristics and create a role that cannot be replaced by other selenium rich products; You can also segment the market and choose one or several markets from the segmented markets based on your own advantages as your target market, positioning the market well, showcasing different product features for consumers, and developing diversified strategies for future needs[10].

5. Conclusion and Outlook

With the support of the rural revitalization and healthy China strategy, China's rural areas have undergone earth shaking changes. Today, people's requirements for the quality and safety of agricultural products and healthy eating are becoming higher and higher, which is more conducive to the rapid development of the selenium rich industry in this context. Taking Fengguyuan as an example, there are still technical, brand, and talent issues in the development of functional agriculture, and different solutions are available for different problems. At the same time, we should encourage more emotional local talents to return to their hometowns, as they are still familiar with the local situation and are more willing to stay here than talents from other places. Finally, we call on more emotional people to return to their hometowns and contribute to the agriculture of their hometowns!

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