



## **Study on the current situation of cultivated land quality in Shaanxi Province**

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**Abstract:** Since the 18 th National Congress of the Communist Party of China, the Party Central Committee, with Comrade Xi Jinping as its core, has always attached great importance to food security, emphasizing the need to strictly abide by the red line of 1.8 billion acres of arable land, ensure national food security, and implement the strategy of " storing grain in the ground and storing grain in technology." The construction of high-standard farmland is a key measure to consolidate and improve food production capacity, ensure national food security and implement the strategy of rural revitalization. The Fifth Plenary Session of the Nineteenth Central Committee stressed 'the need to adhere to the most stringent farmland protection system and implement high-standard farmland construction projects'. As one of the birthplaces of agricultural civilization, Shaanxi Province has encountered many problems in agricultural development at the present stage. Exploring the current situation of cultivated land quality in the process of agricultural development in Shaanxi Province will help Shaanxi Province achieve rapid development, win the battle against poverty, and realize rural revitalization and common prosperity for all.

**Keywords:** high standard farmland, industrial integration, cultivated land quality.

### 1. Introduction

May 13, 2020, the Ministry of Agriculture and Rural Affairs issued the 《National bulletin on cultivated land quality grade in 2019》 [1], announced the quality of cultivated land in different regions of the country. 《Bulletin》 divides the quality grade of 20.23 million mu cultivated land in China into 10 grades from one to ten according to the order from high to low. The average quality grade of cultivated land in China is 4.76, which is 0.35 higher than 4.41 in 2014. Among them, the cultivated land quality evaluation for the first to third grade cultivated land area is 632 million mu, accounting for 31.24 % of the total area of cultivated land. 4-6 arable land covers an area of 947 million mu, accounting for 46.81 per cent of the country 's total arable land. 7-10 arable land covers 444 million mu, accounting for 21.95 per cent of the country 's total arable land. Since the 18 th National Congress of the Communist Party of China, the Party Central Committee, with Comrade Xi Jinping as its core, has always attached great importance to food security, emphasizing the need to strictly abide by the red line of 1.8 billion acres of arable land, ensure national food security, and implement the strategy of "storing grain in the ground and storing grain in technology". The construction of high-standard farmland is a key measure to consolidate and improve food production capacity, ensure national food security and implement the strategy of rural revitalization. The Fifth Plenary Session of the Nineteenth Central Committee stressed' the need to adhere to the most stringent farmland protection system and implement high-standard farmland construction projects'. 《Recommendations of the Central Committee of the Communist Party of China on the formulation of the fourteenth five-year plan for national economic and social development and the vision for 2035》 [2] proposed to vigorously promote the construction of high-standard farmland, provide a solid foundation for ensuring national food security, and ensure the construction of 1 billion mu of high-standard farmland in China by 2022, so as to stabilize and guarantee 1 trillion yuan of grain production capacity. The north-south span of Shaanxi Province is 878 km, and the region is narrow and long. The terrain is high in the north and south, low in the middle, tilted from west to east, showing a landscape pattern of ' two mountains and one river '. There are great differences in geomorphology. From south to north, it is divided into three major geomorphic areas : Qinba Mountain Area, Guanzhong Plain and Northern Shaanxi Plateau. Due to the differences in geological landforms, the cultivated land area and cultivated land quality in the three regions of Shaanxi Province are significantly different. According to the distribution of cultivated land quality grade, the cultivated land quality in Guanzhong area is the best, which is 9.68 grade, higher than the average 1.65 grade of cultivated land in the whole

province. The quality of cultivated land in southern Shaanxi is slightly higher than the average level of the whole province, which is 11.28. The cultivated land grade in northern Shaanxi is lower than the provincial average of 2.01, which is 13.34. And the province's only 0.47million hm<sup>2</sup> excellent land, distributed in Guanzhong area [3]. Cultivated land protection and national food security are the basic national policies, but there are still many problems. First, it is a national development strategy to establish high-standard farmland with high and stable yield and ensure national food security. However, there are large differences in farmland quality evaluation standards, different farmland construction standards, lack of new materials, new technologies and new methods, unclear construction plans, fragmented construction fields, solidified construction models, and single effect evaluation methods, which lead to the return of farmland to the original state in the later period. The second is the agricultural production mode that is not deep in the integration of the three industries, lacks the cultivation of professional talents, has no mature, and can be promoted and implemented in a large area, a wide range and across regions. Only a few regions have small-scale agricultural industrial modes, but its popularization and application have great limitations on the industrial mode of farmland construction.

## **2. The construction gap of high-standard farmland is large, the task is arduous, and the difference of farmland quality evaluation standards is large.**

At present, the cultivated land in Shaanxi Province is 59.65 million mu, and the area of high standard farmland is 14 million mu, accounting for about 23 % of the cultivated land. Shaanxi Province is mainly concentrated in Guanzhong area, accounting for 89.64 % of the province ' s highland area, for 6.155 million hm<sup>2</sup>, no highland distribution in northern Shaanxi, highland area in southern Shaanxi is 7.11 million hm<sup>2</sup>. The middle land is the most in Guanzhong area, which is 8.128 million hm<sup>2</sup>, followed by southern Shaanxi, which is 6.289 million hm<sup>2</sup>, and northern Shaanxi is the least, which is 2.143 million hm<sup>2</sup>. Lowland mainly distributed in northern Shaanxi, accounting for 72.96 % of the province's lowland area, 1.20.30million hm<sup>2</sup>, Guanzhong and southern Shaanxi lowland area is less, respectively 24.74million hm<sup>2</sup>, 19.84 million hm<sup>2</sup>. During the ' 14th Five-Year Plan', the province should build 773 million mu of high-standard farmland, upgrade 179 million mu of high-standard farmland, and supplement 323 million mu during the ' 13th Five-Year Plan'. At the same time, the design requirements of high-standard farmland construction are different : the construction requirements of different areas in the same region are different, and the feasible design standards are different. High standard farmland construction system is not perfect, lack of equipment late management and protection : lack of

infrastructure construction, such as irrigation system into operation, the lack of maintenance measures, resulting in some equipment without supervision and maintenance, function gradually weakened. Lack of scientific operation management mode : the whole process is in the stage of continuous exploration, lack of strict requirements, affect the process of high standard farmland construction. The construction scheme is not clear : the construction should be carried out in strict accordance with the scheme, and it can be changed after the discussion on the site emergencies. Construction of land fragmentation : not conducive to large-scale mechanized operations. Construction mode curing, effect evaluation method is single : lack of diversity of farmland construction, with a single function to measure the overall construction effect. At the same time, the utilization of provincial agricultural funds and the construction of high-standard farmland have formed a joint force, which is relatively dispersed. The improvement of farmland quality and the agricultural industry have not formed a agglomeration effect. It is difficult to play the purpose of promoting rural revitalization through comprehensive land consolidation [4].

### **3. Insufficient depth of integration of the three industries and lack of professionals**

Shaanxi agricultural industrialization started late, but the development speed is fast. In recent years, a large number of leading enterprises with large scale and strong driving ability have emerged, such as Xi ' an Yinqiao, Yangling Qinfeng, Shaanxi Huasheng and so on. Although these leading enterprises have played a certain role in the development of agricultural industrialization in Shaanxi Province, there is still a big gap with the eastern provinces which started earlier, and there is a big gap in scale, quality and efficiency. One is that the leading enterprises of agricultural industrialization in Shaanxi Province have limited driving effect on farmers. Due to the small number of leading enterprises, weak economic strength and small scale of operation, their radiation range is limited, and their driving ability farmers in the radiation range is limited. Second, when the development of intermediary organizations lags behind and the leading enterprises have low radiation driving ability, the development of agricultural intermediary organizations can effectively promote the industrialization of agriculture, connect farmers and leading enterprises, improve the degree of farmers ' organization, and promote the development of agricultural industrialization. The third is the lagging concept, the limited education level of farmers, the weak ability to accept new concepts, new knowledge and new technologies, and the lagging concept, such as indifferent market awareness and underdeveloped commodity economy. Fourthly, the depth of the integration of the three industries is insufficient. In order to develop the rural industry well, the most

important thing is to establish a good industrial system, extend the industrial chain, and integrate the primary, secondary and tertiary industries. However, although there is this concept, there is a lack of innovation in the implementation process, resulting in a low degree of integration and insignificant benefits of industrial development. Fifth, the lack of professional talents, the rural industry involves a wide range, but the lack of professional talents, in terms of agricultural new business entities, the local cultivation and support efforts also need to be further strengthened. In addition, there is a lack of integration with the higher education mechanism. The times are changing, and the rural areas are changing. The development of rural areas needs more talent input, which requires universities, enterprises and governments to complete the docking. With regard to the development of agricultural industrialization in Shaanxi Province at the present stage, it is urgent to develop an agricultural industrial model that can be popularized in a large scale to ensure the rapid development of rural economy and promote rural revitalization.

#### **4. Conclusion**

There are still many problems in the agricultural development of Shaanxi Province that need to be further sorted out. In view of the problems existing in the current situation of cultivated land quality and industrial integration, it is necessary for the government to take the lead and the relevant departments to cooperate fully. If necessary, special affairs and special batch of targeted policies can be given to promote the efficient improvement of cultivated land quality and the rapid development of industrial integration in Shaanxi Province and realize rural revitalization.

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