

Suggestion on Agriculture HR Education and Training in National Core Grain Region

Dejin Huang

Business and Administration College, Henan University of Engineering, Zhengzhou, China

Keywords: education; training; human resource; grain security; bottleneck; core grain region

Abstract: Grain security is a major strategic issues related to the national stability and development under the China's New Normal. This article analyzes in the perspective of Henan province, by the methods of data statistics and comparison on the basis of analysis about the grain yield and agricultural production input data. This article insists that the deadline of the Core Grain Region Strategy has already been coming, it has been fruitful but exposed some bottleneck problems just like the tighter constraint of the land resource, the contradiction of agricultural HR quantity and quality. To promote agriculture by applying scientific and technological advances in order to develop grain production, fundamentally rely on the human resource. So, to improve the education and training of the agriculture human resource is becoming an inevitable choice. Based on the recognition of the necessity of agricultural human resources development and promotion, this article attempts to put forward "three big projects". They are the basic education promoting project, in order to improve basic education in the core grain region; the agricultural talent cultivating project, in order to pay special attention to the professional farmers cultivating and training; the management talent training project, in order to enliven the agricultural economy in the core grain regions.

1. Introduction

A report from the Food and Agriculture Organization of UN (FAO) in November 1996, gives the definition of food security. It means: only when all people at any time can get enough safe and nutritious food to meet their healthy dietary needs and food preferences in the physical and economic sense, could achieve food security. 2012, the central committee of Communist Party of China put forward the goal of building a well-off society in an all-round way until 2020. To ensure national food security is the important foundation of this goal. Because of the core grain region strategy and a lot of policies, China's grain output achieved continuous growth, but the food safety situation is still not optimistic.

In 2015, China's total grain output was 621,435 thousand tons, 102.4% of 2014(China national bureau of statistics, 2015). And this realized the historic "10 years increasing in a row". But the high demand still exists, and the uncertainty factors of increasing grain production are a lot. So we can say that the country's food security risk cannot be ignored. From the regional level, there are 13 major grain-producing areas, Henan, Shandong, Hebei, Heilongjiang, Jilin, Liaoning, Jiangxi, Anhui, Hunan, Hubei, Sichuan, Jiangsu, and Inner Mongolia. And China has make specific farmland protection policy for food security(Erik Lichtenberg, Chengri Ding, 2007). According to the national statistics bureau, the 13 major grain-producing areas contribute 75% grain yield of our country, and about 95% national new increasing grain yield are from these 13 provinces(Tianyi Zhang, 2015). Some data shows, the current insufficient trend of effective domestic food supply in China is becoming more obvious. Now, only Henan, Heilongjiang, Jilin, Inner Mongolia, Anhui, and Hunan province are still able to supply grain outward in the traditional grain provinces. Statistically, the self-sufficiency rate of grain in China has exceeded 95%, even dropped to less than 90%(China national bureau of statistics, 2015). Now the grain gap still remains large. As a national major grain-producing area, Henan province is typical in the core area of grain. Therefore, it is significant to examine the effects and problems of strategy implementation of the core grain region in Henan province.

2. Methods

This article analyses the current situation and problems about the Core Grain Region Strategy in the perspective of Henan province. By the methods of data statistics and comparison on the basis of analysis about the grain yield and agricultural production input data, we found that the strategy has been fruitful but exposed some bottleneck problems just like the tighter constraint of the land resource, the contradiction of agricultural HR quantity and quality, and so on. Then, it points out some suggestions, insists that promote agriculture by applying scientific and technological advances in order to develop grain production, fundamentally rely on the human resource. So, to improve the education and training of the agriculture human resource is becoming an inevitable choice.

3. The Core Grain Region Strategy is fruitful

In order to push forward the construction of the core grain region, in recent years, Henan province continues to promote the construction of high-standard land. According to the latest statistics (as shown in table 1), the total output of grain was 121.342 billion catties in Henan province in 2015, increasing by 5.896 billion catties comparing with 2014(increasing by 5.1%), which has realized the historic "12 years increasing in a row". For seven years(2011-2017), the total outputs were all more than 110 billion catties. And in 2015, it got historic breakthrough of 120 billion catties, and Henan province summer grain exceeded 70 billion catties, reaching 70.236 billion catties, increasing 3.456 billion catties in contrast to the same period of 2014. And that is to say, the growing rate was 5.18%. The total output of autumn grain exceeded 50 billion catties, reaching 51.106 billion catties, increasing 2.44 billion catties in contrast to the same period of the last year, with the growing rate of 5.01%. This is the biggest grain production of Henan province since 2008, also bringing about the breakthrough of total output of 120 billion catties, in which summer grain exceeds 70 billion catties, and autumn grain exceeds 50 billion catties. Here comes true the second step in the construction of the core grain region strategy, in other words, the output reached 120 billion tons in 2015. So to speak, since Henan province implemented the strategy of core grain region, grain production was looked with great importance in the whole province. The grain industry has got stable and huge development, making a great contribution to the national grain security, providing the material support for construction of Central Economic Zone and Zhengzhou Airport Economic Zone.

4. The bottleneck in the construction of core grain region is obvious

The planning and implementation of core grain region in Henan province have been nine years. The deadline will be met in 3 years (by the time 2020). It could say that the deadline is coming, so it is necessary for us to examine the strategic plan of the core grain region and its effect of implement according to the change of the related data of grain production in Henan province. At present, the difficulties and bottlenecks of the construction of the core grain region are still obvious, which can be shown as followed.

Table 1: Table of the grain output in Henan (2008-2017)

year	total output (billion catties)	increasing production (billion catties)	growing rate (%)	summer grain output(billion catties)	increasing production of summer grain(billion catties)	growing rate (%)
2008	107.30	2.50	2.4	61.20	1.32	2.2
2009	107.78	0.48	0.5	61.30	0.10	0.16
2010	108.74	0.96	0.9	61.81	0.51	0.8
2011	110.85	2.11	1.9	62.63	0.82	1.3
2012	112.77	1.92	1.7	63.72	1.09	1.7
2013	114.27	1.50	1.3	64.70	0.98	1.5
2014	115.45	1.17	1.0	66.78	2.08	3.2
2015	121.34	5.90	5.1	70.24	3.46	5.18
2016	118.93	-2.41	-2.0	69.54	-0.70	-1.0
2017	119.46	0.53	0.4	71.08	1.54	2.2

Source of data: the official website of Henan Provincial Statistics Bureau

Table 2: Henan agricultural production index of major inputs TAB (2005-2011)

year	Agricultural GDP index	Agricultural material cost index	Crop planting area index	Agricultural labor input index
1992	100.0	100.0	100.0	100.0
2005	234.2	315.2	116.6	106.2
2006	251.3	338.3	118.8	103.2
2007	260.9	344.1	118.0	98.8
2008	275.2	344.4	118.5	96.4
2009	286.7	367.0	118.8	93.6
2010	299.6	419.3	119.4	91.8
2011	310.5	412.9	119.5	90.4

Notes: Agricultural GDP index adopts the relative index of Agricultural GDP in 2012 Statistical Yearbook of Henan Province to eliminates effects caused by price factors

Source of data: Analysis of the Elements of Agricultural Economic Growth in Henan Province by Wang Yong, published in the first volume of 2015, Rural Economy and Science.

First, the resource constraints of grain output tend to be tight, especially enlarging the areas becomes more and more difficult, just like the same situation of China(Liangzhi You, Max Spoor, John Ulimwengu, Shemei Zhang, 2011). For example, from 2006 to 2011, the index of planting area increased only by 0.7% (as shown in table 2). The urbanization, industrial development, all need more and more land resource. Therefore, in the future, what can we do is to focus on the potential of the existing land resources.

Second, natural conditions vary, and regional natural disasters are frequent. The core grain regions' ability to prevent and fight natural disasters is limited. For example, in the summer of 2009, the bad weather has caused the summer grain disasters in the whole province. In the autumn of 2014, the natural disasters in some parts caused great reduction of output of autumn grain.

Third, increasing production relies too much on the investment in material cost (as shown in table 2). Agricultural GDP index in 2011 is 310.5% of 1992, and agricultural material input index in 2011 is 412.9% times larger than that in 1992. That is to say, during the 20 years, material input of agricultural production increased by 2 times. In other words, it has also intensified the environmental pollution and problems of food safety.

Fourth, the contribution of science and technology in grain output is not high enough. The popularization and application of new agricultural technology is not enough, so the contribution of science and technology to grain output is low.

Fifth, which is important, the problems of human resources are apparent. In other words, the stock and quality of agriculture human resources are limit. Moreover, the speed of outflow of young adults is still rise. Furthermore, the main labor of grain producing left-behind are elderly and feminization. As a result, the situation of the agriculture human resources is disturbing.

5. Promote the education and training of regional human resources to promote the construction of core grain region

In the face of new normal economy, agricultural sustainable development is directly related to grain and food safety problems which is the heart of the national strategy. In the reality with slow economic development, increased pressure of transformation of agricultural reform and hasten of agricultural production resource, it is necessary to actively promote agricultural human resources development to improve the whole quality of farmers through the base education. And it is also necessary to improve the skill levels of agricultural talents through professional training, to enliven rural economy through agriculture operation personnel training , and provide a good support for promoting agricultural reform and ensuring food production.

5.1 Try to improve the basic education in the core grain region

To improve the human resources quality and pay special attention to the local basic education development are both important tasks. "Chinese education reform and development compendium" points out that education should serve socialist modernization. We should pay more attention to

children's basic quality and basic ability cultivation. So to further implement and improve the countryside teachers' basic ability and skill training are important. The government should improve the teachers' living and office conditions, in order to attract outstanding young teachers. Make sure that the funds investment in countryside elementary education is enough and in time. For young children in rural areas, especially the left-behind children who don't live with their parents, need joint efforts from three aspects, the society, school and family.

5.2 Try to promote the training of agricultural talents and professional farmers

The farmers' knowledge, skills and ability are important factors of promoting agricultural development and making good grain production. Relevant department should find more ways to promote farmers' ability of learning, and applying new technologies and achievements in core grain regions. Training is a kind of work, which should be consisted for a long time. Therefore, it should be planned and carried out step by step, aiming to improve the level of knowledge and working ability of training objects. Government departments should improve farmers' ability of science and technology by means of organizing popular science lectures, and setting up night schools for scientific and technological training in the countryside. Trainings for high yield and quality of grain should be especially emphasized. At the same time, it is necessary to set up special education and training organizations for farmers. Now the farmers engaged in agricultural production do not get the respect they deserved. This is the reason why many people want to jump out of countryside into city, and why a new generation of farmers prefers to work outside and make a living in city rather than return to rural and engage in agriculture production. Therefore, creating the social atmosphere of fully respecting the farmers' job is the essential choice to attract more outstanding young farmers with more professional science and technology knowledge into the grain production. And finally, it is also very important to develop the agricultural economy of core grain region by promoting the management personnel training.

5.3 Try to enliven the agricultural economy of core grain region by promoting the personnel training of management

For food professional investors, family farms, agricultural cooperatives, grain processing and marketing enterprises, management training means setting up vocational education and adult education or workshop by teaching them advanced management concept, scientific management methods, flexible business strategy needed for grain production, processing and management. Meanwhile, it is necessary to carry out the case teaching by inviting the successful man of agricultural economy to the lecture hall to teach others by using his own experiences. The management talents may talk with each other, learn from each other and make mutual progress with the aid of questions and answers, discussions as well as communication. According to different forms of new operators, order-based cultivation should be carried out to meet the needs of different types of operators with reference to the urban vocational education experience. In the face of current rural land circulation, the establishment of the farmer cooperative organization, agricultural production scale, and the professionalization of grain planting is very important. The department of agriculture, science and technology, and education should make scientific judgment about the demand for promoting the quality of the human resources, carry out special training. In order to improve the corresponding management talents' ability to grasp the land circulation policy, to improve agricultural cooperation organization and management ability of the cooperative leaders, and to improve farmer entrepreneur's capability of market forecast and business negotiation in the process of agricultural management.

6. Conclusion

R·Temple once said, in nearly 1800 years, China is much more advanced than the west in terms of agricultural productivity, so that China is like so-called developed countries, while the west is more like a developing country. Schultz has also described China's agriculture, when Europe is still in the "dark ages", agricultural modernization of that age has appeared in China.

Grain security is a major strategic issues related to the national stability and development under the China's New Normal. We found that the Core Grain Region Strategy has been fruitful but exposed some bottleneck problems. Especially the tighter constraint of the land resource, the contradiction of agricultural HR quantity and quality, and so on. Under the background of economic globalization, it is absolutely necessary to strengthen the education and training of agricultural human resource, which will certainly promote the great development of the Core Grain Region output as well as the local agricultural economy.

References

- [1] China national bureau of statistics, Announcement of national bureau of statistics on grain output in 2015.(http://www.stats.gov.cn/tjsj/zxfb/201512/t20151208_1286449.html)
- [2] Erik Lichtenberg, Chengri Ding, 2006. Assessing farmland protection policy in China [J], Land Use Policy. pp.59-68
- [3] Liangzhi You, Max Spoor, John Ulimwengu, Shemei Zhang,2010. Land use change and environmental stress of wheat, rice and corn production in China [J],China Economic Review. pp.461-473.
- [4] Tianyi Zhang, The main production areas account for over 75% of the total grain production.(<http://news.workercn.cn/613/201502/07/150207033929333.shtml>)