Study on Crop Variety Improvement in the Early Days of the Founding of New China

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Abstract: Variety improvement reflects the level of agricultural productivity. The Communist Party of China has long explored ways to promote the improvement of varieties by means of mass campaign. After the founding of the people’s Republic of China, the change of variety improvement path reflects that the Communist Party of China has taken reasonable measures to promote the progress of agricultural productivity on the basis of national conditions, which implies the basic experience of the Communist Party of China in governing the country.

Keywords: Variety improvement; Technology; Campaign

1. Introduction

Variety improvement is an important content in the history of China’s agricultural development. The research on variety improvement in China is mainly to sort out its background, measures and achievements. In fact, improved varieties are the symbol of the level of agricultural productivity, and the means of variety improvement is the direct embodiment of the level of agricultural productivity. Through the research on the path transformation of variety improvement, we can spy on the Chinese Communists’ understanding of the means of developing agricultural productivity.

2. From technology to campaign

During the war of liberation, the Communist Party of China explored the role of traditional seed selection technology in improving varieties by means of mass campaign, which shaped the development mode of agricultural productivity in New China. At the beginning of the founding of new China, restoring and developing agricultural productivity was an urgent requirement at the beginning of the founding of the people’s Republic of China. To this end, the Ministry of Agriculture issued the draft five-year plan for the popularization of improved varieties and formulated the basic methods for variety improvement to promote the recovery of productivity.

The purpose of variety improvement is to renew crop seeds in a short time, so its core link is to carry out mass seed improvement movement based on seed selection movement. In order to ensure the promotion of improved varieties in the short term, on the one hand, the Ministry of agriculture stressed that on the basis of seed selection movement, farmers in all townships kept seeds and changed seeds by themselves; on the other hand, establish seed companies to be responsible for the acquisition and promotion of improved varieties. Of course, in the long run, the variety improvement plan also emphasizes the need to carry out farm centered Scientific and technological improvement on the basis of seed selection movement.

Variety improvement was designed as a five-year cycle: 1. Mass seed selection campaign was carried out in 1950. 2. The improved varieties were popularized in 1951, and the comprehensive renewal of varieties was completed in 1952. 3. In 1953, breeding farm improved varieties; In 1954, it was extended to all villages for demonstration planting; In 1955, new species were widely popularized and crop varieties were comprehensively renewed; After 1955, the second batch of improved varieties were popularized.[1]

The new China variety improvement plan is a five-year cycle variety improvement model based on the combination of scientific improvement and traditional spontaneous seed selection, reasonably absorbing the experience of large-scale seed selection movement during the war of liberation, which ensures the recovery and development of agricultural productivity. This paper summarizes the process of variety improvement from 1949 to 1953, which combines the traditional breeding technology of mass movement and scientific breeding technology, and completes the renewal of crop seeds in some parts of the country in a short time.

3. Focus on mass variety improvement

The CPC opposes the idea and practice of variety improvement divorced from the masses and adheres to the working method of “coming from the masses and going to the masses”. The central Ministry of agriculture and industry emphasizes the mass nature of technology promotion based on scientific and technological improvement, that is “to improve agricultural technology, we must take into account the specific conditions of backward agricultural production technology, the economic conditions of small farmers, the restrictions of people’s cultural level, regional differences, climate differences and other conditions, and we can not act arbitrarily without ignoring these conditions.”[2]
To promote improved varieties to the masses, we first need to establish mass-oriented agricultural science and technology units. On the one hand, agricultural extension units must sink into the countryside in order to effectively promote improved varieties to farmers; on the other hand, farmland technology units must be comprehensive units, not isolated seed extension units. In view of this, the national agricultural work conference in 1952 decided to establish an agricultural technology guidance station fixed in the village for a long time to provide in-depth and specific technical guidance(3).

Meanwhile, Liao Luyan, Minister of agriculture, said: "the most important, universal and effective way to promote improved seeds is to organize the masses to choose and keep excellent seeds, and systematically exchange improved seeds among the masses." The promotion of foreign improved varieties is not inevitable, but the promotion of foreign varieties can only be promoted after trial planting, which is difficult and slow in general. Liao Luyan’s viewpoint is based on the mass selection and variety exchange, trying to solve the problem of variety renewal by promoting the existing improved varieties in a short time; However, it also reduces the connotation of variety improvement from relying on scientific and technological improvement to improving variety quality to promoting existing improved varieties to complete variety renewal.

Based on the change of emphasis on variety improvement path, the agricultural department has made adjustments that tend to mass seed selection, seed exchange and promotion of existing improved varieties, and achieved remarkable results in the short term. In 1952, the promotion area of improved varieties of grain crops accounted for only 4.2% of the total sown area, and it developed to 58.4% in 1957. The question is how to further improve the quality of varieties as time goes by, when the varieties are completely updated?

4. Science and technology are the primary productive force

In the face of the successful completion of socialist transformation and the first five-year plan, people believe that “under the leadership of the party, the construction enthusiasm of the 600 million people across the country is unprecedented. Mobilizing and relying on the people for economic construction can achieve the desired high-speed development that has never been achieved in other countries in the world”(33).

How to achieve rapid development? People believe that “copying the successful experience of mass movement and political and military struggle in the war years” can make socialist economic construction faster and better.”(34) It is believed that “if agricultural cooperatives breed their own seeds in the seed field every year, continuously select and reselect improved varieties from improved varieties, they can ensure that there are enough seeds and gradually improve”.(5) This cannot completely promote the progress of productivity.

The tortuous exploration of the “great leap forward movement”, the deterioration of Sino-Soviet relations and the withdrawal of Soviet experts made the CPC leaders realize the importance of science and technology to the development of productive forces. The Communist Party of China pointed out that “some cadres have insufficient understanding of the importance of science and technology, so that science and technology often can not be ranked in the queue in specific work”.(35) Mao Zedong also stressed that “without science and technology, productivity cannot be improved”. It is in this context that variety improvement is becoming more and more prominent, scientific and technological improvement.

In November 1962, the Communist Party of China made the decision on strengthening seed work, emphasizing the use of science and technology to cultivate targeted varieties with different conditions and requirements and different characteristics suitable for different regions and crops. In this context, many improved varieties full of scientific and technological content, including “hybrid rice”, were born one after another.

During the period of reform and opening up, Deng Xiaoping put forward that “if scientific research is not ahead, it will drag the hind leg of the whole country’s construction”. To realize socialist modernization, we must develop science and technology, because “without modern science and technology, it is impossible to build modern agriculture, modern industry and modern national defense.”(7)

5. Conclusion

Promoting variety improvement through science and technology and campaign are the two means for the CPC to develop agricultural productivity. The change of means reflects that the CPC treats the national economic construction realistically and flexibly grasps the flexible space for the development of productive forces, which implies the basic experience of the CPC in governing the country.

References:


Author information: