

Research on Quality and Safety Production Behavior of TCM

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Abstract. Recently, with the widespread application of the theory of Traditional Chinese Medicine (TCM), people pay more attention to the quality of Chinese medicine. Also, the quality and safety problems of TCM have attracted much attention. The paper analyzed the factors on farmers' behaviors to produce safety and quality TCM products and evaluated those behaviors from the government's point of view. Finally, the paper made suggestions to guide farmers to produce the quality and safety TCM products. This could promote the stable and healthy development of Chinese medicine industry.

1 Introduction

TCM industry is an important part of Chinese agriculture, also a solid foundation for the development of traditional Chinese medicine. More than 70% of the total consumption of TCM rely on artificial cultivation. So the standardized planting of TCM has broad prospects. However, with the increase of the amount of TCM planting, there are a lot of problems gradually exposed. TCM planting only need land and labor, but the standardized planting of TCM have requirements for operation management practices and specific technology. And only in this way can we ensure the quality of reliable, uniform and controllable Chinese medicinal herbs. At present the common farmers are lack of scientific cultivation of knowledge and skills, and TVM production area are lack of professional technical guidance to farmers and the TCM planting technology talents. The farmers use chemical fertilizers or pesticides not according to the standard, which has caused pesticide residues, drug residues and heavy metal exceed the standard problems. [1]

The quality of Chinese herbal medicine not only directly affects people's physical and mental health and treatment effect, but also plays an important role in improving the competitiveness of TCM industry. And the production behavior of Chinese growers determines the quality of Chinese herbal medicine. Through the study of Chinese herbal medicine planting factor of safety producing behavior analysis, the essay researched Chinese herbal medicine production behavior, and clarified the current situation of Chinese herbal medicine planting and production. Also, the essay provided reference to the quality safety control of TCM and to the transformation and upgrading of TCM industry.

2 Quality and Safety Problems in the Production of TCM

2.1 The Overemphasize of Quality

At present, the producer aimed at high yield is still generally adopted a high input and high output strategy, fertilizer and pesticide inputs increased year by year. So the quality and safety of TCM is facing a serious threat. Due to long-term re-cultivation of light management, heavy quantity of light quality of the production model, the safety of production awareness is not in place, harmful substances and pesticide residues harmful understanding is not enough, resulting in a large number of Chinese herbal pesticide residues, heavy metal residues seriously exceeded. All of these Resulted in poor quality of TCM. [2]

2.2 Soil Pollution is Becoming More and More Serious

Recently, the use of chemical fertilizer types the proportion of farmers is not coordinate. Farmers pursuit of immediate interests, use chemical fertilizer blindly and they don't use in strict accordance with the standard use of chemical fertilizer (NY/T394-2000) and sometimes regarded these standards as void. However, a large number of farmers use fertilizer improper, which will cause the soil nutrient out of proportion, soil compaction, soil acidification and decreased soil microbial activity. Also this causes the pollution of soil heavy metals, reduce TCM quality and safety.

2.3 Farmers Use Pesticide Technology Improperly

The main method of spraying chemical pesticides is currently in production of TCM in prevention and treatment of diseases and insect pests. Growers apply of excessive pesticides or pesticide and pesticide application disable operation problems in the pesticide application process for production or the pursuit of short-term economic interests. Recently, these problems including the application of pesticides excessively, using other banned pesticides and pesticide use technology misconduct. These directly lead to the increase of pesticide residues in TCM, the ecological environment in the increase of pesticide residues and affect consumers' health and ecological environment safety.

2.4 The Quality and Safety Standards Are Not Perfect

Even though there is a agricultural product quality safety standard system in China, but the system is relatively backward, lacking of unity and coordination, and docking with the international standards. China's agricultural products quality and safety certification system is deficiency. The system is lack of supporting institutions, the lack of guidance and training for the standardization of agricultural production. The producers of agricultural product quality safety inspection working in our country is lack of unified standards and is often neglected in the development of standards in the market demand, the availability of low degree, which can not be realized to improve the safety degree of agricultural products quality.[3]

3 Analyses of Factors on Quality and Safety Production Behavior of TCM

TCM production safety behavior is the basic situation, involving the income sources of farmers, TCM circulation situation, TCM planting cost, the production safety of TCM in the cognitive state of industrial organization, which affect many aspects of information factors of pesticide and fertilizer usage and other aspects. The paper will summarize these factors to five hands, as shown in Figure1.

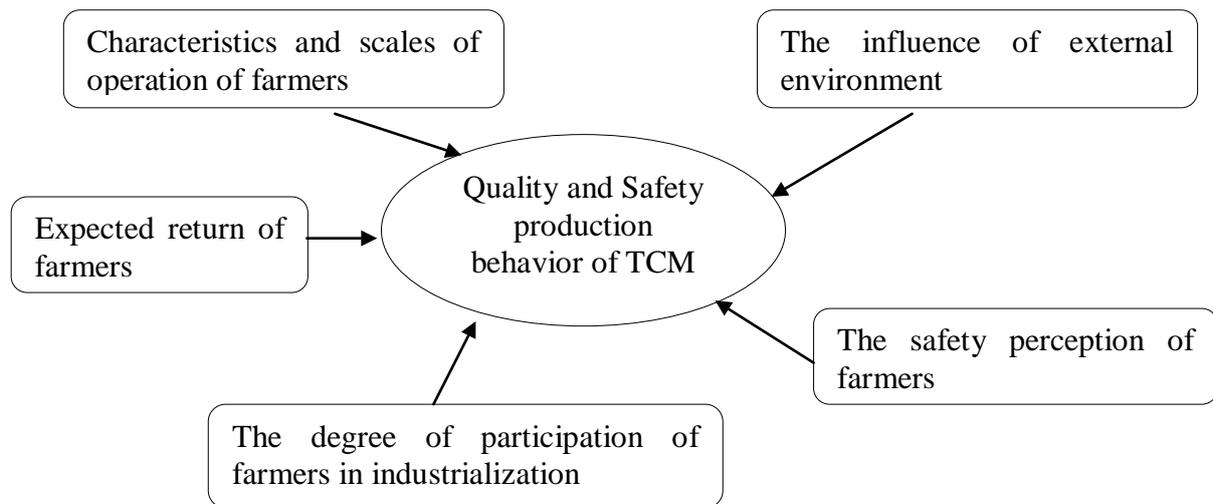


Fig.1. The factors of quality and safety production behavior of TCM

3.1 Characteristics and Scale of Operation of Farmers

The TCM planting farmers' cultural level is generally not high, and the age of farmers is generally too large, who has longer life of planting herbs and have rich experience in planting TCM, TCM planting varieties but complex production safety is more complex, which is difficult to control, and the cost is high. In addition, the farmers are more likely TCM production safety when the scale is larger. Because farmers with a larger family are easier to scale management about safety TCM, which promote TCM safety production based of the standard operation.

3.2 Expected Return of Farmers

Farmers' attitude in TCM production plays a great role in TCM safety production behaviors. Growers will weigh the actual resources available through the external environment and the expected return to decide the behavior choice, when farmers on the safety of TCM expected value is high, the more they safe production of TCM to enhance their economic benefits. To a certain extent, this shows that they are quite rational. Their strength is weak for the current TCM production, and they rely on their own strength according to the standards of safety in production of herbal medicine which is impossible without the help of government.

3.3 The Degree of Participation of Farmers in Industrialization

If farmers are willing to accept the local agricultural station or station technology training, which can improve the safety awareness of farmers, farmers will improve the quality and safety control behaviors. The factors that influence the quality safety behavior of farmers is also affected by peers, rather than completely depends on the individuals involved in the behavior of households industrialization. But this is more associated with an organization or collective behavior.

3.4 The Safety Perception of Farmers

The farmers' cognition of chemical fertilizer, pesticides and the natural environment affect the quality control behavior decision of the farmers. When they realized the excessive use of compound fertilizer and toxic pesticide effect on TCM and natural environment, they also worry the problems of unsafe TCM production. The farmers with the more moral awareness and more responsible, they tend to TCM production safety more. Farmers with more attention to quality control in the process of agricultural production will promote the TCM production safety.

3.5 The Influence of the External Environment

At present, environmental factors including policies and regulations, social media and public opinion, have a certain impact on the farmers' quality and safety control of behavior and attitude, using proper form to guide the transformation of farmer's behavior to safety production. Their strength is weak for the current TCM growers, relying on its own strength in accordance with the production safety standard planting herbs, and the farmers need to get the support of the government.

4 Suggestions

4.1 Raise Farmers' Awareness on Quality and Safety Production

The government should make timely and effective propaganda and education of TCM to growers of production safety. They could strengthen the propaganda and training in various forms, such as the modernization of the public, publicity and science small video, and the use of radio and television, newspapers, Internet and other media, which will further strengthen the popularization and education of farmers and agricultural products quality and safety of scientific knowledge. TCM technology promotion service institutions should focus on strengthening the training and guidance, enhance public awareness of the quality and safety of TCM and form a good atmosphere of quality and safety management. [4]

4.2 Strengthen the Research and Demonstration of the Quality and Safety of TCM Products

The government should encourage leading enterprises in TCM production safety demonstration guide, making TCM science and technology popularization and application of the relevant supporting policies and regulations, promote the application of science and technology in the promotion of TCM. To encourage enterprises to participate in the development and processing of TCM products, which will promote TCM research and development base of TCM culture tourism function. The government provides support for research and development in order to improve the quality and safety of TCM itself and also enhance the enthusiasm of the competitiveness of the products.

4.3 Improve the Quality and Safety Standards System of Agricultural Products

Quality Supervision Center sectors should take supervision responsibility of TCM planting in the process of the wholesale, retail market or production and processing enterprises before the quality and safety. They have to strengthen the TCM market circulation safety standards, establish effective coordination of certification and accreditation system, implement of TCM certification training institutions TCM and complete certification personnel registration and filing system. Also, the establishment of TCM uniform certification body, certification consulting institutions and certification training institutions of the national accreditation system could ensure the quality of TCM products. All of these will guide and support enterprises to carry out the declaration of herbal certification activities.

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