

Study on the Importance of Soil Fertilization in Cultivated Land Protection

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Abstract

In the process of agricultural production, grain plays an important role, which is directly related to the national economy and people's livelihood. To realize the sustainable development of rural areas, people need to master various resources such as soil, fertilizer, and the ecological environment which is an important guarantee for agriculture. Therefore, soil and fertilization are inseparable elements in agricultural production. Based on this, this chapter focuses on the problem of soil fertilization, and discusses its importance in the process of farmland protection and development, to be helpful to farmland protection and development.

Keywords

Soil Fertilizer; Cultivated Land; Important Significance.

1. Introduction

With the deepening understanding of green food production, people gradually found that long-term use of chemical fertilizers and pesticides will not only cause potential pollution to food, but also cause serious harm to people. Nowadays, the disadvantages of modern western agriculture are increasingly prominent, especially the crises in energy, ecology and resources. Modern agriculture in the west only relies on a lot of chemical fertilizers and pesticides to greatly increase crop yield, and its profits are very significant, but this is at the cost of consuming a lot of energy, sacrificing the ecological environment, reducing soil fertility and agricultural product quality. And the widespread use of chemical fertilizers and pesticides has aggravated the increasingly serious energy crisis. To make matters worse, due to the aggravation of environmental pollution, the harmful elements in agricultural products and foods continue to increase, posing a serious threat to human health. High yield requires a large amount of nutrients from the soil. Only relying on chemical fertilizer as the input of soil nutrients not only destroys the use mode of nutrient circulation, but also weakens the nutrients for protecting the soil, resulting in the decline of soil fertility, the reduction of physical and chemical properties of organic matter and deterioration, the reduction of fertilizer efficiency, and the increase of production cost. After summing up the lessons of the past, western countries put forward the development of organic agriculture, ecological agriculture and bio-agriculture. Therefore, green food will become the 21st century. The uneven development level of neighboring regions affects the coordination of rural resources utilization, and even causes the pollution of the natural environment. In agricultural production, soil and fertilization are the main material basis and important premise to keep the balanced development of soil and fertilization. Therefore, it is necessary to deeply study the importance of soil and fertilization in farmland protection and development.

2. Study on the Important Role of Soil Fertilizer in Cultivated Land Protection and Development

2.1. The Role of Soil

Since ancient times, China has been a big agricultural country, which has high requirements for the development of agriculture. However, in the overall development, China's agriculture is still relatively backward. The development of China's agriculture is mainly based on the cultivation of individual farmers, lacking large farms. Self-sufficient traditional agriculture is not conducive to the management and development of agriculture. Everyone needs food to provide energy. Without food, people can't even guarantee their basic survival, let alone develop other projects. Therefore, agriculture is the primary productive force of the country. Only when agriculture is developed can people achieve outstanding results in other areas. However, as a populous country, China's land share in the world does not exceed 15%. The central government attaches great importance to this issue, and for this reason, it has formulated a series of preferential policies on agricultural development, so as to encourage the masses to vigorously develop agriculture and ensure the sustainable development of China's agriculture. Under this environment, China's agriculture is developing steadily and rapidly. However, how to develop agriculture continuously and steadily and how to ensure the continuous increase of grain output are the key issues that we are facing at present. In order to improve China's agricultural production, improve soil fertility and promote convenient planting and management skills, it is also necessary. Only by realizing the sustainability of soil can we realize the sustainability of China's agricultural development. On the contrary, stabilizing the development of agriculture can only be an armchair strategist.

As per capita arable land is very small, there are still many difficulties in increasing grain production. We should attach great importance to the problem of soil resources and raise the awareness of soil resources protection. In agricultural production, soil is the most important material base, and the growth and development of crops can not be separated from a good soil environment. However, with the increasing destruction of nature and the influence of human behavior on soil protection, the focus of agricultural work lies in raising farmers' awareness of soil resources protection and improving the soil. However, due to the differences of soil types, their common functions are prominent, and the transformation of nutrients and the ecological maintenance function of the system also highlight the functions of soil resources. The results show that more than 80% of the energy consumed by human body comes from soil, while fiber and protein are directly obtained from soil. Therefore, soil is closely related to human health. Although it is a powerful agricultural country, due to the low level of agricultural production technology, especially in some economically backward areas, the development of agricultural production is still in the primary stage, which has caused adverse effects on the development of grain industry. Soil resources have a powerful renewable function, so its degradation always exists. We must attach great importance to the renewal and transformation of soil resources, study and adopt more reasonable methods to harness the environment, excavate and exploit soil resources from various angles, and then promote the sustainable development of agricultural production.

2.2. The Role of Fertilizer

A thorough understanding of the physical and chemical properties of the soil can fundamentally guarantee the fertility of the soil. Soil provides multiple favorable growth factors for different crops, so it is also called soil fertility. It is necessary to change the crops planted in the same soil regularly, so that different crops can have excellent balance in the soil and keep the soil fertile. In crop rotation, we should pay attention to the alternate planting of leguminous crops and green manure crops, and adopting the method of crop rotation will achieve better results. The

simplest and best way to cultivate fertile soil is to add organic fertilizer to the land. Plants need to absorb organic components every moment they grow in the soil, so the soil is no longer fertile as time goes by. The application of organic fertilizer can provide nutrients for crop survival, and create and provide the ecological environment for plant growth in nature. Therefore, the application of organic fertilizer can effectively and quickly supplement the soil fertility. In recent years, the status of modern agricultural soil fertilizer and bio-organic fertilizer in China is increasing day by day. The fundamental reason is that it can supplement the soil in the shortest possible time, so that it can recover quickly when the soil continuously outputs power. In order to make China's agriculture develop well, it is very important to have fertile soil while improving planting and management skills. Only by making the soil sustainable and fertile can the sustainable development of Chinese agriculture become a reality. On the contrary, the steady and rapid development of agriculture will only be empty talk. There are many ways to keep the soil fertile, and the simplest and most effective way is to add organic fertilizer to the land. Every plant will absorb its own organic ingredients from the land when it grows, so every planting will cause the soil to lose a lot of organic elements, and the soil will lose its fertility over time. Therefore, applying organic fertilizer directly to the land can supplement the soil fertility in the simplest, effective and rapid way. Only with the development of organic fertilizer can the soil meet the needs of agriculture and meet the nutritional needs of crops for soil and soil. As a populous and agricultural country in the world, China still has a long way to go in the process of agricultural development. The development of organic fertilizer has a great impact on agricultural development, so it is extremely important in the development of soil fertilizer and the modern agricultural production of organic bio-fertilizer.

Once the nutrients in the soil have not reached a balanced state, it is difficult to bring sufficient nutrition to the development of plants. However, once the fertilizer resources are used reasonably, these difficulties can be overcome. In this way, fertilizer resources gradually form the material basis of soil protection and management. It is important to note that differences between regions and soil types will lead to cost differences. Only through rational fertilization can the natural environment in the soil be changed, thus maintaining the balance and unity of various nutrients. The actual research has proved that the grain yield can be increased by about 50% through chemical fertilizer in agricultural production. In addition, the concentration of nutrient elements in chemical fertilizer can also help to improve the soil structure, thus maintaining the balanced mechanism of soil nutrition. Among them, after the use of fertilizer, vitamin C and soluble sugar in vegetables and fruits also play their role. Only by ensuring the effective and correct use of chemical fertilizers can we improve the soil quality, continuously enhance the nutritional function of plants and play a positive role in increasing grain yield.

3. Utilization of Soil and Fertilizer in Agricultural Production

3.1. Soil Nutrient Deficiency and Quality Decline

According to the monitoring data of soil quality in China, at present, more than 60% of the soil in China belongs to middle and low yield fields. As far as our county is concerned, the middle and low yield fields account for about 92%. Most farmland is short of nitrogen, about two-thirds of farmland is short of phosphorus and half to two-thirds of farmland is short of potassium. In addition, as the soil properties will gradually change, the tillage layer will also become shallow. The increase of bulk density, the decrease of soil buffer level and the increase of environmental pollution seriously affect the sustainable development of rural areas.

2.2 Cultivated land is degraded and polluted seriously, and the loss of cultivated land still exists. In recent years, with the development of industrialization and the extensive application of pesticides and fertilizers, the pollution of industrial "three wastes" and pesticide residues to cultivated land has become more and more serious. In addition, with the acceleration of

urbanization, housing construction, desertification of cultivated land, abandoned land, etc., the cultivated land area is decreasing year by year. How to maintain and use the limited soil assets is directly related to the sustainable development of rural areas.

3.2. Shortage of Fertilizer Resources and Waste of Organic Fertilizer Resources

In recent years, with the increasing use of chemical fertilizer year by year, crop yield has increased significantly. However, at present, on the one hand, due to the increasing shortage of chemical fertilizer sources, at the same time, gas as industrial synthetic ammonia resources, Although our country pays great attention to the sustainable development of soil and fertilizer and agriculture at present, many projects can't be completed due to the influence of various unfavorable factors in the actual process. In addition, China's per capita cultivated land area is lower than the world average level, which causes many thorny problems. With the continuous increase of population and the advancement of urbanization, the farmland is decreasing day by day and many fertilizer fields are implemented, and there are still many unreasonable aspects. If these problems are not properly solved, China's future agricultural development will be in trouble. Therefore, it needs the help and support of the relevant state departments, and strive to implement the concept of sustainable agricultural development in China, actively introduce new and high technologies, increase the efficiency of energy circulation of crops, reduce the utilization of fertilizer by soil microorganisms, and avoid adverse effects such as structural damage and environmental damage. For some farmland with low fertility, organic fertilizer and inorganic fertilizer should be scientifically combined to ensure soil structure and scientific application of fertilizer, and to ensure the quality and yield of agricultural products.

4. Strategies to Improve the Role of Soil and Fertilizer in Cultivated Land Protection and Development

4.1. Implementation of Agroforestry Management Mode

In agricultural production, the rational use of cultivated land and fertilizer is a very important prerequisite, and improving the level of agricultural production is also of great significance to the rational development of soil. Therefore, the rational utilization of soil improvement and fertilization is imperative, and the methods of increasing agricultural production must be changed accordingly. Only in this way can we improve the agricultural management ability in rural areas and cultivate advantageous planting industry. The comprehensive development mode of agriculture and forestry is the organic integration of traditional crop management and modern forest management, which makes the natural resources utilization of farmland more perfect, thus effectively transforming rural nature. Here, farmers can fully consider the rural nature and integrate agricultural resources, to obtain huge profits from agricultural operations, compared with the mode of intercropping beams and fruits and intercropping forests and medicines. And improve the existing fertilization technology. Realize the effective improvement of fertilizer utilization rate. It is necessary to popularize the high-tech and means of modern agriculture, and carry out real-time dynamic monitoring and management of the quality of agricultural cultivated land. It is also necessary to popularize advanced soil testing and fertilization techniques to achieve the purpose of scientific and rational fertilization.

4.2. Effective Improvement of Soil Fertilization Technology

In rural development, soil and fertilizer are the most critical material conditions. Reasonable fertilization methods can effectively increase soil fertility. Although a scientific and rational soil fertilization system for soil and soil measurement has been established in some places, it is still blindly implemented due to the influence of soil coverage. Although the calculation of soil nutrition can provide scientific basis for scientific and correct soil fertilization. However, in the

actual operation process, special situations often occur. Among them, in terms of fertilizer quality, although people have tested soil nutrition, it is difficult to improve fertilizer quality and environmental soil quality. Moreover, fertilizer pollutes the environment a lot, which poses a serious threat to the natural environment. Although it can increase the yield of crops, its efficiency is not high, because many harmful substances will be left in the soil or food crops. Under these circumstances, people need to ensure rational use of fertilizers and develop new fertilizers. Strengthening the conservation of agricultural cultivated land. Therefore, it is necessary to improve the balanced ability of soil to provide various nutrients for crops, and increase its capacity and intensity of energy and material circulation. To maintain soil fertility, organic fertilizer should be effectively combined with chemical fertilizer, and a scientific and reasonable fertilization system should be established. The fertilizer matching ratio between grain and other crops is 7:3. If the fertility is too high, we should pay attention to the balance between the input and output of crops, to speed up the circulation between material and energy and ensure that the soil can provide balanced nutrients for crops.

4.3. Promote the Development of Agricultural Industrialization

The traditional agricultural business scope is relatively single, and the economic benefit is not high. With the development of modern agriculture and the formation of the concept of industrialization and intensive management, traditional agriculture is facing the challenge of restructuring. In modern agriculture, we must constantly strengthen the technical content of production, realize the effective expansion of production scale, and highlight industrial advantages through intensive production, which is very beneficial to agricultural scale production. In agricultural production, we should also realize modernization and industrialization, properly adjust the agricultural production structure, implement the development mode of professional cooperatives, and realize the effective optimization of production factors. At the same time, fully combine planting, processing, breeding and other factors to realize a new business model of cooperation between farmers and enterprises, and ensure farmers to increase production and income. This technology is an important technology to increase production by converting crop straw and livestock manure into organic fertilizer. Straw can also be combined with compound high-temperature fermentation bacteria to quickly ferment and transform into organic fertilizer, to improve soil fertility.

5. Conclusion

Only by ensuring the stable development of agriculture can a country develop better. Agriculture is the foundation of a country and the primary productive force of a country. While ensuring the quality and output of agricultural products, we should not neglect the maintenance of soil. We can't just blindly ask for the essence of the earth from the soil, and at the same time, we should properly use organic bio-fertilizer to supplement the soil hollowed out by us. Only in this way can the goal of sustainable agricultural development in China be realized. To sum up, the development of cultivated land protection conforms to the development trend of the times. By using modern management means, the development goal of intensive agricultural management has been achieved, which is a necessary condition for the protection and development of cultivated land. In agricultural production, the role of soil fertilizer is very important. For the development of agricultural resources and the protection of soil resources, the implementation of scientific fertilization measures has a positive impact on the sustainable development of agriculture.

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