

## Research on the Opportunities and Challenges of Rural Revitalization to Grass Industry

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**Keywords:** Rural Revitalization; Prataculture; Ecological Environment; Livestock Husbandry

**Abstract.** Grass industry accounts for a very important part of China's agriculture. It plays an important role in comprehensive environmental governance, agricultural restructuring, and other aspects. The flourishing development of the grass industry is a symbol of national agricultural progress. The report of the 19th National Congress pointed out that socialism with Chinese characteristics has entered a new era. This also means that China's grass industry has entered a new era and entered a new period of historical opportunities. China is shifting from arable agriculture to grassland agriculture. The guidance and policy on Rural Revitalization issued by the state this year have taken the grass industry as an essential part, especially its role in environmental governance and animal husbandry, and has received additional attention. This article focuses on the role of the grass industry in environmental governance and economic development in the new era, issues facing the current stage, and some suggestions given.

### Introduction

On February 4, 2018, the Xinhua News Agency issued the "Central Document No. 1", "Opinions of the Central Committee of the Communist Party of China on Implementing the Strategy for Revitalizing Villages" [1], and proposed a new direction for solving the "three rural issues". The document proposes: Adhere to the harmonious symbiosis between man and nature; coordinate the governance of lakes and grasslands in forest lands in landscapes; improve the recuperation system of cultivated prairie rivers and lakes; carry out greening operations in the land, promote desertification, rock desertification, and comprehensive management of soil erosion; strengthen the protection and restoration of wetlands, The thirteenth National People's Congress also approved the proposal for the establishment of the Forestry Bureau of Grassland. This has brought great opportunities for the grass industry. The vision of the country and the public has gradually expanded from the grain industry and the forestry industry to the grass industry. To achieve the rejuvenation of the countryside, the governance of the grass industry can not be ignored. Most of the rural areas are dominated by agriculture, and the grass industry is the main lifeline of agriculture. While the grass industry is getting more and more attention, there are many problems to be solved, and the grass industry is still facing many challenges. Especially in the rapid development of economy, politics and culture, the research of grass needs to meet the needs of the needs and meet the requirements of the development of the times.

### The Development of Grass Industry in the Historical Flood

**Modern China's Prairie Struggle.** The "cultural revolution" that began in 1966 undermined the best period for the development of the grass industry and brought a huge negative impact on subsequent development. During the "Great Leap Forward" period, the country proposed that "the pastoral areas must be free from agriculture and the pastoral areas should be planted with grain," so that a large area of high-quality grazing land can be turned into a farm. After that, the policy of "grain as a guideline" and "demand for food to the mountains" has once again seriously damaged the grassland resources. . In order to develop production, China has vigorously promoted childbirth. The population has soared, and the consumption of grassland resources has been excessive, leading to a large-scale degradation of the grasslands. At the same time, the country has focused on solving

food problems and has introduced many preferential policies. However, the development of the grass industry has lagged behind. This situation has continued until now. After the reform and opening up, pratacultural industry re-entered the development track. In 1985, the National People's Congress passed the "Grassland Law of the People's Republic of China,"[2] and proposed relevant provisions for the protection, utilization, and construction of grasslands. In 2011, grass science was added to the first class subject, which marked the rapid development of Chinese grass industry and gained more attention. However, the situation of the grass industry remained in the "partial improvement and the overall deterioration". [3]

**Prataculture in the Rise of New Era.** The report of the 19th National Congress pointed out that the implementation of the strategy for the rejuvenation of villages should take the "three rural issues" as the top priority of the work of the whole party, and the solution of the "three rural" problem can not be separated from the grass industry. Under the multiple pressures of the environment, population, and economic development, the state has placed more emphasis on the grass industry. China is one of the countries with the largest area of natural grassland. In the past, China did not make good use of this advantage, and even made it drag its feet. Now it is necessary to make up for and develop this natural advantage. If the Chinese nation wants to revitalize, rural revitalization is the key. The grass industry has ushered in a new period of historical development. There are still many problems left behind by the modern history, The development of the grass industry has a long way to go. No matter whether it is from meat supply, environmental improvement or economic development, the development of the grass industry is consistent with people's needs. Gradual attention and vigorous support have brought new impetus to the development of grass industry.

## **The Role of Grass Industry in Modern Development**

**The Main Role of Grass Industry in the Rural Environment.** Grassland desertification is a kind of land desertification. With the increase of grassland desertification degree, the proportion of soil non-protective organic carbon decreases, soil quality decreases, and natural disasters such as landslides occur more frequently, seriously affecting the daily life and health of the local people. About 60 percent of China's land is hilly. The soil erosion of cultivated land is tens or even hundreds of times higher than that of grassland. and grassland ecosystems contribute to the improvement of climate and is of great significance to the border areas. [4] In some areas, due to the constraints of climate, temperature and rainfall, it is difficult for grassland ecosystems to evolve into more advanced ecosystems—forests. Compared with forest species, grassland has less diversity and self-regulatory capacity, and it is vulnerable to external influences and ultimately desertification. Therefore, in the process of controlling desertification, the control of grassland desertification should not be underestimated.

In the past, industrial sewage and municipal solid waste were all digested by the rural areas, causing many rural environments to be destroyed and the lake and river ecosystem seriously polluted. In order to improve the rural environment, many cities and towns are making efforts to construct an artificial wetland ecosystem, striving to purify water quality and improve the ecological environment. Grassland has the function of conserving water source and maintaining soil and water. The soil and root layer of grassland can infiltrate and save water, which is an important part of wetland. Grasses in wetlands provide habitats and food for inhabiting birds and birds, which helps the survival and reproduction of birds and increase biodiversity. Grassland is a part of the wetland. To improve the wetland ecosystem, we must first understand the grass in the wetland.

**The Main Role of Grass Industry in Economic Construction.** According to the "China Land and Resources Bulletin"[5], by 2016, the area of grassland for pastures in China has reached 219,420,600 hectares, accounting for 34.0% of the country's total agricultural land. Grassland, as the second largest ecosystem, not only optimizes the environment, but also provides many resources for the rural animal husbandry, which greatly promotes the development of animal husbandry and provides a lot of impetus for rural revitalization. In agricultural developed countries such as the United States and the Netherlands, grass industry is the main source of agricultural economy, and its

economic output value is more than 60% of its total agricultural output value. Livestock husbandry and the grass industry complement each other. While vigorously developing animal husbandry, the grass industry needs to keep pace in order to balance the input and output of grassland resources. China is a large agricultural country. Animal husbandry, as an important part of China's agriculture, affects the overall development of China's economy. As the main source of rural economy, it is also an important entry point for precision poverty alleviation.

Lawn is an important part of the urban environment. The urban lawn plays an important role in reducing the noise and beautifying the environment. In daily life, the green and lush lawn can be seen everywhere. The turf of the city is produced in the countryside, the lawn grass has formed an industry, the enterprise of large and small has appeared, and the maintenance of the lawn also needs a lot of manpower to solve the problem of part of the employment. It has made some contributions to poverty alleviation and relief, beautified the city, and also promoted the economic development of the countryside.

## **Main Issues Grass Industry Facing in the Development**

**Major Issues Faced by Grass Industry in Environmental Governance.** Desertification is not only confined to China, but there are signs all over the world. China is one of the countries with the most severe desertification in the world. As a kind of desertification, grassland degradation reduces soil fertility, changes the structure of grassland plants, reduces the food sources of grassland animals, and causes many animal species to die. This will reduce biodiversity and increase the vulnerability of natural ecological environment. Grassland degradation also limits the economic returns of pastoralists. The resulting sandstorms also threaten human life. Grassland degradation has multiple causes, and human overgrazing, reclamation, and unreasonable regulation of grassland have caused extensive grassland degradation today.

Many wetlands are deteriorating due to excessive use of biological resources and blind development of tourism. For this reason, people started to build artificial wetland systems, but artificial wetlands still face many problems, mainly divided into knowledge restrictions and technical limitations. Due to the purifying effect of artificial wetlands on water and good ornamental nature, more and more places have started construction. However, some projects only pay attention to ornamental nature and do not fully consider the requirements for the construction of constructed wetlands. During the construction process, some projects did not consider the adaptability of plants to the soil, the collocation of plants, etc., which resulted in the poor growth of the plants or even their death. Some wetlands were managed in a chaotic manner and there was no coordination, resulting in wetlands suffering from diseases and insect pests. At present, the technology of wetland system construction in China is still in its infancy, and it is still not mature enough. The appropriate plant mix and wetland soil types and distributions in different wetlands in China are still at the exploratory stage. Due to the influence of temperature, the water purification capacity of wetlands in different seasons is different. In winter, it will even produce the pollutants that pollute the water quality, making the net water become polluted water. How to adjust the contradiction between the characteristics of plant physiological stage and the environmental needs is a problem to be solved at the moment. [6]

**The Main Problems Faced by the Grass Industry in Economic Construction.** In the past development, our country's economy has grown rapidly but the environmental conditions have deteriorated. Due to the reduction of production and living materials, engaging in non-agricultural industries may bring greater benefits, and some farmers no longer engage in agricultural activities, resulting in the occupation of farmland. Grassland population pressure, livestock, and pressure from the environment, our country's control of pastoral areas is imperative, the protection of the environment will inevitably sacrifice some of the economic benefits, which requires the people and the government to balance. Grassland herdsmen are the key targets for rural revitalization. To achieve the revitalization target, it is necessary to vigorously support the agriculture and animal husbandry. Therefore, the research on high-yield forage materials is very important. How to improve the production and quality of forage materials and balance the needs of the environment

and economic development is yet to be resolved.

In daily crop production and turfgrass management, weeds are often an annoyance. They often compete with crops for sunlight, moisture and nutrients, hindering the normal growth and development of crops, and seriously affecting crop yields. Farmers often remove weeds by spraying pesticides. Pesticides have a lethal effect on pests and weeds. They also have certain harm to the human body. If they are not well protected, they will harm the health of the sprayed people. In reality, there is also the phenomenon of abuse of pesticides, which causes crop residues to exceed standards and endanger people's health. After pesticides are sprayed, there are often residual organophosphorus residues. These residues are found in agricultural products and soils. Rainwater erosion, atmospheric circulation, and the food chain can also enter the biosphere and endanger the ecological environment. In the management of lawns, in order to maintain the appearance and normal growth of the lawn, managers often arrange for people to weed or spray pesticides on a regular basis, which consumes a lot of financial, human, and material resources. It is necessary to spray pesticides to increase crop yields and maintain a beautiful environment. How to effectively treat residues and efficiently treat weeds is an issue that remains to be solved.

The animal husbandry in the north and south of Xinjiang is very different. The natural conditions in southern Xinjiang are poor and the grassland resources are insufficient. In northern Xinjiang, the opposite is true, so livestock husbandry is well developed. [7] With the development of agriculture, southern Xinjiang has basically mastered the drip irrigation technology, its disadvantages can be compensated by artificial planting of forage, but the normal growth of grass water demand, the amount of fertilizer required, brings direct benefits are not high, in their concept, it is waste to spend human and financial resources to plant grass. Therefore, artificially cultivated grassland has not been implemented in large areas. The livestock in pastoral areas often eat rough forage materials such as straw and weeds, and it is difficult to produce high-quality meat. This is a point that China is lagging behind in developed countries, and it is also a point that the rural animal husbandry needs to be greatly improved. The idea of "Despise the grass industry" has also led to overloading of grassland in China and a retrograde succession. Artificial planting is not only for improving the quality of agricultural products, but also for the long-term development of ecology.

Grass industry is a weak industry. It needs the support of the country to develop. In the past, China tried to get rid of poverty and get rich and solve food problems. The grass industry was not valued. Until now, the state's supportive policies for the grass industry are still very few, making many scientific and technical personnel deterred and turning to other industries. In many universities, the grass industry is an unpopular profession. Many people who are interested in and capable of grass science are limited to the future development, leaving the grass industry, resulting in brain drain.

### **Related Strategies and Suggestions**

Continue to promote grassland protection, return grassland to grassland, plant trees and afforestation, appropriately reduce the area of cultivated land, and improve soil quality. Improve the pasture management system to make farm management more scientific, modern and institutionalized. We will continue to improve grassland laws and regulations and do a good job of supervision. Adhere to grassland monitoring, do a good job of fire prevention, pest control, rodent measures. Always pay attention to the dynamics of grassland, the changes of animal and plant groups, and make records and precautions. [8]

Increase investment in wetland protection, improve the legal system for wetland protection, and improve the division of labor and cooperation among various management departments. All indicators of wetland activated sludge can be put into use after reaching the standard, and the amount of earthworms can also be increased. Doing a good job in plant improvement, increase their ability to resist pests and diseases, study the allelopathy and competitive effects of plants, and make appropriate plant collocation proposals based on soil acidity, alkalinity, texture, temperature, climate, etc. to lead wetland designers and builders to build wetlands correctly and scientifically and pay attention to plant level matching. If necessary, set an appropriate interval, [6] reduce the load of

wetland water purification. Strengthen the selection and training of wetland technicians, do a good job of supervision of constructed wetlands, and protection and restoration of natural wetlands.

Continue to promote the grazing system for grazing, grazing and grazing, and implement a combination of husbandry and animal husbandry. Improve grassland household contracting system, provide appropriate subsidies to herdsman, and encourage production enthusiasm. With the environment permitting, rural tourism will be vigorously developed and proper grazing will be carried out so that pastoral areas will become one of the landscapes. This will increase local income while protecting the environment and developing agriculture. Strengthen education in border areas and cultivate new types of herdsman who can scientifically produce and use them rationally. Actively explore grass species that are conducive to mutual growth and development for artificial fine-grass grasslands, prevent plant-to-species disturbances, and rationally cultivate and develop forage intercropping and grass-grain rotations. Identify poisonous and harmful plants that are common in grasslands and spread them to pastoralists to prevent animals from eating such plants and reducing losses.

turnover the Soil during the growing period of weeds. For plants that can propagate through rhizomes, such as *Alternanthera philoxeroides*, all stems and roots must be removed from the production area. Strengthen the supervision of multinational plants to prevent plant invasion. The pesticides should be studied in the right place, the supervision of pesticide residues in agricultural products should be strengthened, and farmers' awareness of the rational use of pesticides should be improved. Moreover, increasing research on biological pesticides and develop environmentally friendly pharmaceutical agents and continue to follow up the research on degrading herbicide microorganisms, isolate and screen microorganisms that degrade herbicides in soil, study their degradation mechanisms, and use them in production and life. Also, vigorously develop physical weeding to study the survival mechanisms of different weeds and remove them through their requirements for living environment such as light, water, and fertilizer.

To establish a correct concept for the society, grassland is not dispensable, and it is not a stumbling block in the grain industry, forestry, and urbanization. While conserving natural grassland, efforts are made to develop artificial grasslands and to optimize natural grasslands, with reference to the development of artificial grasslands. Encourage pastoralists to carefully plant and forage grasses, change traditional concepts, teach pastoralists the technical skills of fine-grass forage, give scientific and technological support, and regularly provide guidance on the observation of fine-grass grasses. Weeds, low-yield land, houses built after demolition, newly-built highways, and high-speed rails are planted with grass to restore damaged land, reduce the area of bare land, and preserve water and soil, paving the way for the subsequent introduction of shrubs and green trees. [9] Simultaneously produced forage and grass seeds can be used or even sold to increase income.

improve the supporting policies of grass industry and give grass talents the preferential treatment and employment opportunities to attract more talents. Encourage innovation and provide financial support for projects that have promising futures and innovative ideas. Promoting the construction of the three major systems of modern agriculture, it is also a necessary way for the grass industry to achieve more economic value. Encourage entrepreneurship and let grass industry form an industrial chain, not only small companies, but also large companies and leading enterprises, intensify the linkage between grass industry companies and scientific research teams, help each other and support each other. To support existing small companies and increase the demand for scholastic talents, we must not only develop grass industry, but also make grass industry contribute to increase job opportunities.

## Conclusion

Rural revitalization is not only the revitalization of economic and material conditions, but also the revitalization of the ecological environment. A good environment brings opportunities and impetus to the economic development of the rural areas, and is also the capital for national development. There are many natural capital in rural areas. If we can make good use of these resources, the

people will get closer to the moderately prosperous society. As a large agricultural country with a large population, China should accelerate the construction of agricultural development. Grass industry is the lifeblood of animal husbandry and environmental protection. To develop agriculture and restore the ecological environment, the development of grass industry must be strengthened. After the convening of the Nineteenth National Congress of the People's Republic of China, we proposed that the lake and grassland in the mountains and forests should be used as a community of life for unified protection and restoration. The status of the grass industry has gradually increased in our country. This is also an important step for our country's agriculture to approach agricultural advanced countries. Poverty alleviation is a long-term process. As the main source of rural income, grass industry will play an even more important role in this process. At the same time, it will usher in more challenges. At the beginning of the new era, the grass industry has many important tasks that need to be completed.

## Acknowledgements

Fund Project: This research work was funded by the earmarked fund for Modern Agro-industry Technology Research System (No. CARS-34)

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