

# Study on the Operation Mode and Solution of "Toilet Revolution" in Rural Areas of Hebei Province

Bao Li, Jinmei Shi, Jiaqi Huang, Lifeng Jia\*

Hebei Agricultural University, Baoding, Hebei Province, 071001, China

## Abstract

The issue of toilets is related to the people's livelihood, and the construction of rural "toilet revolution" is an important part of the road to rural revitalization. This paper conducts an extensive research in Hebei Province, explores the effectiveness of toilet conversion in Hebei Province, and also finds many problems in the process of toilet conversion, proposes to do a good job in the preliminary planning of toilet conversion, improve the capital management system, diversify the main body of toilet conversion, improve the grassroots inspection mechanism and other optimization paths, designs a scientific path to promote the effective development of the policy in the later stage of toilet conversion in Hebei Province, and provides experience for the later operation of rural "toilet revolution" around the country.

## Keywords

Rural "toilet revolution"; Pre-planning; Multiple subjects; Grassroots inspectors.

## 1. Introduction

Small toilets reflect the people's livelihood, and toilets are an important reflection of the level of economic and cultural development of a region. The "Toilet Revolution" was first proposed by the United Nations Children's Fund (UNICEF), with the improvement of China's economic development level and the overall development of health and sanitation, the process of rural modernization has been accelerated, and China's rural areas have also carried out a vigorous toilet revolution. The quality of toilets has been increasing, and the supporting facilities for rural toilets have been gradually improved. The National Action Plan for Urban and Rural Sanitation (2015-2020) proposes that the rural sanitary toilet penetration rate should be increased to 85% by the end of 2020. Hebei Province also introduced the implementation plan to promote the rural "toilet revolution", the current situation of rural public places has a comprehensive and fundamental improvement, but there is also a weak sense of synergy, toilet model limitations and other problems, the need to achieve the interaction and balance of the rural toilet revolution continues to deepen.

## 2. The Effectiveness of the Rural Toilet Revolution in Hebei Province

Hebei Province based on the comprehensive elimination of dry toilets, multiple measures to strongly promote the toilet revolution, the provincial finance in 2020 to arrange 1.9 billion yuan of rural habitat environment improvement funds, priority protection of rural toilet conversion, such as provincial subsidies at a standard rate of 500 yuan per seat, focusing on new construction, renovation and maintenance; central funds focused on late manure treatment and Long-term management and care, gradually establish the central, provincial, municipal and county, farmers, the market as one of the funding mechanism, rural sanitary toilet penetration rate increased from 35.3% in 2017 to 72.2% in 2020, more and more farmers to achieve universal use of sanitary toilets. In 2021, the organization will carry out nationwide mapping and rectification of rural household latrine discharge problems, and explore the establishment

of "three mechanisms" for latrine management and maintenance, manure removal and harmless treatment and utilization of manure, so that farmers' sense of access and happiness will be significantly enhanced.

### **3. Hebei Province Rural "Toilet Revolution" Operation Problem Analysis**

#### **3.1. Lack of Localization in Advance Planning**

The majority of village cadres are more rigid about the completion of the work of toilet conversion, lacking overall flexible planning, and in order to fully integrate with the actual local situation before the conversion, some villages ignore the problem of low winter temperatures in the northern countryside to lay sewer pipes in the village, resulting in the altered toilets being unusable in winter.

At the same time, the current quality of rural latrine conversion lacks unified and reasonable standards. In the issuance of infrastructure such as latrine houses and septic tanks, different areas have different facilities issued due to different economic levels, and there are large differences among regions, which also lead to large differences in the level of latrine conversion in Baoding City among counties and districts. Of course, there is no perfect pre-deployment of manure treatment and toilet maintenance, and the supporting work system of latrine conversion needs to be improved, and the system optimization effect of latrine conversion is not significant.

#### **3.2. The Allocation and Use of Funds for Toilet Improvement Is Unreasonable**

Under the current toilet renovation model, almost all toilet renovation work needs to be promoted and undertaken by the government. The lack of participation of social and market players makes the toilet renovation project non-competitive in the market, resulting in poor motivation and low efficiency of relevant personnel, which also results in the waste of funds. In addition, it is worth mentioning that because of the different economic strength of different villages and towns, the funds they invest in toilet renovation vary, and the funds invested in toilet renovation in some economically developed areas and poorer areas show an obvious imbalance.

Since the "toilet revolution", China's financial resources for agricultural and rural areas continue to increase, but in the toilet renovation, the majority of rural areas still have a large funding gap. This, coupled with the fact that some rural areas have inadequate infrastructure for toilet renovation, has further increased the funding gap. In addition, there is a certain rigidity in the allocation of funds by grassroots cadres, who fail to analyze specific problems and be flexible according to the regional development and the specific situation of each household.

#### **3.3. Single Subject of Toilet Conversion, Lack of Interaction and Balance**

Toilet renovation is a systematic project, and the diversification of governance bodies is of great significance to the promotion of toilet renovation. Nowadays, most of the rural villages in the process of "toilet revolution" are mostly led by the government in construction and operation, and the funds are often used by the municipal or county governments to coordinate and hire construction teams to carry out construction, which can strengthen the government's management of funds and optimize the use of funds, but lacking the necessary market introduction, and also generates problems such as low flexibility and weak market participation, and fails to successfully build a business model for the toilet revolution. The lack of participation of market players and the lack of necessary market supervision and market competition have led to the toilet revolution as if it were only a government project, and it is difficult for idle social capital to participate in the construction of toilet reform and to achieve the optimal allocation of toilet reform resources [1]. In toilet renovation and rural governance,

it is necessary for the government, enterprises and individuals to play a joint role to optimize the governance subjects and promote collaboratively to improve the governance capacity and governance level.

### **3.4. The Grassroots Supervision Mechanism Is Not Perfect**

The implementation of the policy at the grassroots level is an important grip to promote the work of toilet conversion, and this is inevitably inseparable from the operation of a perfect supervision mechanism. At present, there is a serious lack of grass-roots supervision of the toilet revolution in rural areas of China, and the village collective policy propaganda and popularization are not in place. In the process of changing toilets, grass-roots cadres are not highly motivated to work, and they often only convey this policy to farmers, but do not convey the deployment and process of changing toilets to farmers, which to a certain extent leads to the lack of comprehensive understanding of farmers' minds. Some village cadres take precise poverty alleviation as the focus of their work and do not pay enough attention to the "toilet revolution" in rural areas, which also makes the work of changing toilets much less effective, and farmers know little about the benefits brought by changing toilets and often take a passive approach, which affects farmers' acceptance of the "toilet revolution". This has affected the acceptance of the "toilet revolution" by farmers.

### **3.5. There Are Loopholes in the Way Manure Is Treated**

At present, the commonly converted toilets in northern rural areas are double-urn funnel type, although this type of toilet alleviates the constraints of sewage pipes, but there are also some other problems, only the timely cleaning of the suction truck can promote the sustainable development of the construction of latrine conversion, and most villages have not yet formed a professional regular cleaning deployment. The septic tank used in double-urn hopper type toilets needs to be buried deep underground, which is not convenient to take out, and its small capacity is not conducive to long-term storage [2].

### **3.6. Lack of Supporting Facilities for Latrine Conversion**

The infrastructure provides an important guarantee for the implementation of toilet conversion. According to the "Notice on the Issuance of Technical Requirements for the Construction of Rural Latrines (for Trial Implementation)" issued by the General Office of the National Health Commission and the General Office of the Ministry of Agriculture and Rural Development, the infrastructure construction that must be completed for the rural "toilet revolution" includes: toilets, toilet houses, sewage networks, and running water facilities. Field research found that Baoding City, rural toilet renovation work generally issued a full set of toilet facilities. However, most of the rural areas have not laid the sewage network, and the roads have not been reconstructed, mostly narrow original roads, which are difficult to access by suction trucks in some areas, and are not conducive to the timely cleaning of toilets in farmers' homes, which also causes the actual effectiveness of the toilet revolution to be limited.

## **4. The Optimization Path of Policy Implementation in Hebei Province in the Late Stage of Toilet Conversion**

### **4.1. Do A Good Job of Advance Planning of Latrine Conversion, Strengthen the Mobilization Of Publicity**

The planning of latrine conversion should be based on a comprehensive mapping of the status quo of household latrines, supporting facilities and the needs of the public, adhering to the principles of "one village one case" and "one household one policy", selecting the right technical model, focusing on the overall promotion, and at the same time paying attention to the division

of responsibilities between relevant departments to ensure that the implementation of the policy is smooth.

Farmers, as direct stakeholders of the toilet conversion work, should be encouraged to actively participate in the development of the toilet conversion system, explain the real situation of their own families and put forward practical proposals for toilet conversion, so that villagers can participate in democratic decision-making, democratic supervision and democratic management, thus fully mobilizing the enthusiasm of the public to support and participate in toilet conversion.

#### **4.2. Improve the Capital Management System and Solve the Capital Problem**

As the same rural area, different regions have very different levels of economic development, the government can adopt a cross-regional approach to financial assistance, provide support to economically disadvantaged areas, lead the poor with the rich, and balance the financial investment.

In addition, the government can use the way to attract big capitalists and business tycoons to invest in the rural "toilet revolution" to obtain more funds; the grassroots government should keep abreast of the times to dovetail with national policies and raise funds through multiple channels, such as applying for loans, applying for subsidies, and giving policy tilts to enterprises willing to undertake toilet improvement.[3] ; the government encourages competition on the market for innovative products of rural toilets and protects product patents. The government encourages innovative products of equipment to compete in the market, protects product patents, and indirectly obtains profits from product sales are also beneficial to the effective use of funds.

#### **4.3. Enrich Diversified Toilet Reform Subjects and Introduce Market Mechanis**

The role of the government is certainly indispensable, but the promotion of the rural "toilet revolution" is in fact a crowd gathering firewood, requiring "multi-body participation" to achieve "multi-body win-win". The market mechanism can be introduced, delegate power to the market, adopt the way of competitive bidding to screen high-quality suppliers, use the market mechanism to reduce the cost of toilet conversion, improve the efficiency of toilet conversion, so that resources can be optimally allocated. At the same time, the government can collect the villagers' domestic waste and toilet waste for a fee and put them into the market for secondary production, so as to improve the efficiency of resource utilization.

#### **4.4. Improve Grassroots Supervision Mechanism and Strengthen Cadres' Responsibilities**

The government should seize the opportunity of rural development and implement the supervision mode of "adoption, trusteeship, and construction and maintenance" after the conversion of latrines. For the government authorities, they should compact the supervision responsibility, force the implementation of the main responsibility, and make joint efforts to promote the rural toilet conversion; for the villagers, they should encourage the grassroots to report the bad government behavior through hotlines and emails, and give full play to the advantages of the grassroots mass autonomy system, and farmers participate in democratic supervision and management.

#### **4.5. Play the Advantages of the Internet to Optimize the Technology of Latrine Conversion**

The effective solution to technical problems requires the government to dock with universities and scientific research institutions, and researchers to find innovative ideas to give full play to the advantages of the Internet, improve the level of manure treatment and promote the new model of Internet wisdom toilet reform. For example, big data can link the living habits of

villagers in the area with information on local water supply and sewage treatment for analysis, providing scientific reference for toilet renovation work, and also networking and managing the renovated toilets in the area, including operation and reporting for repair.

Secondly, agricultural technology stations and other related departments should also explore the use of excrement automatic sensing technology and recycling technology to build small integrated biological treatment equipment according to the actual situation, promote the integration of rural toilet conversion and domestic sewage treatment, and improve the harmless treatment level of manure. Take the rural areas of Baoding City as an example, the commonly reconstructed toilets are double-urn funnel type. The septic tank used in double-urn funnel type toilets needs to be buried deep underground, which is not convenient to take out, and its capacity is small, which is not conducive to long-term storage, so the double-urn funnel type toilets should be optimized in terms of reducing the depth and expanding the capacity.

#### **4.6. Improve the Relevant Infrastructure to Ensure the Continuation of Latrine Conversion**

The end of the toilet reform does not mean the end of the rural "toilet revolution", the toilet reform has led to the improvement of the rural landscape and opened a good start for the improvement of rural infrastructure. In order to maximize the living standards of farmers, meet the needs of farmers of all ages and levels, and enhance the continuity of toilet use, the east wind of the rural "toilet revolution" should be welcomed, and infrastructure construction should be continuously optimized to make farmers truly happy and satisfied.

Along with the establishment of the institutional mechanism of urban-rural integration development and the implementation of rural housing renovation, in order to ensure that the toilet conversion continues to be effective, in the future development process, in addition to the use of septic tanks as a means, Baoding should explore the laying of sewage networks, the establishment of manure treatment stations and other treatment methods to promote the resource utilization of the toilet conversion.

To enhance the sustainability of toilet improvement, resources should also be integrated and joint efforts should be made to build. Combine the work of rural toilet improvement with new rural construction, rural habitat improvement, poverty alleviation and relocation projects, integrate the resources of health and planning, agriculture, environmental protection, housing and construction, poverty alleviation and other departments, guarantee them in policies and funds, and promote the work of toilet improvement in a coordinated manner.

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