

The Content Analysis of High-Quality Farmer Cultivation Policy under the Context of Rural Revitalization: A Two-Dimensional Perspective on Policy Tools and Participants

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Abstract: As the latest stage in the development of farmer cultivation, the sustainable advancement of high-quality farmer cultivation requires not only the rational application of public policy tools but also the collaborative participation of multiple stakeholders. By collating policy documents on high-quality farmer cultivation at the national, Shandong provincial, and Yantai municipal levels from 2019 to December 2023, a total of 26 policy texts were coded, classified, and quantitatively analyzed using the content analysis method under a two-dimensional framework that includes the dimensions of policy tools and participants. The findings reveal that the composition of high-quality farmer cultivation policy in China is unbalanced, with demand-side policies having a weak driving effect. There is insufficient mobilization of agriculture-related enterprises and social organizations, and policy follow-up requires strengthening. Additionally, the correlation between policy tools and participants is inadequate, resulting in fragmented policies. Based on these findings, it is recommended to optimize the structure of policy tools, emphasize the participation of multiple stakeholders, and align policies with the actual policy environment.

Keywords: rural revitalization, high-quality farmers, policy tools, participants, policy text analysis.

1. Introduction

In his report to the 20th National Congress, President Xi Jinping emphasized the need to "comprehensively promote rural revitalization and solidly advance the revitalization of industries, talent, culture, ecology, and organizations in rural areas" [1]. Talent revitalization is the foundation of rural revitalization. Only by accelerating the cultivation of high-quality, modern talents who are in line with the new trends of agricultural and rural development can we effectively meet the overall demands of the rural revitalization strategy. Farmers, as the main participants in rural revitalization, are crucial to talent cultivation.

High-quality farmers in the new era are defined as those who are "educated, skilled in technology, proficient in business operations, and capable of management." They mainly include rural revitalization leaders, rural entrepreneurship and innovation leaders, industry poverty alleviation

leaders, practical rural talents, heads of new agricultural business entities, and agricultural managers. These individuals form the backbone of rural revitalization [2]. The 2023 No. 1 Central Document explicitly called for strengthening the rural talent workforce, implementing the high-quality farmer cultivation plan, launching a rural entrepreneurship leader training initiative, and improving the effectiveness of training. The cultivation of high-quality farmers is a key link in achieving talent revitalization and serves as a fundamental project in advancing rural revitalization [3].

As a new concept introduced in 2019, the cultivation of high-quality farmers still has certain theoretical gaps in domestic research. However, based on China's experience and lessons from professional farmer training, some progress has been made in high-quality farmer cultivation. By 2023, the High-Quality Farmer Development Index reached 0.5228, an increase of 2.99% compared to 2022, demonstrating a stable development trend [4]. Scholars have also begun to conduct in-depth research on this new concept, such as analyzing the connotation of high-quality farmers, the operational mechanism of their cultivation, and the factors influencing the effectiveness of cultivation.

Overall, existing research is predominantly qualitative, focusing on identifying problems in the high-quality farmer cultivation model itself. The primary research methods employed are questionnaires and interviews, with fewer studies systematically reviewing policy texts related to high-quality farmer cultivation. This paper adopts the policy tool theory model to analyze the structure and alignment of recent high-quality farmer cultivation policy texts. The implementation of these policies involves not only the coordination and construction of various internal policy tools but also the collaboration of different participants. This paper constructs a two-dimensional analytical framework based on policy tools and participants to conduct a quantitative statistical analysis of high-quality farmer cultivation policies, examine the policy structure, and assess policy implementation. The aim is to provide references for the balanced and scientific formulation of high-quality farmer cultivation policies in the future.

2. Theoretical Foundation of Policy Tools

Policy tool theory is an important framework in the field of public policy research, referring to the specific methods and means employed to solve a particular social problem or achieve a policy goal [5]. There are various approaches to classifying policy tools. McDonnell and Elmore categorize government tools based on the ultimate goals they aim to achieve into four types: command-and-control tools, incentive-based tools, capacity-building tools, and system-changing tools [6]. Howlett and Ramesh classify policy tools into voluntary tools, coercive tools, and hybrid tools [7]. The most well-known and widely applied classification, however, is by Rosewell and Zegfeld, who divide policy tools into three categories: supply-side policy tools, demand-side policy tools, and environment-oriented policy tools [8]. Supply-side policy tools play a driving role in achieving policy objectives, while demand-side policy tools act as pulling forces toward the same goals. Environment-oriented tools exert an indirect influence, as shown in Figure 1.

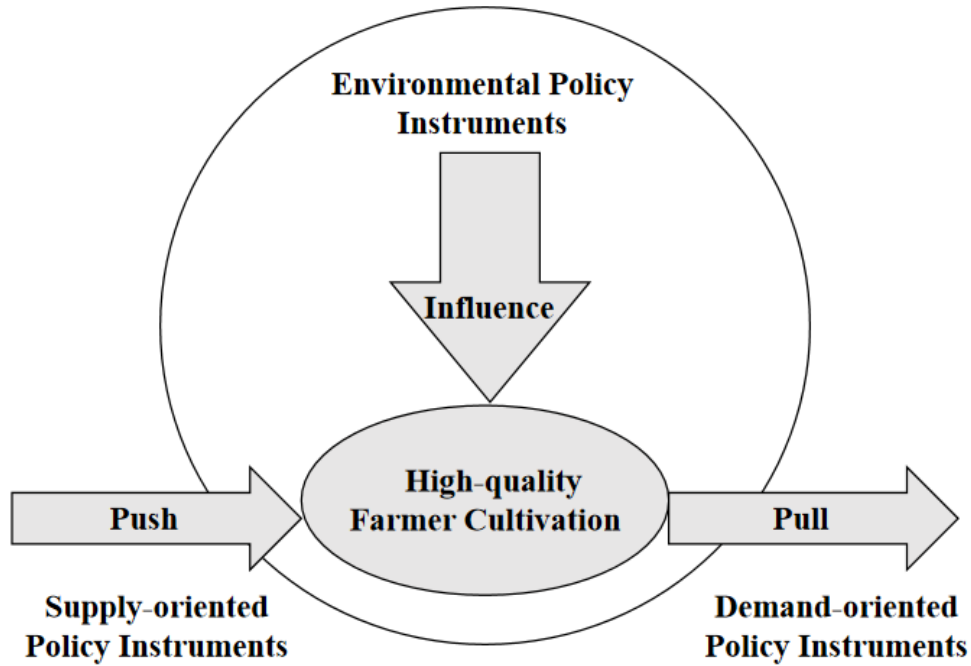


Figure 1: The Role of Policy Tools in the Cultivation of High-Quality Farmers

3. Sources of Policy Texts and Analytical Framework

3.1. Sources of Policy Texts

The concept of cultivating high-quality farmers was first introduced in 2019, and the number of related policy texts remains limited. This paper selects national-level, Shandong provincial-level, and Yantai city-level laws, regulations, and policy documents on high-quality farmer cultivation from the period of 2019 to December 2023 as the sample for analysis and research, as shown in Table 1.

Table 1: Major Policies and Regulations on High-Quality Farmer Cultivation (2019-2023)

No.	Document Title	Date of Issuance	Issuing Authority	Relevant Provisions
01	Notice from the General Office of the Ministry of Agriculture and Rural Affairs on High-Quality Farmer Cultivation Work in 2020	2020-5-29	General Office of the Ministry of Agriculture and Rural Affairs	Three sections, eleven articles, totaling 25 points
...
13	Notice on Issuing the "14th Five-Year Plan for Educational Development in Shandong Province"	2021-10-22	General Office of the People's Government of Shandong Province	One point in the second section
...

Table 1: (continued).

26	Yantai City's "14th Five-Year Plan for Vocational Skills Training"	2022-05-30	Yantai Municipal Human Resources and Social Security Bureau	Two points in the fourth section of the second article
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3.2. Analytical Framework

The cultivation of high-quality farmers requires not only the structural role of various policy tools but also the collaborative efforts of multiple participants. Therefore, this paper employs a two-dimensional policy tool analysis method for the study. The X-axis represents the classification of policy tools, and the Y-axis represents the various participants.

3.2.1. X-Dimension: Basic Policy Tool Types

The basic policy tools are categorized into supply-side, demand-side, and environment-oriented types. Based on classifications by scholars such as Xia Mian [9], Hu Shiwen [10], Liu Rujia [11], and Wang Yidong [12], the supply-side is subdivided into five aspects: talent support, infrastructure conditions, financial investment, public services, and technical support. The demand-side is divided into two aspects: interaction and communication, and government procurement. The environment side includes four aspects: goal planning, strategic measures, regulatory control, and publicity and guidance. The secondary classifications are used as the basis for categorization, with conceptual definitions provided, as shown in Table 2.

Table 2: Coding and Classification of Policies for High-Quality Farmer Cultivation in China

Category	Subcategory	Description
Supply-Side	Talent Support	Cultivating high-quality farmers and management talents through education, training, and program development.
	Cultivation Infrastructure	Improving the education and training conditions for high-quality farmer cultivation bases in various forms.
	Financial Investment	Providing financial support for high-quality farmer cultivation, including funds for base construction and research.
	Public Services	Supporting the development and training of high-quality farmers with services in healthcare, education, and local management.
	Information Technology Support	Applying advanced information technologies, such as online/offline teaching, e-commerce, and live-streaming.
Demand-Side	Interaction and Communication	Enhancing interaction between teachers and trainees, and between training institutions and agricultural enterprises.

Table 2: (continued).

Environment-Side	Resource Integration	Consolidating various social resources, such as industrial parks, to promote high-quality farmer cultivation.
	Encouragement and Support	Providing measures to encourage and support the delivery of services related to high-quality farmer cultivation.
	Goal Planning	The government's goals and planning related to high-quality farmer cultivation.
	Strategic Measures	Measures to ensure the steady implementation of policies, such as organizational coordination and task division.
	Regulatory Oversight	Supervising and managing the performance of high-quality farmer cultivation-related work.
	Publicity and Guidance	Publicizing high-quality farmers and their cultivation to create a favorable environment for policy execution.

3.2.2. Y-Dimension: Participants

In 2005, the Ministry of Agriculture proposed the cultivation of professional farmers, aiming to improve their knowledge and skills for agricultural production and management. From the concept of professional farmers to new professional farmers and, finally, to high-quality farmers, significant progress has been made in China's efforts to cultivate such talents. However, despite these advances, the current development of high-quality farmer cultivation under the rural revitalization strategy still faces many challenges. One major issue is the lack of effective communication and collaboration among the various participants involved in the cultivation process. Successful cultivation of a highly educated, technically proficient, business-savvy, rural-rooted, and law-abiding farmer workforce requires the active participation and cooperation of five key participants: government departments, training institutions, agricultural enterprises, social organizations, and farmers themselves.

3.2.3. Two-Dimensional Analysis Framework of Policy Tools and Participants

This paper adopts a two-dimensional analytical framework (see Figure 2) to study the policy texts related to high-quality farmer cultivation. On the X-dimension, supply-side policies include talent support, infrastructure conditions, financial investment, public services, and technical support. Demand-side policies include interaction and communication, government procurement, and encouragement and support [11]. Environment-side policies encompass goal planning, strategic measures, regulatory oversight, and publicity and guidance. On the Y-dimension, the participants are categorized into five groups: government departments, training institutions, agricultural enterprises, social organizations, and farmers.

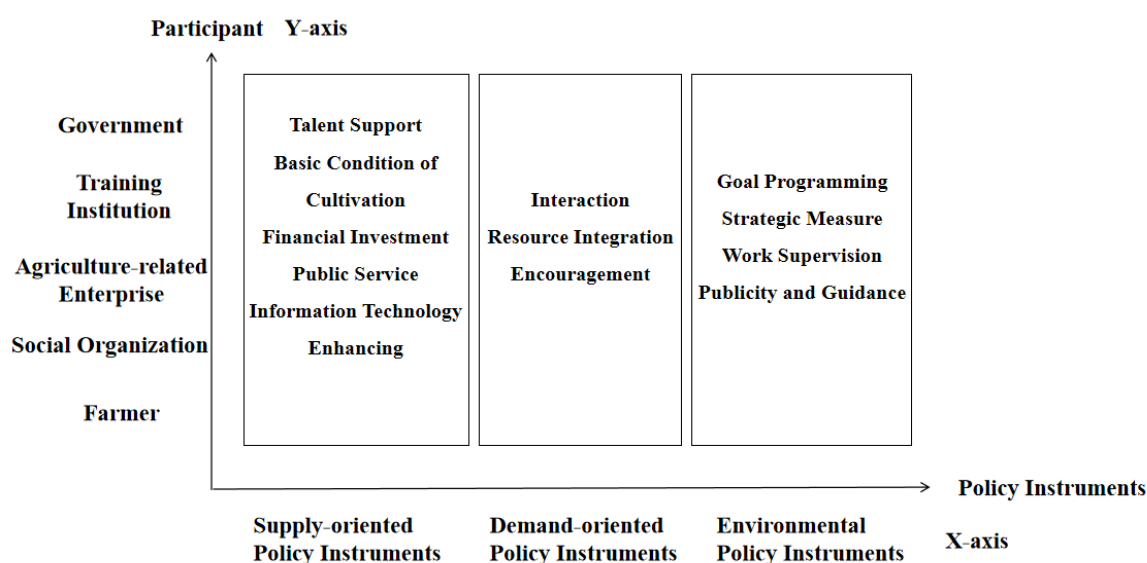


Figure 2: Two-Dimensional Analytical Framework for High-Quality Farmer Cultivation Policy

4. Quantitative Analysis of High-Quality Farmer Cultivation Policy Texts

4.1. Coding of Policy Content

Out of the 26 policy documents listed in Table 1, a total of 398 provisions related to high-quality farmer cultivation were selected as units of analysis for policy tools. These provisions were coded according to the specific policy categories, with the format "policy number-specific section-specific article or provision." For example, "1-2-1-1" refers to the first document, Notice from the General Office of the Ministry of Agriculture and Rural Affairs on High-Quality Farmer Cultivation Work in 2020, under the second major point "Key Tasks," where the first point is "Comprehensively assist in winning the battle against poverty," and the first provision is "Train one poverty alleviation leader per village in impoverished villages, helping farmers with labor capacity acquire 1-2 skills for poverty alleviation." This coding method generated the distribution table for high-quality farmer cultivation policy tools, as shown in Table 3.

Table 3: Overview of the Coding Content of High-Quality Farmer Cultivation Policy Texts

No.	Content Analysis Unit	Code
1	The general approach is to guide the high-quality development of modern agriculture, meet farmers' ideas, knowledge, skills, and needs, and promote a three-year action plan for improving the quality and efficiency of farmer education and training. This aims to cultivate 1 million agricultural managers, large-scale farmers, and service-oriented skilled high-quality farmers involved in production and management services.	1-1
...

Table 3: (continued).

199	For crop production farmers and production services, organize the personnel from agricultural enterprises and other production entities, focus on the agricultural calendar, implement the entire process of crop production across regions, organize training flexibly by type, and have technical experts teach in specialized groups during different stages.	8-2-1-1
...
398	Focus on modern agricultural technology application, improving production and management skills, and enhancing knowledge of industrial development and public services. Target agricultural enterprises, farmer cooperatives, family farms, agricultural service organizations, and large-scale producers, conducting multi-level, multi-form training in agricultural production skills, industrial development, and rural construction for rural practical talents.	26-4-5

4.2. Analysis of Policy Tool Dimensions

As shown in Table 4, the distribution of policy tools for high-quality farmer cultivation is uneven. Among the 26 policy documents with 397 content analysis units, supply-side policy tools account for the largest proportion, at 48.87%, followed by environment-oriented policy tools at 31.99%, while demand-side policy tools account for the smallest proportion, at 19.14%.

Supply-side policy tools dominate. Among these, talent support tools account for the largest share, at 62.37%, followed by technical support and public service tools, which account for 16.49% and 9.28%, respectively. Financial investment tools and cultivation infrastructure tools make up 6.70% and 5.15%, respectively.

Environment-oriented policy tools are relatively balanced. Among these, strategic measures account for the highest proportion, at 34.65%, while regulatory oversight tools account for the smallest share, at 14.17%.

Demand-side policy tools have the potential to play a more significant role. The data shows that demand-side tools account for the smallest proportion, only 19.14%. Among the secondary categories, encouragement and support policies are the most prominent, accounting for 46.05%, indicating that the government is transforming encouragement for enterprises and support for farmer cooperatives into rural endogenous power. Interaction and communication policies account for 26.32%, fostering exchanges between teachers at farmer training bases or institutions and farmers, thereby enhancing the role of "leaders" and "local experts."

Table 4: Distribution of Policy Tools for High-Quality Farmer Cultivation

Policy Tool Type	Tool Name	Policy Document Codes	Number	Percentage of Subcategory	Percentage of Main Category
Supply-Side	Talent Support Cultivation	1-2-1-1,1-2-1-2...	121	30.48%	48.87%
	Infrastructure	1-3-1-2,3-2-1-2...	10		
	Financial	2...	13		
	Investment	1-4-3-1,3-2-2-2...	18	3.27%	
	Public Services	2...	32	4.53%	
	Information	1-4-3-1,3-2-2-2...		8.06%	
	Technology	2...			
Demand-Side	Support	1-3-3-2,1-3-4...			19.14%
	Interaction and Communication	1-3-7-2,1-4-3-2...	20	5.03%	
	Resource	6-3-1-3,6-3-2-2...	21	5.29%	
	Integration	2...	35	11.78%	
	Encouragement and Support	1-3-6-1,1-4-1-3...			
Environment-Side	Goal Planning	1-1,1-2-2-1...			24.18%
	Strategic Measures	1-2-2-2,3-4-1-1...	31	7.81%	
	Regulatory	1...	44	11.08%	
	Oversight	1-4-3-3,3-4-4-1...	18	4.53%	
	Publicity and Guidance	1...	34		
Total		1-4-5,3-2-5-1...	397	100%	100%

4.3. Analysis of the Participant Dimension

As shown in Figure 3, the 26 policy documents contain the most provisions related to government departments, totaling 165 articles, which accounts for 41.56% of the total. Training institutions come next with 118 articles, making up 29.72%. Farmers are the third most addressed group, with 74 articles, representing 18.64%. Finally, agricultural enterprises and social organizations are tied with the fewest number of articles, each having 20, or 5.04% of the total.

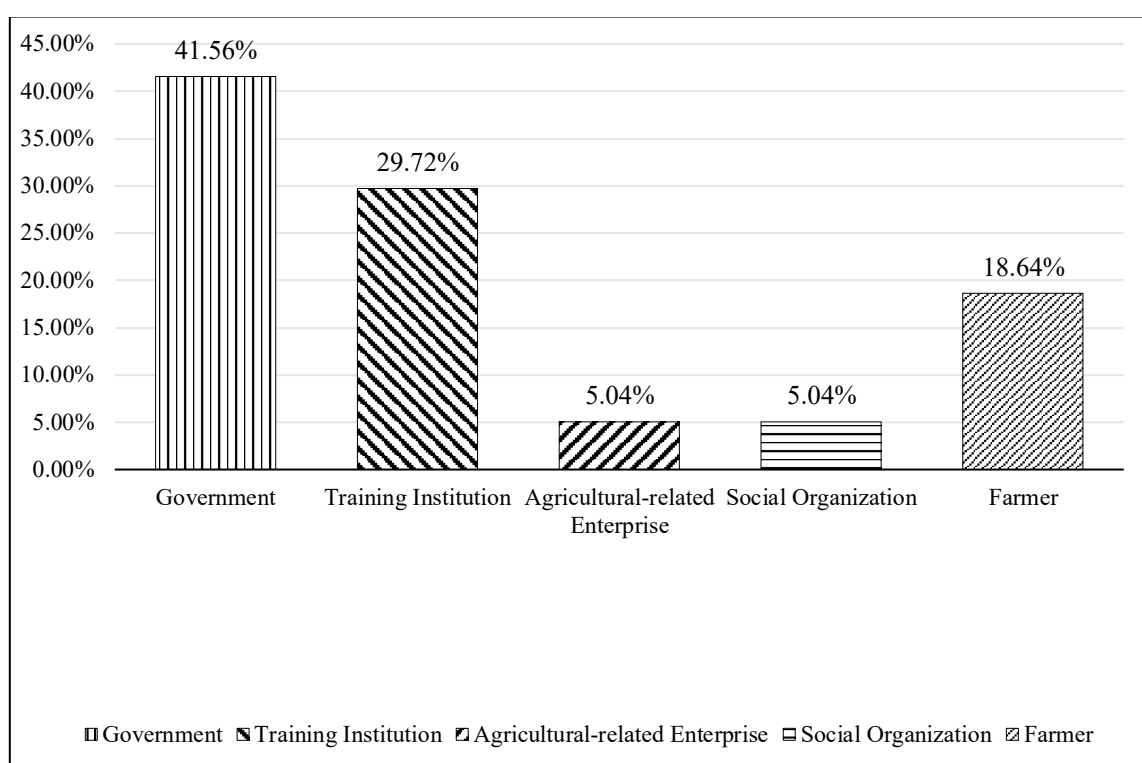


Figure 3: Frequency Statistics of Participants in High-Quality Farmer Cultivation Policies

4.4. Two-Dimensional Analysis of Policy Tools and Participants

As shown in Table 5, the policy tools for high-quality farmer cultivation in China address government departments, agricultural enterprises, farmers, and other participants, though the response frequency varies. In terms of the frequency of participant mentions, the policies focus more on government departments and training institutions, which are most frequently associated with policy tools. In terms of the types of policy tools associated with each participant, government departments are the most comprehensively covered, with a notable number of mentions across all categories of policy tools.

Further analysis of the secondary classifications shows that government departments are particularly involved in environmental policy tools, with 38 provisions related to strategic measures. These strategic measures from a macro perspective play a guiding role in various stages of high-quality farmer cultivation across different regions. Additionally, government departments account for 54 provisions related to supply-side policies, ensuring the integrity of the high-quality farmer cultivation process through financial investment and the improvement of public service systems.

Training institutions, as the direct providers of high-quality farmer cultivation, are predominantly associated with supply-side policies, accounting for 82 provisions, 53 of which relate to talent support. Talent support constitutes 43.8% of the total talent support policy provisions. For agricultural enterprises, supply-side and demand-side policies are the most frequently mentioned, with 9 and 10 provisions, respectively. These policies often focus on project promotion and technical guidance, carried out in collaboration with new types of agricultural business entities, helping high-quality farmers to develop collectively, in coordination, and through complementary strategies. In the policy texts, "agricultural enterprises" are frequently mentioned in connection with projects like modern agricultural industrial parks, advantageous specialty industry clusters, and strong industrial towns. Enterprises integrate resources in line with their characteristics, particularly in teaching venues and methods, playing a key role in demand-side policies. Regarding social organizations, demand-side policies are the most prevalent, mainly reflecting interaction and resource integration. Training

institutions not only engage in self-education by dividing students into layers and categories, but also collaborate with social organizations to build comprehensive bases, specialized bases, and branded training programs that connect farmer field schools.

As for farmers, being the primary beneficiaries of the policies, they are most frequently associated with supply-side and demand-side policies. The most frequent secondary categories for farmers are talent support and encouragement/support. The former is primarily reflected in demonstration training sessions led by agricultural leaders, allowing other farmers to engage in practical training and exercises, which improves skill levels and vocational competence. The latter focuses on innovative daily learning activities for farmers, offering encouragement and support for participation in small group or online learning, which motivates farmers to actively engage in their own training.

Table 5: Two-Dimensional Comparative Analysis of Policy Tools and Participants for High-Quality Farmer Cultivation

Policy Tool Type Participant	Supply-Side Policies					Demand-Side Policies			Environment-Side Policies				Total
	Talent Support	Infrastructure Conditions	Financial Investment	Public Services	Information Technology Support	Interactive Communication	Integrate Resources	Encourage and Support	Goal Programming	Strategic Measure	Work Supervision	Publicity and Guidance	
Government Departments	23	2	13	11	5	5	3	3	25	38	13	24	165
Training Institutions	53	7	0	2	20	3	5	14	5	3	4	2	118
Agricultural Enterprises	7	0	0	0	2	0	3	7	0	0	0	1	20
Social Organizations	2	0	0	0	0	8	8	1	0	1	0	0	20
Farmers	36	1	0	5	5	4	2	10	1	2	1	7	74
Total	121	10	13	18	32	20	21	35	31	44	18	34	397

5. Research Conclusions and Recommendations

5.1. Research Conclusions

Through analysis, it is evident that both national and provincial governments place a significant emphasis on cultivating high-quality farmers, and the design of these policies is broad in scope. There are both comprehensive policies and specialized policies aimed at various relevant departments. Additionally, there are regulatory policies targeting government departments and training institutions, as well as supportive policies aimed at social organizations and agricultural enterprises. However, some problems and deficiencies exist in the current formulation of high-quality farmer cultivation policies.

First, in terms of the composition of policy tools, the policy design tends to focus more on the direct impact of expanding supply or the indirect impact of shaping the environment, while the use of demand-side policy tools is relatively low. This suggests that the pulling effect of demand-side policy tools has not been fully realized and indicates that demand-side policies should be a key focus for policymakers. Over-reliance on supply-side policies could lead to policy failures or deviations from targets, potentially crowding out the effects of environment- and demand-side policies.

Second, from the perspective of participant distribution, the policies currently focus primarily on government departments and training institutions, with insufficient mobilization of agricultural enterprises and social organizations. This creates an overall imbalance. As the rural revitalization strategy continues to advance, agricultural enterprises and social organizations will inevitably play increasingly important roles, so policy follow-up is essential. Farmers, as the ultimate recipients of high-quality farmer cultivation, should also be a primary focus of policy attention. Currently, most farmers lack initiative and capability, and the level of support provided to them is inadequate. There is a need to strengthen corresponding service guarantees and incentive mechanisms.

Third, from the perspective of the relationship between high-quality farmer cultivation policies and participants, the role of policy tools is relatively singular, making it difficult to fully address complex issues. Additionally, the policies appear fragmented, with weak coherence between them. For example, the roles of government departments and training institutions in the cultivation process overlap, requiring the supplementation and improvement of policy tools to consider new areas of focus.

5.2. Optimization Paths

5.2.1. Optimize the Structure of Policy Tools to Improve Internal Balance

In the initial phase of high-quality farmer cultivation, policy design exhibits inherent path dependence, relying primarily on supply-side policies. However, when formulating policies, the characteristics of each policy tool must be fully considered, emphasizing the unique roles of demand-side and environment-side policies to optimize the overall structure. A diversified combination of policy tools should be used to achieve rational application.

For supply-side policies, there are relatively few related policies concerning infrastructure conditions and financial investment. The government needs to strengthen its foundational support for high-quality farmer cultivation across different regions. The use of environment-side policy tools is substantial, and the key to optimizing and improving the environment is achieving sustainable development. This requires leveraging regulatory oversight and publicity to shape the environment for high-quality farmer cultivation. The use of demand-side policy tools is infrequent, and their effects are not apparent, with internal structures also displaying imbalances. To activate market factors, the government should encourage typical demonstration projects and promote excellent experience-sharing. Additionally, a cross-sector platform for communication and promotion should be

established. Furthermore, the government should connect technical and skills training with market resources to motivate farmers to take a more active role in their own education.

5.2.2. Emphasize the Participation of Diverse Stakeholders and Actively Incorporate Social Resources

The diversity of participants in policies reflects the extent of policy effectiveness, and the responsiveness of participants directly impacts the feasibility and practicality of policies. The traditional two-way teaching model is insufficient to meet the needs for cultivating complex talents, and the unique advantages of agricultural enterprises and social organizations should be leveraged. On one hand, social organizations can serve as a bridge in the cultivation of high-quality farmers, coordinating the interests of various parties. Organizations such as the Science Association, the Communist Youth League, and the Women's Federation can also provide diversified services to different groups. On the other hand, practical challenges, such as limited training venues, often arise during the actual teaching process. Agricultural enterprises can collaborate with training institutions to provide internship and hands-on practice opportunities.

5.2.3. Combine Policy Environment with Optimization of Policy Tool Matching Mechanisms

Effective policy tools should not only reflect the value and efficiency of the tools themselves but also be aligned with the policy environment. The two-dimensional analysis shows that the organic matching between policy tools and participants reflects the combination of policy tool characteristics and participant needs, while also considering the influence of the policy environment. Therefore, it is recommended that policymakers tailor policies to local conditions, considering the social background and specific characteristics of the region. By summarizing the experience from the initial stages of cultivation and analyzing obstacles, the matching mechanism between policy tools and participants can be optimized to make the combination more flexible and adaptable.

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