

# Practice and Reflection on the Science and Technology Propaganda Work of Agricultural Research Institutes in the New Era: A Case Study of Changli Pomology Institute, Hebei Academy of Agricultural and Forestry Sciences

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**Abstract** Taking Changli Fruit Tree Research Institute of Hebei Academy of Agricultural and Forestry Sciences as an example, starting from the importance of strengthening scientific and technological propaganda work in agricultural research institutes, the current situation of scientific and technological propaganda work in agricultural research institutes is analyzed in this paper. In response to the problems of lack of targeted evaluation mechanism, lack of distinctive publicity forms, and weak news sensitivity of science and technology propaganda workers in agricultural research institutions, strategies such as establishing a scientific and standardized evaluation system, improving incentive policies, deeply exploring propaganda content, leveraging the joint advantages of new and traditional media, and cultivating and training science and technology propaganda teams are proposed.

**Key words** Agricultural research institutes, Reinforcement, Science and technology propaganda, Changli Pomology Institute

## 1 Introduction

Agricultural science and technology propaganda is an important component of the scientific and technological work of agricultural research institutions<sup>[1]</sup>, responsible for the internal cultural construction of the institutions<sup>[2]</sup>, and also responsible for publicizing scientific and technological policies, popularizing scientific and technological knowledge, transmitting scientific and technological information, and promoting scientific and technological achievements<sup>[3]</sup>. It is an important component of serving agriculture, rural areas, and farmers, and an important means of promoting the development of agriculture and rural economy in the new era. Meanwhile, it can also stimulate the enthusiasm, initiative, and creativity of scientific and technological workers to carry out scientific research, and boost greater progress and faster development in scientific research work. In this paper, Changli Pomology Institute, Hebei Academy of Agricultural and Forestry Sciences (hereinafter referred to as "Changli Institute") is taken as research object to analyze the problems in the scientific and technological propaganda work of agricultural research institutes, and strategies to strengthen the scientific and technological propaganda work of agricultural research institutes in the new era are proposed for reference.

## 2 Important significance of strengthening science and technology propaganda work in agricultural research institutes

**2.1 Science and technology propaganda work is an important carrier and platform for improving the soft power of technology competition** Science and technology propaganda work is an intangible asset that plays an important role in strengthening the position and role of agricultural research institutions in scientific and technological innovation, enhancing social influence and visibility<sup>[4]</sup>. It is also a way to reflect the innovation level and ability of innovation teams. Science and technology propaganda is an important carrier for improving the soft power of scientific and technological competition, which can reflect the comprehensive level of agricultural research institutions in promoting discipline construction, platform construction, talent team construction, agricultural science and technology independent innovation projects, and scientific and technological achievement transformation bases.

### 2.2 Strengthening science and technology propaganda is an accelerator to promote the transformation of achievements

By strengthening science and technology propaganda to create a good social public opinion atmosphere, expand influence and reach, it can effectively enhance tripartite understanding, help scientific research institutions grasp the original innovation needs and scientific innovation topics, and avoid low-level repetitive research; it is conducive to promoting the rapid transformation of new technologies and achievements into productivity; it assists the frontline agricultural research team to become an important force in serving the scientific and technological support of social and economic construction; it is conducive to the integration of scien-

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tific and technological innovation achievements with enterprises, and accelerates the transformation and implementation of scientific and technological achievements.

### 3 Current situation of science and technology propaganda work in agricultural research institutes

#### 3.1 Creating a good public opinion atmosphere for the innovative development of agricultural science and technology

In 2021, Changli Institute promoted the cherry team and its achievements on national and provincial mainstream media such as the *Learning to Build a Powerful Country*, the *Science and Technology Daily*, the *Farmers' Daily*, and the *Xinhua Daily*, and promoted the institute's ideas and achievements in adjusting disciplines to serve the development of modern agriculture, as well as the specific methods and achievements of building scientific research platforms and discipline teams. It effectively promoted the successful application and approval of the cherry experimental station of national industrial technology system, peach innovation team facility cultivation post expert of Hebei modern agricultural industry technology system, cherry post expert of Hebei industrial technology system, grape resource breeding post expert of Hebei industrial technology system, and apple Qinhuangdao comprehensive experimental station of Hebei industrial technology system.

#### 3.2 Strengthening science and technology propaganda for that it has achieved a breakthrough in transfer and transformation of fruit tree achievements

In 2021, a breakthrough was achieved in the transfer and transformation of new grape varieties such as "Time" by vigorously promoting the "light series" grapes, chestnut early harvest technology, sweet cherries, pears, and "bagged free" apples independently developed by Changli Institute. The transfer of over 0.2 million yuan for the use rights of chestnut Yanshan early harvest technology, and the transfer of over 0.7 million yuan for the seedling variety rights of five new cherry varieties, namely May Red, Linglong Crisp, Changhua Zixia, Changhua Purple Crisp, and Wanmilu, in 2022, not only led the cherry industry to a new level, but also created a new situation of win-win cooperation. In addition, the planting and shaping techniques for pear trees with dense planting and light and simplified cultivation, as well as the technical regulations for green grape production throughout the process, have been included in the agricultural leading varieties, main technologies, and green technology models recommended and released by the Hebei Department of Agriculture and Rural Affairs. This has accelerated the application of advanced and applicable agricultural technologies, and enhanced the supporting and leading role of technology in the development of agriculture and rural economy in Hebei Province.

#### 3.3 Strengthening science and technology propaganda for the construction of the party affairs information team

The key to doing a good job in promoting agricultural technology is to establish a high-quality propaganda team<sup>[5-6]</sup>. Changli Institute

has established a party affairs management office and a four-level science and technology propaganda management mechanism of "party general branch secretary – deputy director in charge of propaganda – party office – correspondent". It has formed a propaganda network system consisting of full-time and part-time personnel (scientific research personnel, auxiliary personnel, party affairs propaganda personnel, and various correspondents). The division of labor is clear, each with its own focus, active planning, and linkage between upper and lower levels, which ensures the smooth operation of information propaganda work.

### 4 Problems in the science and technology propaganda work of agricultural research institutions in the new era

#### 4.1 Lack of targeted assessment and evaluation mechanisms

The lack of rigid assessment indicators, evaluation indicators, and promotion mechanisms in propaganda work affects the promotion and enthusiasm of scientific and technological propaganda workers, and even leads to the loss of scientific and technological propaganda talents. It lacks incentive mechanisms, and is limited to verbally requiring all departments to work hard to do practical things, solve difficulties, and do good things for propaganda cadres. There is still a long way to go before truly achieving the goal of using career and emotions to stimulate unlimited enthusiasm for propaganda work and the motivation for work and entrepreneurship.

#### 4.2 Content of science and technology propaganda lacking in-depth exploration, and propaganda form lacking characteristics

Most science and technology propaganda workers focus on daily news trends, technology services, academic activities, and research achievements, neglecting summary, analysis and typical experience with data, analysis, and technical content<sup>[7]</sup>, as well as in-depth analysis and subsequent reporting of hot events. The focus of propaganda content is not clear enough, and the characteristics are not prominent enough, and there is not much technical response to bottleneck needs. Moreover, it mainly relies on traditional media, lacking effective integration with new media promotion methods, and a good information exchange relationship with various external media has not been established.

#### 4.3 Low news sensitivity of science and technology propaganda workers

The science and technology propaganda workers in agricultural research institutes cannot deeply understand the complementary relationship between science and technology propaganda and the central work of agricultural research institutes. Some science and technology propaganda workers believe that science and technology propaganda is only "icing on the cake" for scientific research and is not a necessary task, and the scientific research of scientific research institutions is the main body. So, the understanding of scientific research spirit propaganda and scientific research achievement promotion by science and technology propaganda workers of scientific research institutions is not forward-looking.

## 5 Strategies for strengthening the science and technology propaganda work of agricultural research institutes in the new era

**5.1 Establishing a scientific and standardized evaluation system and improving incentive policies** A sound and comprehensive working mechanism is an important guarantee for doing a good job in science and technology propaganda. At the beginning of each year, Changli Institute clarifies and concretizes the propaganda work, improves the entire process operation mechanism of scientific and technological innovation from project initiation, research and development, publicity, and transformation, coordinates propaganda work and business work, and incorporates propaganda work into the target responsibility assessment system, which is deployed and assessed together with business work; "exemplary individual in propaganda" has been set up, and the reward amount is determined according to the amount of information released and the level of media. It has conducted excellent manuscript selection and strengthened the assessment and evaluation of the communication team to mobilize the work enthusiasm and initiative of science and technology propaganda workers.

**5.2 Deeply excavating propaganda content** For some major projects in the field of agricultural technology innovation, it is necessary to explore various links and processes, and use digital icons and other visual propaganda reports to enrich and complete the information dissemination. In addition to reporting the known quantitative indicators, the information reporting on the transfer and transformation of scientific and technological achievements should also deeply explore the technology service expert team behind the achievements, organically combining the advanced deeds of outstanding scientific and technological personnel with the new achievements they have developed, and fully reflecting their scientific spirit and style. For the information reporting of serving agriculture, rural areas, and farmers in a timely manner invited by science and technology service teams, newspaper reporters and others can be invited to jointly plan and work on the depth and breadth of information to form influential reports.

**5.3 Cultivating and training a team of science and technology propaganda information** At the National Conference on

Propaganda and Ideological Work, the General Secretary Xi Jinping emphasized that "it must continuously enhance physical, visual, intellectual, and writing abilities, and strive to build a propaganda and ideological work team that is politically proficient, highly skilled, pragmatic, innovative, and capable of winning battles. In response to the issue of low technological sensitivity among agricultural research institutes' scientific and technological propaganda workers, it is necessary to cultivate a group of agricultural scientific and technological propaganda teams and invite senior media personnel to strengthen training and improve their media literacy. They should not only master theoretical knowledge in scientific and technological propaganda, possess certain writing and shooting skills, but also delve into the frontline of scientific research and research groups to provide publicity services, continuously enrich scientific research knowledge and improve their own level.

## References

- [1] ZHANG YX, JIN J. Discussion on propaganda work in agricultural scientific research institutes[J]. *Horticulture & Seed*, 2020, 40(6): 59 – 60. (in Chinese).
- [2] LI CC, WU J, HE SQ, *et al.* Innovation path of science and technology publicity in scientific research institutes in the "Internet +" era[J]. *Youth*, 2020, 71(23): 120 – 121. (in Chinese).
- [3] WANG ZD, SUN JC, LIAO YF, *et al.* Research on promoting the effect of scientific and technological promotion of agricultural scientific research institutions[J]. *Anhui Agricultural Science Bulletin*, 2016, 22(18): 114 – 116. (in Chinese).
- [4] CHEN Z, CUI LX, LIU CH, *et al.* Considerations on promoting the news propaganda of agricultural scientific research institutes under the new situation, taking Institute of Plant Protection of Hebei Academy of Agricultural and Forestry Sciences as an example[J]. *Management of Agricultural Science and Technology*, 2022, 41(1): 92 – 95. (in Chinese).
- [5] AN J, WANG XF, ZHAO B, *et al.* Reflections on the science and technology propaganda work of agricultural research institutes[J]. *Shandong Agricultural Sciences*, 2012, 44(12): 128 – 130. (in Chinese).
- [6] LUO FY, LIAO YQ, YANG HY, *et al.* Innovative thinking on doing a good job in agricultural science and technology propaganda in the new era[J]. *Guangdong Agricultural Sciences*, 2010, 37(8): 326 – 328. (in Chinese).
- [7] YAN XQ. Measures for information propaganda of agricultural mechanization in the new situation[J]. *Agricultural Engineering Technology*, 2017, 10(29): 44. (in Chinese).
- [8] XU ZJ. Analysis on the current situation and optimization strategy of marketing channels of agricultural products[J]. *Agricultural Economics*, 2016(2): 120 – 122. (in Chinese).
- [9] GUO YJ, LI J, JI XM. Research on marketing channel optimization of agricultural products under the mode of "live broadcast + short video"[J]. *Southern Agricultural Machinery*, 2023, 54(10): 84 – 87. (in Chinese).
- [10] LI DW. Optimization of marketing channels of agricultural products: problems and countermeasures[J]. *Agricultural Economics*, 2021(8): 114 – 116. (in Chinese).
- [11] WANG DY. Research on marketing channels of characteristic agricultural products: Taking sunshine cooperative in Gaizhou City, Liaoning Province as an example[J]. *China Collective Economy*, 2019(36): 74 – 75. (in Chinese).
- [12] LI M. Analysis on the optimization of marketing channels of agricultural products[J]. *Shaanxi Agricultural Sciences*, 2016, 62(2): 104 – 105, 114. (in Chinese).
- [13] MA HM, XIA JF, MAO HS. Study on influencing factors of marketing channel efficiency of characteristic agricultural products in northern Jiangsu: Taking Peixian rice as an example[J]. *Southern Agricultural Machinery*, 2022, 53(6): 96 – 98. (in Chinese).
- [14] ZHOU YW. Research on brand marketing strategy of agricultural products based on network community and emotion construction[J]. *Agricultural Economy*, 2018(12): 135 – 137. (in Chinese).

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