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Technology Foresight Research on China's Agricultural Engineering Science and Technology to 2035

Task Force for the *Research on China's Engineering Science and Technology Development Strategy 2035*

Agriculture Research Group

Abstract: To improve scientific judgment on the development strategy for China's agricultural engineering science and technology until 2035, the technology foresight research method was used. This method entailed a wide collection of detailed technology foresight lists and two rounds of a questionnaire survey. Based on the survey results, which were studied and evaluated by specialists, the overall development characteristics of agricultural engineering science and technology were confirmed, and 12 directions for key technologies in agriculture were put forward. Furthermore, a development strategy for key technologies in agriculture was proposed to overcome a lack of talent and a lack of R&D inputs in agriculture. In conclusion, technology foresight research results can provide important support for creating development strategies for China's agricultural engineering science and technology.

Keywords: agricultural engineering science and technology; technology foresight; key technology; strategic research; Delphi method

1 Introduction

The next 20 years is a key period for improving economic efficiency and economic transformation/upgrades in China, which has an urgent need for innovations in science and technology to sustain its economic development. Modern agricultural development was characterized as resulting in efficient output, product safety, resource conservation, and a healthy environment. The themes for China's agricultural development include the need to adopt green ecological technologies to support agriculture production more efficiently and safely, the need to safeguard food security, and agricultural sustainable development. The "Research on China's Engineering Science and Technology Development Strategy 2035" in agriculture is based on the outcomes of many previous studies [1–4] on the social and economic development prospects and development trends in agricultural engineering science and technology until 2035, with a focus on the practical problems and technology needs of the coming 20 years. To improve the scientificity of the study and to judge future development trends in agricultural engineering science and technology, the technology foresight method was employed [5–7]. The overall objectives are to grasp trends in science and technology in agriculture; to present the key development fields according to China's practical needs through 2035 regarding social and economic development; and to predict and judge China's capability through 2035 regarding science and technology in agriculture. The knowledge obtained will provide reference and support for future development trends in science and technology in agriculture engineering.

2 Methods

2.1 Foresight method and procedure

One of the main methods adopted in technology foresight is the questionnaire survey. The list of future directions for key technology was derived from an extensive collection of expert opinions and advice. The survey method used was the Delphi method. The questionnaire was distributed to academicians, experts, government officials, and business people. A comprehensive evaluation of the listed technology items was obtained from people in every group. Based on the statistical analysis of the survey results, the key fields, key technology projects, and major technology groups of future science and technology in ag-

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riculture were filtered, providing support for the formulation of development strategies for the 2035 China engineering science and technology in agriculture.

The questionnaire was in two forms: online and hard copy. It was administered in two rounds. The technology lists in the second round were updated/revised by incorporating the new directions presented by the experts in the first round. A statistical analysis was performed in the second round of the survey and questionnaire, and the foresight report was formatted. The procedure followed is illustrated in Fig. 1.

2.2 The list of agricultural technology foresight and their statistical indicators

2.2.1 The foresight list in the agricultural area

There were nine subfields in the first-round questionnaire pertaining to the agricultural area: grain and cash crops, horticulture, forestry and ecology, agricultural engineering, animal husbandry, fisheries, animal epidemics, agricultural resources and environment, and food processing and food safety; there were a total of 58 technology directions. A total of 958 experts were invited to participate in the first-round questionnaire, of whom 408 replied. The expert participation rate was 42.6%. We received 2 253 questionnaires. There were 39 experts on average for each technology item, and the number of experts exceeded 50 for one-third of the technology items.

A research group organized and analyzed the data collected in the first-round survey and discussed it with academicians and experts in order to evaluate the technology lists and formulate the foresight lists for the second round (Table 1); there were a total of 41 items. There were 796 experts invited to the second round, of whom 300 replied. The participation rate was 38%. We received 1 306 questionnaires. There were 32 experts on average for each technology item, and the number of experts exceeded 30 for the one-second technology items.

2.2.2 Statistical indicator and analysis method

Both the single-factor index and the comprehensive index were used in the statistical data analysis. The main indices and the corresponding explanations in this study are listed in Table 2.

The design of questionnaires and statistical indicators is derived from the *Research on China's Engineering Science and Technology Development Strategy 2035* Technology Foresight Group.

3 Results

3.1 The technology directions with top comprehensive importance

Based on the survey data in the second round, by combining the importance of technology itself and the importance of technology applications, we obtained the technology directions with top comprehensive importance in different subfields of agriculture, as listed in Table 3.

The expert judges decided that the top 10 items ranked in Table 3 all belong to two subfields of grain and cash crops and horticulture; these cannot fully reflect the contents of different agricultural subfields due to the relatively significant differences in the different subfields. Therefore, the experts decided to perform a more objective analysis in terms of technology directions with top comprehensive importance being given to different subfields. The results are listed in Table 4. The results in the second round are mainly consistent with those in the first round, with differences observed in the fields of animal husbandry, agricultural resources and environment, and food processing and food safety.

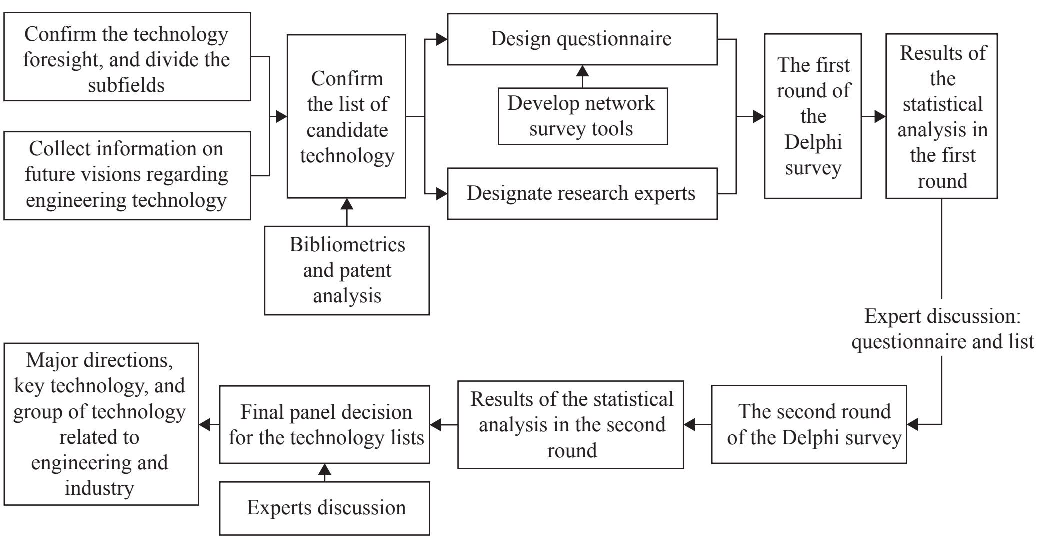

Fig. 1. Flow chart of technology foresight in agriculture.

Table 1. List of the second-round agricultural technology foresight.

Subfields	Number	Technology direction
Grain and cash crops	901001	Germplasm resources collection, preservation, and precise identification of crops
	901002	Functional gene mining and molecular design breeding technology for crops
	901003	High light-efficiency breeding and biological nitrogen fixation technology for crops
	901004	Whole-process precise prevention and control technology for pests
	901005	High-yield and high-efficiency comprehensive technical system and intelligent managing system
	901006	Crop production system adapting technology to cope with global climate change
Horticulture	902001	R&D of molecular breeding techniques, excavation of high-quality genes, and breeding of new varieties of horticultural crops
	902002	Horticultural effort-saving crop cultivation, safety standardization production, and product traceability technology
	902003	Soil conservation, seedling intensification, and precise facility cultivation technology
	902004	Postharvest quality maintenance and modern circulation technology for horticultural products
	902005	Research and utilization of functional horticultural products
Forestry and ecology	903001	Directional cultivation and sustainable management techniques for artificial forests
	903002	Genetic analysis of important traits in forest trees and gene cloning technology
	903003	Advanced technology in wood material manufacturing
Agricultural engineering	904001	Key technology for intelligent agricultural equipment
	904002	Agricultural sensor technology
	904003	Mechanized and intelligent agricultural production system and sets of equipment based on regional characteristics
Animal husbandry	905001	Design and breeding technology for animals based on large amounts of conventional and genomic data
	905002	Technology to aid the provision of precise nutrition based on real-time monitoring and dynamic requirements
	905003	Information technology in farming based on intelligent facilities
Fisheries	906001	Modern aquaculture seeding technology
	906002	Equipment and key technologies for aquaculture projects in circulating water
	906003	New aquaculture technologies on beaches and in shallow seas
	906004	Efficient aquaculture facilities and key technologies
	906005	Conservation, proliferation, and habitat restoration technology for important fishery resources
	906006	Technology for high value application of aquatic products
	906007	Prospecting technologies for polar ocean and oceanic fishery resources
	906008	Construction technology for fishing island engineering in the South China Sea
Animal epidemics	907001	Creation of and key production technology for new biological agents for animals
	907002	Technology for diagnosis, monitoring, and warning for major animal epidemics
	907003	Prevention and control technology for animal epidemics and zoonosis
Agricultural resources and environment	908001	Theory and technology system for recycling agriculture engineering
	908002	Water-saving and benefit-increasing technology and products for crops
	908003	Technology regarding soil fertility improvement and cleaning of cultivated land
Food processing and food safety	909001	Key technologies in modern processing for traditional Chinese brewing and fermented food
	909002	Key technologies in modern processing for traditional Chinese cuisine
	909003	Key technologies in Chinese aerospace food engineering
	909004	Core equipment development and processing technology for modern food engineering
	909005	Technology of formation, change, and control of the hazard factors in good materials
	909006	Fast detection technology and equipment for food safety
	909007	Key technology of high value and nutrient processing for food materials

3.2 The important common technology directions

Based on the survey data in the second round, by combining the technology commonality index and technology application importance index, we obtained the most important common technology directions in the different subfields of agriculture as listed in Table 5.

Table 2. Statistical indices and significance of the technology foresight.

	Indices	Calculation and description (including standard value)
Single factor indices	1. Technology core index	Description: to determine whether a technology plays a key role in the relevant technology group and product development. The technical breakthrough of this technology is directly related to the development of related products, industries, and projects. This index can be divided into four levels: high, relatively high, medium, and low. Scores: 100 for high, 50 for relatively high, 25 for medium, and 0 for low. The score is a weighted calculation according to the experts' familiarity with the technology. Analysis and application: the sequencing and distribution of the first *N*th technologies based on this index; the average of the index in a certain field or subfield, etc. (The statistical method of the first six indices including the technology core index, technology commonality index, technology driving index, technology discontinuity index, economic development importance index, and social development importance index, is similar.)
	2. Technology commonality index	To determine whether the technology is widely applied and whether it is commonly used in various industries.
	3. Technology driving index	To determine whether the technology plays a leading role in motivating the development of other technologies and industries.
	4. Technology discontinuity index	To determine whether the R&D results will replace the existing mainstream technology, and whether they have a significant impact on the market.
	5. Economic development importance index	To assess the significance of the technology for economic development, mainly on the basis of market demand, effects on future development, and potential economic benefits.
	6. Social development importance index	To assess the significance of the technology for the development of society, mainly on the basis of its effects on the environment, improvement of resource utilization, and improvement in the quality of life.
	7. R&D level index	Description: to quantify the evaluation results. Scores: 100 for internationally leading, 50 for close to international standards, and 0 for lower than the international standard. The score is a weighted calculation according to the experts' familiarity with the technology. Analysis and application: to sequence technologies based on this index, such as internationally leading (scored 81–100), relatively leading (61–80), general (41–60), relatively backward (21–40), and backward (0–20).
	8. Technology-leading countries	Description: to determine the leading countries of a technology. Five countries or regions are assessed: the US, EU, Japan, Russia, and others. Analysis and application: to sequence countries based on this index to analyze the technology projects of different countries, and their leadership in some fields and subfields.
	9. Main constraints of technological development	Description: to determine the constraints in the development of technology projects. It can be chosen from six items: talent, science, and technology resources; laws, regulations, and policies; standards and specifications; R&D investment; industrial fundamental capacity; and coordination and cooperation. Analysis and application: to draw conclusions on primary and secondary constraints in the development of technology in a field and subfield, and to present targeted promotion measures.
Comprehensive indices	10. Technology itself importance index	This index is measured using a combination of the technology core index and the technology driving index.
	11. Technology application importance index	This index is measured using a combination of the economic development importance index, social development importance index, and the index of national security significance.
	12. Comprehensive index of technology and application importance	This index is used to screen the subfields and technical directions of great technical importance by combining the technology importance index and the technology application importance index.
	13. Comprehensive index of commonality and application importance	This index is used to screen generic technology by combining the technical commonality index and the technology application importance index.
	14. Comprehensive index of discontinuity and application importance	A disruptive technology not only emphasizes its originality but places great significance on the role it plays in the future development of the economic society. This index is used to screen important disruptive technologies by combining the technology discontinuity index and the technology application importance index.

The design of questionnaires and statistical indicators is derived from the *Research on China's Engineering Science and Technology Development Strategy 2035* Technology Foresight Group.

The experts suggested an objective analysis in terms of the top comprehensive importance of technology directions in different subfields, and the results are listed in Table 6. Apart from the results for the fields of horticulture, animal husbandry, forestry and ecology, and food processing and food safety, the results in the second round are consistent with those of the first round.

3.3 Important disruptive technology directions

Based on the survey data in the second round, the scores of the top 10 directions ranked with the discontinuity index are relatively low, with most being less than 60, as shown in Table 7. This indicates that the agricultural technology directions pre-

Table 3. Technology directions with top comprehensive importance in different subfields of agriculture.

Subfields	Technology direction	Importance index	R&D level	Leading countries		Constraint factors	
				1st	2nd	1st	2nd
Grain and cash crops	Functional gene mining and molecular design breeding technology for crops	87.04	40.74	USA	China	Talent, science, and technology resources	R&D investment
Grain and cash crops	Germplasm resource collection, preservation, and precise identification of crops	81.47	42.61	USA	Japan	Talent, science, and technology resources	Coordination and cooperation
Grain and cash crops	High-yield and high-efficiency comprehensive technical system and intelligent managing system	80.82	25.71	USA	EU	Talent, science, and technology resources	R&D investment
Grain and cash crops	Whole-process precise prevention and control technology for pests	78.77	23.96	USA	EU	Talent, science, and technology resources	R&D investment
Grain and cash crops	High light-efficiency breeding and biological nitrogen fixation technology for crops	72.72	13.73	USA	EU	Talent, science, and technology resources	R&D investment
Grain and cash crops	Crop production system adapting technology to cope with global climate change	70.63	17.44	USA	EU	Talent, science, and technology resources	R&D investment
Horticulture	R&D of molecular breeding techniques, excavation of high-quality genes, and breeding of new varieties of horticultural crops	93.76	40.23	USA	EU	Talent, science, and technology resources	R&D investment
Horticulture	Horticultural effort-saving crop cultivation, safety standardization production, and product traceability technology	87.56	8.45	EU	USA	R&D investment	Standards and specifications
Horticulture	Soil conservation, seedling intensification, and precise facility cultivation technology	83.65	8.62	EU	Japan	Standards and specifications	R&D investment

Table 4. Top-ranked technology directions based on the comprehensive index of technology importance in different subfields.

Subfields	1st round: Technology directions	1st round: Comprehensive index of technology importance	2nd round: Technology directions	2nd round: Comprehensive index of technology importance
Grain and cash crops	Functional gene mining and molecular design breeding technology for crops	82.08	Functional gene mining and molecular design breeding technology for crops	87.04
Horticulture	Excavation of high-quality genes and breeding of new varieties of horticultural crops	85.63	R&D of molecular breeding techniques, excavation of high-quality genes, and breeding of new varieties of horticultural crops	93.76
Forestry and ecology	Directional cultivation and sustainable management techniques for artificial forests	77.19	Directional cultivation and sustainable management techniques for artificial forests	84.92
Agricultural engineering	Key technologies for intelligent agricultural equipment based on Beidou satellite positioning	79.09	Key technology for intelligent agricultural equipment	86.34
Animal husbandry	Technology to aid the provision of precise nutrition based on real-time monitoring and dynamic requirements	78.33	Design and breeding technology for animals based on large amounts of conventional and genomic data	86.53
Fisheries	Modern aquaculture breeding technology	80.73	Modern aquaculture seeding technology	87.26
Animal epidemics	Technology for diagnosis, monitoring, and warning for major animal epidemics	83.56	Technology for diagnosis, monitoring, and warning for major animal epidemics	88.12
Agricultural resources and environment	Water-saving and benefit-increasing technology and products for crops	77.00	Theory and technology system for recycling agriculture engineering	85.80
Food processing and food safety	Technology of formation, change, and control of the hazard factors in good materials	75.68	Core equipment development and processing technology for modern food engineering	85.36

Table 5. Important common technology directions in the different subfields of agriculture.

Subfields	Technology directions	Common technology importance index	R&D level	Leading countries		Constraint factors	
				1st	2nd	1st	2nd
Fisheries	Modern aquaculture seeding technology	75.75	59.30	USA	EU	R&D investment	Talent, science, and technology resources
Animal epidemics	Technology of diagnosis, monitoring, and warning for major animal epidemics	75.71	28.44	USA	EU	Talent, science, and technology resources	R&D investment
Horticulture	Horticultural effort-saving crop cultivation, safety standardization production, and product traceability technology	75.64	8.45	EU	USA	R&D investment	Standards and specifications
Forestry and ecology	Advanced technology in wood material manufacturing	74.16	36.60	USA	EU	R&D investment	Talent, science, and technology resources
Forestry and ecology	Directional cultivation and sustainable management techniques for artificial forests	73.33	29.33	EU	USA	Talent, science, and technology resources	R&D investment
Agricultural resources and environment	Technology regarding soil fertility improvement and cleaning of cultivated land	73.22	20.35	EU	USA	R&D investment	Coordination and cooperation
Agricultural engineering	Key technology for intelligent agricultural equipment	72.38	6.88	USA	Japan	R&D investment	Talent, science, and technology resources
Agricultural engineering	Agricultural sensor technology	71.75	8.10	USA	EU	Talent, science, and technology resources	R&D investment
Agricultural resources and environment	Theory and technology system for recycling agricultural engineering	71.39	22.92	EU	Japan	R&D investment	Talent, science, and technology resources

Table 6. Top-ranked technology directions in different subfields based on the comprehensive index of common technology importance.

Subfields	1st round		2nd round	
	Technology directions	Comprehensive index of common technology importance	Technology directions	Comprehensive index of common technology importance
Grain and cash crops	Functional gene mining and molecular design breeding technology for crops	64.24	Functional gene mining and molecular design breeding technology for crops	68.64
Horticulture	Excavation of high-quality genes and breeding of new varieties of horticultural crops	68.65	Horticultural effort-saving crop cultivation, safety standardization production, and product traceability technology	75.64
Forestry and ecology	Directional cultivation and sustainable management techniques for artificial forests	52.80	Advanced technology in wood material manufacturing	74.16
Agricultural engineering	Key technology for intelligent agricultural equipment based on Beidou satellite positioning	56.98	Key technology for intelligent agricultural equipment	72.38
Animal husbandry	Technology to aid the provision of precise nutrition based on real-time monitoring and dynamic requirements	58.41	Design and breeding technology for animals based on large amounts of conventional and genomic data	65.79
Fisheries	Modern aquaculture breeding technology	58.27	Modern aquaculture seeding technology	75.75
Animal epidemics	Technology for diagnosis, monitoring, and warning for major animal epidemics	66.91	Technology for diagnosis, monitoring, and warning for major animal epidemics	75.71
Agricultural resources and environment	Technology regarding soil fertility improvement and cleaning of cultivated land	63.85	Technology regarding soil fertility improvement and cleaning of cultivated land	73.22
Food processing and food safety	Technology of formation, change, and control of the hazard factors in good materials	59.12	Core equipment development and processing technology for modern food engineering	71.00

Table 7. Sequencing of agricultural fields based on the discontinuity index.

Subfields	Technology directions	Discontinuity index
Fisheries	Modern aquaculture seeding technology	62.21
Horticulture	Horticultural effort-saving crop cultivation, safety standardization production, and product traceability technology	60.56
Horticulture	Postharvest quality maintenance and modern circulation technology for horticultural products	57.61
Agricultural engineering	Agricultural sensor technology	57.57
Forestry and ecology	Advanced technology in wood material manufacturing	57.47
Agricultural engineering	Mechanized and intelligent agricultural production system and sets of equipment based on regional characteristics	56.44
Grain and cash crops	High-yield and high-efficiency comprehensive technical system and intelligent managing system	55.00
Horticulture	Research and utilization of functional horticultural products	54.76

sented by experts have features of continuity, and that there are a few directions that can replace major technologies and have disruptive features.

3.4 Constraint conditions for technology realization

3.4.1 Technology-leading countries

Fig. 2 shows the leading scores of different subfields for technology-leading countries based on the statistical results of the second round. Apart from its horticulture, fisheries, and agricultural resources and environment, the United States has overwhelming superiority in agriculture, followed by the European Union and Russia.

3.4.2 Research and development level

Fig. 3 shows the statistical results of the R&D level for 41 technology directions in agriculture in the second round. There is only one technology direction with a level higher than 60, seven technology directions ranging from 40 to 60, 18 technology directions ranging from 20 to 40, and 15 technology directions scoring less than 20. Among them, the 23rd technology direction, namely "new aquaculture technologies on beaches and in shallow seas," has the highest level, and it is the highest scoring technology in all areas. The 11th technology direction, the "research and utilization of functional horticultural products," has the lowest R&D level.

3.4.3 Restraining factors

"Talent, science, and technology resources" and "R&D investment" are the main factors restraining agricultural engineering science and technology (Fig. 4). Of the nine subfields, fisheries, animal epidemics, and agricultural resources and environment are more restricted by "laws, regulations, and policies" (Fig. 5). The areas of horticulture, agricultural resources and environment, and food processing and food safety are more sensitive to "standards and specifications." Agricultural engineering

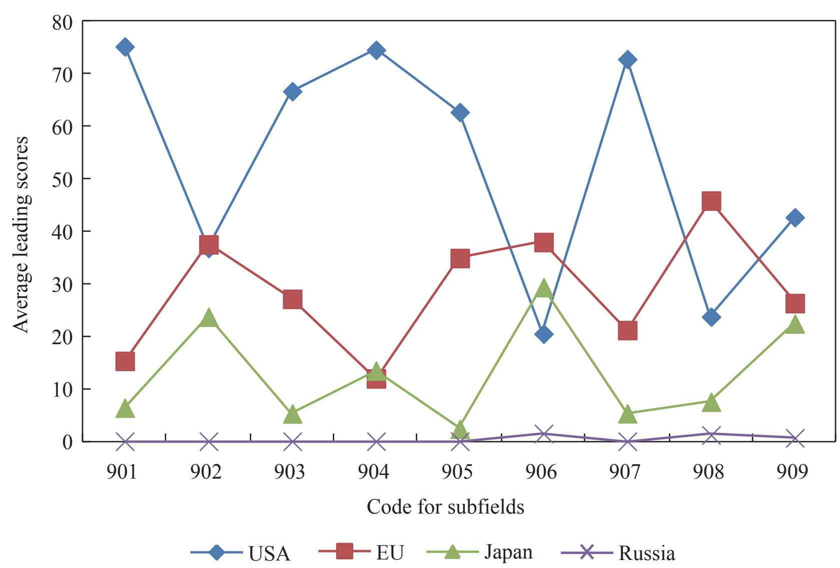

Fig. 2. The leading scores of different subfields for technology-leading countries. 901: grain and cash crops; 902: horticulture; 903: forestry and ecology; 904: agricultural engineering; 905: animal husbandry; 906: fisheries; 907: animal epidemics; 908: agricultural resources and environment; 909: food processing and food safety.

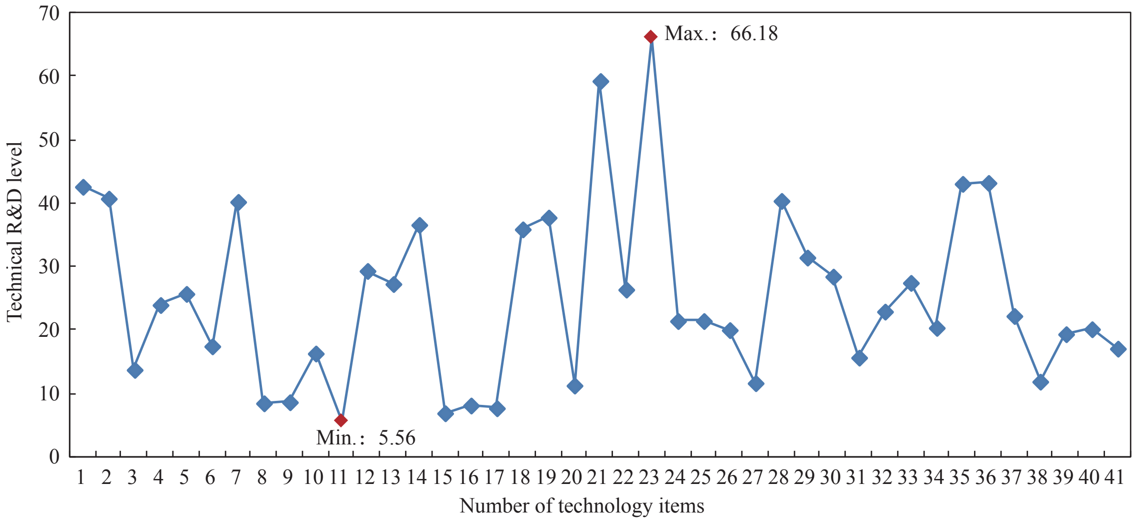

Fig. 3. Technical R&D level in agriculture.

and food processing and food safety rely more on the capability of industrial bases. Grain and cash crops, animal husbandry, fisheries, animal epidemics, and agricultural resources and environment are restricted by "coordination and cooperation" to a certain extent.

4 General conclusions and development strategies for key technology directions

4.1 Judgment on the general features of technology development

According to the above statistical results, the general features of science and technology in agricultural engineering are as follows:

(1) Technology's core role

The core role in agriculture lies in modern biotechnology breeding and efficient breeding, the facilities and equipment of production in the planting and breeding industry, as well as in food processing. Additionally, it plays a role in the creation of new medicine that is relevant to animal health, and the effect that recycling agricultural technology has on agricultural resources and the environment.

(2) Technology's driving role

Generally, the key aspects of agricultural technologies have a continuity feature, and there are a few new directions that have disruptive features and that can replace major technologies.

(3) The importance of economic development

The contributions of the subfields of fisheries, animal epidemics, and horticulture on economic development are relatively high in agriculture.

(4) The importance of social development

The subfields of horticulture, forestry and ecology, agricultural engineering, forestry and ecology, food processing and food safety, agricultural resources and environment, animal epidemics, and animal husbandry have made greater contributions to environmental protection, to the improvement of resource utilization, and to improving the quality of life.

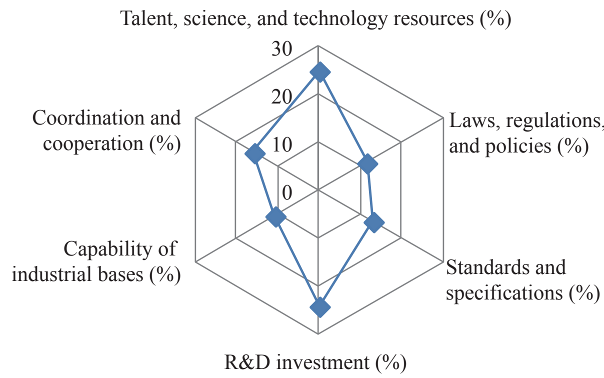

Fig. 4. Restraining factors of engineering science and technology development in agriculture.

(5) R&D level

There continues to be a gap between the overall R&D in agriculture in China and that of developed countries, with large differences existing in different technology directions. Apart from horticulture, fisheries, and agricultural resources and environment, the United States shows overwhelming superiority in agriculture, followed by the European Union and Russia.

(6) Restraining factors

In general, "talent, science, and technology resources" and "R&D investment" are the main restraining factors. The subfields pertaining to fisheries, animal epidemics, and agricultural resources and environment are further restricted by "laws, regulations, and policies." The fields of horticulture, agricultural resources and environment, and food processing and food safety are more sensitive to "standards and specifications." Agricultural engineering and food processing and food safety rely on the

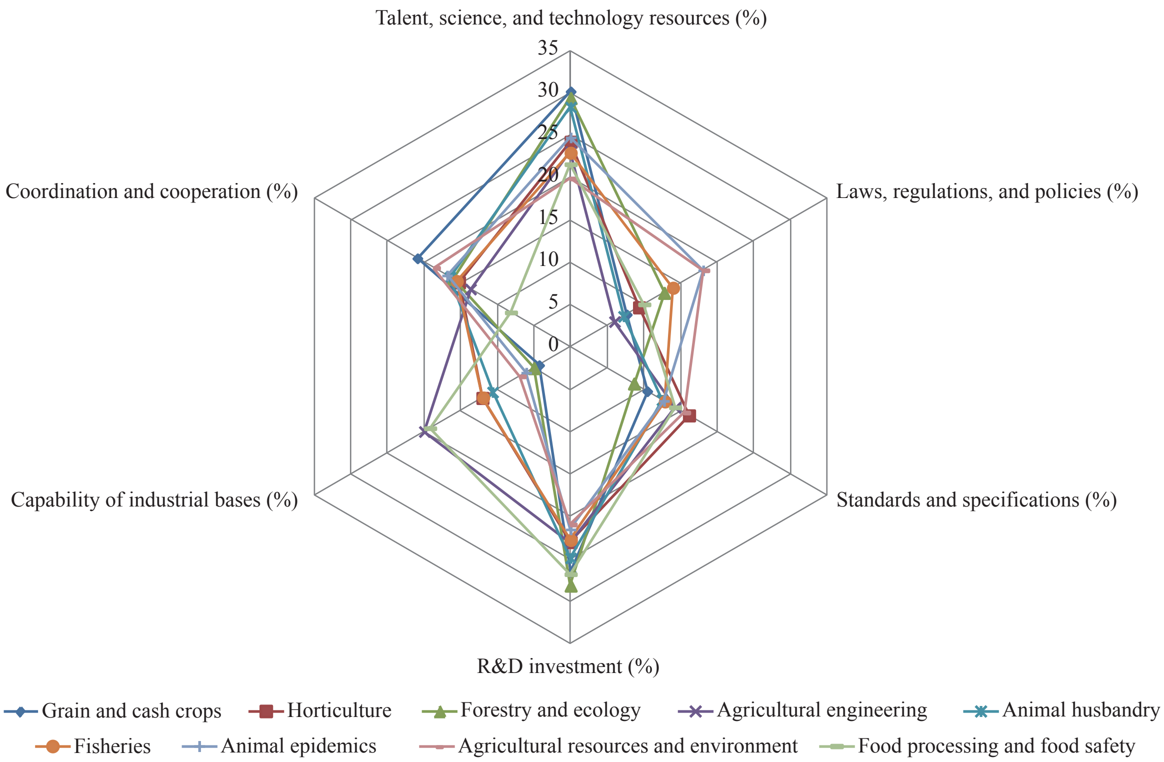

Fig. 5. Restraining factors of engineering science and technology development for different subfields in agriculture.

Table 8. Key technology directions through 2035 in agriculture.

Subfields	Key technology directions
Grain and cash crops	Functional gene mining and molecular design breeding technology for crops
Horticulture	R&D of molecular breeding techniques, excavation of high-quality genes, and breeding of new varieties of horticultural crops Horticultural effort-saving crop cultivation, safety standardization production, and product traceability technology
Forestry and ecology	Directional cultivation and sustainable management techniques for artificial forests Advanced technology in wood material manufacturing
Agricultural engineering	Key technology for intelligent agricultural equipment
Animal husbandry	Design and breeding technology for animals based on large amounts of conventional and genomic data
Fisheries	Modern aquaculture seeding technology
Animal epidemics	Technology for diagnosis, monitoring, and warning for major animal epidemics
Agricultural resources and environment	Theory and technology system for recycling agriculture engineering Technology of soil quality improvement and cleaner production of cultivated land
Food processing and food safety	Core equipment development and processing technology for modern food engineering

capability of industrial bases. Grain and cash crops, animal husbandry, fisheries, animal epidemics, and agricultural resources and environment are restricted, to a certain extent, by "coordination and cooperation."

4.2 Development strategy in key technology directions

4.2.1 Key technology directions

Based on the analysis of the survey data and after considering the relatively large differences in different subfields of agriculture, the 12 key technology directions are presented in Table 8.

4.2.2 The development strategy for key technology directions

The major restraining factors in agricultural development are talent and R&D investment. Therefore, we need to further emphasize/increase the support of investment in R&D. Meanwhile, the construction of a talent team is essential to ensure the stable support of key technology directions, and to promote sustainable development for relevant technologies.

In addition, horticulture, agricultural resources and environment, and food processing and food safety are more restricted by standards and specifications, while fisheries, animal epidemics, and agricultural resources and environment are more significantly restricted by laws, regulations, and policies. The formation of relevant standards and specifications, as well as laws, regulations, and policies with more R&D input therefore need to be emphasized. The construction of a relevant national industrial base is also required, as agricultural engineering and food processing and food safety greatly depend on it. We need to further promote coordination, innovation, and collaboration in relevant areas, and strengthen international collaborations and exchanges to address coordination and cooperation restraints in the development of the fields of grain and cash crops, animal husbandry, animal epidemics, and agricultural resources and environment.

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