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# The Current Situation of the Development of Agricultural Standardization in Zhejiang Province and Recommendations

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**Abstract** Without the agricultural standardization, there would be no agricultural modernization. Through many years of effort, the building of agricultural standardization system in Zhejiang Province has made significant achievements, effectively giving play to the technology supporting role of agricultural standardization in adjusting agricultural industrial structure, and promoting the transformation and upgrading of industrial structure. But with the acceleration of the development of modern agriculture in Zhejiang Province, the building of agricultural standardization system poses new opportunities and challenges. This article describes the development course of the building of agricultural standardization system in Zhejiang Province, analyzes the current situation, characteristics and problems, and finally puts forward the following recommendations: improving and coordinating the working mechanism; improving standard system; focusing on demonstration and promotion; improving test and supervision system; focusing on human resources building; increasing capital input.

**Key words** Agricultural standardization, Agricultural modernization, Current situation, Recommendations

Based on science, technology and practical experience, the agricultural standardization, in accordance with the principle of "unification, simplification, coordination, and optimizing", develops and implements the standards covering production, processing, operation, sales and other aspects concerning agricultural products, which is used for guiding and regulating the agricultural production activities, in order to achieve improvement in the level of quality safety and market competitiveness of agricultural products, ultimately achieving effective unification of economic, social and ecological benefits. The content of agricultural standards is very broad, mainly including agricultural foundation standard, seeds and seedlings standard, product standard, method and technique standard, environmental protection standard, health standard, agricultural engineering and engineering component standard, and management standard, covering all links in the whole process of agricultural production.

The agricultural standardization is an important symbol of the modernization of agriculture; the best bridge for the realization of conversion of agricultural scientific and technological achievements into productivity; an important means to improve the level of quality safety of agricultural products, cope with the technical trade measures, and enhance the international competitiveness of agricultural products; an effective initiative to promote the industrialized development of competitive agricultural products; the basis for the agricultural law enforcement.

Further focusing on the work of agricultural standardization is of great significance to adjusting and optimizing the agricultural industrial structure in Zhejiang Province; promoting the transformation of the mode of agricultural development; enhancing the level of agricultural production; promoting resource conservation and sustainable development of agriculture and the rural economy; dealing with the technical trade measures; enhancing the market competitiveness of agricultural products; maintaining market order and fair competition; increasing agricultural efficiency and farmers' income.

## 1 The course of development

The development of agricultural standardization in Zhejiang Province has mainly experienced three stages.

(i) The initial stage. The agricultural standardization work in Zhejiang Province can be traced back to the early period of the liberation. At the time, in order to adapt to the needs for unifying the quality of agricultural products and meeting planned purchase and supply under the conditions of planned economy, Zhejiang Province focused on the setting and implementation of quality standards for products such as seeds and seedlings, and the role of agricultural standardization initially loomed.

(ii) The advance stage. From the late 1970s to the mid-1990s, in order to effectively solve the problem of food and clothing, Zhejiang Province actively promoted grain field construction, mode-oriented cultivation of crops, soil testing and formulated fertilization technology, and other production standardization measures, accelerating the conversion of agricultural scientific and technological achievements, improving agricultural yield, raising the level of agricultural production. The agricultural standardization work was effectively developed.

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(iii) The stage of comprehensive development, also the stage of rapid development of agricultural standardization.

In 2002, the provincial government specially set up the "Zhejiang Agricultural Product Quality Safety Supervision and Testing Coordination Meeting", with assistant secretary general of general office of the provincial government as the director, Provincial Bureau of Quality and Technical Supervision, Department of Agriculture, Department of Forestry, Department of Marine and Fisheries, Department of Finance and Development and Reform Commission as the members. The office is in Provincial Bureau of Quality and Technical Supervision (referred to as the Provincial Agricultural Products Quality Safety & Supervision and Testing Coordination Meeting Office).

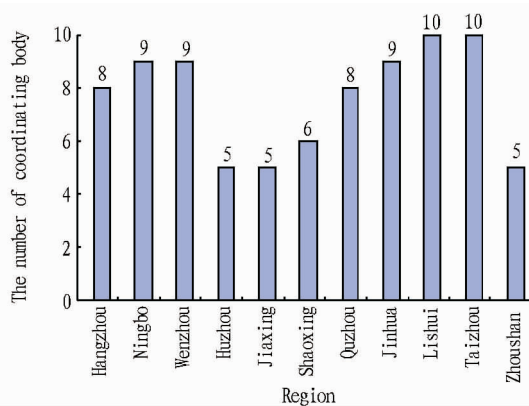
In order to further exert influence and better promote the implementation of agricultural standardization strategy, the Provincial Agricultural Products Quality Safety & Supervision and Testing Coordination Meeting Office actively absorbs the relevant departments. Through the efforts, the Provincial Supply and Marketing Cooperative officially became the new member of the Provincial Agricultural Products Quality Safety & Supervision and Testing Coordination Meeting Office in 2010. At the present, there have been 7 members of the Provincial Agricultural Products Quality Safety & Supervision and Testing Coordination Meeting Office, including the Provincial Department of Finance, Development and Reform Commission, Region Bureau of Quality Supervision, Region Department of Agriculture, Region Department of Forestry, Provincial Bureau of Ocean and Fisheries, and Provincial Supply and Marketing Cooperative. Increase in the number of members will better give play to the Provincial Agricultural Coordination Office's role of promotion and coordination, effectively propelling the smooth implementation of agricultural standardization strategy in Zhejiang Province.

## 2 The current situation of development

After years of development and improvement, the agricultural standardization work in Zhejiang Province has been effectively promoted in terms of working mechanism, standard system, demonstration and application system, brand building, inspection and testing system, information services, human resources building, etc., steadily and effectively improving the level of agricultural standardization.

**2.1 The working mechanism is gradually improved** According to statistics, as of July 2010, 87 counties (cities, districts) in Zhejiang Province established the corresponding agricultural standardization coordinating body. The regional distribution can be shown in Fig. 1. According to the statistical data, various cities in the province have set up the corresponding coordinating body, and most of the counties have also established the corresponding coordinating body, basically forming "three-level" (provincial, municipal and county) coordination mechanism, making the work of agricultural standardization and quality safety testing of agricultural products in Zhejiang Province advance comprehensively and orderly.

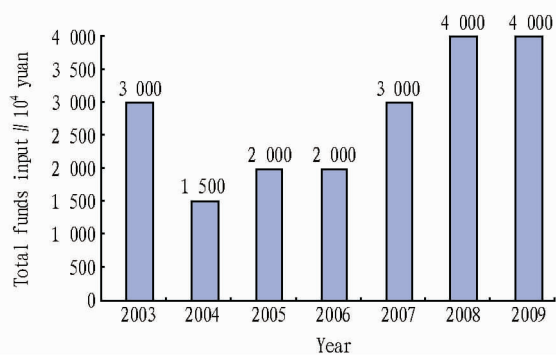
Since 2003, the provincial finance of Zhejiang has invested



**Fig. 1 The building of coordinating body in various regions of Zhejiang Province**

a total of about 15 million–40 million yuan as special funds for promoting the work of agricultural standardization and quality safety testing of agricultural products in Zhejiang Province. As of the end of 2009, Zhejiang Province invested a total of about 0.2 billion yuan as the special financial funding (Fig. 2). The special financial funding in 2004 was 15 million yuan, and it increased year by year subsequently, reaching 400 million yuan in 2008.

The financial funds support ensures the smooth implementation and comprehensive development of the work of agricultural standardization and quality safety testing of agricultural products in Zhejiang Province. On the one hand, it indicates that the agricultural standardization work in Zhejiang Province draws the attention of the provincial party committee and provincial government; on the other hand, it poses higher requirements on the work of agricultural standardization in Zhejiang Province, and the agricultural standardization work still has a long way to go.



**Fig. 2 Financial funds for agricultural standardization and quality safety of agricultural products in Zhejiang Province**

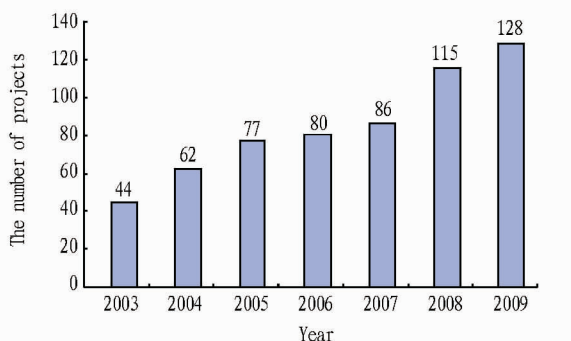
**2.2 The standard system is constantly improved** Since 2002, Zhejiang Province has successively established 9 national and provincial agricultural standardization technical committees on tea, aquaculture, forestry, farming, animal husbandry and veterinary, effectively giving full play to the technical platform role of the agricultural standardization technical committees. Moreover, in order to meet the requirements of agricultur-

al development in the new era, the formulation scope of agricultural local standards in Zhejiang Province gradually shifts from the area of traditional production technical regulations and product standards to the key areas of ecological agriculture, facility agriculture, circular agriculture and agricultural basic management standards. The agricultural standard system in Zhejiang Province is further strengthened.

As of the end of 2009, the province formulated and promulgated about 2 200 agricultural standards and specifications at all levels, including 647 provincial agricultural local standards (According to the standard nature, 194 were mandatory standards and 453 were recommended standards; according to the industry category, 344 are agricultural standards, 105 are forestry standards, 156 are fishery standards, and 42 are standards on other types. ), covering ten leading agricultural industries in Zhejiang Province, such as tea, vegetables, fruits and aquatic products, and whole process of production and operation, forming clear and sound agricultural standard system.

**2.3 The promotion and application are constantly strengthened** At present, Zhejiang Province has basically established the agricultural standardization promotion and application mechanism of "promoted by the government, guided by the market, driven by the leading enterprises, social common participation". It aims to choose a good project, establish a set of standards, drive an industry, cultivate a brand, and enrich the people; focuses on promoting the standardized production and management mode "leading enterprises (cooperatives, trade associations or technology promotion agency) + bases + farmers + standards + brands".

As of the end of 2009, the province established more than 1 200 types of agricultural standardization demonstration zone (demonstration project), of which 101 were national projects and 592 were provincial projects (Fig. 3); the total promotion and demonstration area reached 19 million acres, covering 2.46 million peasant households; the standardized production implementation rate of agricultural products reached more than 42%, promoting agriculture to increase income by 6 billion yuan.



**Fig. 3 The provincial agricultural standardization demonstration project**

Through the statistical analysis of provincial agricultural standardization demonstration projects in Zhejiang Province during the period 2007 – 2010 (Fig. 4), we find that the proportion of leading agricultural enterprises in all demonstration

and promotion projects is the highest, accounting for 31% – 39% of the total number, followed by professional cooperatives, technology promotion agencies and industry associations, and the agricultural standardization demonstration and promotion projects dominated by the four institutions account for about 75% – 94% of all demonstration projects, indicating that Zhejiang Province has basically worked out the promotion model for the development of agricultural standardization in Zhejiang Province; the implementation role of agricultural standardization subject is further brought into play.

The promotion and implementation of agricultural standardization has promoted the establishment of a large number of name-brand agricultural products. As of July 2010, 99 geographical indication products in the province were protected by the General Administration of Quality Supervision, Inspection and Quarantine, of which 33 were reported by the quality supervision department and 66 were reported by the commodity inspection department. In the 99 geographical indication protection products, 89 are agricultural products, accounting for 89% of the total.

In addition, through the promotion and implementation of agricultural standardization, as of the end of 2009, 412 agricultural products in the province were identified as name-brand products in Zhejiang Province; 378 brands of agricultural products were identified as provincial famous brands; nearly 4 000 pollution-free agricultural products passed the national certification of pollution-free agricultural products, green and organic food. The brand building of agricultural products has become an important part of the agricultural economy.

#### **2.4 The test and supervision system is initially improved**

In accordance with the principles of scientific layout, rational division of labor, resource sharing and features reflecting", the test system of agricultural products in the province is basically established and improved. According to statistics, there are 205 "three-level" (provincial, municipal and county) test institutions of agricultural products with the statutory test qualification, having passed metrology accreditation, including 25 institutions at the provincial and ministerial level, 40 institutions at the municipal level and 140 institutions at the county level, mainly distributed in quality supervision department, health department, agricultural department, fishery department, forestry department, and food department.

At present, the instruments and equipments in Zhejiang institutions at the provincial and ministerial level have reached the international advanced level; the level of equipments in institutions at the municipal and county level is also markedly improved, basically meeting the needs for monitoring and testing of quality safety of agricultural products. By the end of 2009, the Provincial Agricultural Products Quality Safety Supervision and Testing Coordination Meeting Office had arranged more than 40 000 times of quality safety monitoring of agricultural products, involving the province's production bases, wholesale markets, farmers' markets and other places. The comprehensive spot test qualification rate increased from 88.9% in 2003 to more than 95% in 2008. The test results show that through vig-

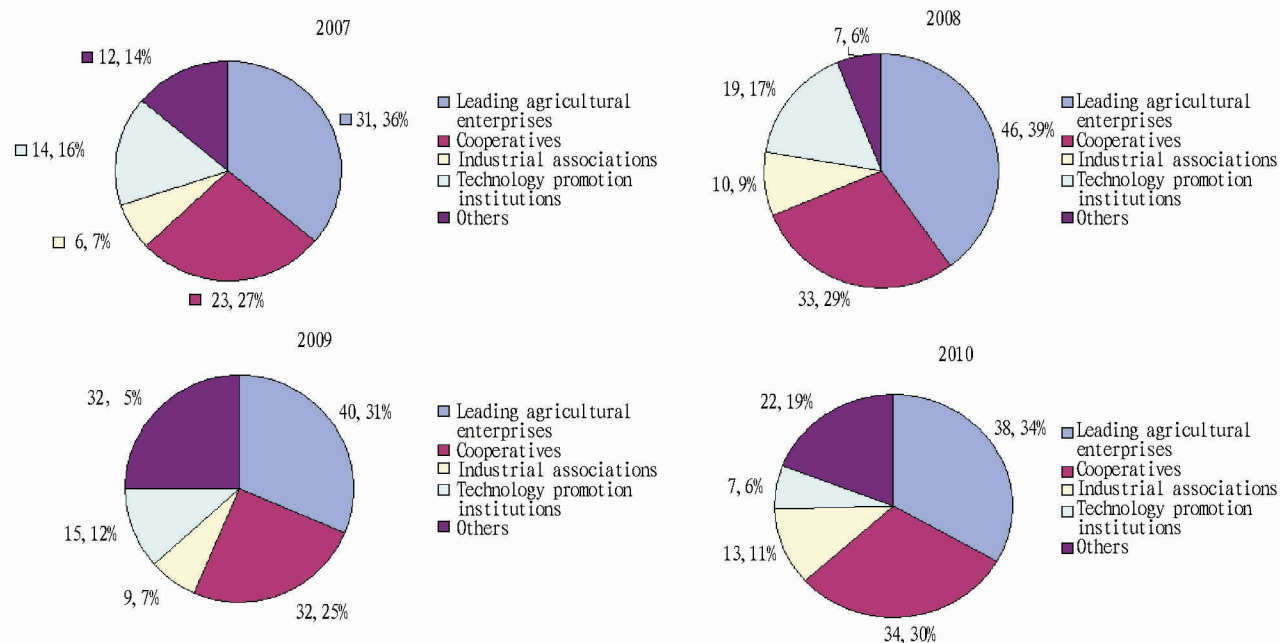


Fig. 4 The provincial agricultural standardization demonstration projects in Zhejiang Province during the period 2007 – 2010

orous promotion and implementation of agricultural standardization in recent years, the level of quality safety of agricultural products in Zhejiang Province is significantly improved.

**2.5 The standardized information service system is gradually perfected** On the one hand, the information service platform of agricultural standardization is established, achieving rapid release of agricultural standardization information, and greatly improving the efficiency of information services. At present, Zhejiang Province has established farmer mailbox, Zhejiang public scientific and technological innovation service platform of standard information and quality safety, Zhejiang agricultural standardization information network and other information platforms, providing comprehensive, timely, targeted information services.

On the other hand, according to the characteristics that Zhejiang's agriculture is highly dependent on foreign trade and the export of agricultural products is susceptible to the technical trade measures, Zhejiang Province actively carried out tracking, research and appraisal of foreign technical trade measures, and timely sends the relevant early warning information to agricultural export enterprises, playing a key role in the smooth export of agricultural products in Zhejiang Province.

For example, the assessment and discussion on the EU endosulfan report, involving \$ 260 million of tea exports in Zhejiang Province, effectively ensured the smooth export of tea in Zhejiang Province. For another example, the research on technical barriers of the Japanese "Positive List System" was conducted early at home, and 19 special researches were completed; a number of achievements were converted into the national and local standards to be promoted and applied in Taizhou of Zhejiang, achieving remarkable results, and effectively promoting the export of agricultural products in Zhejiang Province.

## 2.6 The standardized human resources team is initially established

Since the establishment of the Provincial Agricultural Products Quality Safety Supervision and Testing Coordination Meeting Office, it has put the establishment of outstanding talent team as an important task to promote the work of agricultural standardization; the coordinating body of agricultural products at all levels actively carried out the publicity and training of basic knowledge on the relevant laws and regulations (such as the *Standardization Law*, the *Law on Quality Safety of Agricultural Products*) and agricultural standardization.

Up to now, it has carried out the activity of "send standard to countryside", formulated the production technical guidance booklets, and distributed more than 1.5 million copies of technical data on agricultural standardization production mode. Since 2005, various regions in the province have organized and conducted training classes for agricultural standardization management personnel and technical personnel, training more than 0.3 million people. There are 73 technical staff having been sent to the United States, Germany and other countries for professional training, effectively improving the detection technology level of agricultural products and laboratory management capacity; in addition, a number of experts have been hired by the CAC as members of national agricultural expert working group.

The work above indicates that the building of agricultural standardization human resources in Zhejiang Province has initially achieved good effect.

## 4 The existing problems

Overall, the quality safety monitoring work of agricultural products and agricultural standardization in Zhejiang Province has achieved positive results. However, compared with the current objectives and requirements of agricultural industrialization, modernization development trends and building of a new

socialist countryside, there are still some deficiencies.

**4.1 The coordination and advance mechanism needs to be improved** Although the province has set up 84 agricultural standardization coordinating bodies, there are multifarious types of coordinating body in various regions, counties and districts, with different names, such as "Agricultural Standardization Work Leading Group", "Supervision and Testing Coordination Meeting of Quality Safety of Agricultural Products", "Coordination Group of Agricultural Standardization Promotion and Implementation Project", and "Joint Conference of Agricultural Standardization".

Inconsistent name of institution will cause inconvenience in the work and misunderstanding in the communication. In addition, some counties and districts even have not established corresponding coordinating body of agricultural standardization work, and can not better promote the agricultural standardization work in the region.

The role of agricultural standardization in coordinating urban and rural development and building a new countryside needs to be further played. Part of the city, county governments and grass-roots competent authorities' awareness of the important role of agricultural standardization in promoting industrial structure adjusting, transformation and upgrading is yet to be further improved, and they do not include the agricultural standardization in the overall agricultural development planning and working objective evaluation system. In many areas, there is a shortage of policy incentives and capital inputs.

At present, except for the local government in a handful of areas of Zhejiang Province (such as Hangzhou, Ningbo, Jinhua and Wenzhou) having special supporting funds for agricultural standardization, most of the other regions have not set up agricultural special funds for carrying out agricultural standardization work.

**4.2 The standard system is still not reasonable** On the one hand, although Zhejiang Province has developed more than 600 agricultural local standards, the standards are mainly the production technique standards and product standards, lacking the local standards on improvement in varieties of agricultural products, safety and high efficiency production technique regulations, the quality grading and safety traceability, facility agriculture, circular agriculture, and basic management of agriculture. These standards can not better meet the needs of modern agricultural development and new socialist rural construction in Zhejiang Province for scientific, unified, and authoritative agricultural standard system.

On the other hand, the agricultural standard basic research capacity and ability to transform advanced technology into technical standards in Zhejiang Province need to be improved; agricultural research is not well connected with the formulation and revision work of standards. In comparison with the developed countries, the agricultural standard system in the whole industry chain lags behind, failing to the current production development and market needs.

**4.3 The promotion and implementation area needs to be increased** On the one hand, from the previous statistics, we

know that the implementation rate of agricultural standardization in Zhejiang Province at present has reached 42%, but there is plenty of room for improvement compared to the requirements of comprehensively achieving agricultural modernization.

On the other hand, the standardized management ability of the implementation subject (such as the leading agricultural enterprises, cooperative economic organizations, industry associations and technology promotion agencies) is not strong, and the demonstration base as a carrier can not be better used for carrying out agricultural standardization publicity and training work. The majority of farmers' standardization awareness and consciousness of organizing production according to standards are yet to be further improved.

**4.4 The inspection and test system is not perfect** The hardware facilities in the municipal professional testing institutions in Zhejiang Province do not lag behind; the testing conditions of testing institutions at the county level or below are relatively backward, and the testing means in the county-level testing stations is basically the speed measurement technology, which can only complete rough qualitative detection, far from meeting the quantitative detection needs, carrying out quality control and strengthening the management of the wholesale market.

The majority of agricultural standardization production bases lack effective self-detection technology, which is related to, on the one hand, low detection technology level of bearing subject in the demonstration area; on the other hand, lack of capital input, funds for inspection and supervision of the agricultural products.

**4.5 There is a shortage of agricultural standardization talents** The agricultural standardization work in Zhejiang Province is carried out well in some agricultural product export enterprises, leading enterprises, agricultural economic cooperation organizations and other institutions, but for most farmers, the degree of cognition of standardization is low, especially at the village level, generating a bottleneck on township agricultural personnel and large farming households.

Agricultural standardization work is the foundation work with strong technicality, but at present, it has not yet received due attention and social recognition. The agricultural colleges and universities in Zhejiang Province have not established the education curriculum of agricultural standardization, which is a prominent issue. The agricultural standardization talents are the compound talents, who should not only be familiar with the standardization business, but also be familiar with the professional business, and combine the two organically; not only be familiar with the actual situation of China's agricultural standardization, but also be familiar with the development trend of standardization in other advanced countries and regions.

There is a shortage of agricultural standardization talents, and the research capacity of agricultural standardization is not strong, resulting in insufficient support of scientific and technological achievements, scientific and technical personnel. With the scientific and technological progress and industrial development, there are no special personnel tracking and evaluating

the revision work of some standards and putting forth recommendations. In particular, for the international standards and foreign advanced standards, it lacks active, purposeful, and planned analysis, research, introduction, adoption and transformation.

## 5 Recommendations

### 5.1 Improving and coordinating the working mechanism

According to the building situation of coordination working mechanism of agricultural standardization at present, it is recommended to further improve the coordination mechanism, make the province's counties and the regions with conditions establish the corresponding coordinating body. At the same time, a unified standard should be established in terms of the name of coordinating body, conducive to the smooth implementation of the province's coordinating body work.

**5.2 Improving the standard system** It is necessary to strengthen the research, transformation and upgrading work of agricultural standards, and focus on developing a number of important public welfare local standards with core technology, on the plant and animal disease prevention and control, seeds and saplings cultivation, quality classification and grading, healthy breeding techniques, facility agriculture, circular agriculture and agricultural basic management, matched with national standards, and industry standards.

Meanwhile, the province should continue to focus on the construction and operation of agricultural standardization technical committees on tea, aquatic products, feed, etc. We should encourage the main body of agricultural standardization to positively undertake the formulation and revision of national and industry standards, to gradually expand "right to speak" of the standards. The production mode diagram of agricultural standardization has excellent pictures and texts, popular and easy to understand, easy to be accepted by grass-roots farmers, with strong guidance, so it is recommended that when formulating the agricultural production technical regulation standard, the production mode diagram should be drawn, to further improve the practical applications effect of standards.

**5.3 Focusing on demonstration and promotion** In the building of demonstration projects, based on 10 leading agricultural industries in Zhejiang Province (such as vegetables, tea, animal husbandry, and aquaculture), coupled with the building of "food functional areas", "modern agricultural park" and "vegetable basket project", we should strengthen the building of the national, provincial, municipal and county-level agricultural standardization demonstration projects or demonstration areas.

It is necessary to explore the long-term management mechanism for the building of demonstration areas; give full play to the demonstrating and driving role of the demonstration areas, and continuity of building of demonstration areas; rely on the regional development planning of agriculture and industrial features to actively carry out the creation work of agricultural standardization demonstration counties and townships, giving play to the demonstrating and driving role.

**5.4 Improving the test and supervision system** According to the principles of "streamlining and increasing efficiency" proposed by the Provincial Agricultural Products Quality Safety Supervision and Testing Coordination Meeting Office, it is recommended to carry out planning of agricultural product inspection and testing institutions and key project construction in the province, to promote the integration of the province's agricultural testing resources, and improve use efficiency of equipment.

At the same time, it is necessary to establish the information sharing mechanism of inspection and testing results, to achieve the sharing of inspection and testing information and avoid repeated testing; publish the quality safety early warning of agricultural products on a regular basis, to provide the basis for guiding the production and management of agricultural enterprises and guiding consumption.

**5.5 Focusing on human resources building** We should make full use of online media, standard information service platform, farmers' mailbox and other carriers, to publicize agricultural standardization knowledge, and improve the awareness of the standardization in the whole society. It is proposed to organize the agricultural standardization training with diverse forms and vivacity, and explore the establishment of agricultural standardization training mechanism, to carry out training for the agricultural standardization managers and technical staff, according to the requirements of backbone professionals.

At the same time, based on the requirements of "new farmer training, green certificate training", combined with the construction of agricultural standardization demonstration areas, we should focus on the farmers, to carry out the targeted standardization production technical training, and improve the standardization skills and levels of the majority of farmers. In order to establish outstanding agricultural standardization human resources, it is recommended that the agricultural colleges and universities in Zhejiang Province should set up the agricultural standardization courses, and cultivate compound talents, to meet the development needs of modern agriculture in Zhejiang Province. We should actively carry out the work of standardization talent reserve.

**5.6 Increasing capital input** Agricultural standardization work is a public welfare cause, so it is recommended that the government departments should increase capital input into the agricultural standardization work, and especially the municipal governments should establish funding input mechanism of agricultural standardization, to include the funding for the development and implementation of agricultural standards, basic research for standards, building of standardization demonstration area, construction of standard information platform, standardization publicity and training, quality supervision, inspection and testing of agricultural products, in the fiscal budget.

At the same time, we must adhere to the combination of the administrative promotion and market operation, and establish government investment-oriented diverse funding input mechanism of agricultural standardization, with the enterprise input as main body, complemented by the social input, to provide financial

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drought is widespread, and it is faced with the problem of land desertification, leading to low comprehensive production capacity of agricultural land. It is the area with the most abundant mineral resources in Hainan Province, and an important industrial production base, with a certain basis of heavy industry production. The production of rubber and other tropical crops has obvious advantages. It should rely on Yangpu Development Zone, Dongfang Chemical City, Changjiang Industrial Park and other key industrial parks, to focus on the development of heavy and chemical industries, and also take into account the development of the industries of paper making, sugar making, rubber making and woodwork processing, foster rational industrial structure system, and build it into the western industrial corridor in Hainan Province.

Direction of land use regulation: rationally arranging land for industrial projects; developing heavy industry towards the intensive direction, occupying farmland as little as possible; reasonably expanding the scale of urban land, and strengthening the construction of infrastructure, especially the construction of port and transport facilities; paying attention to the construction of water conservancy facilities, ensuring the water supply for industry and agriculture; enhancing the ability of agriculture to resist drought; ensuring the quantity and quality of the development of cultivated land in this area, laying stress on the land development and consolidation in this area.

**3.5 The central group** The main problems in the land use in this area are as follows: the level of development and utilization of land is low, the level of output and benefit of land is low; the land ecosystem is extremely fragile; the urban and rural residential land is used extensively.

Qiongzong District is the ecological conservation area in Hainan Province, the birthplace of the island's major rivers, the region with the richest forest resources in Hainan Province, and an important pillar for the ecological balance of the entire island. The land use within the area has a very important impact on the quality of the ecological environment in Hainan Province. Currently in this area, the traffic conditions are poor; the population density is low; agriculture is dominant, and the farmers in some remote mountainous areas have not yet shaken off poverty. This area should give a priority to the protection of sources of rivers, water conservation areas and biodiversity; achieve the combination of ecological and environmental protection,

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security for the all-round development of agricultural standardization in the region.

Agricultural standardization work requires innovation. At present, agricultural standardization work in Zhejiang Province must be based on the leading agricultural industries in Zhejiang Province, for guiding the enhancement of the whole industry chain. We must introduce the concepts of cycle and ecology, and put the development of circular and ecological agriculture on the standardization track, to better serve the province's ecological civilization building. It is necessary to adhere to innovation, to fully demonstrate the advanced features of agricultural standardization in Zhejiang Province, making full use of some characteristics in Zhejiang Province, such as

restoration and economic development; focus on the development of eco-industries, mountain agriculture, mountain tourism and folklore tourism.

Direction of land use regulation: ensuring the ecological land, land for transportation facilities, land for the urban development and land for tourism facilities; limiting mining land, strengthening the protection of basic farmland, and reasonably arranging returning farmland to forest.

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the original developed economy, export-oriented agriculture, the fine tradition of intensive cultivation and relatively high quality of laborers.

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