Study on the Internal Logic of the Agricultural Information Service, the Agricultural Information Service Standard and the Standard System

Zhi-Mei LI¹,²,a, Qing-Feng WEI¹,²,b, Chang-Shou LUO¹,²,c,*
Cheng-Zhong CAO¹,²,d, Ya-Ming ZHENG¹,²,e

¹Institute of Information on Agricultural Science and Technology, Beijing Academy of Agriculture and Forestry Sciences, Beijing, China
²The Research Center of Beijing Engineering Technology for Rural Remote Information Services, Beijing, China

a lizhimei424@126.com, b 44086081@qq.com, c 42542429@qq.com, d 113468043@qq.com, e 281052798@qq.com

*Corresponding author

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Abstract. In order to promote the construction of agricultural information service standards and standard system, and make the agricultural information service industry to develop orderly, we analyzed the inherent logic relation between agricultural information service, agricultural information service standards and the standard system based on the description of related concepts. In the development process of agricultural information service, we find that the development of agricultural information service is the basis for standard setting, the standards of agricultural information service are components of the standard system, agricultural information service standard system can guide the standard setting, and the agricultural information service standards can standardize and enhance the development and progress of the agricultural information service industry. In short, the agricultural information service, agricultural information service standard and the standard system interrelate, cannot be separated, and jointly promote the scientific, sustainable and healthy development of agricultural information service. This study established the foundation for the research of agricultural information service standard and standard system.

Introduction

Agricultural information service as an intermediary and bridge to promote the transformation of agricultural achievements is an important means to solve the "last mile" problem of the agriculture technique extension [1]. With the development of national information technology strategy, the new information dissemination channels and services have developed quickly, the economic engine role of which has been highlighted. The new media service with the characteristics of multi communication carriers, real-time, fast, flexible, and broad audience has become the new trend of the agricultural information service, which plays an important role in getting rid of the information asymmetry, reducing intermediate cost, and improving the production efficiency. The agricultural information service is in the development stage of rapid promotion, service divergence in China, and agricultural information service technology and means upgrade continuously, which puts forward higher requirements to the quality of the agricultural information service, and brings new opportunity for the construction of agriculture information service standard system. The lack of corresponding standards in the service process, restricts the maximum extent of agricultural information services, and reduces the multiplier effect of agricultural economic development. The construction of agricultural information service standard system has very important significance in reducing the randomness of agricultural information service, expanding the multiplier effect of agricultural information service, and promoting the norms and orderly development of the agricultural
information service industry [2]. At present, there are rare researches on agricultural information service standard system. Making clear the internal logic relations among agricultural information service, agricultural information service standard and the standard system, will effectively promote the construction of agricultural information service standards and the standard system, and promote the scientific, sustained and healthy development for agricultural information service industry ultimately.

Related Concepts

**Agricultural Information Service**

With the development of the agricultural information service, the definition of agricultural information service is becoming more and more specific. Agricultural Information Center, Ministry of agriculture, holds that the agricultural information service refers to information collection, production, processing, communication and other services provided by the information service institutions with agriculture related user’s needs as core.

Ying Bo Li (2006) proposed that agricultural information service is a series of activities that the main body of agricultural information service such as governments, enterprises, agricultural universities, research institutions and rural cooperative organizations provide all kinds of information resources for before, during and after the whole agricultural process by developing and using various means of modern information technology, to promote the Chinese agricultural informatization and modernization ultimately [3].

Dao Liang Li (2007) proposed that agricultural information service should be defined as the activities that timely, accurate and safe agricultural information is provided for agricultural information demanders by means of experiment, demonstration, training, and consulting services and making full use of existing information resources and communication medias to guide the farmers, enhance their knowledge and skills, change their attitudes, enhance their self decision-making ability, prompt the behavior change of their own free will, and make the agricultural science and technology popularization and application before, during and after the whole agricultural process [4].

The simple and authority point of view from agricultural information center, Ministry of agriculture, is the basic definition of agricultural information service; Dao Liang Li’s point of view further enriches the forms, service effect and purpose of agricultural information service; Ying Bo Li’s view is clear in the service subjects and service objects, service methods, service contents and service effect of agricultural information service.

Based on the above point of view, we suggest that agricultural information services is the activity that focus on the agricultural users’ information needs, provide all kinds of valuable agricultural knowledge, information and practical skills before, during and after the whole agricultural process by the effective technical means, whose ultimate goal is to promote the agricultural industry development and the level of productivity.

**The Standard**

The Standardization Committee (STACO) of International Standardization Organization (ISO) defined the "standard" as the documents established and approved by a recognized institution in the form of "guide". For the common and repeated use, it provides rules, guidelines, or special values for the activities or results of activities, in order to achieve the effect of the best order in a predetermined area.

China's national standard GB20000.1-2002 the standardization working guide part 1: general vocabulary of standardization and related activities specifies that standard is a normative document established by consensus and approved by a recognized body in order to obtain the best order in a certain range, for common use and repeated use "[5]. And it states that the standards should be based on the comprehensive results of science, technology and experience to promote the best common
benefit”. This definition is also the definition of the standard provided by the International Electrical Commission (IEC) "ISO/IEC guide 2:1996"[6].

**The Standard System**

Standard system refers to the scientific and organic whole formed by standards of a certain range in terms of their interrelationships. "A certain range" refers to the scope of the standard. "Interrelationships” refers to the relationship of upper and lower levels, that is, the relationship between the common and personality and the relationship between left and right, also the unified, coordinated, connected and matched relationship. "Scientific and organic whole " is formed for a particular purpose, it is not a simple superposition, but composed according to the basic elements of the standard and the internal relations, with the overall structure of a certain aggregative degree and level [7].

**The Relationship between the Agricultural Information Service, the Agricultural Information Service Standard and the Standard System**

Any system has its inherent logical structure, which has its own starting point, core and main line of development. In the process of agricultural information service development practice, agricultural information service, agricultural information service standards and agricultural information service standard system influence each other, indivisible, jointly promoting the rapid development of agricultural information service. The relationship between the three can be described with a simple diagram.

![Diagram of the relationship between agricultural information service, agricultural information service standards and agricultural information service standard system.](image)

Figure 1. The relationship between agricultural information service, agricultural information service standards and agricultural information service standard system.

**The Development of Agricultural Information Service Is the Industry Foundation of the Standard-setting**

The standard-setting and the development of the industry are inseparable, the development of the industry directly determines the level of the development of standards, and the standard is the product of the industry developed to a certain stage. The development of Agricultural information service industry promotes agricultural information service standard-setting, the development demand of the agricultural information service industry is the foundation and prerequisite of the agricultural information service standard-setting, and no the development demand of the industry there is no the needs of the industry standard-setting. For example, the standard-setting of the agricultural information service infrastructure and equipment is based on the improvement of rural network and communication infrastructure; the standard-setting of the agricultural information resources construction is based on the improvement of the agricultural information collection channels and the agricultural information database construction; with the development of information technology, the agricultural information service network system has been established and improved constantly, which lays the foundation for the development of the agricultural information network system standards; The formation of the sixth class service organization system “country, province, city, county,
township, village” lays the foundation for the standard-setting of the agricultural information service system and the organization.

**Agricultural Information Service Standards Are the Components of the Agricultural Information Service Standard System**

In short, the standard system is composed by many specific standards with regularity, each agricultural information service standard is included in the agricultural information service standard system, each agricultural information service standard is the component of the agricultural information service standard system, supports the agricultural information service standard system, and its quality level will have a direct effect on the construction of the standard system. Therefore, the construction of a single standard is of great significance to the construction of the standard system. For a specific field, generally the more mature the development of the relevant standards in this field is the more clear the standard system construction is. As the basic components of the standard system, the agricultural information service standards support and enrich the content of the agricultural information service standard system. The establishment of agricultural information service standard promotes the formation and perfection of the agricultural information service standard system.

**Agricultural Information Service Standard System Plans and Guides the Standard-setting**

Agricultural information service standard system is the scientific and organic whole formed by standards in the field of agricultural information service in terms of their interrelationships, is the system framework of all agricultural information service standards, and plays a role of direction guidance, overall planning, and top-level design in the establishment of agricultural information service standards. Make science and reasonable agricultural information service standard system framework, accurately find out the standard promulgation of the agricultural information service industry, and study existing standards and being revised standards, which can help to find the standard blank, and plays an important part in relevant standards setting and the construction of the standard system.

**Agricultural Information Service Standards Can Standardize and Improve the Development of the Industry**

Standardization is not only an important means to promote the application of agricultural information technology achievements, but also a key measure to ensure the normative and orderly development of agricultural information service industry and achieve the best economic benefits and social benefits. Agricultural information service industry belongs to the cross industry of agriculture and service industry, and is the spread and application of service industry in the field of agriculture. The development of the industry not only refers to the agriculture and service industry standards, but also refers to its unique agricultural information service standards. Agricultural information service standards ultimately improve the quality of agricultural information services, and promote the development of agricultural information service industry by regulating the service provision, service guarantee and other aspects of agricultural information services. To use the standardized means effectively, can make full use of the input resources, make the whole system work effectively, and achieve the optimization of the service effectiveness. The study of agricultural information service standard system and the formulation of related standards is the important measure and key part to ensure that the agricultural information service industry develops the regularly and orderly, and has very important theoretical and practical significance to realize the development of agricultural information service industry and the upgrade of the quality level.

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