# Digitalization of Financial Management Drives High-quality Development of Family Farms

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**Abstract:** As the foundation of the modern agricultural management system, family farms play a poor role in improving internal operating efficiency, seeking policy support, establishing financial credit system evaluation, and claiming insurance compensation due to the lack of standardized financial accounting and records. The survey found that the current financial accounting of family farms mainly has four modes: "flow account", "business ledger", "enterprise agency account", and "financial service". Based on the analysis of the financial management status quo of family farms, this paper puts forward the design ideas and implementation methods of "self-service" financial management platform to address the shortage of family farm financial personnel and provide financial information basis for relevant departments to give policy support, thereby driving the high-quality development of family farms via digitalization.

#### 1. Introduction

Since 2014, the overall number of family farms as a new type of agricultural business has grown rapidly, with driving capacity significantly enhanced. The Chinese government also proposed to study and introduce financial support policies for family farms [1]. However, in the operation of family farms, there is a widespread problem of irregular accounting and registration ledger, lacking financial information foundation for provision of financial support [2]. In order to further carry out policy support, it is particularly urgent to transform financial data into standardized and standard accounting information with the help of information technology through scientific use of the financial operation information provided by the "Family Farm Financial Income and Expenditure Record Book" [3-4].

# 2. The current Main Modes of Financial Accounting for Family Farms

#### 2.1. "Current Account" Mode

The "current account" mode allows the family farmer to keep a record of business income and expenditure and farming activities every day. Detailed records provide a good foundation for accounting and ledger registration. In general, the notes are "current accounts", lacking a summary of business information, and the displayed information is incomplete, unsystematic, lacking comparability, which plays a very limited role in promoting the business management value. However, through standardization, it can be used as original accounting data for financial accounting.

# 2.2. "Business Ledger" Mode

In accordance with the requirements of the "Guiding Opinions of the Ministry of Agriculture on Promoting the Development of Family Farms", various localities have explored the establishment and improvement of family farm management service systems. Business ledger, as an important tool for promoting the modernization of family farm management, has become an important basis

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for annual report, demonstration evaluation, project arrangement, commendation and publicity. The ledger generally includes the basic information of the family farm, the ledger of labour input, the ledger of operating income, the ledger of operating expenses, etc., but the format varies, and the registration requirements and business processing are not unified. It only reflects the input and operating income and expenditure of labour, seeds, fertilizers, etc. of the family farm from the perspective of agricultural production and operation, which fails to convert operating information into standardized financial information, and lacks necessary original bills and other basis supporting the truth and accuracy of the ledger data.

# 2.3. "Enterprise Agency Account" Mode

The "enterprise agency account" mode adopts standardized accounting methods and accounting rules for accounting processing, which is used in some large-scale family farms registered as a limited liability company or a joint stock company. Family farmers generally have experience in business management, or have some overlaps in business and management with professional farmer cooperatives. Such family farms generally hire professional accountants for bookkeeping, so that it is managed in accordance with the corporate accounting system. This mode incurs relatively high cost, and some accountants are unfamiliar with agricultural production and management and are unstable, which leads to problems in the continuity and consistency of accounting.

#### 2.4. "Financial Service" Mode

The "Financial Service" mode is to establish a financial management service platform to serve the financial work of new agricultural business entities under the guidance of agricultural and rural administrative departments, which takes standardization of financial accounting as the main indicator for new agricultural business entities to declare financial project funds and participate in demonstration evaluation. At present, in Tianchang City, Anhui Province, which has a relatively mature operation, the local Agriculture and Rural Bureau takes the lead in establishing a financial service platform, and a third-party accounting company is responsible for recruiting the platform accounting personnel. The Agricultural and Rural Bureau is responsible for daily use and management. The service fee is shared by the municipal finance, business entities, and higher-level competent departments according to the principle of public benefit and compensation. This mode ensures that accountants are familiar with family farm business and accounting processing, unifies accounting content and methods, guarantees complete financial accounts, which can provide family farms with effective financial analysis and cost control data, and supervise the compliance of financial project funds use. However, this mode requires a large number of professional accounting personnel. Coupled with the difficulty in collecting original documents, there is problem of untimely and incomplete accounting.

#### 3. Problems in Financial Accounting of Family Farms

# 3.1. The Organizational Form and Legal Subject are unclear

The accounting entity is the basic premise of financial accounting. Generally, the organizational form and accounting scope are clarified through industrial and commercial registration. In practice, the main forms of family farm registration include: individual industrial and commercial households, sole proprietorships, partnerships, companies (mainly divided into limited liability companies and stock liability companies). Registration is usually performed by the industrial and commercial departments at or above the county level. Family farms are generally registered with the industry and commerce department under the motivation to increase financing credibility or to participate in demonstration family farms, and then establish standardized financial account books.

# 3.2. Lack of a unified Financial Accounting System

The family farms applicable to the current agricultural and rural financial accounting systems are still vacant. The "Accounting System for Village Collective Economic Organizations" is applicable to the accounting of village-level collective economic organizations [5]. The "Financial Accounting

System of Farmer Professional Cooperatives (Trial)" is applicable to the accounting work of farmers' professional cooperatives and protects the legal rights and interests of cooperatives and their members [6]. The "Agricultural Enterprise Accounting Measures-Biological Assets and Agricultural Products" is applicable to the accounting of agricultural enterprises established in accordance with the "Company Law" within the territory of the People's Republic of China. "Accounting Standard No. 5 for Business Enterprises-Biological Assets" is applicable to the accounting of any enterprise related to agricultural production [7]. The "Accounting Standards for Small Businesses" are applicable to small businesses that simplify accounting and are related to the accounting of biological assets. Due to the type of family farm registration and the economic and business characteristics of accounting, none of the above systems can be directly applied to family farm accounting.

# 3.3. Serious Shortage of Professional Financial Personnel

At present, family farm finance-related work is mainly undertaken by family farm internal personnel. Without professional training, they do not have the corresponding basic financial knowledge, so the work content is limited to keeping "current accounts" and business ledgers, and it is difficult for them to meet the requirements of standardized financial work. Hiring an external company to act as an agent for bookkeeping has relatively high cost, the turnover of personnel is high, the bookkeeping is not timely, and the information is asymmetric, leading to inaccurate records. Coupled with the lack of knowledge in agricultural production management business and practice, they cannot provide constructive opinions on daily operation and management. There is an urgent need for the agricultural and financial authorities to formulate a standardized and unified financial accounting system to meet the requirements of management accounting. Also, there is need to adopt information technology through strengthened training to achieve "self-service" financial accounting in family farms and improve management level.

# 3.4. Shortage of Financial Accounting Software Based on Information Technology for Family Farms

The financial accounting software used by general enterprises requires professional accounting personnel to enter accounting information in accordance with accounting standards. Accounting information data is based on bookkeeping vouchers, which imposes relatively high professional requirements for financial accounting personnel. How to use information technology to separate business data entry and financial data generation under the existing management capabilities of family farmers and realize automatic generation of financial accounting information by software is an urgent task for us to solve the current financial accounting problems of family farms.

#### 4. Conclusion and Policy Implications

We need build a "self-service" financial accounting platform based on information technology, sort out the corresponding relationship between business operations and financial accounting, and internalize it into financial software. When operating data is entered, the generation of accounting vouchers should be automatically triggered based on the corresponding information, which is the key to the implementation of financial accounting by family farms. Relevant departments need to provide the necessary technical software platform, formulate unified accounting standards, strengthen appropriate guidance, put forward report reporting requirements, and do a good job in training and publicity.

(1) Unify the financial accounting system, do a good job in the conversion and connection of financial accounts and business accounts

First, design a unified financial accounting system for family farms. Under the framework of existing accounting standards and systems, considering the operating characteristics and business content of family farms, we need design a unified family farm financial accounting system, clarify accounting subjects, business processing rules, accounting procedures, report preparation and

reporting, etc. thus providing basis for daily financial accounting of family farms. Second, improve the design and promotion of business ledger. Led by the provincial agricultural and rural authorities, business ledger should be unified and used as an important basis for the evaluation and financial support of the model family farms. Third, sort out the business operations of the family farms and design the accounting conversion rules for the business ledger. Through correspondence between operating business and accounting, ensure the accuracy of service trigger, and do a good job in basic work for "self-service" financial software development.

(2) Develop "self-service" financial software and do a good job in financial accounting and information statistics

First, develop a business terminal used for business ledger entry. The business terminal is mainly open to family farms for entering basic family farm information and daily business ledger information. The business information is entered in the form of "current account" to ensure that family farmers unfamiliar with accounting can do the job, thus solving the problem of lack of accounting professionals. Second, develop a financial terminal for accounting conversion. The financial terminal is used to transform business information into accounting information, which automatically performs functions such as business identification, voucher preparation, account book registration, and report generation. Third, develop decision-making terminals for business and financial information inquiry, statistics, and reporting to provide data for farm management decision-making, credit system evaluation, and management department monitoring. The management department can view the basic family farm information and uploaded report data, and conduct multi-calibre statistical analysis to keep abreast of the development status of family farms.

(3) Strengthen the construction of agricultural economic team, do a good job in policy guidance and business training

First, strengthen the construction of the grassroots agricultural economic management system to ensure the implementation of major agricultural and rural reform policies in the new period. Second, improve the management quality and service capabilities of agricultural economics personnel, cultivate a group of management talents who know accounting, excel in management, and understand information technology to take charge of the operation and information statistical analysis of the "self-service" platform. Third, link the family farm and the competent department, contact expert teams and training institutions, and do a good job in guiding and training family farm development policies.

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