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THE IMPACT OF ORGANIZATIONAL AND TECHNOLOGICAL FEATURES OF AGRICULTURAL ENTERPRISES ON ACCOUNTING AND ANALYTICAL SUPPORT OF CROP PRODUCTION MANAGEMENT

Introduction. Agriculture is one of the key sectors of Ukraine’s economy, accounting for a substantial share of gross domestic product, employment, and food security. Effective management of agricultural enterprises requires the integration of organizational and technological aspects, which form the basis for informed managerial decision-making.

Problem Statement. Given the strategic importance of agriculture for the national economy, the need to enhance its competitiveness, the implementation of innovations, and the growing demand for an integrated management approach, the study of organizational and technological characteristics of agricultural enterprises and their influence on accounting and analytical support for crop production management remains highly relevant.

Purpose. The purpose of this study is to identify the organizational and technological features of agricultural enterprises and to determine their impact on the development of accounting and analytical support for crop production management.

Materials and Methods. The information base of the study includes scholarly research publications addressing the characteristics of agricultural enterprises and their influence on accounting and analytical support for crop production management, statistical data, and national ratings. General scientific and special research methods have been applied, including synthesis and generalization, induction and deduction, graphical methods, modeling, systematization, comparative analysis, as well as bibliographic and bibliometric analysis.

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Results. *The study has demonstrated that the development of accounting and analytical support for crop production management is significantly influenced by the organizational and technological characteristics of agricultural enterprises within specific agricultural sectors.*

Conclusions. *Given the specific features of agricultural enterprises enables the development of a rational accounting and analytical support system for crop production management. Such a system provides enterprise management with timely and relevant information necessary for effective decision-making.*

Keywords: accounting, analysis, accounting and analytical support, management accounting, production management, crop production, agricultural enterprises, organizational and technological peculiarities.

In modern conditions, agriculture plays a key role in ensuring food security and economic development of the country. Crop production as one of the main branches of agricultural production provides the population with basic food products and raw materials for industry. The efficiency of agricultural enterprises largely depends on the organizational and technological peculiarities of their activities, as well as on the construction of an effective system of accounting and analytical support for the management of crop production. The study of the organizational and technological peculiarities of the activities of agricultural enterprises and their influence on the accounting and analytical support construction for the management of crop production is extremely important for increasing the efficiency and competitiveness of enterprises in modern conditions.

Despite the growing attention of domestic and foreign authors to the indicated issues, it should be noted that the cited works mainly examine the organizational and technological peculiarities of production in sugar beet growing, gardening and organic products, but there is no disclosure of them for the cultivation of other plant products (grain and leguminous crops: corn for grain, winter wheat, soybeans; industrial crops: sunflower, winter rapeseed).

The purpose of this study is to determine the organizational and technological peculiarities of the activities of agricultural enterprises and to identify their influence on the accounting and analytical support construction for the crop production management. According to the stated goal, the following research objectives have been formulated: 1) to study the number of operating agricultural

enterprises by size (large, medium, small); 2) to analyze the largest agricultural holdings in Ukraine by land bank; 3) to determine the distribution of the studied agricultural enterprises by the size of the land plot; 4) to characterize the typical management scheme of an agricultural enterprise engaged in the production of crop products; 5) to disclose the operating cycle of agricultural enterprises engaged in the production of crop products.

The features of agricultural enterprises and their influence on the structure of accounting in plant production management have been extensively explored in various studies. These works shed light on the complexities of accounting systems in agriculture, emphasizing the need for adaptability to specific characteristics of agricultural production, the integration of sustainability measures, and the impact of technological advances.

1. Management and Financial Accounting in Agriculture. Several studies focus on enhancing management and financial accounting within agricultural enterprises, highlighting the importance of adapting accounting systems to the specific needs of the sector. Moreover, a group of domestic authors H. Anishchenko, V. Andrusyak, N. Ivanova, O. Krochak, T. Kucherenko, O. Matros, S. Mikhailovina, L. Melnik, N. Olyadnichuk, O. Polischuk, E. Podlubna, O. Ratushno, V. Stankevich [1] are studying the influence of the specific activities on the organization of accounting in agricultural enterprises. For instance, L. Bondarchuk et al. [2] discuss how demographic shifts, particularly migration, influence the resources available to agricultural enterprises, underscoring the necessity of adjusting accounting procedures accordingly. At the same

time, the team of researchers R. F. Brukhanskyi, M. K. Parkhomets, P. R. Putsenteilo, etc. [3] prove the peculiarities of agriculture as a branch of the economy of the accounting construction. Similarly, the work of K. Bezverkhyi, L. Hnylytska, O. Yurchenko, and N. Poddubna [4] emphasizes the need for refined auditing and analytical procedures in integrated reporting to ensure transparency and the reliability of financial data in agricultural enterprises. At the same time, F. F. Butinets and S. V. Kucher [5] define the characteristics of the activities of agricultural enterprises. O. Demchuk, O. Moshkovska, T. Ihnatenko, O. Romashko, and M. Kuzub [6] provide a comprehensive analysis of the methodological principles and practical approaches to cost accounting and costing in crop production within agribusinesses of various forms of ownership in Ukraine. The authors emphasize that cost accounting serves as a fundamental tool for effective management, especially under current economic challenges faced by the agricultural sector. T. Dziuba [7] focuses on the development of an information model aimed at enhancing accounting and analytical support for managing the economic potential of enterprises. The study underlines the critical role of timely and reliable information in supporting strategic and operational decisions, especially in conditions of economic uncertainty and transformation. N. G. Tsaruk [8] investigates the peculiarities of value-added tax (VAT) accounting at agricultural enterprises, focusing on the legal, procedural, and sector-specific challenges associated with VAT administration in the agro-industrial complex. The study emphasizes that due to the preferential tax treatment historically applied to agriculture in many countries, including Ukraine, the accounting for VAT in this sector requires special attention.

2. Sustainability and Environmental Accounting. Environmental accounting has become increasingly significant in the agricultural sector. M. Ali, A. Marvuglia, Y. Geng, Z. Yu, and H. Sun [9] explore how sustainability practices in agriculture, particularly in India and Pakistan, are influenced by emergency situations, demonstrating the im-

portance of resilient accounting systems to maintain sustainability in the face of external shocks. A. M. Alrowwad, K. A. Alhasanat, O. Sokil, S. Halako, and S. Kucherko consider the sustainable transformation of agricultural accounting [10]. A. Makarenko [11] explores the role of accounting and analytical support in enhancing the effectiveness of rational forest use management. Although the research is centered on the forestry sector, its findings and methodological approaches are highly relevant for broader applications in resource-based industries, including agriculture and land use management. Moreover, E. Montemayor, A. Bonmatí, M. Torrellas, V. Riau, and A. Antón [12] focus on environmental accounting in maize production, emphasizing the role of manure as fertilizer and the integration of catch crops in closed-loop production systems. This research highlights the need for incorporating environmental factors into accounting practices for sustainable agriculture. V. Mukoviz, L. Leshchii, O. Khodakivska, O. Prokopova, and M. Kuzub [13] examine the problem of accounting for transaction costs incurred by agricultural producers operating within the shadow economy. L. Iu. Nyzova and N. S. Zolotarova [14] explore the organizational and technological peculiarities of organic crop production and their implications for the design of accounting systems. The authors emphasize that organic agriculture, due to its regulatory, ecological, and production-specific requirements, necessitates a fundamentally different approach to accounting compared to conventional farming systems. D. Osipchuk, L. Chyzhevska, L. Petryshyn, S. Pryimak, N. Loboda, and V. Antoshchenkova [15] analyze the accounting treatment of government grants in the financial reporting of agricultural enterprises in accordance with International Financial Reporting Standards (IFRS). In their work, M. Shygun and K. Bezverkhyi [16] lead a group of researchers who emphasize the role of sustainability reporting as a tool for corporate social responsibility. The authors argue that systematic non-financial reporting increases transparency and stakeholder trust, stimulates environmental investment,

and creates the conditions for integrating Environmental, Social and Governance (ESG) metrics into management accounting. In the context of agricultural production, this implies the necessity of incorporating indicators such as fertilizer use, water consumption, emissions, biodiversity, and the impact on local communities into accounting systems, alongside appropriate verification and documentation procedures.

3. Digitalization of Accounting Systems. The digitalization of accounting practices in agriculture is another critical trend. M. Shygun et al. [17] examine the role of digital formats in presenting financial information, arguing that digitalization enhances the analysis, audit, and real-time decision-making capabilities of agricultural enterprises. As the sector modernizes, the use of digital tools in accounting becomes essential to improving efficiency and transparency, allowing for more accurate reporting and faster response to changes in market and environmental conditions.

4. Innovative Approaches to Accounting in Plant Production. Studies have also focused on the specifics of accounting in particular branches of plant production. For example, O. H. Biriuk and V. V. Korol [18] analyze the organizational and technological aspects of sugar beet production and sale, demonstrating how these factors affect the design of accounting systems in this sector. Their work shows that accounting systems must be tailored to the technological peculiarities of each type of agricultural product to ensure accurate financial management. T. Haiduchok, O. Dmytrenko, and S. Viter [19] investigate the current state and features of accounting and analytical support for the management of aquaculture enterprises. Although focused on a specific sector — fish farming — their findings have broader relevance for primary production industries, including crop production, due to similar challenges in cost tracking, biological asset valuation, and performance monitoring. V. Zhuk, M. Pugachov, O. Shpykuliak, Y. Bezdashna, and Y. Popko [20] explore the innovative application of accounting tools for assessing war-related losses in Ukrainian agribusi-

ness enterprises. Their research addresses a highly relevant and urgent issue — the need for reliable, transparent, and standardized approaches to record and quantify economic damages resulting from military aggression. M. M. Kotsupatryi, O. H. Biriuk, and O. Iu. Smolska [21] address the peculiarities of accounting and control over biological transformations in horticulture, focusing on the sector's biological complexity and seasonality. Their monographic work provides a detailed examination of theoretical and methodological approaches to recognizing, measuring, and reporting biological assets and changes in their condition.

5. Risk Management in Agricultural Accounting. Risk management is a recurring theme in the literature on agricultural accounting. N. Tomilova-Yaremchuk, M. Khomovyi, S. Khomovyi, and O. G. Makarchuk [22] advocate for the creation of effective accounting systems that support management decision-making in the context of high-risk environments. Agricultural enterprises are highly vulnerable to external risks, such as climate change, market volatility, and policy shifts. Therefore, integrating both financial and non-financial risk indicators into accounting practices is crucial for mitigating these risks. A growing body of research emphasizes the integration of non-financial data, such as environmental impact and social sustainability, into agricultural accounting systems. Empirical analytical tools — regression and forecasting methods exemplified by K. O. Nazarova et al. [23] — provide practical means to quantify drivers of profitability and to incorporate these insights into budgeting, costing and decision support systems in crop enterprises. K. Khushvakhtzoda [24] examines the classification of costs within the framework of strategic management accounting in agricultural enterprises, emphasizing its role in enhancing long-term decision-making and competitiveness. The study highlights that conventional cost accounting systems, while useful for short-term control, are often insufficient for supporting strategic objectives in the agricultural sector. S. Yekimov, I. Murenets, V. Saienko, B. Ganna, L. Shmorgun, and M. Sudorgin [25] examine the optimization

of accounting and management accounting systems in agricultural enterprises through the reengineering of document management processes under globalization conditions. The authors argue that traditional document flow structures in agricultural enterprises are often inefficient, paper-based, and poorly integrated with analytical systems, which limits their usefulness for real-time decision-making.

The information basis of the research was scientific works of Ukrainian and foreign authors about the definition of the characteristics of the activities of agricultural enterprises and their influence on the accounting and analytical support construction for the management of crop production, analytical reviews, statistical information, national ratings, etc. During the research, general scientific and special methods of studying processes and phenomena in their interrelation and development were used, namely: synthesis and generalization to study of the number of operating agricultural enterprises by size (large, medium, small); induction and deduction to analyze of the largest agricultural holdings of Ukraine by land bank; comparative analysis to distribute of the studied agricultural enterprises by the size of the land plot; the graphical method to characterize the typical management scheme of an agricultural enterprise engaged in the production of crop products; modeling made to identify the organizational and technological peculiarities of the activities of agricultural enterprises and trace their influence on the accounting and analytical support construction for the management of crop production; systematization to reveal the operational cycle of the activities of agricultural enterprises engaged in the production of crop products. The method of systematization and generalization was used to formulate conclusions.

An analysis of the number of agricultural enterprises and their distribution by size for 2010—2024 was conducted (Table 1). The total number of enterprises operating in the agriculture, forestry and fisheries sector fluctuated over the period. It ranged from 41.677 in 2011 to 50.666 in 2010, peaking at 50.504 in 2018. However, by 2024, this

figure had fallen significantly to 35.197. This sharp decline of over 30% between 2018 and 2024 may indicate structural changes in the sector, possibly influenced by economic shifts, conflict-related disruptions or market consolidation processes.

Throughout the entire period, large enterprises have consistently been very few in number. Their number varied only slightly, from 13 in 2010 to 52 in 2024. Despite this slight increase, their share of the total number of enterprises remained extremely low, always at or below 0.1%. This suggests that large-scale agricultural enterprises are rare in Ukraine's agricultural sector, despite them potentially playing a significant role in production volumes.

Medium-sized enterprises showed a peak in their numbers and share around 2011, with 3.274 units representing 7.9% of the total. Since then, there has been a gradual decline in the absolute number and relative share of medium-sized enterprises, reaching 1.391 units and 4.0%, respectively, in 2024. This points to the increasing difficulties faced by medium-sized enterprises, which may be due to rising operational costs, market instability or competitive pressures from larger and smaller market players.

Small enterprises dominated the sector throughout the entire period under study. Their number fell from 47.213 in 2010 to 33.754 in 2024, yet their proportion of the total number of enterprises increased from 93.2% to 95.9%. This suggests that, although the sector is shrinking overall, it remains highly fragmented and dominated by small-scale operations, possibly reflecting the prevalence of individual entrepreneurs or family businesses.

These trends suggest a polarization within the sector, characterized by a shrinking middle segment and the dominance of small enterprises. For policymakers, this highlights the need to support medium-sized agricultural businesses in order to foster scalability and innovation, while also enhancing the resilience and sustainability of small enterprises. Crucial steps for stabilizing and developing the sector may include strengthening formalization, encouraging cooperatives, and improving access to capital and technology.

Table 1. Operating Enterprises by Economic Activities — Section A. Agriculture, Forestry and Fisheries with Distribution into Large, Medium and Small-Sized for 2010—2024

Year	Total units	Large enterprises		Medium enterprises		Small enterprises	
		Units	As a % of the total number of operating enterprises of the corresponding type of activity	Units	As a % of the total number of operating enterprises of the corresponding type of activity	Units	As a % of the total number of operating enterprises of the corresponding type of activity
2024	35197	52	0.1	1391	4.0	33754	95.9
2023	40889	39	0.1	1457	3.6	39393	96.3
2022	32844	39	0.1	1683	5.1	31122	94.8
2021	47753	49	0.1	2091	4.4	45613	95.5
2020	49452	36	0.1	2134	4.3	47282	95.6
2019	50239	34	0.1	2281	4.5	47924	95.4
2018	50504	23	0.0	2298	4.6	48183	95.4
2017	50115	18	0.0	2383	4.8	47714	95.2
2016	44998	20	0.0	2501	5.6	42477	94.4
2015	46744	29	0.1	2533	5.4	44182	94.5
2014	46012	28	0.1	2595	5.6	43389	94.3
2013	49848	27	0.1	2915	5.8	46906	94.1
2012	47656	26	0.1	3143	6.6	44487	93.3
2011	41677	16	0.0	3274	7.9	38387	92.1
2010	50666	13	0.0	3440	6.8	47213	93.2

Source: summarized by the authors based on [26].

Table 2. Criteria for Classifying the Enterprises into Categories Corresponding to Their Scale of Activities

Name of the indicator *	Categories of enterprises							
	Micro-Enterprise		Small		Medium		Large	
	Ukraine	European Union	Ukraine	European Union	Ukraine	European Union	Ukraine	European Union
Book value of assets	Up to EUR 350000		Up to EUR 4000000		Up to EUR 20000000		Over EUR 20000000	
Net income from sales	Up to EUR 700000		Up to EUR 8000000		Up to EUR 40000000		Over EUR 40000000	
Average number of employees	Up to 10 people		Up to 50 people		Up to 250 people		More than 250 people	

* The indicators of which, as of the date of preparation of the annual financial statements for the year preceding the reporting year, correspond to at least two of the following criteria.

Source: constructed by the authors in accordance with Part 2 of Article 2 of the Law of Ukraine *on Accounting and Financial Reporting in Ukraine* dated July 16, 1999 No. 996-XIV [27] and Directive 2013/34/EU of the European parliament and the council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC [28].

The distribution of enterprises in accordance with legislation [27] into small, medium and large is shown in Table 2.

Table 2 outlines the criteria applied in both Ukraine and the European Union, highlighting the similarities between the two regions' enterprise size category thresholds.

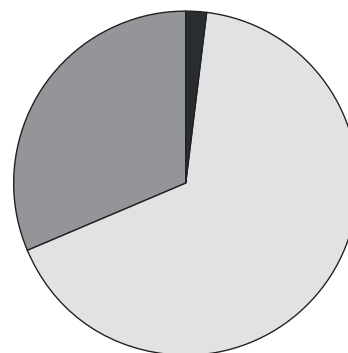
As shown in Table 2, classification into the category of enterprises: 1) micro-enterprise; 2) small; 3) medium; 4) large is carried out based on their compliance with two of three criteria: a) book value of assets; b) net income from sales; c) average number of employees. However, in our opinion, such classification into categories of enterprises, primarily agricultural ones, does not take into account such a production factor as land, namely the volume of agricultural land on which agricultural crops are grown. Taking into account the above, it is proposed to provide a land bank owned by the largest agricultural producers of plant products (Table 3).

As shown on the Table 3 the first places among agricultural holdings in Ukraine in terms of land bank size are occupied by the following companies:

1. *Kernel* has the largest land bank, which is 510 thousand ha.
2. *Ukrlandfarming* ranks second with a land bank of 475 thousand ha.
3. *Myronivskiy Khlіboproduct* is the third largest land bank, which is 370 thousand ha.
4. *Agroprosperis* has 300 thousand ha land.
5. *Astarta Kyiv* ranks fifth with 243 thousand ha.

The above-mentioned agricultural holdings own a significant share of the land bank in Ukraine, which indicates their high competitiveness and influence in the agricultural market. From the analysis (Table 3) of the rating of agricultural holdings it is clear that land is indeed a significant factor of the crop products production.

However, the above data does not provide an idea of the volume of agricultural land. It is advisable to consider, using the example of the studied agricultural holding *Agroprosperis* whose agricultural enterprises are part of it with the corresponding land bank, on the basis of which the distri-



- Large enterprise (more than 5,000 hectares)
- Medium-sized enterprise (1,000 to 5,000 hectares)
- Small enterprise (up to 5,000 hectares)

Fig. 1. Share, % of agricultural enterprises by land resources

Source: compiled by the authors based on Table 4.

Table 3. Rating of Agroholdings by Land Area

Name of the agroholding	Land bank, thousand ha
Kernel	510.00
Ukrlandfarminh	475.00
Myronivskiy Khlіboproduct	370.00
Ahroprosperis	300.00
Astarta Kyiv	243.00
Kontynental Farmerz Hrupp	195.00
AhroKholdynh 2012	160.00
Ahrarni systemni tekhnolohii	150.00
HarvEast Holding	127.00
IMK	123.90
UKRPROMINVEST-AHRO	120.00
Ahroton	110.00
Ahrein	110.00
Lebedynskiy nasinnevyi zavod	90.00
Ahrarna tekhnolohichna kompaniia	87.00
Pryvat-AhroKholdynh	85.00
Hrupa kompanii VITAGRO	85.00
Tas Ahro	83.00
Hrupa kompanii AhroVista	82.00
Svitanok	80.00

Source: formulated by the authors on the basis [29].

bution of agricultural enterprises by the volume of land area was carried out (Table 4).

The analysis of the distribution of agricultural enterprises by land area (Table 5) has shown that 32 enterprises are classified as large (more than 5.000 ha), 15 as medium-sized (1.000—5.000 ha), and one as small (up to 1.000 ha). A share of these enterprises is presented in Fig. 1.

At the same time, large agricultural enterprises account for 66.67% of the total, medium-sized enterprises for 31.25%, and small enterprises for 2.08%. This indicates that the *Agroprosperis* agricultural holding includes 66.67% of large and

31.25% of medium-sized agricultural enterprises by land bank size.

Taking into account the above, the authors propose a criterion namely the total size of the land plot owned by the agricultural enterprise (own plot and/or leased) to determine the size of such enterprises (large (more than 5.000 ha), medium (from 1.000 to 5.000 ha), small (up to 1.000 ha) and include it in paragraph 2.2 of Article 2 of the Law of Ukraine on Accounting and Financial Reporting in Ukraine dated July 16, 1999 No. 996-XIV [27]. This would be applicable to those agricultural enterprises carrying out their main economic acti-

Table 4. Distribution of Agricultural Enterprises into Large-, Medium-, Small-Sized by Land Area

Name of agricultural enterprises	Classification of enterprises by land area size	Number of enterprises, units	Share of enterprises, %
TOV "KURLAND," TOV "KURIVNA NYVA," TOV "VOLYN AHRO," TOV "VESELE-AHRO," TOV "KOROSTYSHIVZEMINVEST," TOV "BRODY AHRO," TOV "UKRLATAHRO," TOV "HORYN AHRO," TOV "BILOPILLIA AHRO," TOV "VOROZHBALATINVEST," TOV "BIO LAT," PP "KARLA MARKSA-2," TOV "BILOPILLIA AHROSVIT," TOV "HLUKHIV-AHROINVEST," TOV "SHUMSK AHRO," TOV "AHROTOP," PRYVATNE AHRARNO ORENDNE PIDPRYIEMSTVO "ZORIA," TOV "AHROLATINVEST," TOV "ORILKALATINVEST," TOV "PROMIN PODILLIA," TOV "AHROFIRMA-OBRII," TOV "PROMIN HALYCHYNA," TOV "NIU AHRO PODILLIA," TOV "AHROFIRMA PROHRES-V," TOV "LATAHROINVEST," TOV "BAKhMACH AHRO," TOV "NIZHYN AHRO," TOV "NOSIVKA AHRO"	Large (more than 5000 ha)	32	66.67
TOV "AHROFIRMA SHARHOROD," TOV "KRASNE-AHROINVEST," TOV "NEMYRIVLATINVEST," TOV "OBODIVKA-AHRO," TOV "ORATIVLATINVEST," TOV "KOLORYT AHRO," TOV "POLONNE-AHRO," TOV "VOLYN KRAI," TOV "KROLEVETS-AHRO," TOV "RIASNIA NSKE," TOV "BIO-LAN," TOV "CHARIVNYI LAN," TOV "LETYCHIV AHRO," TOV "STAROKOSTIANTYNIV AHRO," TOV "AHRO STAR 2006"	Medium (from 1000 to 5000 ha)	15	31.25
TOV "KOMYSHUVATSKYI MOLOCHNYI KOMPLEKS"	Small (up to 1000 ha)	1	2.08
Total		48	100.00

Source: compiled by the authors based on a study of the agricultural enterprises' activities [30].

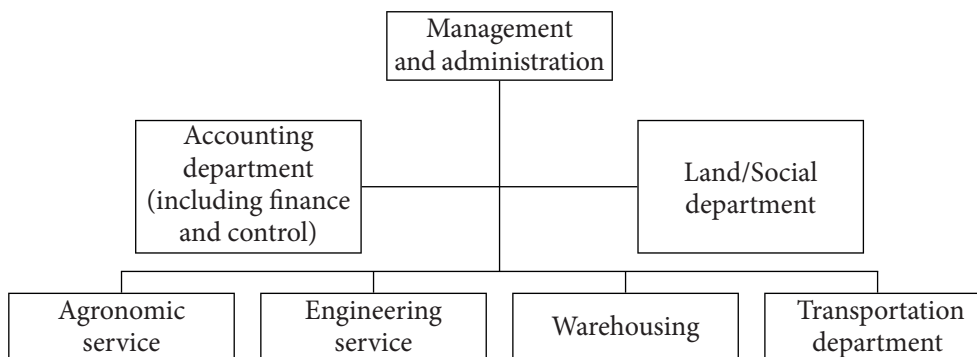


Fig. 2. Typical scheme for managing an agricultural enterprise engaged in the production of crop products

Source: constructed by the authors based on a study of agricultural enterprises that are part of the *Agroprosperis* agroholding.

vity in accordance with the KVED 2010 [31] — “Section A. Agriculture, Forestry and Fisheries,” groups 01.1 “Growing of annual and biennial crops,” 01.2 “Growing of perennial crops,” 01.3 “Plant reproduction,” 01.5 “Mixed agriculture.”

A typical scheme for managing an agricultural enterprise is shown in Fig. 2.

Thus, the following can be attributed to the organizational and technological peculiarities of the activities of agricultural enterprises that influence of accounting and analytical support construction for the management of plant production (Table 5).

In addition to the general organizational and technological features of agricultural enterprises, it is advisable to list the impact of these features on the accounting structure for crop production management in wartime conditions.

1. Personnel safety:

a) Ensure the availability of shelters and develop an action plan for an alarm.

b) Provide personal protective equipment (helmets and body armor) within 30 km of the line of combat operations.

2. Equipment safety:

a) Equip with radio-electronic warfare equipment within 30 km of the front line.

b) Disperse equipment — do not store it all in one place.

3. Security of assets and storage locations for inventory. This means not storing diesel fuel in company warehouses, changing the technological power supply scheme for fertilizers and replacing ammonium nitrate with non-explosive nitrogen fertilizers (e.g. urea or a urea-ammonium mixture).

4. Restrictions on technological operations:

a) inability or limited ability to use drones for the chemical treatment of crops;

b) inability to perform technological work during curfew hours.

5. Readiness to work in the absence of a GPS signal:

a) retrofitting seeders with markers to mark rows;

b) having printed maps of fields.

6. Proper military record keeping to ensure the receipt and updating of the enterprise’s status as critical infrastructure and the reservation of key specialists.

7. Ensure that the company’s production and office facilities are equipped with autonomous power sources (e.g. generators, solar batteries and accumulators) and that they have an uninterrupted internet connection.

8. Develop an evacuation plan for personnel and production facilities in case of threat or necessity.

Analyzing the organizational and technological peculiarities of the activities of agricultural enterprises and determining their influence on the

accounting and analytical support construction for the management of crop production (Table 6), it is advisable to characterize the operational cycle of such enterprises.

Thus, each stage of the operating cycle (Table 6) plays a key role in ensuring the efficiency and effectiveness of agricultural enterprises aimed at producing crop products.

Table 5. Organizational and Technological Peculiarities of the Activities of Agricultural Enterprises and Their Impact on the Accounting and Analytical Support for Crop Production Management

Type of factors	Name of factors	Characteristic
Technological Peculiarities	Production program	Crops grown (plant growing) — winter rape, winter wheat, corn, sunflower, soybeans Duration of the production cycle (for winter crops 10—11 months, for spring crops 6—7 months) Presence of livestock production Seed production (for own needs or for sale to third-party organizations) Marketing strategy (domestic/export) and contractual quality requirements (moisture, contamination, protein, gluten, oil content — for oilseeds)
	Availability of material and technical base	Availability of warehouses, grain storage facilities and current facilities Availability of machinery and tractor fleet Availability of repair facilities Land bank structure (own, lease/sublease, joint investment activities)
	Technologies	Complexity and innovativeness of the technology for growing individual crops and the number of types of supplies (preparations, fertilizers, etc.) that are used in the growing process Mechanization and automation of processes, use of manual labor
Organizational Peculiarities	Size of agricultural enterprise by volume of land resources	Small (300—1000 ha) Medium (1000—5000 ha) Large (more than 5000 ha) Holding structures (including vertically integrated)
	Organizational structure of the enterprise	The need for various departments and services, the number of personnel in each department and functionality Channels for supplying stocks and selling manufactured (grown) products Accordingly, responsibility centers are formed for the implementation of operations and entering data into the registers of synthetic and analytical accounting — for the further formation of reports and making management decisions
	Production Management System	Affects the construction of the accounting and analytical support scheme for the management of plant production and business operations and, accordingly, costs in the formation of the plant productions cost
	Sole proprietorship or integrated type of agricultural enterprise	Impact on the construction of the accounting and control system, as well as the volume and structure of management reporting Coordination of processes (planning, budgeting, procurement, implementation, land bank management, etc.)
	Complexity of intra-production relationships	Coordination/distribution of expenses between responsibility centers (agronomic department — engineering service — finance department — land department — transport department — warehouse, etc.)

Source: developed by the authors based on [1, p. 17; 5, p. 31; 18, p. 49; 20, p. 46].

A team of foreign authors M. Ali, A. Marvuglia, Y. Geng, Z. Yu ra H. Sun [9] analyze the accounting of the sustainability of agricultural production in India and Pakistan for the first decade of the 21st century based on emergency situations. Their research demonstrates the importance of taking extreme conditions and climate change into account when designing accounting systems to ensure the sustainability of agricultural enterprises.

The study of analytical procedures for auditing the integrated reporting of corporate agricultural companies, conducted by K. Bezverkhyi, L. Hnylytska, O. Yurchenko and N. Poddubna [4], emphasizes the importance of high-quality accounting and analytical support for effective management of enterprises. Implementing a comprehensive approach to integrated reporting audit will help agricultural enterprises improve their competitiveness, reduce risks and ensure sustainable development in the long term.

Another group of researchers F. Butynets and S. Kucher [5], identify key peculiarities of the activities of agricultural enterprises that influence on the accounting organization. They emphasize the importance of seasonality, dependence on natural and climatic conditions and biological processes, which makes agriculture a unique industry for building accounting and analytical systems.

Domestic authors O. Biriuk and V. Korol [18] study the organizational and technological peculiarities of the production and sale of sugar beet products and their influence on the accounting construction. They note the need to adapt accounting systems to the specifics of various types of plant growing, which can significantly improve the efficiency of production management.

A team of Ukrainian researchers T. Haiduchok, O. Dmytrenko, S. Viter [19] assess the current state and accounting and analytical support for the management of aquaculture enterprises. Their research highlights the importance of developing specialized accounting systems for different agricultural sectors that take into account the unique requirements and characteristics of each.

T. Dziuba [7] proposes an information model for improving the accounting and analytical support for managing the economic potential of an agricultural enterprise. The implementation of such models can significantly increase the efficiency of management decisions and improve the economic performance of companies.

The group of authors M. Kotsupatriy and A. Smolska [21] determine the organizational and technological peculiarities of biological transformations in horticulture and their influence on the accounting construction. They emphasize the need to take into account biological cycles and processes when developing accounting systems for this industry.

A. Makarenko [11] examines accounting and analytical support as a factor in increasing the effectiveness of rational forest management. This study demonstrates the importance of integrating environmental aspects into accounting systems to ensure sustainable management of natural resources.

A group of Chinese researchers E. Montemayor, A. Bonmatí, M. Torrellas, V. Riau, A. Antón [12] are studying the environmental accounting of closed-loop maize production scenarios, where manure is used as fertilizer and catch crops are included in the production process. This research reinforces the importance of promoting the ecological environment to ensure the continued development of the agricultural sector.

The study by M. Shygun and others [17] emphasizes the importance of digital formats for presenting financial information as a basis for analyzing and auditing the activities of agricultural enterprises. The use of digital technologies helps to improve management efficiency, ensure transparency and reliability of financial reporting, which is a key factor in the sustainable development and competitiveness of enterprises in the agricultural sector.

Nyzova L. and Zolotarova N. [14] examine the organizational and technological peculiarities of the production of organic plant products and their influence on the accounting construction. They emphasize the need to adapt accounting systems to the specifics of organic production to ensure its efficiency and transparency.

Table 6. The Operational Cycle of Agricultural Enterprises Engaged in the Crop Production

The preparatory stage “Planning and acquisition of necessary resources”	The main stage “Growing”	The final stage “Product sales”
Business plan Technological map (flow-charts for production)	Soil type and field relief Predecessor (the crop that was grown before)	Transporting produce from the field Material and technical base for processing and storage (own or services)
Availability of material and technical base for receiving and storing stocks Provision of commercial personnel	Crop areas and crop rotation structure Hybrids / seed varieties	Distribution channels Transportation of products to the buyer
Availability of material and technical base for carrying out repair work and preparing equipment Procurement channels	Nutrition (fertilizer) Chemical treatment of crops	A system of contractual obligations to buyers (spot, forward, internal or external contract) Payment scheme for delivered products
System of contractual obligations with suppliers	Provision of production personnel (agronomists, machine operators, engineers)	Provision of commercial personnel
Transportation of stocks to the storage location	Qualification and responsibility of personnel	Selling prices, methods for determining them (fixed, linked to the exchange, premium/discount for quality)
Purchase prices	Availability and condition of material and technical base	Laboratory evaluation of quality indicators
Payment scheme for received stocks	The size of the farm’s land bank and the organizational structure of the enterprise	Sale of substandard goods
Laboratory evaluation of quality indicators	Structure of the land bank and organization of work with shareholders and other tenants. Destruction and “repair” of crops	X X
Accounting and analytical support for the management of plant production		
Analytical information and management reporting on actual performance results for previous periods (min 3 years): culture world market conditions logistics factors	Documentation of expenses at each stage of their implementation	Stock market price analytics
Analytical data (fluctuations in resource prices, delivery schedules, usage rates, etc.) and statistics for the last 3 years	Reflection and recording of costs in analytical systems and management accounting Statistical reporting on production (according to legislation)	USDA and FAO Analytical Reporting X

The preparatory stage “Planning and acquisition of necessary resources”	The main stage “Growing”	The final stage “Product sales”
X	Analytical information on the implementation of technological operations and incurred expenses in the analytical accounting registers (lower level)	X
X	Management reporting (top level)	X
X	Accounting policy for reflecting costs and output and reflecting them in accounting	X
X	Chart of accounts and accounting of expenses by items	X
X	Control procedures	X

Source: developed by the authors.

The research team R. Brukhanskyi, M. Parkhomets, P. Putsenteilo and others [3] substantiate the characteristics of agriculture as a branch of the economy when constructing accounting. They highlight special aspects that need to be taken into account when developing accounting systems for agricultural companies.

A group of domestic authors H. Anishchenko, V. Andrusyak, N. Ivanova, O. Krochak, T. Kucherenko, O. Matros, S. Mikhailovina, L. Melnik, N. Olyadnichuk, O. Polischuk, E. Podlubna, O. Ratushno, V. Stankevich [1] study the influence of the characteristics of the activity on the accounting organization of agricultural enterprises. Their research highlights the need to take into account industry-specific conditions and requirements when developing accounting systems.

Based on the identified organizational and technological peculiarities of the activities of agricultural enterprises and the determination of their impact on the construction of accounting and analytical support for the management of plant production, we propose to add the criterion of the total size of the land plot owned by such an enterprise (own plot and/or leased) for determining the size of an agricultural enterprise and include it in paragraph 2.2 of Article 2 of the Law of Ukrai-

ne on Accounting and Financial Reporting in Ukraine dated July 16, 1999 No. 996-XIV [27].

The criterion of the total size of the land plot (own plot and/or leased) at the disposal of agricultural enterprises for determining the size of an agricultural enterprise and include it in paragraph 2.2 of Article 2 of the Law of Ukraine on Accounting and Financial Reporting in Ukraine dated July 16, 1999 No. 996-XIV [27] is proposed. This proposal is based on the identified organizational and technological peculiarities of the activities of agricultural enterprises and the determination of their impact on the accounting and analytical support construction for the management of plant production. This makes it possible to account for the fundamental factor of crop production — land owned or controlled by the agricultural enterprise — and also ensures the classification of such enterprises as public-interest entities, in accordance with paragraph 12¹.2 of Article 12 of the Law of Ukraine on Accounting and Financial Reporting in Ukraine dated July 16, 1999 No. 996-XIV [27] which are required to prepare financial statements according to international standards. It will also affect the construction of their accounting and analytical support for the management of crop production.

In order to ensure the completeness of tax revenues to the state budget, it is proposed to introduce into subparagraph 291.4.4 paragraph 291.4 of Article 294 of the Tax Code of Ukraine dated December 2, 2010 No. 2755-VI [32], the criterion of the maximum volume of a land plot belonging to an agricultural enterprise in the amount of 1000 ha for being in the fourth group of single taxpayers — agricultural producers. All other agricultural enterprises with land areas over 1000 ha are recommended to be transferred to the payment of enterprise income tax. This, in turn, will require high-quality of accounting and analytical support construction for the management of plant

production, as the indicator of production costs and the cost price of grown products of an agricultural enterprise has a direct impact on the amount of taxable profit, as well as the application of transfer pricing to such agricultural enterprises.

A perspective direction for further scientific research is the development and improvement of accounting and analytical support for agricultural enterprises growing crop products, taking into account the above-mentioned organizational and technological peculiarities of the activities of agricultural enterprises to ensure their effective management.

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ОСОБЛИВОСТІ ДІЯЛЬНОСТІ СІЛЬСЬКОГОСПОДАРСЬКИХ ПІДПРИЄМСТВ ТА ЇХНІЙ ВПЛИВ НА ПОБУДОВУ ОБЛІКУ В УПРАВЛІННІ ВИРОБНИЦТВОМ ПРОДУКЦІЇ РОСЛИННИЦТВА

Вступ. Сільське господарство є однією з ключових галузей економіки України, забезпечуючи значну частину ВВП, робочі місця і продовольчу безпеку країни. Ефективне управління сільськогосподарськими підприємствами вимагає інтеграції організаційних та технологічних аспектів.

Проблематика. Дослідження організаційно-технологічних особливостей діяльності сільськогосподарських підприємств та визначення їхнього впливу на обліково-аналітичне забезпечення управління виробництвом продукції рослинництва є актуальним з огляду на важливість цього сектору для економіки, потребу підвищення його конкурентоспроможності, впровадження інновацій та запровадження комплексного підходу до управління.

Мета. Визначення організаційно-технологічних особливостей діяльності сільськогосподарських підприємств і виявлення їхнього впливу на побудову обліково-аналітичного забезпечення управління виробництвом продукції рослинництва.

Матеріали й методи. Інформаційною базою дослідження є наукові праці щодо визначення особливостей діяльності сільськогосподарських підприємств та їхній вплив на побудову обліково-аналітичного забезпечення управління виробництвом продукції рослинництва, статистична інформація, національні рейтинги тощо. Використано загальнонаукові та спеціальні методи дослідження процесів і явищ у їхньому взаємозв'язку й розвитку: синтез і узагальнення, індукцію, дедукцію, графічний метод, моделювання, систематизацію, компаративний, бібліографічний і бібліометричний аналіз.

Результати. Показано, що на побудову обліково-аналітичного забезпечення управління виробництвом продукції рослинництва суттєво впливають галузеві організаційно-технологічні особливості діяльності сільськогосподарських підприємств.

Висновки. Урахування визначених особливостей діяльності сільськогосподарських підприємств дасть змогу побудувати раціональне обліково-аналітичне забезпечення управління виробництвом продукції рослинництва, яка забезпечуватиме своєчасною й достатньою інформацією потреби управління підприємством.

Ключові слова: облік, аналіз, обліково-аналітичне забезпечення, управлінський облік, управління виробництвом, продукція рослинництва, сільськогосподарські підприємства, організаційно-технологічні особливості.