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TÍTULO: Enfoque tecnológico para la identificación de elementos contables en la producción de cultivos.

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RESUMEN: El artículo presenta los resultados del estudio sobre la identificación de objetos de producción en la producción de cultivos. Los autores sistematizaron la información sobre las características del proceso tecnológico de producción de cultivos, incluida la participación en el proceso de la tierra y los activos biológicos, la dependencia del proceso tecnológico de las condiciones naturales y climáticas, la duración del proceso de biotransformación y su desajuste con el período de calendario Los autores fundamentaron un enfoque integrado para la identificación de los objetos del proceso de producción, basado en la síntesis de enfoques tecnológicos y económicos.

PALABRAS CLAVES: Producción de cultivos, proceso tecnológico, productos terminados, productos semiacabados, trabajos en curso.

TITLE: Tecnological Approach to identification of accounting items in crop production.

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ABSTRACT: The article presents the results of the study on the identification of production objects in crop production. The authors systematized the information about the features of the technological process of crop production including participation in the process of land and biological assets, the dependence of the technological process on natural and climatic conditions, the duration of the biotransformation process, and its mismatch with the calendar period. The authors substantiated an integrated approach to the identification of the production process objects, based on the synthesis of technological and economic approaches.

KEY WORDS: crop production, technological process, finished products, semi-finished products, work-in-progress.

INTRODUCTION.

Operating efficiency of the business entity is determined based on the assessment of past events, and planning is based on potential evaluations of its capabilities. The use of valuation in the economy is inextricably linked with the economic content of the objects that are being evaluated. The specifics of crop production predetermine many approaches to the identification of the production process objects.

Analysis of studies of such Russian scientists as R.A. Alborov, S.M. Bychkova, D.G. Vasiliev, A.P. Varava, G.D. Verbov, A.V. Zolotarev, G.M. Lisovich, I.A. Mironov, P.P. Nemchinov, M.Z. Pizengolts, L.I. Khoruzhy, I.S. Shutova established that the disclosure of the contents of such categories as finished products, semi-finished products, and work-in-progress employs technological, economic, and legal approaches. The study of works of German scientists (F. Schmaunz, C. Janze, M. Köhne, U. Bodmer, A. Heißenhuber, D.K. Altehöfer, K.H.M. Bauer, H. Fichtelmann, H. Walter) made it possible to define the property approach to identifying and classifying production process objects as the dominant one.

The discussion on the identification of the work-in-progress, semi-finished, and finished products in crop production has been going on for more than half a century. The subject of this study are approaches to the identification of production objects in crop production (finished products, semi-finished products, and work-in-progress), taking into account the specifics of its technological process. (Muhina, , Aboimova, , Kulagina, , Trophimov, & Chigarov, 2016).

The study purpose is to substantiate an integrated approach to the identification of production objects in crop production (finished products, semi-finished products, and work-in-progress), taking into account the specifics of its technological process. In accordance with the study purpose, its objectives are:

– to study the approaches of specialists and scientists to the identification of finished products, semi-finished products, and work-in-progress in crop production;

– to study the influence of the specifics of the technological process in crop production on the identification of finished products, semi-finished products, and work-in-progress;

– to provide definitions of finished products, semi-finished products, and work-in-progress in crop production based on the integrated approach;

– to reveal the dualistic nature of work-in-progress in crop production.

DEVELOPMENT.

Method.

The fundamental principles of economic theory lie in the methodological framework of the study. The study is based on the analysis of scientific works in the field of economics of agricultural organizations. General scientific methods of synthesis and analysis were used when justifying the approach to the disclosure of the concepts of finished products, semi-finished products, and work-in-progress in crop production.

Information on the activities of crop production organizations of the Republic of Khakassia was used as an evidential material of the study.

Results.

The concepts of finished products, semi-finished products, work-in-progress and their delineation are based on the technological characteristics of the product, which is the result of the production process. The main difference of agricultural production from other industries is that agricultural production is a set of sequential technological and natural (biological) processes aimed at obtaining agricultural products. A technological process in agriculture "implies a method or a set of methods for treating the soil and plants using chemical, mechanical or other physical methods with the aim of changing their properties or condition". This circumstance predetermines the need to consider the crop production technology to define the concepts of finished products, semi-finished products, and work-in-progress in this industry.

All agrarian scientists and specialists distinguish the main feature, among other specific features of agricultural production, that is fundamentally distinguished from other industries — "the production process deals with the land and living organisms — farm animals, as well as plants that are labor objects". The second specific feature of agrarian production is the dependence of technological processes of "targeted impact on living organisms — growing them to a certain condition" on natural

climatic conditions (Pizengolts, 1982). The time of completion of agrotechnical works is determined by the growing season of plants, which must be carried out in strict sequence. As a consequence of the first two features, the third one is the duration of the production cycle in agriculture, which, according to M.Z. Pizengolts and A.P. Varava, "is much longer than in other industries". The fourth distinctive feature of agricultural production, due to the dependence of the technological process on natural conditions and the length of the crop growing period, is the discrepancy between the calendar year, which is the basis of the accounting chronology, and production cycles. M.Z. Pizengolts and A.P. Varava state: "Agricultural production, due to the influence of natural factors, is characterized by the significant duration: production processes in most industries go beyond the calendar year. Therefore, the accounting has to distinguish the costs of production cycles that do not coincide with the calendar year: the expenses of previous years for the harvest of the current year, the expenses of the current year for the harvest of future years, etc." (Pizengolts & Varova, 1975).

The specificity of crop technology, according to I.S. Shutova and G.M. Lisovich, is determined by the type of cultivated winter crops (for example, wheat, rye, etc.) or spring crops (for example, oats, barley, peas, etc.), annual or perennial crops (herbs, bushes, etc.) (Shutova, 2011). Therefore, due to the biological, soil-climatic, agrotechnical features, the production is, firstly, sharply seasonal, and, secondly, extended in time. The costs incurred in the reporting year in connection with the cultivation of particular, for example, winter crops will lead to the results in the form of harvest only in the next reporting year.

The production of individual crops takes more than one year; they yield in the second or third year after they are sown, for example, perennial crops or shrubs. Thus, the interrelation of economic processes of reproduction in plant growing with natural and biological processes is the reason of the difference in the production period in this industry from the calendar one. These specific characteristics of the crop production process predetermine the special character of the agricultural

crop as the object used to obtain a result — the harvest.

The crop cultivation technology implies a complex of agrotechnical techniques performed in a certain sequence, aimed at meeting the requirements of crop biology and obtaining high yields of a given quality (Fig. 1). The production technology in each of the sub-sectors is different and has its own specifics. The presence of four main complexes of work is common for crop production: soil preparation for sowing, sowing (planting), crop tending, harvesting. In addition, paragraph 11 of the Methodological Recommendations states that "due to the specific features of production, some types of final crop products are obtained in two production cycles: the first one is associated with the cultivation of culture, and the second one — with the processing of the resulting products" (Kostina, 2009).

The general scheme of the technological process in crop production, presented in Figure 1, allows distinguishing three of its main stages: preparatory work before the use of biological resources, sowing and the process of growing crops directly, their primary processing, which is of fundamental importance for distinguishing between the concepts of work-in-progress, semi-finished products, and finished products in crop production.

The completeness of the technological process for the recognition of agricultural products in the composition of the finished product was the basis in the planned economy as well, but the harvesting point was the frontier point. M.Z. Pizengolts and A.P. Varava wrote that "usually crop products are initially accounted in uncleaned form. For example, grain at combine harvesting comes in bunker weight" (Pizengolts, 1982). German scientists agree with the Russian scientists. Thus, Franz Schmaunz writes that "an asset is related to the finished products, not to field property, if it is separated from the land. The examples are cereal crops, potatoes, canola, hops, and vegetables" (Schmaunz, 2003).

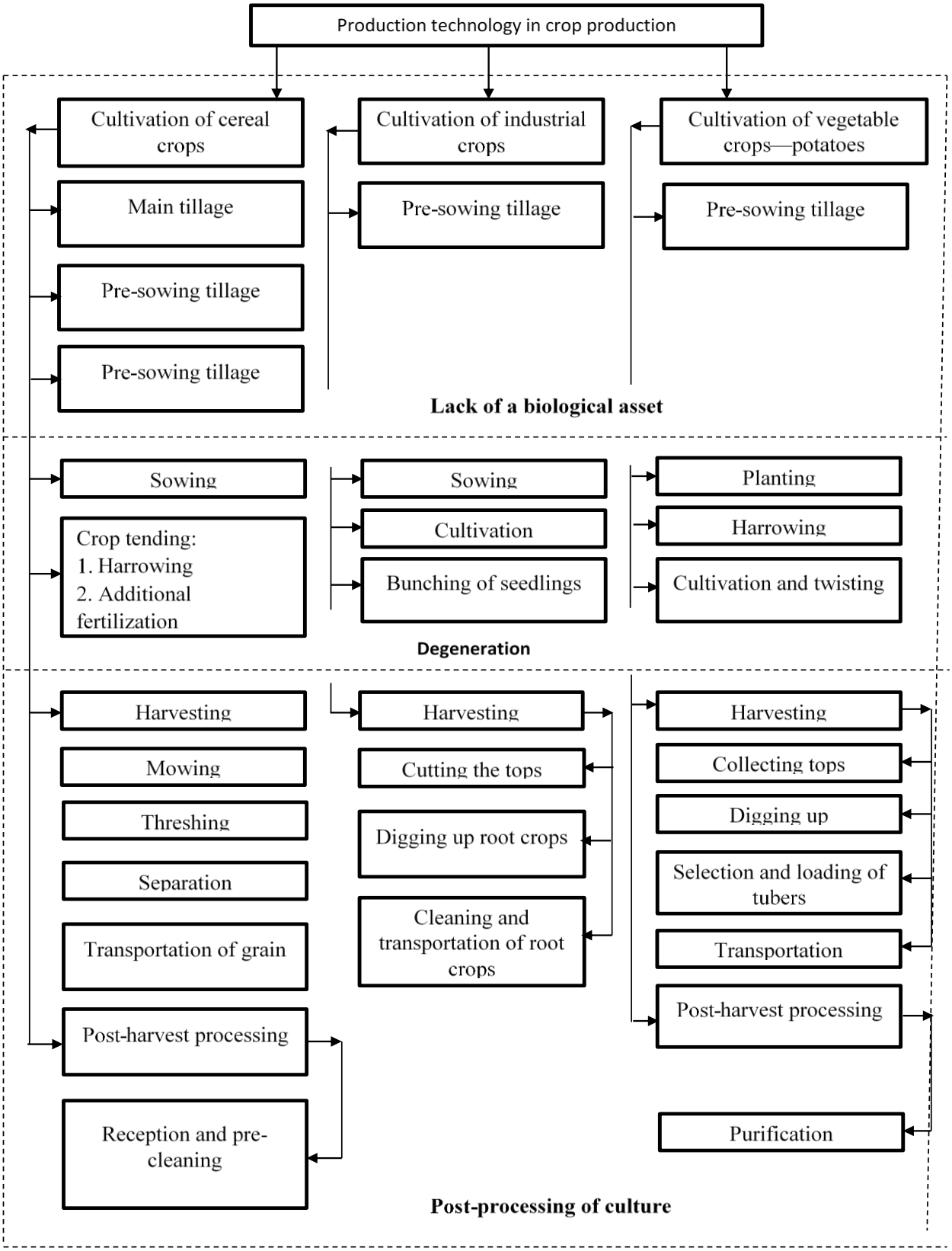

Fig. 1. Production technology in crop production.

However, the products are further cleaned and sorted, as a result, "products of different grades are formed, products are dried out, unused waste appears. Identified shrinkage and unused waste are written off" (Pizengolts, 1982).

In agriculture, finished products are characterized as "the product of labor". Thus, P.P. Nemchinov and G.D. Verbov write that "the products of labor on collective and state farms are all types of finished products (grain, potatoes, vegetables, cotton, milk, meat, wool, eggs, etc.)". This circumstance is indicated by the scientists of the Russian State Agrarian University — MAA named after K.A. Timiryazev: "all types of finished products (grain by type, potatoes, vegetables by type, fruit by type, honey, flax, milk, eggs, wool, etc.) are products of labor" (Belov & Khoruzhy, 2010).

Precisely continuing the practice of yield recognition adopted in a planned economy, the definitions of finished products resulting from agricultural activities in modern specialized literature fundamentally differ from the definition of a finished product as the result of production activities of industrial enterprises. The main difference lies in the different purposes for the production of the product. If the finished product in industrial production is intended for transferring it to other economic entities or individuals, then the finished product in agriculture is not only sold but can also be consumed inside the enterprise. Thus, scientists of the Russian State Agrarian University—Moscow Agricultural Academy named after K.A. Timiryazev noted that finished products include products made for sale and products "partially intended for the organization's own needs" (Belov & Khoruzhy, 2010).

All specialists point out that agricultural products produced at the enterprise can be used for various purposes: to create a seed fund for crops, for animal feed, as agricultural raw materials for further industrial processing within the enterprise, for further sale, etc. However, regardless of the areas of application of agricultural products, it is recognized as a finished product, in contrast to the product produced at an industrial enterprise (Bychkova et al, 2006). The fact that agricultural products,

regardless of their further use, are recognized as finished products, leads, on the one hand, to the impossibility of comparing these indicators between industrial and agricultural organizations, and, on the other hand, to the mixing of the types of material values that are resources for production or being its result.

We agree with the opinion of A.V. Zolotareva, S.M. Bychkova, I.A. Mironova on the inclusion of "products of industrial production if they exist in an agricultural enterprise" in the composition of the finished product (Bychkova et al, 2006), which contradicts the actual definition of agricultural products "as a result of the use of relevant biological assets" (Paliy, 2008). Industrial products should not be included in the composition of agricultural products if they are not the result of their primary processing.

Therefore, the fulfillment of two conditions is necessary to define agricultural products as finished: firstly, this product must be intended for sale, and, secondly, all production cycles at a specific agricultural enterprise—cultivation and primary processing of products—must be completed. Thus, based on the general notion of finished products and taking into account the specifics of crop production technology, we formulated the following definition of finished crop products — it is the tangible result of the production process of agricultural products and their primary processing at a particular enterprise, intended for sale, having a cost characteristic determined according to the resources consumed for its production or income to be received as a result of its sale.

The existence of specific features in the production of certain types of final crop products, consisting of two production cycles of cultivation of crops and their processing, for example, obtaining silage, haylage, and vitamin-herbal flour as a result of drying and laying green mass of grown crops, predetermines the availability of the product with partial degree of readiness. Paragraph 48 of the Methodological Recommendations for Accounting for Costs and Output of Products in Crop Production indicates the sequence of separate, and independent technological stages, which result is

final finished products. The combination of technological operations or redistribution "leads to the development of an intermediate product (semi-finished product) or the production of the finished product". A detailed description of the production process in crop production, presented in the Methodological Recommendations, proves the recognition of the availability of semi-finished products and in crop production: "A semi-finished product, other than the starting material, is obtained from the starting material after the first phase of processing. The same semi-finished product, after some period of storage in the warehouse or immediately, enters the next production stage (redistribution), from where, after appropriate processing, it comes in the form of a semi-finished product of a completely different nature, completely different from the semi-finished product that was obtained after the first redistribution, etc., until the release of finished products. At the same time, each redistribution provides a semi-finished product having an independent utility (value). Each of these semi-finished products can remain as the work-in-progress. Sometimes the intermediate product (semi-finished product), due to the peculiarities of the production technology (for example, flax straw on the rettery), lasts for quite a long time before going into further processing.

Each redistribution, with the exception of the latter, is a complete phase of processing material resources, as a result of which the agricultural organization receives not its own final processing product, but semi-finished products of its own production, used both for domestic consumption (green mass of annual and perennial herbs for silage, haylage, and grass meal) and for sale (flax). The list of redistribution is determined based on the technological process in accordance with the possibility of planning, accounting, and calculating the cost of the redistribution product and the assessment of the work-in-progress" (Paliy, 2008).

Thus, the redistribution and the semi-finished product are observed only in the cycle of processing of agricultural raw materials. In the cycle of crop growing in crop production, intermediate stages of its readiness are not isolated until the time of its maturation, i.e. a single technological cycle of the crop

growing is characteristic of crop production. In this case, the intermediate state of the cultivated crop does not correspond with the concept of a semi-finished product, namely, a product brought to a certain degree of maturity. Carried out before the harvesting, the process of growing agricultural products is continuous. Thus, there is no redistribution at this stage of the production process. However, at this stage, an early harvest can be gathered in the production of vegetable crops at any moment, which necessitates the recognition or semi-finished products for further processing of vegetables, or finished products with the aim of their sale.

Based on the existence of several possibilities for the use of culture at different stages of its biotransformation, we formulated the definition of a semi-finished product in crop production. A semi-finished product in crop production is a tangible result of the technological stage of the production process (redistribution) in a separate enterprise, which has a cost characteristic determined according to the resources consumed for its production or income to be received as a result of its sale. If a semi-finished product is for sale, it should be included in the finished products. However, in crop production, products can be intended both for sale and for further use within the organization. In agricultural organizations, crop production is extensively used for on-farm needs—the so-called internal turnover—not included in the sales process. A part of the grown crops should be used as seeds for sowing for the next year. Many enterprises are engaged in crop production to provide feed for livestock. Agricultural enterprises can process grown crops in their own industrial production. In these cases, the semi-finished product sent to the next technological stage of processing at the same enterprise will be the material resource of the subsequent production process stages.

The fact that the production process for the cultivation of many crops is not limited to the reporting period determines the presence of the work-in-progress in crop production. Experts mainly associate the work-in-progress in crop production with costs that are aimed at growing a certain crop. In the middle of the last century, D.G. Vasiliev wrote that the work-in-progress in crop production "includes

the costs for agricultural operations, as a result of which the farm will receive products in the following reporting periods. Work-in-progress is taken into account in the following approximate nomenclature: fallow land for spring crops, autumn plowing, stubbing, fertilizers, sowing of winter grain crops, sowing of perennial grasses, cultivated pastures, land foraging, other sowing of winter crops, plowing of rough fallow land, development of new lands (bringing new lands under cultivation, deposits and other works), other costs (work on snow retention, performed in Q4, etc.) (Vasiliev, 1959).

Successors of these provisions set forth by D.G. Vasiliev are M.Z. Pizengolts, A.P. Varava, V.K. Rodostovets, who note that "work-in-progress, transferred to the next year, is taken into account in the following nomenclature: winter grain crops, winter vegetable crops, winter tobacco sowing, autumn plowing (without fertilizers), shallow plowing (without autumn plowing), application of mineral fertilizers, application of organic fertilizers, snow retention (in Q4), sowing of perennial grasses in spring of the reporting year (sub-cover), crops of perennial grasses in the fall of the reporting year (sub-cover), crops of perennial grasses in the spring of the reporting year (coverless), crops of perennial grasses in the fall of the reporting year (coverless), crops of perennial grasses of the past years (by sowing years), fallow plowing in the fall of the current year, fallow under the spring crops of the next year's harvest, grassland renovation, land reclamation, cultivated pastures, cultural hayfields, soil liming and plastering costs" (Pizengolts & Varova, 1975; Rodostovets, 1971).

In contrast to Russian scientists, who defined the work-in-progress based on the financial component (costs), German scientists (Christian Janze, Franz Schmaunz, Manfred Köhne) gave priority to the material basis and define the work-in-progress as the specific asset of agricultural enterprises — "field assets". The field asset is an asset that meets two conditions. Firstly, it is in the production stage, "is in the ground" (Altehöfer et al, 2009). Thus, Franz Schmaunz notes that "an asset relates to work-in-progress only if it had already entered the production process at the balance sheet date" (Schmaunz,

2003), and Christian Janze stresses that "field assets... on the valuation date are still on arable land. After the separation from the ground (usually through harvesting), the case is about finished (self-produced) products" (Janze, 2006). Manfred Köhne clarifies the procedure for the classification of assets into work-in-progress and finished products through liability as a result of their damage or destruction: "field property is generally understood to be unripened or already ripe fruits that are still on the field or in the meadows.

Fruits that have already been collected belong to field property if they have not yet been placed in a warehouse (granary, piles, etc.), for example, sugar beet dug not yet sent to a warehouse or not yet harvested (put up in based) straw. Harvested silage, hay or straw in a form suitable for storage refers to stocks, even if they are stored on the field. Such a difference is important, for example, in case of damage caused by wild beasts, which will be reimbursed only in respect of field property, and not in relation to stocks" (Köhne, 2007). Ulrich Bodmer and Alois Heißenhuber point out the inextricable link between field assets and land: "civil essential components of the land" (Bodmer & Heißenhuber, 1993).

Secondly, this asset generates income only once. Christian Janze, who is not dividing cultures depending on their vegetative period, notes that "field assets include one-year and perennial crops, which bring a one-time income" (Janze, 2006). Franz Schmaunz details income generation depending on the type of crop: "agricultural technical crops are, as a rule, annual crops that generate income every year. Perennial cultures need several years to develop a culture and bring ... income only once. They include the cultures from tree nurseries and ornamental woody plants" (Schmaunz, 2003).

The approach of German scientists to the definition of the work-in-progress as a tangible object and the property allows viewing it through the prism of the "biological asset" category. All scientists define the biological asset as plants and animals. L.I. Khoruzhy proposed the most common definition: a biological asset is "living plants (crops, perennial plants) or animals (farm animals)"

(Khoruzhy, 2013; Köhne, 2007). This definition is as succinct as in the international standard 41 Agriculture: "a biological asset is a living animal or plant (sheep, fruit tree)". R.A. Alborov and S.M. Kontsevaya, E.V. Zakharova clarify this definition by introducing the concept of activity, which employs plants and animals, and the objectives of its conduct: biological assets are "plants and animals used for agricultural activities, i.e. grown for sale, replacement or to increase their number in order to obtain agricultural products in the present time and the future" (Alborov et al, 2009). These definitions are used by many scientists in Russia, for example V.F. Paliy. The definition of biological assets contained in the draft Accounting Regulations "Accounting for Biological Assets and Agricultural Products" differs from other definitions in a substantive and fundamentally important refinement reflecting the life stage of an asset — "animals and plants in a state of biotransformation" (Paliy, 2008).

Many biological assets are classified according to various criteria: term of use, method of use, degree of maturity (Fig. 2).

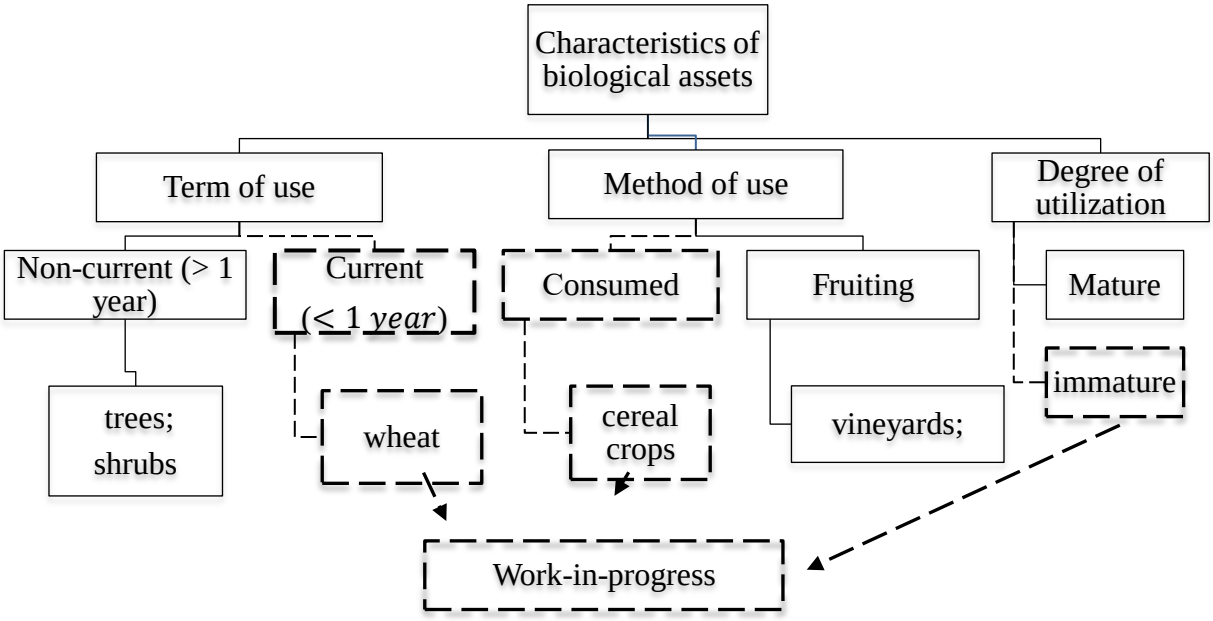

Fig. 2. Classification of biological assets.

Depending on the period of use, biological assets are divided into non-current and current. Biological assets used for more than one year, for example, trees, shrubs, are recognized as non-current assets. Plants with a life cycle of less than a year (e.g., wheat, sunflower) are current biological assets. Non-current biological assets may not constitute work-in-progress since they create agricultural products (berries, fruits, etc.), but not the plants actually form its basis. While the current biological assets (wheat, sunflower, etc.) are the basis of the new harvest of grain and other fruits, they can be recognized as a part of the work-in-progress before the harvest.

Depending on the method of use, biological assets fall into one of two groups: consumed and fruiting. Biological assets belong to the group of consumed assets if they cease to exist during the collection of agricultural products (e.g., grain crops). These assets, which are the basis of the new product being created, are also included in the work-in-progress. Plants that do not cease during the collection of agricultural products and can be used productively for a certain period of time belong to fruiting biological assets. This group includes, for example, vineyards, fruit and berry trees (Paliy, 2008). A new product is created with these biological assets, so they are not included in the work-in-progress. Assets are subdivided into mature and immature biological ones according to the degree of maturity. Mature biological assets are assets that "have reached the parameters that allow them to be used for production and harvesting" (Paliy, 2008). If the plant did not reach the parameters that allow it to be used for production, it is recognized as an immature biological asset. Until maturity, current consumable assets are included in the work-in-progress. Upon reaching maturity and harvesting, the current consumed assets cease to exist, transforming into a new finished product. Thus, the work-in-progress objects and biological assets in crop production intersect (Fig. 3).

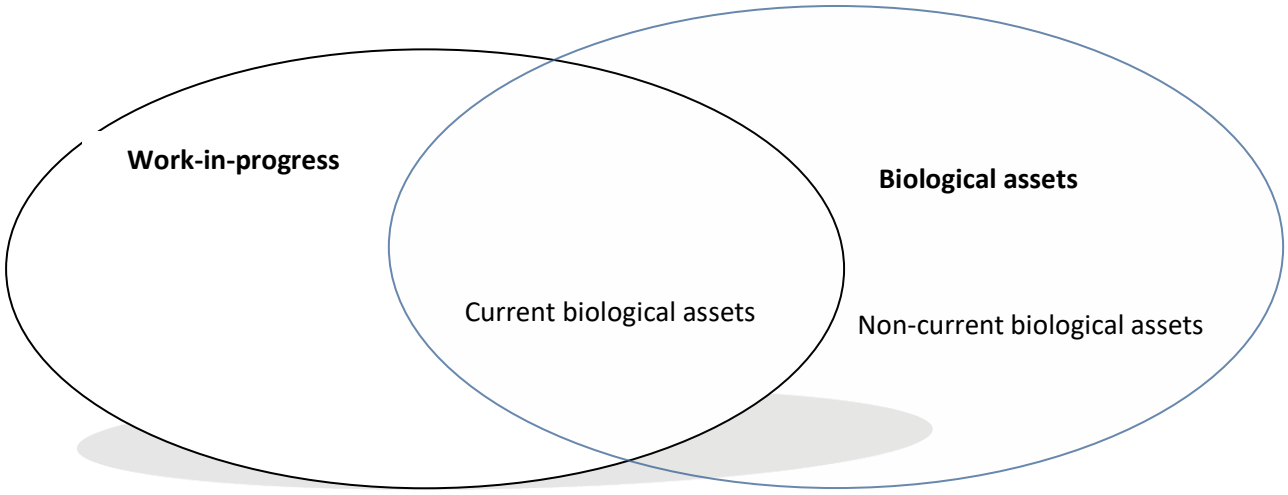

Fig. 3. The interrelation between the work-in-progress and biological assets.

The analysis of production facilities in crop production has established that work-in-progress is related to the first stage of preparatory work prior to the start of use of biological resources and to the main second stage of sowing and growing crops. If the work-in-progress object has no tangible form at the first stage, then the work-in-progress object has a tangible form at the second stage. This circumstance is important, as it fundamentally distinguishes the work-in-progress object in crop production from its analog in industry.

The work-in-progress in crop production has a complex nature: at the first stage, it is an object of financial accounting (costs) that does not have a material form, at the second stage of technological works it is an object that has a material form and has a cost characteristic (Fig. 4). The work-in-progress in crop production is, firstly, agricultural work performed in the reporting year for the next year's harvest, the cost equal to the amount of resources consumed for their performance; secondly, a culture in the process of growth and degeneration that has not reached the maturity parameters, allowing for the collection of products, and which has a value characteristic determined either in the

amount consumed for its growing resources or in a different order.

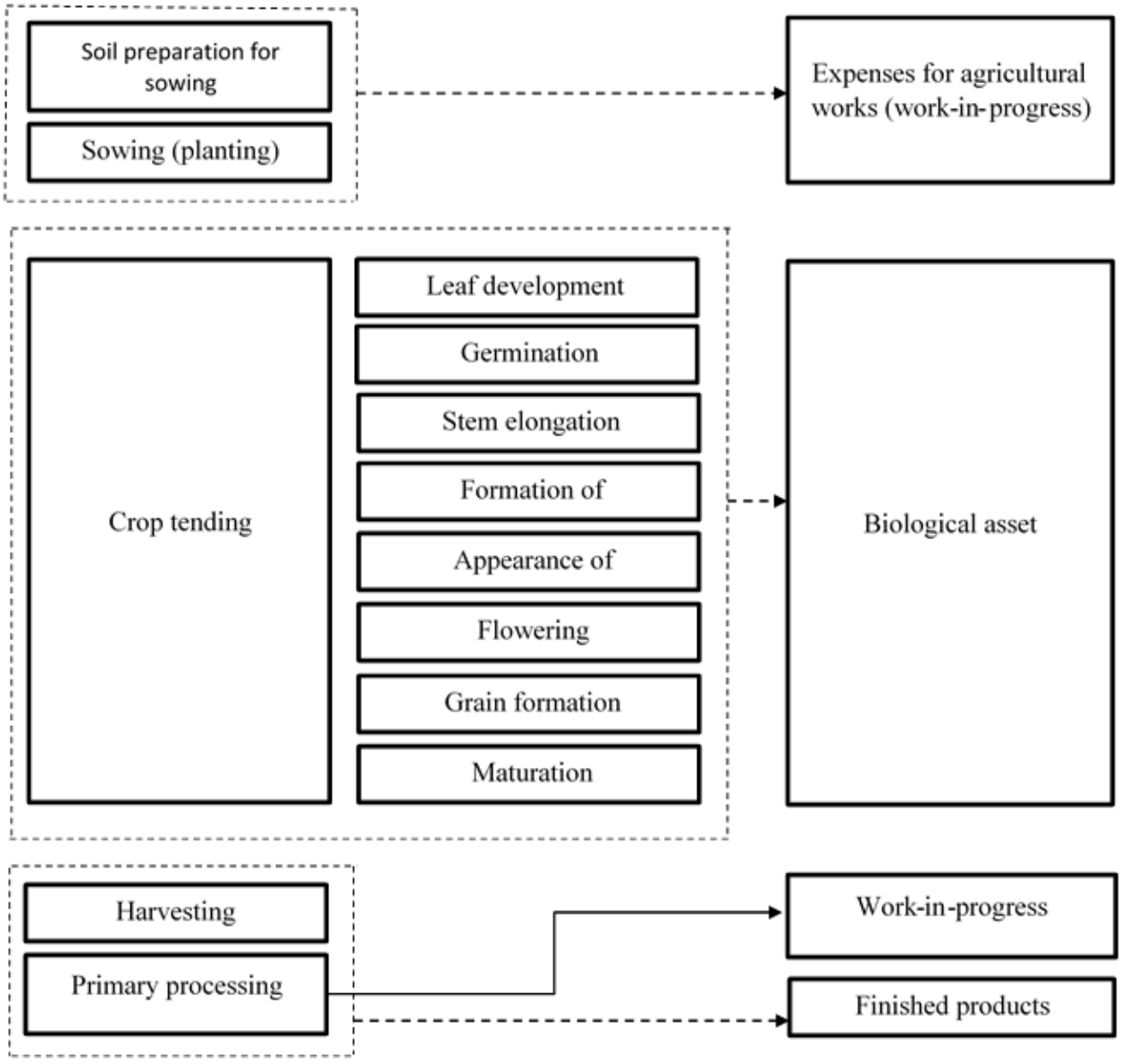

Fig. 4. The interrelation between agricultural work, the stages of plant development, and accounting objects.

It should be emphasized once again that a biological asset can act as both the work-in-progress object and a semi-finished product depending on the ability and desire of managers of an economic entity to sell it to a consumer.

Thus, based on the technological analysis carried out on the content of work-in-progress in crop production, we formulated its definition. The work-in-progress object in crop production is either the agricultural work that is not materialized in the object being created, performed in the reporting year for the next year's harvest, or a crop that is in the process of growth and degeneration and has not reached maturity parameters for collecting products that have cost characteristics reflecting either the cost of their creation or income from their sale.

It should be noted that in contrast to the technological approach to the definition of the work-in-progress in industry, the economic approach dominates in crop production.

CONCLUSIONS.

There are some conclusions such as:

1. The concepts of finished products, semi-finished products, work-in-progress and their delineation are based on the technological characteristics of the product, which is the result of the production process.
2. The specific characteristics of crop production that affect the identification of the concepts of finished products, semi-finished products, work-in-progress include:

– participation of land and plants (biological assets) in the technological process;

– the dependence of technological processes of targeted impact on plants on the natural climatic conditions that determine their vegetation and, therefore, the time of ripening;

– significant duration of the production cycle in crop production;

– mismatch of the calendar year underlying the chronology of accounting and production cycles.

3. The technological process in crop production includes four stages that determine the degree of product availability: soil preparation for sowing, sowing (planting), crop tending, harvesting. Some agricultural enterprises process the resulting products.

4. Crop production can be used for various purposes: for the creation of seed fund, animal feed, as agricultural raw materials for further industrial processing within the enterprise, for sale, etc. Currently, experts and scientists, regardless of the area of application of agricultural products, define it as a finished product in contrast to the product of an industrial enterprise.

Based on the analysis of the definitions of the finished product, we justified the use of an integrated approach (synthesis of economic and technological) to the definition of the finished product in crop production. Based on the application of an integrated approach, we formulated the definition of finished products in crop production as a tangible result of agricultural production cultivated at a separate enterprise and (or) its primary processing intended for sale, having a cost characteristic determined according to the resources consumed for its production or income to be received as a result of its sale.

5. In crop production, in the cycle of growing a crop, intermediate stages of its readiness are not distinguished before its ripening, which does not allow applying the notion of semi-finished product at this stage of the technological process. However, at this stage, an early harvest can be gathered at any time for the sale of early vegetables, silage, etc.; it necessitates recognition or semi-finished products for further processing of vegetables or finished products for the purpose of their sale. We took into account this circumstance when formulating the definition of a semi-finished product as a tangible result of the technological stage of the production process (redistribution) in a separate enterprise, having a cost characteristic determined according to the resources consumed for its production or income to be received as a result of its sale.
6. The work-in-progress in crop production has a complex nature: at the first stage, it is an object of financial accounting (costs) that does not have a material form; at the second stage of technological works, it is an object that has a material form and has a cost characteristic. The work-in-progress in crop production is, firstly, agricultural work performed in the reporting year

for the next year's harvest, the cost equal to the amount of resources consumed for their performance; secondly, a culture in the process of growth and degeneration that has not reached the maturity parameters, allowing for the collection of products, and which has a value characteristic determined either in the amount consumed for its growing resources or in a different order.

Thus, work-in-progress in crop production has a dualism determined by the stage of the technological process at which it is evaluated. The first preparatory stage suggests the costs for preparing the soil; and at the next stage, it is a biological asset.

BIBLIOGRAPHIC REFERENCES.

1. Alborov, R. A., Kontsevaya, S. M., & Zakharova, E. V. (2009). Development of biological asset management and accounting of their biotransformation results in agriculture: monograph. Izhevsk: Federal State Educational Institution of Higher Professional Education Izhevsk State Agricultural Academy, 165 p.
2. Altehöfer, K., Bauer, K. H. M., Fichtelmann, H., & Walter, H. (2009). Besteuerung der Land und Forstwirtschaft. Verlag Neue Wirtschafts-Briefe GmbH & Co.KG, Herne, 733 p.
3. Belov, N. G., Khoruzhy, L. I. (2010). Accounting in agriculture. Moscow: Publishing House of Russian State Agrarian University – MAA named after K.A. Timiryazev, 2, 362 p.
4. Bodmer, U., & Heißenhuber, A. (1993). Rechnungswesen in der Landwirtschaft: 135 Tabellen. Ulmer.
5. Bychkova, S. M., Zolotorev, A. V., & Mironova, I. A. (2006). Accounting and taxation in agriculture: a textbook. Moscow: Prospekt, 424 p.

6. Janze, C. (2006). Auswirkungen einer möglichen Einführung der International Financial Reporting Standards (IFRS) auf das landwirtschaftliche Rechnungswesen in Deutschland: Dissertation zur Erlangung des Doktorgrades der Fakultät für Agrarwissenschaften der Georg-August-Universität Göttingen, 561 p.
7. Khoruzhy, L. I. (2013). Variants of accounting methods for biological assets and agricultural products. The Journal of Accounting in Agriculture, 3, 13–23.
8. Köhne, M. (2007). Landwirtschaftliche Taxationslehre. — Ulm: Eugen Ulmer KG, 1100 p.
9. Kostina, Z. A. (2009). Technological features of agricultural production and their impact on the grouping of costs. Modern Problems of Science and Education, 5, 184—186
10. Muhina, T., Aboimova, I., Kulagina, A., Trophimov, V., & Chigarov, E. (2016). Development of emotional intelligence of students as a condition of successful adaptation to training. International Electronic Journal of Mathematics Education, 11(10), 3463-3467.
11. Paliy, V. F. (2008). International Accounting Standards and Financial Reporting: a textbook. 3rd edition, revised and supplemented. Moscow: INFRA-M, 512 p.
12. Pizengolts, M. Z. (1982). Accounting in agriculture. Part 1. Accounting for economic resources: a textbook. Moscow: Finansy i statistika, 288 p.
13. Pizengolts, M. Z., & Varova, A. P. (1975). Accounting in agricultural enterprises (general ledger accounting). Moscow: Statistika, 359 p.
14. Rodostovets, V. K. (1971). Accounting in agriculture. Moscow: Statistika, 240p.
15. Schmaunz, F. (2003). Buchführung in der Landwirtschaft. Bilanz, Auswertung, Gewinnermitlung. 4. überarbeitete Auflage. Stuttgart (Hochenheim): Eugen Ulmer Verlag, 243 p.
16. Shutova, I. S. (2011). Accounting (management) accounting in agriculture: a textbook. Moscow: INFRA-M, 168 p.

17. Vasiliev, D. G. (1959). Accounting at state farms. Moscow: Gosstatizdat, 372 p.

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