

FEATURES OF SOLVING OPERATIONAL TASKS OF THE MONITORING SUBSYSTEM IN SYSTEMS FOR STRATEGIC CONTROL OF THE REGIONAL STRUCTURE AND TERRITORIAL ORGANIZATION OF ENTITIES IN THE AGRI-FOOD SPHERE

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UDC 332.146.2:[65.012.122:338.43]

Tkachenko S. A. Features of Solving Operational Tasks of the Monitoring Subsystem in Systems for Strategic Control of the Regional Structure and Territorial Organization of Entities in the Agri-Food Sphere

The article highlights scientifically based design decisions on system-wide issues related to the functional structure of the daily monitoring task of implementing by the territorial-production system its production plan, the nature of its internal and external communications, interaction and interdependence of its functional and supporting parts. The solution of the daily monitoring task of implementing by the territorial-production system its production plan with the electronic digital machines and using subscriber stations as the main data collection and logging devices allows: to reduce the processing time and obtaining accounting and economic as well as analytical information; to reduce the complexity of the calculations; to improve the reliability and quality of the monitoring; to monitor systematically the implementation of the plan and take timely measures to eliminate backlogs; to calculate production and economic plans for the units for the next twenty-four hours with regard to their implementation for the given twenty-four hours. The prospect for the further research is solving the given problem on the basis of a more complete regulation (system of rules) allowing to obtain operational accounting and economic as well as analytical information about the causes of deviations during the implementation of the production and economic plan.

Keywords: implementation, production plan, task, monitoring, territorial-production system.

Fig.: 1. **Bibl.:** 11.

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УДК 332.146.2:[65.012.122:338.43]

Ткаченко С. А. Особливості вирішення оперативних завдань підсистеми моніторингу в системах стратегічного регулювання регіональної структури та територіальної організації суб'єктів агропродовольчої сфери

У статті обрано науково обґрунтовані проектні рішення за загально-системними питаннями, що стосуються функціональної структури завдання щоденного моніторингу виконання територіально-виробничою системою виробничого плану, характеру її внутрішніх і зовнішніх зв'язків, взаємодії та взаємозалежності її функціональних і забезпечуючих частин. Рішення завдання щоденного моніторингу виконання територіально-виробничою системою виробничого плану на електронних цифрових машинах і застосування як основних пристроїв збору і реєстрації інформації абонентських пунктів дозволяє: скоротити терміни обробки та одержання обліково-економічної та аналітичної інформації; знизити трудомісткість розрахунків; підвищити достовірність та якість моніторингу; систематично контролювати виконання плану і своєчасно вживати заходів щодо ліквідації відставань; розраховувати виробничо-господарські плани підрозділам на наступну добу із урахуванням їх виконання за дану добу. Надалі передбачається вирішення даної задачі за більш повним приписом (системою правил), що дозволяє отримувати оперативну обліково-економічну та аналітичну інформацію про причини відхилень у виконанні виробничо-господарського плану.

Ключові слова: виконання, виробничий план, завдання, моніторинг, територіально-виробнича система.

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УДК 332.146.2:[65.012.122:338.43]

Ткаченко С. А. Особенности решения оперативных задач подсистемы мониторинга в системах стратегического регулирования региональной структуры и территориальной организации субъектов агропродовольственной сферы

В статье выбраны научно обоснованные проектные решения по общесистемным вопросам, касающимся функциональной структуры задачи ежедневного мониторинга выполнения территориально-производственной системой производственного плана, характера её внутренних и внешних связей, взаимодействия и взаимозависимости её функциональных и обеспечивающих частей. Решение задачи ежедневного мониторинга выполнения территориально-производственной системой производственного плана на электронных цифровых машинах и применение в качестве основных устройств сбора и регистрации информации абонентских пунктов позволяет: сократить сроки обработки и получения учётно-экономической и аналитической информации; снизить трудоёмкость расчётов; повысить достоверность и качество мониторинга; систематически контролировать выполнение плана и своевременно принимать меры по ликвидации отставаний; рассчитывать производственно-хозяйственные планы подразделениям на следующие сутки с учётом их выполнения за данные сутки. В дальнейшем предусматривается решение данной задачи по более полному предписанию (системе правил), позволяющему получать оперативную учётно-экономическую и аналитическую информацию о причинах отклонений в выполнении производственно-хозяйственного плана.

Ключевые слова: выполнение, производственный план, задача, мониторинг, территориально-производственная систем.

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Distinctive features of the modern way to solve monitoring operational tasks are: high frequency of solutions, preparing own information source arrays; requirement for processing rather large amounts of information in a short time period; relatively simple algorithms for

solving problems; extensive use of special means of information collection and logging; use of digital data processing and many others. For example, one of the accounting and economic and analytical problems solved in the framework of the monitoring subsystem in strategic systems for cont-

rol of the regional structure and territorial organization of entities in the agri-food sphere is the operational task of daily monitoring the production plan implementation by the territorial-production system. The problem of solution periodicity refers to the block of the operational monitoring subsystem and by the monitoring objects it is included in the complex of tasks of monitoring the production and sale of finished products.

Analysis of recent publications on the problem.

The advanced modern practical experience and carried out scientific research of the works by such scientists and economists as A. E. Aliamov (2012), Yu. A. Antokhina (2006), S. B. Beliakov (2007), Ye. N. Berezovskaya (2009), A. Ye. Bogdanov (2014), D. G. Voronov (2011), Ye. P. Goltsunov (2009), William Detmer, Eli Schragenheim (2009), Yu. A. Lucash (2004), V. M. Moroz (2011), F. S. Rastegaeva (2009) and others provide strong evidence that a successful solution for the problem of forming and implementing such an important type of monitoring in its control functions like operational monitoring is possible only under conditions of creating and developing an independent functional task of daily monitoring the production plan implementation by the territorial-production system both in the existing and being developed functionally advanced systems for strategic control of the regional structure and territorial organization of the entities in the agri-food sphere.

Choosing the given monitoring item as an independent problem of functionally advanced systems for strategic control of the regional structure and territorial organization of the agri-food sphere is dictated, on the one hand, by the independent role and significance of this task in the control subsystem and, on the other – follows from the system-wide aspects of the problem: the task has its purpose and performance criteria; tight relationship between the task of monitoring the daily coverage and research of implementing by the territorial-production system its production plan and other tasks of the control system functions provides an opportunity to consider it as an organic part of the control subsystem as a whole, that is as a task of the large subsystem.

Formulation of the research objectives. First, it is necessary to select a scientifically based design decisions on the system-wide issues related to the functional structure of the daily monitoring task of implementing by the territorial-production system its production plan, nature of its internal and external communications, interaction and interdependence of its functional and supporting parts, etc.

Research methods. The dialectical method and main provisions of the monitoring function and system regulation theory serve as theoretical and methodological basis for the given scientific article. In the course of the research there were used the following methods: *abstract-logical* (for theoretical generalization and formulating conclusions); *monographic* (for studying theoretical methods of monitoring and the control system); *economic and statistical, calculation and design, comparative* (for diagnosing the state of the monitoring subsystem of territorial-production systems); *grouping* (for characterizing individual stages of the algorithm for solving the daily monitoring task of imple-

menting by the territorial-production system its production plan); *graphic* (for building an enlarged block diagram of the system of operations to solve the daily monitoring task of implementing by the territorial-production system its production plan), etc.

Statement of the main research results with their substantiation. The purpose of the daily monitoring task of implementing by the territorial-production system its production plan is presenting to the Director (Deputy Director) and the management of Production and Dispatcher Department the information on the results of implementing the production plan for the past twenty-four hours and since the beginning of the month by units, directions of production as well as by the entity in the sphere on the whole. At the same time the following information is provided: implementation of the production plan in terms of value, implementation of the plan for the product output, implementation of the plan for promoting the technological readiness of orders, etc.

The initial data for solving the problem are generated in Production and Dispatcher Department of the entity, Planning and Distribution Bureaus of the units and Department of Functionally Advanced Systems for Strategic Control of the Regional Structure and Territorial Organization in the Agri-Food Sphere. Different forms of documents acting in territorial-production systems serve as input documents.

A nomenclative plan-report of the unit as for/for the date (period) is provided by Production and Dispatcher Department once before the beginning of the covered and researched period (month). Under current conditions of solving the problem, the direction is indicated on the first page of the form after the unit number. Every form is prepared by employees of Production and Dispatcher Department and signed by the works foreman of Production and Dispatcher Department and by the head of Production and Dispatcher Department. Then these forms sorted by the development directions and in ascending order of the unit numbers within them are sent to Department of Functionally Advanced Strategic Systems for Control of the Regional Structure and Territorial Organization in the Agri-Food Sphere. The information received is used to form accumulation of the production plan for units for the past month and for twenty-four hours.

At the end of every working day a daily report about implementation of the production plan and production timetable for the period signed by the head of Planning and Distribution Bureau and the head of the unit is sent from Planning and Distribution Bureau of the units to their subscriber stations.

To solve the problem, concentration of units' indicators since the beginning of the month and for the previous twenty-four hours is used.

As a result of solving the problem, the intermediate conglomerate of indicators of the units in terms of orders, complex data-out of the production plan implementation by units for twenty-four hours and since the beginning of the month and series of indicators of the production plan implementation by the territorial production system in terms of orders since the beginning of the month, as well as part of the data of the units' indicators since the beginning of the

month are obtained. All output named sets of similar variables are stored only until next calculation.

The abstract type of data indicators of the production plan implementation by the territorial production system in terms of orders since the beginning of the month is used to issue the following output forms: a summary report on the production plan implementation by the entity in the sphere in terms of the development directions as of the date; a summary report on the units that have not fulfilled the plan for the given period; a summary report on the progress of the technological readiness of orders by the units as of the date; a summary report on the production plan implementation by a unit in terms of orders as of the date.

One output form – a summary of the progress of technological readiness of orders by the territorial production system as of the date is issued from the interface to the data storage.

All of these forms are issued to an alphanumeric printing device and sent to Production and Dispatcher Department. In addition, the forms are intended for the director of the territorial-production system and are shown on the display on demand. The software for the task is based on Delphi, PL/I, Fortran, Visual Basic, SQL, C ++, and 1C languages. The structure of the task should include programs running on demand and restoring the output forms mentioned above. The task is solved every day. The units bring their reports at the end of the working day and give the output forms next morning. Depending on the user's request either all the forms are issued or any of them. The task of daily monitoring the production plan implementation by the entity in the sphere is informationally connected with other tasks of the monitoring subsystem. In particular, there is a connection between the task of monitoring the use of the wages fund and the operational monitoring unit, the task of monitoring the plan implementation in terms of production and nomenclature of the intraeconomic monitoring unit and the task of monitoring the plan implementation and finished product dynamics in the unit of periodic monitoring of the sphere entity activities. This problem is also informationally related to subsystem tasks of operative regulation of productive work.

The general scheme of any actions for solving the daily monitoring task of implementing by the territorial-production system its production plan consists of several stages: **Stage 1.** Calculation of the production plan for the units for month and for twenty-four hours. **Stage 2.** Calculation of the plan implementation for units since the beginning of the month and for twenty-four hours. **Stage 3.** Calculation of the progress of technological readiness of orders.

Figure 1 presents an enlarged block diagram of successive stages of the modern functionally advanced solving of the daily monitoring task of implementing the production plan by the territorial-production system.

The calculation of accounting and economic as well as analytical indicators in the task is carried out by computing the percentage of the plan implementation in terms of production and economic indicators for twenty-four hours and since the beginning of the month, and also finding the

deviation of the actual level of the plan for the given periods in absolute values, in percentage terms.

Operational monitoring of the plan implementation for the units and the entity is very important and time-consuming work. Exercising operational monitoring by traditional methods leads to the fact that the staff receives information about the progress of production behind time, which reduces the possibility of influence on the production process, etc.

CONCLUSIONS

Solving the daily monitoring task of implementing the production plan by the territorial-production system with the help of electronic digital machines and using subscriber stations as main devices for data collection and logging allows: to reduce the time of processing and obtaining accounting and economic as well as analytical information; to reduce the complexity of calculations; to improve the liability and quality of monitoring; to systematically control the plan implementation and take measures in order to eliminate the backlog; to calculate production and economic plans for the units for next twenty-four hours with regard to their implementation for the given twenty-four hours. The prospect for further research is solving the given problem on the basis of a more complete regulation (system of rules) allowing to obtain operational accounting and economic as well as analytical information about the causes of deviations during the implementation of the production and economic plan, etc. ■

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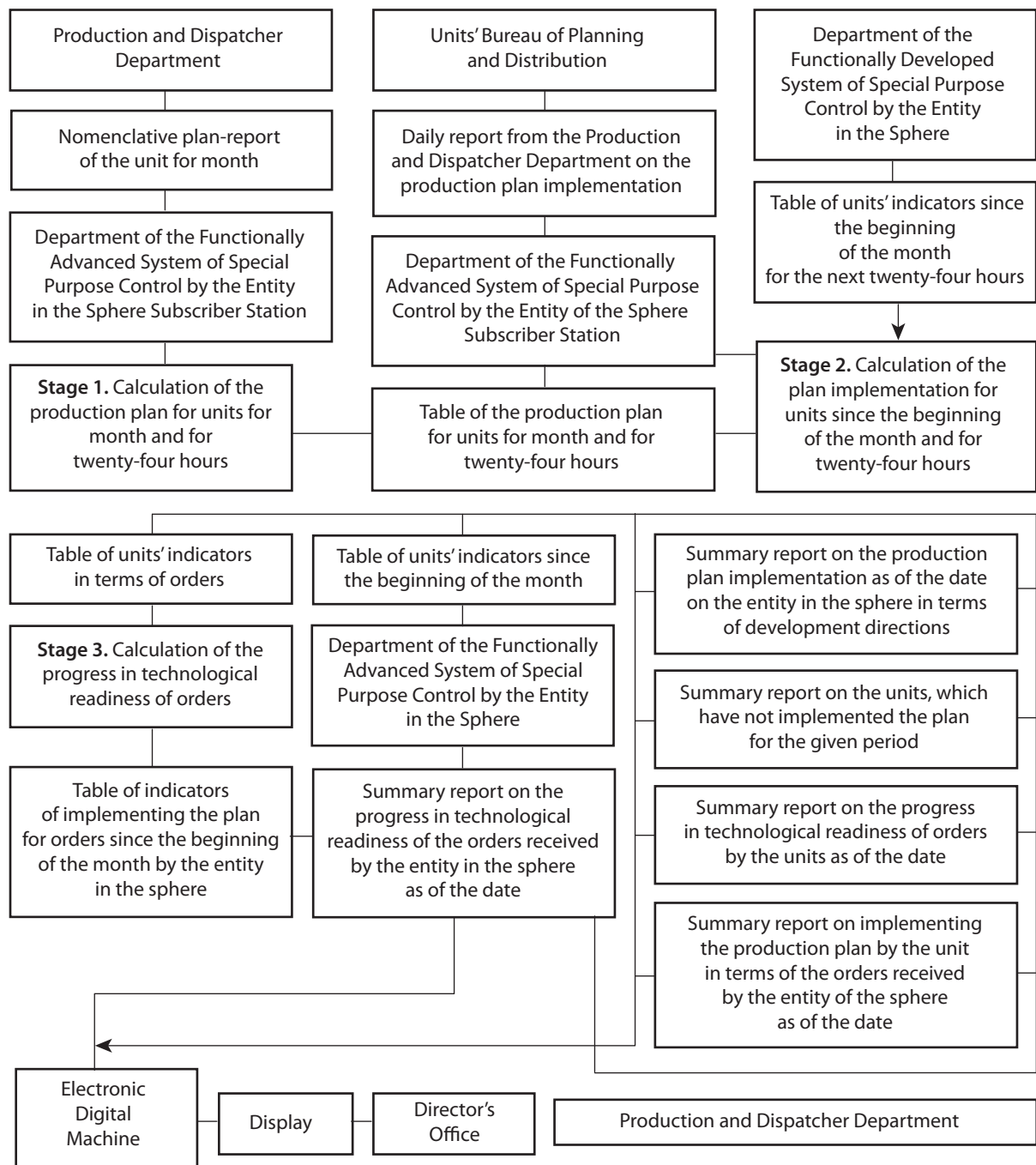


Fig. 1. The enlarged block diagram of successive stages for the modern functionally advanced solving of the daily monitoring task of implementing the production plan by the territorial-production system

Source: developed by the author.

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УДК 336.225.6:330.59

ФІНАНСОВА ПОЛІТИКА ДЕРЖАВИ В МОЛОЧНО-ПРОДУКТОВОМУ ПІДКОМПЛЕКСІ АПК: ПЕРСПЕКТИВИ ТА НЕДОЛІКИ

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УДК 336.225.6:330.59

Найденко О. Є., Белосвет О. В. Фінансова політика держави в молочно-продуктовому підкомплексі АПК: перспективи та недоліки

Метою статті є визначення особливостей реалізації фінансової політики держави в молочно-продуктовому підкомплексі АПК та коригування її напрямів з урахуванням сучасного стану виробництва молока та молочної продукції в Україні. Розглянуто причини скорочення виробництва та споживання молочної продукції. До таких можна віднести диспаритет цін між виробниками сировини та переробними підприємствами, незадовільна селекційна робота в молочному скотарстві, що призводить до зниження ефективності виробництва за рахунок зростання собівартості продукції. Проаналізовано світові тенденції фінансової політики держави в молочно-продуктовому підкомплексі АПК. Визначено, що структура експорту української продукції на зовнішні ринки потребує коригування. Перспективним у цьому напрямі є ринок сухого молока Китаю, на якому за останній час спостерігається стійка тенденція до зростання.

Ключові слова: фінансова політика держави, державна підтримка, молочно-продуктовий підкомплекс, молоко, молочно продукція.

Рис.: 3. **Табл.:** 6. **Формул.:** 3. **Бібл.:** 9.

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УДК 336.225.6:330.59

Найденко А. Е., Белосвет А. В. Финансовая политика государства в молочно-продовольственном подкомплексе АПК: перспективы и недостатки

Целью статьи является определение особенностей реализации финансовой политики государства в молочно-продовольственном подкомплексе АПК и корректировка ее направлений с учетом современного состояния производства молока и молочной продукции в Украине. Рассмотрены причины сокращения производства и потребления молочной продукции. К таковым можно отнести диспаритет цен между производителями сырья и перерабатывающими предприятиями, неудовлетворительную селекционную работу в молочном скотоводстве, что приводит к снижению эффективности производства за счет роста себестоимости продукции. Проанализированы мировые тенденции финансовой политики государства в молочно-продовольственном подкомплексе АПК. Определено, что структура экспорта украинской продукции на внешние рынки нуждается в корректировке. Перспективным в этом направлении является рынок сухого молока Китая, на котором в последнее время наблюдается устойчивая тенденция к росту.

Ключевые слова: финансовая политика государства, государственная поддержка, молочно-продовольственный подкомплекс, молоко, молочно продукция.

Рис.: 3. **Табл.:** 6. **Формул.:** 3. **Библ.:** 9.

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UDC 336.225.6:330.59

Naydenko O. Ye., Belosviet O. V. Financial Policy by the State in the Dairy Foods Subcomplex of Agrarian-Industrial Complex: Opportunities and Shortcomings

The article is aimed to determine specifics of implementing financial policy by the State in the dairy foods subcomplex of AIC and adjustment of its directions in view of the current status of production of milk and dairy products in Ukraine. The causes of reducing the production and consumption of dairy products have been considered. These could include price disparities between producers of raw materials and processing enterprises, poor work in breeding the dairy cattle, resulting in reducing production efficiency by increasing the cost of production. Global trends of financial policy by the State in the dairy foods subcomplex of AIC have been analyzed. It has been determined that structure of exports of Ukrainian products to external markets needs to be adjusted. Promising in this direction can be the market of milk powder in China, which presently experiences a steady tendency to growth.

Keywords: financial policy of the State, public support, dairy foods subcomplex, milk, dairy products.

Fig.: 3. **Tabl.:** 6. **Formulae:** 3. **Bibl.:** 9.

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