DOI: http://dx.doi.org/10.34069/AI/2020.27.03.35

Accounting agricultural business from scratch: management accounting, decision making, analysis and monitoring of business processes

Сельскохозяйственный бизнес с нуля: управленческий учет, принятие решений, анализ и мониторинг бизнес-процессов

Received: January 15, 2020 Accepted: February 25, 2020

Written by:
Gamlet Y. Ostaev[108]
Spin-code: 3674-4120
https://orcid.org/0000-0003-0869-7378
Alexey A. Shulus[109]
Spin-code: 2424-1486
https://orcid.org/0000-0002-6419-1550
Marina V. Mironova[110]
Spin-code: 7142-6988
https://orcid.org/0000-0003-4961-7098
Yevgeny V. Smolin[111]
Spin-code: 2577-0572
https://orcid.org/0000-0003-2787-9214

Abstract

The article reveals the key points of accounting and management actions when creating an agricultural business from scratch for growing seedlings of vegetables in a greenhouse. The main economic instruments for creating an agricultural business for growing vegetable seedlings in a greenhouse in Russia are: planning, management, accounting, organization, analysis and monitoring of business processes. Today, the state is increasingly focusing on the development of the industry, helping beginners and existing farmers, allocating land at preferential rates, subsidizing interest rates on loans and providing grants for the development of greenhouses. However, the main problem holding back the development of the industry remains high utility tariffs. One of the main conditions for obtaining reliable management information on business value is a clear definition of the costs incurred to create a business from scratch and its further sustainable development.

Аннотация

Статья раскрывает ключевые моменты учетно-управленческих действий при создании сельскохозяйственного бизнеса с нуля по выращиванию рассады овощей в теплице. Основными экономическими инструментами при создании сельскохозяйственного бизнеса по выращиванию рассады овощей в теплице в России являются: планирование, управление, учет, организация, анализ и мониторинг бизнес процессов. На сегодняшний день государство все больше концентрирует внимание на развитие отрасли, помогая начинающим и действующим фермерам, выделяя земельные участки по льготным ставкам, субсидируя процентные ставки по кредитам и предоставляя гранты на развитие тепличного хозяйства. Однако главной проблемой, сдерживающей развитие отрасли, остаются высокие тарифы на коммунальное обеспечение. Одной из основных условий получения достоверной управленческой информации о стоимости бизнеса – чёткое определение понесенных затрат на создание

[108] Candidate of Economic Sciences, Associate Professor of Accounting, Finance and Audit, Izhevsk State Agricultural Academy
[109] Doctor of Economic Sciences, Professor of the Department of Economics, head of the research Department, Institute of international economic relations
[110] Candidate of Pedagogical Sciences, Associate Professor of the Department of Economic Cybernetics and Information Technologies, Izhevsk State Agricultural Academy
[111] Candidate of Economic Sciences, Associate Professor, Department of management, Institute of international economic relations

The aim of the study is to develop management accounting criteria for organizing a business from scratch. The subject of the study is management accounting as an integrated mechanism in terms of creating and developing an agricultural business from scratch.
In accordance with this goal, the main task was determined: to develop managerial decisions to create an agricultural business (greenhouse) for growing seedlings of vegetables for its implementation in the Udmurt Republic. It is concluded that achieving high profits is possible with a competent managerial approach, taking into account the further expansion and cultivation of other seedling crops, despite the complexity and specificity of this type of activity.

Key Words: business from scratch, management accounting, monitoring, planning.

Целью исследования является выработка критерии управленческого учета при организации бизнеса с нуля. Предметом исследования является управленческий учет как комплексный механизм в части создания и развития сельскохозяйственного бизнеса с нуля.
В соответствии с указанной целью была определена основная задача: выработать управленческие решения по созданию сельскохозяйственного бизнеса (тепличного хозяйства) по выращиванию рассады овощей для ее реализации в Удмуртской Республике. Сделан вывод о том, что, несмотря на сложности и специфику данного вида деятельности, при грамотном управленческом подходе с учетом дальнейшего расширения и выращивания других культур рассад, возможно достижение высокой прибыли.

Ключевые слова: бизнес с нуля, мониторинг, планирование, управленческий учет.

Introduction

In the current economic situation, effective management accounting of the activities of any agricultural organization involves regular monitoring, using a whole range of traditional and innovative management tools (Alborov, Kontsevaya and Klychova, 2017).

At the present stage of economic relations, the success of any agricultural business largely depends on management accounting, which should indicate the advantages, novelty and main features of the business that distinguish it from competitors. In the conditions of the modern market, the need for a study of the theory and practice of managerial accounting and its features is increasing.

Among the created variety of agricultural organizations, the most important is the determination of priorities in improving their own business in order to increase its efficiency and uniqueness.

Under the current realities of a market economy, only that agricultural business can count on success in this uncompromising struggle, which uninterruptedly monitors the market situation, makes a forecast of the situation and makes operational and correct management decisions based on these measures, including the introduction of a new business with zero.

Management accounting in business in modern times should be one of the mechanisms of stability and profitability of economic entities (Ostaev, Klychova and Sokolova, 2019). The problems of managerial accounting are highlighted in the works of domestic scholars of economists (Alborov, Kontsevaya and Klychova, 2017; Alborov, Knyazeva and Kontsevaya, 2012; Alborov and Kontsevaya, 2017; Ivashkevich, 2018; Ivashkevich, 2017; Lyubanova and Myasoedova, 2017; Sukhova, and Chernova, 2016; Khoruzhiy, 2019; Alborov, Kontsevaya, Klychova, and Kuznetsov, 2017; Kontsevaya, Alborov, Kontsevaya, and Makunina, 2019). The contribution of these authors to the development of the theory and practice of management accounting in Russia is very significant. Considerable experience has been accumulated in management accounting, however, management accounting in the field of accounting and management actions in business from scratch has its own characteristics, therefore this technique requires development.

It is advisable when starting a business from scratch in the management accounting system: use indicators reflecting the impact on the economic, social and environmental components of sustainable business development; apply indicators for the calculation of which special information is required; use indicators that take

into account the specifics of the agricultural industry.

The object of the study is management accounting for the purposes of organizing, planning and commissioning an agricultural (greenhouse) business form scratch.

Literature review

The development of management accounting has been significantly influenced by the development of information technology, and the ever-increasing need for information in the management system.

The concept of management accounting is debatable, many authors interpret management accounting in different ways, identify areas of coverage, purpose, goals and objectives.

"... Management accounting is an area of knowledge and activity related to the formation and use of economic information for management within an economic entity (enterprise, company, bank, etc.)" (Ivashkevich, 2018).

"… Management accounting is a part of accounting that systematizes information for operational management decisions and coordination of problems of the future development of an organization" (Alborov, Kontsevaya and Klychova, 2017).

"...The goal of management accounting is to help managers (managers) in making economically sound competent decisions" (Ivashkevich 2019). "...The essence of management accounting is based on two important points; firstly, it allows substantiating current and perspective management decisions, and secondly, it is a combination of systematic and problem accounting" (Alborov, Knyazeva and Kontsevaya, 2012).

"... Management accounting is a subsystem of accounting, which within the framework of one organization provides its managerial staff with the information used for planning, actually managing and monitoring the organization's activities." (Lyubanova and Myasoedova, 2017). "... The main goal of management accounting is the information and analytical support of managers of economic entities on the costs and results of activities of both the entire organization and its individual structural units for them to make operational, tactical and strategic management decisions") Alborov, Kontsevaya, Klychova, and Kuznetsov, 2017).

"... Management accounting is an enterprise management system using the functions of control, analysis, for the purpose of making management decisions" (Sukhova, and Chernova, 2016).

"... The purpose of management accounting is to satisfy internal information needs of managers of all levels of management" (Alborov and Kontsevaya, 2017).

"... Financial accounting is an essential component of management accounting and the system of managing the activities of organizations. An important task of accounting in the on-farm agrarian sector is information support and modeling of social transformations" (Khoruzhiy, 2019).

"... In the conditions of a market economy, the requirement of completeness of the characteristics of the controlled object and its external environment is of great importance in the control system. This requirement should be the initial condition for the formation of information in management, as well as the organization of its collection and processing." (Kontsevaya, Alborov, Kontsevaya, and Makunina, 2019).

Studies of many economists in the current state of organizations and accounting arrangements in agricultural organizations, there is a significant lack of information, its lag, and on the other hand, most of the information presented by the system of all economic accounting is absolutely useless for managing the organization. The specifics and technological features of agricultural production require special attention to the organization of management accounting.

Methodology

During the study, a descriptive method was used, which is a system of procedures for collecting, primary analysis and presentation of data and their characteristics. Thus, we can distinguish a new generalized direction of management accounting.

Management accounting is a business owner's planned form of studying and transmitting information, distributed using specially selected means and communication channels, aimed at a specific target audience in order to present and

promote the business (ideas, finished products, goods and services).

The concept of "management accounting" is multicomponent. Management accounting includes a wide range of components, on the basis of which a complex of effective management decisions is developed.

In order to improve managerial accounting in agriculture and develop effective management decisions using innovative tools, the following methodological approaches inherent in managerial accounting should be applied (Figure 1).

All of these management approaches reflect the different aspects of making effective management decisions.

Management accounting in its essence is, first of all, an instrument of the whole business mechanism, therefore, it is necessary to clearly assess its need and impact on management decisions.

We can conclude that management accounting is a system of interconnected management activities that have a common strategy, budget, focused on the same problem (a set of problems) and using different channels for studying and providing information to achieve a specific management goal.

The success of management accounting, as an instrument of the entire business mechanism of an economic entity, is currently determined by three main factors: focus; systematic nature; and clearly defined quality of providing information for decision-making purposes. This can be achieved only with the help of a full analysis and development of all stages of activities for the development of management accounting strategies.

Equally important in management accounting is monitoring and analysis of consumer characteristics, while promoting their finished agricultural products, services (Ivashkevich, 2018; Ivashkevich, 2017).

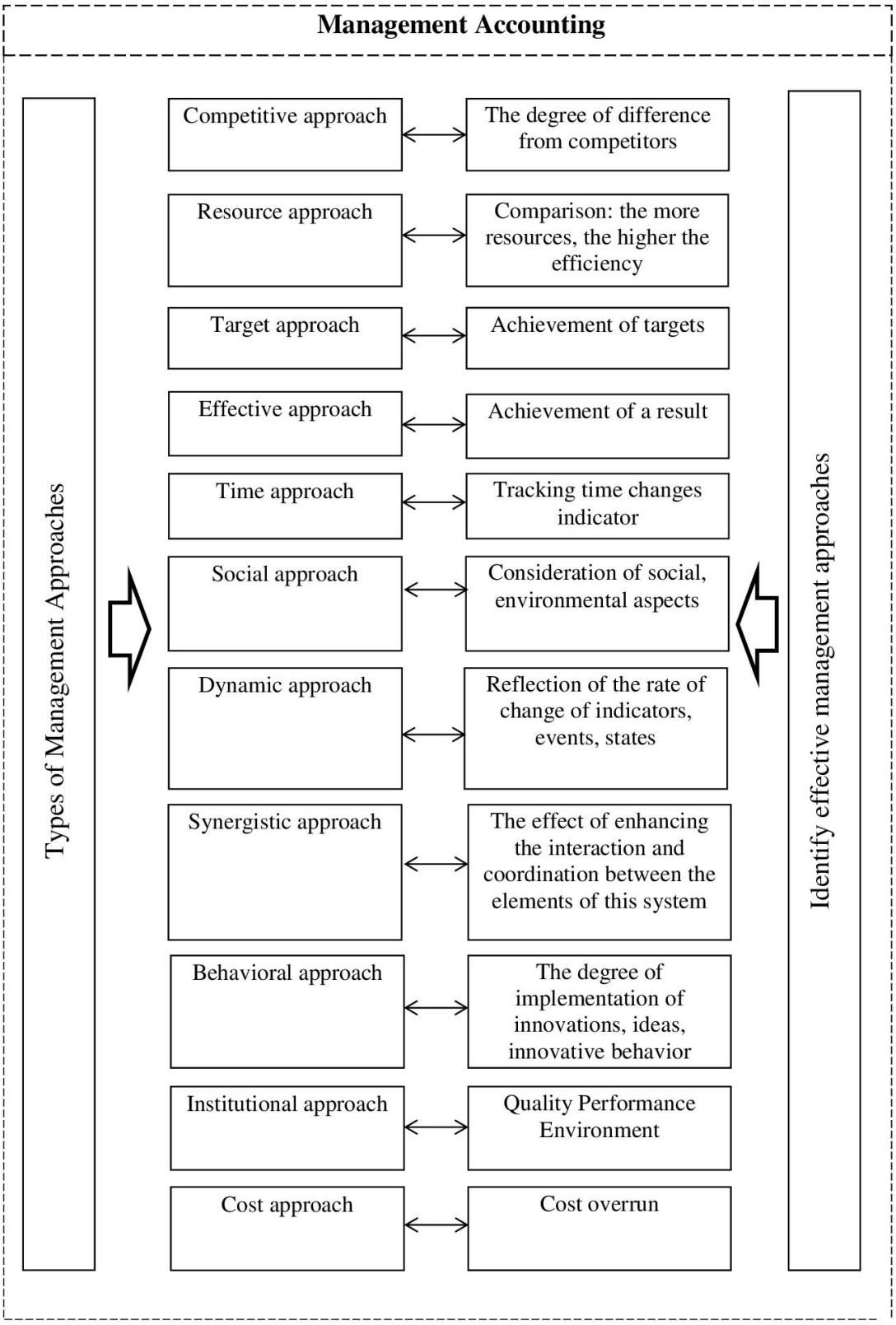

Figure 1 - Management approaches for the development of effective solutions (authoring)

Management accounting should have all the tools and mechanisms to meet the information needs of users at all levels of management for the purpose of making management decisions, including when organizing a new business for an economic entity from scratch.

However, it should be noted that management accounting should model and simulate forecast data as necessary for the purpose of creating a business from scratch and its sustainable development.

We understand the sustainable development of the agricultural business as the process of irreversible regular change in the interrelated economic, environmental and social components of the enterprise, due to the action of external and internal factors, aimed at achieving a new sustainable state. This is a process that happens all the time regardless of business. At the same time, the sustainable development of the agricultural business is strategic, since the achievement of medium-term and long-term goals of its activity is carried out in its process (Ostaev, Klychova, Sokolov and Mukhamedzyanov, 2019).

Starting a business from scratch requires certain economic and managerial steps and solving problems (table 1).

Table 1- Economic and managerial steps and solving managerial problems

No	Economic and managerial steps	Management tasks
1.	Business implementation	Improving the efficiency of using business resources
2.	Business systematization	Ensuring coordination of activities and ensuring the interconnection of interests of the business as a whole
3	Business forecasting	Analysis and evaluation of various options for business activities of the business and improving the soundness of management decisions
4	Business improvement	Ensuring financial stability and improving the financial condition of the business

● Compiled by the authors

The economic and managerial steps and the solution of managerial tasks is designed to identify the specifics of business processes, so it is very important to correctly formulate a system of business benchmarks and targets (Ostaev, Klychova and Nekrasova, 2018).

Growing seedlings of vegetable crops in greenhouses in the modern world is becoming more and more popular, as buyers who have summer cottages and gardens, less and less want to grow seedlings on their own, but want to receive high-quality products in the future. The task of the modern greenhouse complex is to produce high-quality seedlings with the creation of optimal agroecological conditions. Many factors should be considered for this. One of the most important factors is the choice of variety. The variety that is most suitable for the growing region, such as a greenhouse, etc., must be chosen among a huge variety. Many vegetable crops (tomato, pepper, cucumber) are heat-loving plants by their origin, so it is problematic to grow them without using protected soil.

Soil with a sufficient supply of necessary nutrients is used to grow seedlings of vegetables. When seeds germinate, a high temperature is needed; the seeds germinate faster at + 20 ... + 25 ° C. The substrate also plays an important role. To make a decision, the agronomist weighs all the pros and cons and finds the best option. Issues of watering and plant nutrition require a competent approach, since it is very important to provide plants with water and nutrients during the growth period. For this, it is necessary to know the physiology of plants and possess agrochemical knowledge (Akhiyarov, Ismagilov and Nugmanov, 2016).

Various types of fertilizers can be found on the market today and pick them up for a specific case.

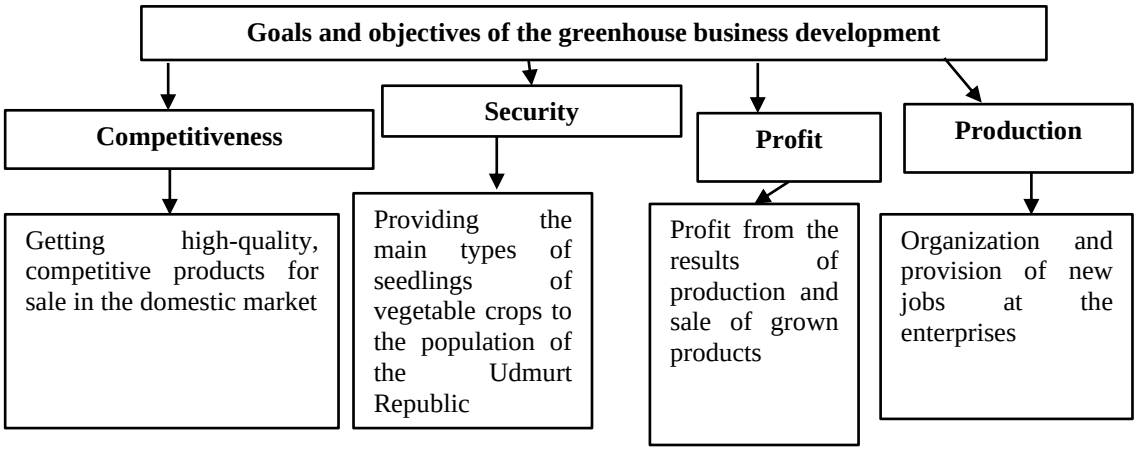

Figure 2 - Goals and objectives of the development of management accounting when organizing a business from scratch (compiled by the authors)

The terms and main stages of management accounting for the implementation of a business from scratch are as follows: the start of a project begins after receiving borrowed capital (Ostaev, Khosiev and Klychova, 2018).

The following is the development of management accounting solutions to achieve the goal when developing a greenhouse business from scratch:

- the acquisition of the site and its fence;
- the construction of a greenhouse complex with engineering and "turnkey" technological equipment;
- the acquisition and procurement of basic and auxiliary materials for production (working capital for seeds, fertilizers, etc.
- the beginning of production and production of the greenhouse complex.

When developing management decisions, preparatory stages of activity and technical characteristics were determined:

1. *Installation of a greenhouse for growing seedlings of vegetables.* The length of the greenhouse is 16 m, the width is 18 m, the total area is 256 sq.m. The set of equipment for the greenhouse complex includes the following main components: storage tank with pump; evaporative humidification and cooling system; set of transport carts for transporting seedlings.

The greenhouse provides for automatic regulation and maintenance of the optimal microclimate necessary for the germination, growth and development of plants and the mechanization of basic work during preparation and operation.

2. *Preparation of the substrate.* When organizing the soil 7 days before sowing, the substrate should be moistened, avoiding overmoistening and maintained at a temperature of 20-24 ° C.

Peat based substrate is considered the best for sowing. Peat should not contain a lot of salts, since excess salts inhibit the growth of roots in seedlings.

3. *Sowing and growing seedlings.* Plants are grown in pots with a diameter and height of 5 cm, the bottom of which has holes. Before sowing, the cassettes are washed and processed in a weak solution of potassium permanganate, dried. Further, the pots are manually stuffed with peat, moistened with water and the seeds are sown directly. Sown seeds fall asleep depending on the size and light requirements for germination. The same substrate is used as a powder.

After sowing, a critical period of seed germination begins. For germination, the seeds provide light. Crops are covered with a film that maintains moisture well, but does not provide dark conditions for germination. Shelter with

non-woven material, which allows air and water to pass, gives the best results.

Seedling care includes: spraying and watering; loosening and fertilizing the soil; regular inspection for any diseases, as well as the destruction of harmful organisms using insecticides.

The temperature in the greenhouse is maintained within: during the day 21-22 ° C; at night 17-18 ° C; relative humidity of 70-75% (Andreev, 2017).

To determine the competitiveness and viability of the business from scratch, the market was investigated.

Monitoring the situation on the market of the Udmurt Republic showed:

1. Competition in the seedling growing market is practically negligible.
2. Some agricultural producers grow seedlings for their own needs, mostly of very low quality, there are also several farms specializing in growing seedlings, often also of poor quality.
3. Since seedling producers do not face serious competition, they can maximize profitability and shift unreasonable costs to consumers.
4. Free sale of vegetable seedlings on the market should compete with existing seedling producers for planting seedlings for summer planting of cucumbers, tomatoes, peppers and cabbage at the end of May.

Since the external and internal environment change under the influence of business activities in a changing environment, it is necessary to identify and correlate the limitations and opportunities, strengths and weaknesses of the business (Ostaev, Klychova and Sokolova, 2018).

Table 2- SWOT analysis of the definition of strengths and weaknesses of the business

Name	**Strengths**	**Weaknesses**	**Opportunities**	**Threats**
Vegetable seedlings	-attracting customers through the organization of targeted delivery of products; - saving money on product deliveries due to a more favorable location; - advantageous location: the availability of inexpensive raw materials, labor; - lower price due to lack of rent; - higher quality and lower price due to the use of high-tech equipment and technology.	- it is necessary to increase the volume of production space (construction) - it is necessary to additionally purchase equipment - additional staffing required	- creating your own brand and business development opening branches in other regions	- lack of profit in the first months of work - financial crisis

- Compiled by the authors

The economic efficiency of management accounting reflects its impact on the whole range of economic indicators, and implies an assessment of the economic feasibility of investments made (Sukhova, and Chernova, 2016.)

One should also consider the possible risks inherent in agriculture in order to make managerial decisions. One of the main disadvantages of growing seedlings is seasonality. Prices are reduced in the summer due to intense competition. In the cold season,

their cost becomes higher, but the demand for them is almost disappearing.

Also, one of the most important risks is the threat of non-germination of seeds. To prevent this, it is necessary to purchase high-quality seeds that have passed stratification. When buying seeds, you should pay attention to the expiration date. The correct storage conditions should also be created. Given all these factors, seed germination will increase.

Results and discussion

An indicator in management accounting is also market stability, which characterizes the competitiveness of the agricultural business (enterprise, organization) in the market. This indicator reflects the totality of marketing strategies, namely: obtaining accurate and objective information about demand, reducing the risk of irregularity in receiving orders, increasing the rating of the agricultural business (enterprise, organization), as well as studying the market capacity and competition. In management accounting, the objects of analysis of market stability will be the following: sales and turnover; business position relative to competitors; marketing costs (Ostaev, Khosiev and Kallagova, 2018).
The main consumers of seedlings will be local residents of the Udmurt Republic, as well as institutions that are ready to place orders for high-quality seedlings of vegetables. It is assumed that the manufactured products will be sold mainly on their own.

To increase the demand for the goods sold, it is possible to put up announcements, place an advertisement in the newspaper about the sale of seedlings, and also inform friends. The costs will be: an advertising banner (3x6 m) - 17,270 rubles, a banner extension - 2,000 rubles, an advertisement in the newspaper "Success for everyone" (5x10 cm) - 3,300 rubles.

In addition, management accounting takes into account investment sustainability (stability), which is manifested in the ability of the economic entity to financial recovery and expanded reproduction, taking into account risk factors and uncertainty in investments.

Organizational sustainability for management accounting purposes should reflect the effectiveness of labor organization, production organization.

The planned business from scratch is initially designed for a relatively small greenhouse complex with further expansion, for which six employees are planned to be hired. At the same time, the following personnel should be hired: accountant, agronomist, driver, security guards.

Table 3 - Salary and number of employees

No	Employee	Number of people	Salary, rubles / month	Amount, rub.
1	Accountant	1	35 000	35 000
2	Agronomist	1	30 000	30 000
3	Driver	1	20 000	20 000
4	Security guard	3	15 000	45 000
5	Total	**6**	**-**	**130 000**

- Compiled by the authors

The cost of paying wages to employees amounted to 130,000 rubles per month for 6 employees. In the future, it is planned to increase the number of employees with a subsequent increase in wages.

Production and technical stability in management accounting characterizes the presence of the agricultural business (enterprise, organization) of such a production potential that is able to provide a break-even volume of production. The production sustainability of the agricultural business (enterprises, organizations) is evaluated by the production and technical potential.

A financial plan (budget) must be drawn up to develop managerial decisions in management accounting. Prices and varieties of seedlings of vegetables that are planned to be grown, and a plan of monthly income and expenses should be studied for these purposes.

Table 4 - a List of purchased varieties of cultivated seedlings of vegetables

No	Products	Volume of purchase	Price	Calculation
1	Onion senchik	10 kg	80	80*10=8000
2	Red onion	10 kg	18	18*10=1800
3	Bulb onions	10 kg	16	16*10=1600
4	Tomato "striped chocolate"	20 packs (10 pcs.)	95	95*20=1900
5	Tomato "Mongolian dwarf"	20 packs (10 pcs.)	95	95*20=1900
6	Cherry Tomato	20 packs (10 pcs.)	60	60*20=1200
7	Cucumbers "Annushka F1"	20 packs (10 pcs.)	38	38*20=760
8	Cucumbers "Chinese Snake"	20 packs (12 pcs.)	22	22*20=440
9	Cucumbers "Matilda"	20 packs (12 pcs.)	20	20*20=400
10	White cabbage "June"	2 packs (150 pcs.)	16	16*2=32
11	Cabbage"	10 packs (50 pcs.)	34	34*10=340
12	Cauliflower"	10 packs (50 pcs.)	30	30*10=300
13	Sweet red pepper "Giant"	10 packs (20 pcs.)	18	18*10=180
14	Red sweet pepper "Jack"	10 packs (20 pcs.)	12	12*10=120
15	Sweet yellow pepper "Golden barrel"	10 packs (20 pcs.)	14	14*10=140
16	**Total**			**19 112**

- Compiled by the authors

Table 4 presents the varieties of seedlings grown and seed purchases. The highest seed prices are tomato prices. Sweet pepper prices are mostly low. On average, the cost of seeds of vegetable crops range from 15 rubles and above.

In our opinion, a quick and optimal managerial decision making, taking into account income and expenses, certain specific market conditions, is the primary task during the development of the plan.

Table 5 - Plan (budget) of monthly income and expenses, thousand rubles

No	Name of indicator	Сумма
1	**Income - total (2)**	**500 000**
2	Revenues from the sale of crop production	500 000
3	**Operating expenses - total (4 + 5 + 6 + 7 + 8 + 9)**	**167 882**
4	Payroll fund with accruals	130 000
5	Seeds	19 112
6	Mineral fertilizers	3000
7	Water consumption	1200
8	Substrate	10 000
9	Overalls and materials	12 000
10	Advertising	22 570
11	**Depreciation of fixed assets**	**32 000**
12	**Profit (loss) from sales (2-3-11)**	**300 118**
13	Loan interest	80 800
14	**Profit (loss) before tax (12-13)**	**219 318**
15	Income tax (income)	60 024
16	**Net profit**	**242 118**
17	**Return on sales,%**	**297,8**

- Compiled by the authors

From the data in table 5 it is seen that the planned monthly revenue will amount to 500,000 rubles.

The costs will amount to 167,882 rubles, the largest part of the costs is the payroll and advertising costs. Profit from sales per month is 300 118 rubles. Profit before tax is 219,318 rubles. The net profit of our business (enterprise) will amount to 242 118 rubles. The profitability of the organization is 297.8%, which means an increase in prices and a change in cost standards. To implement this project, we will need borrowed funds for financing. Management decisions should be made promptly, which will allow developing specific mechanisms for managing the loan capital of the agricultural business.

Table 6 - Borrowed capital for the agricultural business

Name	Date	Loan amount, rub.	Duration, months	Rate, %
Credit	01.02.2020	12 000 000	36	9

Business financing is carried out at the expense of borrowed capital in the amount of 12,000,000 rubles. We intend to take this loan to Rosselkhozbank for a period of 3 years at 9% per annum.

The stages of the project should be reduced mainly to the study of all costs, including technological nature.

Table 7 - Estimated water consumption for irrigation (Akhiyarov, Ismagilov, Nugmanov, 2016)

No	Products	Watering rate liter per 1 square. m	Sowing area, sq. m	Water consumption, l
1	Tomatoes	4	6	24
2	Cucumbers	5	6	31
3	Peppers	2	6	12
4	Cabbage	5	12	60
5	Bow	5	12	60
6	**Total**	-	-	**187**

Daily water required for watering plants is 187 liters. Monthly water consumption will be 5,610 liters. (5.61 cubic meters).

The next area of business development from scratch is the choice of taxation of the agricultural business. In our case, a simplified tax system (STS) is suitable. Keep in mind that STS rates are 15%, and 6%.

We make a control (preliminary) calculation of taxation.

1) STS 15% (income - expenses)
500 000 - 167 882 = 332 118 rubles.
332 118 * 15% = 49 818 rub.
2) STS 6% (income)
500,000 * 6% = 30,000 rubles.

Based on the above calculations, it is clear that with a simplified tax system of 6% the tax amount is less, therefore, the organization will use the object of taxation.

Payback period = Investment size / Net annual profit
12 550 000/2 905 416 = 4 years 4 months.

The planned profit from this business project will be 2,905,416 rubles by the end of February 2021. In March 2022, borrowed capital in the amount of 12 million rubles will be closed. Every month, the business pays 350,000 rubles as a loan debt. According to the calculations, the costs of starting a business (enterprise) will pay off in 4 years 4 months. The company will be in tax

regime - STS 6% and the amount of tax per month amounted to 30,000 rubles.

Acceptance of grown seedlings should be carried out on account 43 “Finished products” at the planned cost during the year with bringing to the actual at the end of the year.

Analytical accounting in greenhouse enterprises should be carried out in the development of synthetic accounts for accounting the costs of seedling production. In particular, accounting for the development of synthetic account 20 “Main production” is carried out in the context of calculation articles and the place where technological work is performed.

The debit of the account reflects the direct material, labor, financial costs of growing seedlings of vegetables in the greenhouse, and the costs of maintaining the greenhouse, and the management of the greenhouse enterprise, which should first be taken into account in the relevant accounts. For the credit of account 20 “Main production”, the actual production cost of greenhouse products accepted for accounting is reflected.

Table 8 - Business operations to account for the costs of growing seedlings of vegetables in a greenhouse

No	**Business operations**	**Offsetting accounts**	
		Debit	**Credit**
1	Mineral fertilizers were written out from the warehouse for the care of seedlings of vegetables	20/1 “Main production” sub-account “Crop production” 10/2 “Materials”, sub-account “Fertilizers, plant and animal protection products”	20/1 “Main production” sub-account “Crop production” 10/2 “Materials”, sub-account “Fertilizers, plant and animal protection products”
2	Organic fertilizers for caring for vegetable seedlings released	20/1 “Main production” sub-account “Crop production” 10/2 “Materials”, sub-account “Fertilizers, plant and animal protection products”	20/1 “Main production” sub-account “Crop production” 10/2 “Materials”, sub-account “Fertilizers, plant and animal protection products”
Note: *In order to receive annually stable seedlings of vegetables in greenhouse enterprises, seedlings must be fertilized. Organic, mineral fertilizers and trace elements are added under seedlings. Manure, humus, peat compost, bird droppings are most often used from organic fertilizers in greenhouse enterprises.*			
Note: *The main types of mineral fertilizers in greenhouse enterprises are: nitrogen, phosphorus and potash. The most common nitrogen fertilizers used as fertilizers in greenhouses include: ammonium sulfate, ammonium nitrate and urea. From phosphoric mineral fertilizers, it is necessary, first of all, to single out simple superphosphate, double superphosphate, granular superphosphate, as well as phosphorite flour and precipitate. Potassium chloride, potassium sulfate and potassium salts from potash fertilizers are widely used. The use of complex fertilizers in granules also gives good results.*			
3	Overalls for the production needs of the greenhouse were issued	20/1 "Main production" sub-account "Crop production"	10/11 Materials ", sub-account" Inventory and household supplies

4	Various preparations for spraying and processing seedlings were released	20/1 "Main production" sub-account "Crop production"	10/2 “Materials”, sub-account “Fertilizers, plant and animal protection products”
Note: *Chemical treatment of seedlings should be in the evening.*			
5	Accrued wages for workers engaged in growing seedlings	20/1 "Main production" sub-account "Crop production"	70 "Settlements with staff but pay”
6	Accrued insurance premiums from the wages of workers engaged in growing seedlings	20/1 "Main production" sub-account "Crop production"	69 "Calculations for social insurance and security”
8	Written off the actual cost of growing seedlings	43 "Finished products"	20/1 "Main production" sub-account "Crop production"
9	At the end of the month, the costs of the tractor fleet are distributed and written off	20/1 "Main production" sub-account "Crop production"	23 "Auxiliary production"
10	Overhead expenses are allocated and written off	20/1 "Main production" sub-account "Crop production"	25 "General production costs"
11	General expenses allocated and written off	20/1 "Main production" sub-account "Crop production"	26 "General expenses"
Note: *If the main activity of the greenhouse enterprise is the cultivation and sale of seedlings, then the planned (actual), cost of sales of seedlings (fruit trees, shrubs) is debited from the credit of account 43 “Finished products” to the debit of account 90 “Sales”.*			

- Compiled by the author

One of the most important components of the country's national security is food security, the level of security of which depends on the effectiveness of the development and functioning of the agro-industrial complex (Frantsisko et al., 2020). Implementation of such business projects as growing vegetable seedlings will lead to stabilization and saturation of the market with necessary vegetables, including on an industrial scale.

Conclusion

The research results can be used in the development of theoretical and practical problems of management accounting, including the organization of a business from scratch, and its implementation in any agricultural enterprises and organizations.

Thus, we can conclude that the success of management accounting, as an instrument of the entire business mechanism of an economic entity, is currently due to three main factors: focus; systematic nature; and clearly defined quality of providing information for decision-making purposes.

Information management accounting in modern conditions should have certain properties (reliability, efficiency, relevance, flexibility, etc.) and qualitative characteristics (materiality, relevance, reliability, usefulness) for managing business processes and activities of organizations of seedling producers. This requires taking more active steps to improve planning, management accounting, increase their control and analytical functions in the management system for growing seedlings of vegetable crops.

Cost reduction is the most important condition for the growth of economic efficiency of

production, therefore, it is necessary to increase the efficiency of resource use by expanding production volumes, increasing yield, which will reduce the cost of production.

Business from scratch to grow high-quality seedlings of vegetable crops in a greenhouse is a profitable business today, since this market is practically free, and there is no good supply of high-quality seedlings without diseases and pests. Despite the complexity and specificity of this type of activity, with a competent management approach, taking into account the further expansion and cultivation of other seedling crops, it is possible to achieve high profits

Bibliographic references

Akhiyarov, B.G., Ismagilov, R.R. and Nugmanov, A.Kh. (2016) Technology for the production of vegetables. Agricultural production system in the Republic of Bashkortostan. RAAS, Academy of Sciences of the Republic of Belarus, Ministry of Agriculture of the Republic of Belarus, Ufa.

Alborov, R.A., Kontsevaya, S.M. and Klychova, G.S. (2017) Managerial cost accounting and monitoring the effectiveness of agricultural production. Bulletin of Kazan State Agrarian University, vol. 12, no. 3 (45), pp. 96-104.

Alborov, R.A., Knyazeva, O.P. and Kontsevaya, S.R. (2012) Improving management accounting in the system of internal management of agricultural production. Economics of agricultural and processing enterprises, no. 2, pp. 46-50.

Alborov, R.A., Kontsevaya, S.M., Klychova, G.S. and Kuznetsovd, V.P. (2017) The development of management and strategic management accounting in agriculture. Journal of Engineering and Applied Sciences, vol. 12, no 19, pp. 4979-4984.

Alborov, R.A. and Kontsevaya, G.R. (2017) Management accounting of the costs of consumption of production resources and their transformation into the cost of newly created agricultural products. Actual issues of accounting, finance and analytical control of management in agriculture materials of the International Scientific-Industrial Conference dedicated to the 30th anniversary of the Department of Accounting, Finance and Auditing. Ministry of Agriculture of the Russian Federation, Federal State Budgetary Educational Institution of Higher Education "Izhevsk State Agricultural Academy".

Andreev, V.M. (2017) Horticulture Workshop V.M. Markov. Moscow: KnoRus.

Frantsisko, O.Yu., Ternavshchenko, K.O., Molchan, A.S., Ostaev, G.Ya., Ovcharenko, N.A. and Balashova, I.V (2020) Formation of an integrated system for monitoring the food security of the region. Amazonia Investiga, vol. 9, no. 25, pp. 59-70.

Ivashkevich, V.B. (2018) Using statistics to manage the enterprise. Economic Bulletin of the Republic of Tatarstan, no. 1, pp. 41-43.

Ivashkevich, V.B. (2017) Fundamentals and principles of integrated management accounting. Audit statements, no. 3, pp. 35-44.

Khoruzhiy, L.I. (2019) The impact of digitalization on the development of the accounting and analytical system of economic entities operating in the agricultural sector of the economy. Actual issues of economics and agribusiness Collection of articles of the X International Scientific and Practical Conference.

Kontsevaya, S., Alborov, R., Kontsevaya, S. and Makunina, I. (2019) Techniques of accounting and evaluation of final product manufacturing in minor and medium-size agricultural companies as exemplified by russian agricultural companies. Agrarian perspectives xxviii. business scale in relation to economics proceedings of the 28th International Scientific Conference.

Lyubanova, T.P. and Myasoedova, L.E. (2017) Strategic planning at the enterprise. Moscow: Finance and credit.

Ostaev, G.Ya., Klychova, A.S. and Sokolova, I.N. (2019) Management accounting of the macroenvironment, mesomedium and microenvironment in the agricultural business. Bulletin of Kazan State Agrarian University, vol. 14, no. 1 (52), pp. 145-151.

Ostaev, G.Ya., Klychova, G.S. and Nekrasova, E.V. (2018) Management Decision Making: Mechanisms and Financial Instruments. Bulletin of Kazan State Agrarian University, vol. 13, no. 4 (51), pp. 146-152.

Ostaev, G.Ya., Khosiev, B.N. and Klychova, A.S. (2018) Management accounting: Management of financial flows of agricultural enterprises. Bulletin of Kazan State Agrarian University, Vol. 13, No. 3 (50), pp. 134-139.

Ostaev, G.Ya., Klychova, G.S. and Sokolova, A.V. (2018) Management accounting in the agricultural sector: external and internal environment Bulletin of Kazan State Agrarian University, vol. 13, no. 4 (51), pp. 153-159.

Ostaev, G.Ya., Khosiev, B.N., and Kallagova, A.Kh. (2018) Management accounting in the agro-industrial complex: Methods for making optimal (key) decisions. Mountain State Agrarian University. Vladikavkaz.

Ostaev, G.Ya., Klychova, G.S., Sokolov, V.A. and Mukhamedzyanov, K.Z. (2019) Development of a financial strategy in management accounting. Bulletin of Kazan State Agrarian University, Vol. 14, No. 2 (53), pp. 170-175.

Sukhova, L.F. and Chernova, N.A. (2016) Workshop on developing a business plan and financial analysis of the enterprise. Moscow: Finance and Statistics.