

INNOVATION SCIENCE AND TECHNOLOGY

ISSUE 10, PART I / OCTOBER 2026

 **Acceptance of papers**



**Acceptance of
papers**

Published monthly



Topics

economics,
technology, social
sciences



EDITOR-IN-CHIEF:

Mirzaliyev Sanjar Makhamatjon ugli

DEPUTY EDITOR-IN-CHIEF:

Makhmudov Nosir Makhmudovich
DSc., Prof., Academician

DEPUTY EDITOR-IN-CHIEF:

Ochilov Bobur Bakhtiyor ugli – Senior
lecturer at TSUI

THE SCIENTIFIC-POPULAR ELECTRONIC
JOURNAL **"INNOVATION SCIENCE AND
TECHNOLOGY"** HAS BEEN REGISTERED
UNDER THE NUMBER **C-5669633** BY THE
AGENCY FOR INFORMATION AND MASS
COMMUNICATIONS (AOKA) OF THE
REPUBLIC OF UZBEKISTAN, EFFECTIVE
FROM OCTOBER 9, 2024.

CONTACTS

Phone: **+998 50 737 87 88**

Website: <https://ist-journal.uz>

Email: innovationist2025@gmail.com

The scientific electronic journal "Innovation Science and Technology" has been included in the list of scientific publications recommended for the publication of main scientific results of dissertations for the award of PhD and DSc degrees in economics and technical sciences, in accordance with the Resolution No. 370 of the Presidium of the Higher Attestation Commission of the Republic of Uzbekistan, dated May 8, 2025.

Editorial board:



Sharipov Kongiratbay Avezimbetovich,
Doctor of Technical Sciences (DSc), Professor



Abdurakhmanova Gulnora Kalandarovna, Doctor of
Economic Sciences (DSc), Professor



Cham Tat Huei,
Doctor of Philosophy (PhD), Professor (Malaysia)



Muhammad Imran Sadiq
Doctor of Philosophy in Economics (PhD), Professor,
Malaysia



Ahmed Aziz Ismail
Doctor of Technical Sciences (DSc),
Professor (Egypt)



Lee Chin
Doctor of Philosophy in Economics (PhD), (Malaysia)



Asongu Simplicie
Doctor of Philosophy in Economics (PhD), Cameroon



Rui Dang
Doctor of Chemistry (DSc), Professor, China



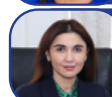
Zahoor Ahmed
Doctor of Philosophy in Economics (PhD), Turkey



Shujaat Abbas
Doctor of Philosophy in Economics (PhD), Russia



Tina A Coffelt
Doctor of Philosophy in Educational Sciences (PhD),
USA



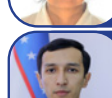
Abdikarimova Dinara Rustamxanovna
Doctor of Economic Sciences (DSc), Professor

Kurbonbekova Mohichehra Turobjonovna
Doctor of Economic Sciences (DSc), Professor

Alimardonov Ilkhom Muzrabshokovich
Doctor of Economic Sciences (DSc), Professor



Razakova Barno Sayfiyeva
Doctor of Philosophy in Economics (PhD)



Khasanov Sarvar Ulugbek ugli
Doctor of Philosophy in Economics (PhD)



Kholikova Rukhsora Sanjarovna
Associate Professor (PhD)



Xoliyorova Shoxista Qahramon qizi
PhD in Economics, Assistant Lecturer at the Department TSUE

Nasiba G'anjion qizi Sattorova
PhD, Senior Lecturer at the Department of Banking

CONTENTS

IMPLEMENTATION OF THE IMPROVED METHODOLOGY IN PRACTICE AND ASSESSMENT OF ITS ECONOMIC EFFICIENCY	8
Eshniyazova Yulduz Yuldashbayevna	
EXPERIMENTAL OPTIMIZATION OF DESIGN AND ENERGY PARAMETERS OF A GARLAND-TURBINE MOBILE MICRO HYDROPOWER PLANT FOR FREE-FLOWING WATER	13
Sultonov Sanjarbe, Zokirov Islomjon, Nurillaev Ahadullo, Abdullaev Shavkat	
METHODOLOGY FOR INCREASING THE EFFICIENCY OF CREDIT OPERATIONS IN COMMERCIAL BANKS	19
Djumaniyazov Ikram Karimbaevich	
COMPARATIVE ANALYSIS OF A COMPACT RESIDUAL CONVOLUTIONAL MODEL AND LINEAR REGRESSION FOR IMAGE SUPER-RESOLUTION	27
Husan Arziqulov Normurod o'g'li	
COMPARATIVE EVALUATION OF MACHINE LEARNING ALGORITHMS AND CLASS IMBALANCE HANDLING STRATEGIES FOR CREDIT CARD FRAUD DETECTION	33
Mahmudova Dilnoza Avaz qizi	
DIGITAL TRANSFORMATION OF FINANCIAL RESOURCE MANAGEMENT IN PUBLIC SOCIAL SECTOR INSTITUTIONS	39
Khasanov Tulkin Axmatovich	
WAYS TO ENSURE THE STABILITY OF THE CAPITAL BASE OF COMMERCIAL BANKS	45
Isakov Isobek Janabay's son	
CROSS-DAY EXPERIMENTAL EVIDENCE OF THERMAL-LOAD SHIFTING IN A SOLAR-DRIVEN HYDRONIC RADIANT FLOOR WITH MACROENCAPSULATED RT52 PHASE CHANGE MATERIAL	50
Jurabek Kamolov, Sokhib Temirov, Marjona Makhmudova	
STUDY OF THE TRACTION DYNAMICS OF AN AGGREGATE CONSISTING OF A FRUIT-HARVESTING MACHINE AND ITS TWO-AXLE CONTAINER-CARRYING TRAILER PLATFORM	59
Norchayev Davron, Sardor Nigmatjonov, Norchayev Jaloliddin, Norchayev Rustam	
PRIORITY DIRECTIONS FOR STRENGTHENING THE FINANCIAL STABILITY OF AGRICULTURAL ENTERPRISES	67
Kulmatov Zafar Jumanazarovich	
METHODOLOGICAL APPROACHES TO DEVELOPING UNIVERSITY STUDENTS' DIGITAL COMMUNICATIVE COMPETENCE BASED ON EMOTIONAL INTELLIGENCE	73
Malikakhon Kamiljanova	
SIMULTANEOUS REMOVAL CHARACTERISTICS OF OIL AND HEAVY METAL IONS BY BIOFLOCCULANTS BASED ON THE CELLULOSE-DMAEMA/PEPA COMPOSITE	80
Xayitboeva Dilshoda, Ibragimov Nasrilla, Jumaev Anvarbek	
ECONOMIC ANALYSIS AND DEVELOPMENT STRATEGY OF THE WOOD-POLYMER COMPOSITES MARKET	84
Abdumalikova Zarnigor, Ayubova Indira, Jumaev Anvarbek	
ENERGY UTILIZATION ANALYSIS OF AGRICULTURAL DRYING BASED ON INTEGRATED SOLAR THERMAL AND PHOTOVOLTAIC ENERGY SUPPLY	89
Ibragimov Umidjon, Mirzayarova Sevara, Khujayorova Aziza	
RECENT ADVANCES IN THE SYNTHESIS OF NANOSTRUCTURED MATERIALS FOR ZINC-ION BATTERIES	96
Diyorbek Absattorov, Dilnoza Erimbatova, Murodjon Samadiy	
ENTHALPY-MODEL SELECTION AND PRACTICAL IDENTIFIABILITY OF A MACROENCAPSULATED RT52 RADIANT FLOOR UNDER UNCERTAIN BRANCH FLOW	101
Jurabek Kamolov, Sokhib Temirov, Marjona Makhmudova	
ENTHALPY-MODEL SELECTION AND PRACTICAL IDENTIFIABILITY OF A MACROENCAPSULATED RT52 RADIANT FLOOR UNDER UNCERTAIN BRANCH FLOW	101
Jurabek Kamolov, Sokhib Temirov, Marjona Makhmudova	

THE IMPORTANCE OF THERMAL ENERGY STORAGE SYSTEMS IN ENHANCING THE EFFICIENCY OF SOLAR DRYERS	110
B. A. Hikmatov, M. S. Mirzaev,	
METHODOLOGY AND PRINCIPLES FOR THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN ADAPTIVE ECONOMIC MODELS OF HIGHER EDUCATION.....	117
O'lmasxo'jayev Zoirxo'ja Abbos o'g'li	
FORECASTING ECONOMIC EFFECTS OF GREEN INNOVATION IN MINING THROUGH COST REDUCTION, ENERGY SAVINGS AND LONG-TERM COMPETITIVENESS.....	122
Kurbanova Mehriniso Nematjanovna	
AN INTELLECTUAL HYBRID MODEL AND FEATURE SPACE FOR NAMED ENTITY RECOGNITION IN KARAKALPAK TEXTS	127
Kalmuratov Bekbosin Kushkinbaevich, Uzakbaev Jangeldi Sabit-uli, Rzambetova Suliwxan Baxtiyarovna	
COMPARATIVE ANALYSIS OF EXISTING METHODOLOGIES FOR ASSESSING THE EFFICIENCY OF LENDING PRACTICE	133
Turdiyev Eralijon Muxtarovich	
STRATEGIC MANAGEMENT OF SERVICE QUALITY: ADAPTING THE GAP MODEL TO SERVICE ENTERPRISES.....	140
Tuxliyev Baxtiyor Maxmaziyyevich	
ORGANISATIONAL AND LEGAL FOUNDATIONS FOR THE DEVELOPMENT OF ISLAMIC FINANCE IN UZBEKISTAN	145
Khodjaev Aziz Shovkatovich	
REGIONAL TRANSMISSION OF MACROECONOMIC SHOCKS AND THE DYNAMICS OF ECONOMIC CONVERGENCE	153
Elyor Nazarov	
PRIORITY DIRECTIONS FOR INCREASING SECTORAL DIVERSIFICATION IN THE ECONOMY OF UZBEKISTAN'S REGIONS	159
Mamarasulov Nozimjon Mamajonovich	
THE ROLE OF STATE STRATEGIC RESERVES IN ENSURING FOOD SECURITY: POLICY EVOLUTION AND REASSESSMENT OF THE MILITARY SUPPLY SYSTEM IN THE CASE OF UZBEKISTAN.....	165
Bazarov Nazirjon Sobirovich	
LOCAL ADAPTATION OF MRA-FW FOR CARDIOVASCULAR RISK ASSESSMENT IN ARAL SEA REGION INPATIENTS.....	170
Uteuliev Niyetbay, Saytov Aralbek, Saytov Kamiljan	
GREEN FINANCE IN UZBEKISTAN: FROM SOVEREIGN BONDS TO FOREIGN DIRECT INVESTMENT IN RENEWABLE ENERGY (2021–2026).....	176
Temirova Nozima Shuhrat qizi	
IMPROVING THE ACCOUNTING OF REVENUE, EXPENSES AND FINANCIAL RESULTS IN PRIVATE HIGHER EDUCATION INSTITUTIONS	182
Saidova Kamolat Farhodovna	
THE IMPACT OF DIGITAL TRANSFORMATION ON SERVICE DELIVERY EFFICIENCY IN LOCAL HIGHER EDUCATION INSTITUTIONS.....	187
Masaidova Marguba Muratovna	
INVESTIGATION OF METAL REFINING DURING ELECTRIC ARC WELDING.....	195
Ermatov Ziyadulla, Rakhmatullaeva Nozima, Galperin Leonid	
STATE AND INSTITUTIONAL SUPPORT FOR THE EXPORT ACTIVITIES OF CONSTRUCTION ENTERPRISES.....	200
Mirzayeva Khulkar Abduladjon kizi	
ECONOMIC DIPLOMACY AS THE EXTERNAL TIER OF INVESTMENT GOVERNANCE: INSTITUTIONAL DESIGN AND IMPLEMENTATION GAPS IN UZBEKISTAN.....	207
Imamov Javokhir	
METHODS FOR IMPROVING THE EFFICIENCY OF PRODUCTION RESOURCE UTILIZATION IN AGRICULTURE	213
Nurxonov Nurkomil Qahramon ugli	

METHODS FOR IMPROVING THE EFFICIENCY OF PRODUCTION RESOURCE UTILIZATION IN AGRICULTURE

Nurxonov Nurkomil Qahramon ugli

Perfect University

Associate Professor, Department of Economics

Email: nurkomilnurxonov623@gmail.com

Abstract: This article explores opportunities to enhance the effectiveness of production resource utilization in agriculture. The study applies statistical methods (index analysis, correlation-regression analysis) to group resources, examine labor and material cost norms, and evaluate factors affecting crop yield and profitability.

Keywords: agriculture, production resources, effectiveness, yield, profitability, statistical analysis, regression equation.

Annotatsiya: Mazkur maqolada qishloq xo'jaligida ishlab chiqarish resurslaridan foydalanish natijadorligini yuksaltirish imkoniyatlari tadqiq etiladi. Ilmiy ishda resurslarni guruhlash, mehnat va moddiy sarflar me'yorlarini o'rganish, shuningdek, hosildorlik hamda rentabellikka ta'sir etuvchi omillarni baholash maqsadida statistik usullar (indeks tahlili, korrelyatsion-regressiya tahlili) qo'llanilgan.

Kalit so'zlar: qishloq xo'jaligi, ishlab chiqarish resurslari, natijadorlik, hosildorlik, rentabellik, statistik tahlil, regressiya tenglamasi.

Аннотация: В данной статье рассматриваются возможности повышения результативности использования производственных ресурсов в сельском хозяйстве. В научной работе применены статистические методы (индексный анализ, корреляционно-регрессионный анализ) для группировки ресурсов, изучения норм трудовых и материальных затрат, а также оценки факторов, влияющих на урожайность и рентабельность.

Ключевые слова: сельское хозяйство, производственные ресурсы, результативность, урожайность, рентабельность, статистический анализ, уравнение регрессии.

INTRODUCTION

In the current period, particular attention is being paid to improving the efficiency of economic resource utilization in the agricultural sector, as well as strengthening state support for ensuring the availability of these resources. This is because sufficient production resources enable agricultural enterprises to organize the production of material goods efficiently and achieve sustainable development. Meeting the demand for each type of agricultural product primarily involves producing goods that correspond to market needs. This, in turn, requires the effective allocation and use of an adequate quantity of production resources to ensure sufficient output of each product type. It is well recognized that producing goods to meet specific consumer needs involves the coordinated and efficient use of various resources.

REVIEW OF LITERATURE ON THE SUBJECT

The theoretical and methodological aspects of the socioeconomic development of the agricultural sector and improving its efficiency have been studied by foreign scholars, including L. Sfu, T. S. Fan, L. Zhou, J. M. Shurbakh, S. Shiona, and S. S. Shenoy [1, 2, 3].

Among scholars from the Commonwealth of Independent States (CIS), issues related to agricultural production, economic modeling, and forecasting in the agricultural sector have been examined by L. V. Agarkova, I. A. Baranov, N. A. Popov, A. V. Afanaseva, M. A. Solomakhin, and N. I. Grekov [4, 5, 6].

RESEARCH METHODOLOGY

The research employed methods such as a systematic approach, comparative analysis, statistical observation, grouping, comparison, time-series analysis, economic indices, correlation and regression analysis, induction, and deduction.

ANALYSIS AND RESULTS

In agriculture, resources are classified as follows according to their specific characteristics:

1. Means of production: land resources, working machinery and equipment, buildings and structures, agricultural machinery, transport vehicles, productive livestock, and perennial plantations.
2. Natural resources: land, water, climatic conditions, and underground and surface natural resources.
3. Labor resources: people's ability to produce goods and provide services, including agricultural specialists with higher or specialized secondary education, as well as workers with general secondary education or no specialized education.

In addition to these resources, the entrepreneurial factor also plays an important role in organizing production efficiently under market conditions. It is assessed based on the entrepreneur's business acumen, qualifications, experience, intelligence, and other personal qualities (Figure 1).

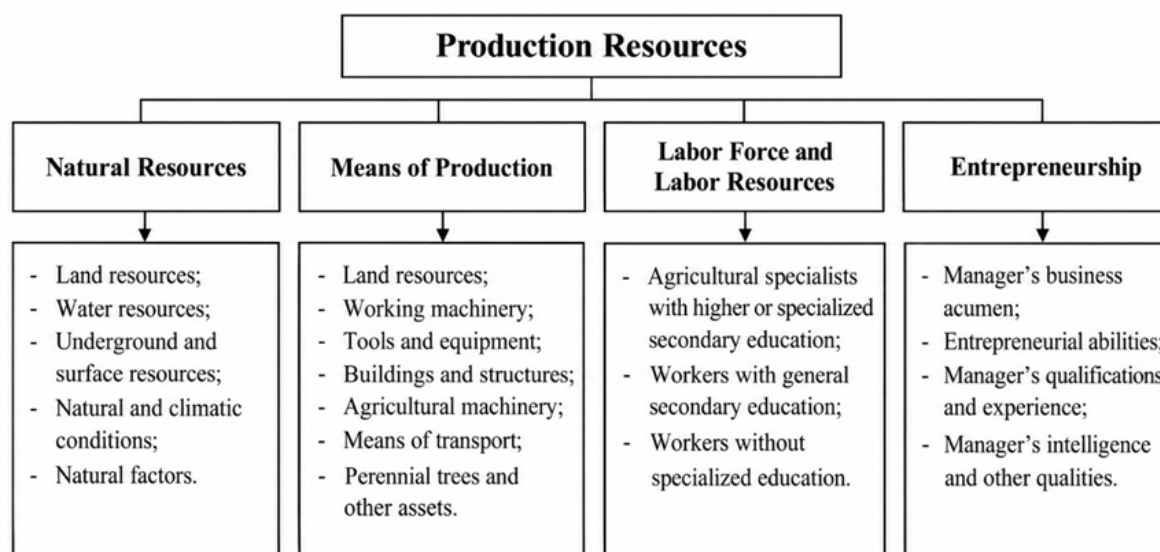


Figure 1. Production Resources in Agriculture and Their Composition¹

The privatization of state property in agriculture and the restructuring of production and service systems have increased not only the material interests of property owners but also their responsibility for the full, economical, and efficient use of privately owned means of production. This process, in turn, has created the need for private property owners to possess independent entrepreneurial capabilities and act as genuine owners. As a result, alongside all traditional resources, entrepreneurial activity has also come to be recognized as an important resource of production.

The following table presents the standards for labor and production resources required for growing agricultural products and maintaining crops on farms. These standards were approved by Letter No. 11/48-1 dated April 7, 2007, entitled "Standards for Labor and Material Resources Required for Agricultural Production." The document provides standards for labor and other resource consumption across all types of agricultural crops (Table 1).

Table 1. Standards for labor and material costs per hectare of land required for agricultural production² [7]

No.	Crop type	Yield (centners/ha)	Labor input (person-hours)	Seeds (kg)	Fuel (kg)	Total fertilizer (kg)	Nitrogen (kg)	Phosphorus (kg)	Potassium (kg)
1	Grain	42	134	220	164	420	210	147	63
2	Including wheat	42	134	220	164	420	210	147	63
3	Cotton	27	964	45	340	485	220	155	110

¹ Source: Author's own work.

² Source: Author's own work.

4	Potatoes	120	900	4,000	325	485	220	155	110
5	Vegetables	220	1,680	20	200	285	235	95	55
6	Fruit	40	800	x	263	270	120	85	65
7	Grapes	40	2,000	x	333	295	135	90	70
8	Alfalfa	120	123	16	294	240	100	90	50
9	Silage maize	300	46	40	250	330	150	105	75
Total	x	629	x	291	x	x	x	x	x

To achieve a grain yield of 42.0 centners per hectare, the production process requires 134 person-hours of labor, 220 kg of seeds, 164 kg of fuel, 210 kg of nitrogen, 147 kg of phosphorus, and 63 kg of potassium per hectare. In addition, scientifically established standards indicate that achieving a cotton yield of 27 centners per hectare requires 964 person-hours of labor, 45 kg of seeds, 340 kg of fuel, 220 kg of nitrogen, 155 kg of phosphorus, and 110 kg of potassium. In agricultural grain production, the application rates of mineral fertilizers vary according to soil fertility, in accordance with the established standards.

For highly fertile soils, the application rate of mineral fertilizers is reduced by 15–20%, whereas for low-fertility soils, mineral fertilizer consumption is increased by 15–20%. Similar scientific and practical calculations are also carried out for other crop types, taking their specific characteristics into account. These standards serve as practical guidelines for agricultural enterprises in crop cultivation and in ensuring sufficient levels of agricultural production. From an agrotechnological perspective, it is also important to emphasize that the efficiency of mineral fertilizer use directly depends on irrigation periods and application rates.

The index method is appropriate for determining changes in the gross yield and productivity of cereal crops on farms. This method is illustrated by the following example (Table 2).

Table 2. Crop areas and yields of cereal crops at the “Xolmatota” farm in Nishon District, Kashkadarya Region³

Crop type	Crop area, P ₀	Crop area, P ₁	Yield 2024 (centners/ha), Y ₀	Yield 2025 (centners/ ha), Y ₁	Gross yield 2024 (centners), (Y ₀ P ₀ =V ₀)	Gross yield 2025 (centners), (Y ₁ P ₁ =V ₁)
Wheat	56 (80%)	60 (75%)	40.0	44.0	2,240	2,640
Barley	14 (20%)	20 (25%)	30.0	27.0	420	540
Total	70 (100%)	80 (100%)	x	x	2,660	3,180

I. Individual yield indices (YI=Y₁:Y₀):

a) For wheat: =44:40=1,1 or 110%; b) For barley =27:30=0,9 or 90%.

II. General yield indices

a) Variable-composition yield index:

$$I_{\bar{Y}} = \frac{\sum Y_1 P_1}{\sum P_1} : \frac{\sum Y_0 P_0}{\sum P_0} = \bar{Y}_1 : \bar{Y}_0 = \frac{3180}{80} : \frac{2660}{70} = 39,75 : 38 = 1,046 \text{ times or } 104,6\%$$

b) Fixed-composition yield index:

$$I_Y = \frac{\sum Y_1 P_1}{\sum P_1} : \frac{\sum Y_0 P_1}{\sum P_1} = \frac{\sum Y_1 P_1}{\sum Y_0 P_1} = \frac{3180}{40 * 60 + 30 * 20} = 3180 : 3000 = 1,060 \text{ or } 106,0 \%$$

As a result of changes in the yields of individual crops, the average yield across both crops increased by 6%.

c) Index of shifts in crop area structure:

$$I_{str} = I_{\bar{Y}} : I_Y = \frac{\sum Y_0 P_1}{\bar{Y}_0 \sum P_1} = 1,046 : 1,060 = 0,987 \text{ or } 98,7\%$$

Changes in the structure of crop areas resulted in a 1.3% decrease in average yield.

³ Source: Author's own work.

III. Crop area volume index:

$$I_p = P_1 : P_0 = 80 : 70 = 1,143 \text{ or } 114,3\%$$

IV. Gross yield index:

$$I_V = \frac{\sum Y_1 P_1}{\sum Y_0 P_0} = \frac{\sum B_1}{\sum B_0} = \frac{3180}{2660} = 1,195 \text{ or } 119,5\%$$

$$\text{or } I_V = I_Y * I_{str} * I_n = 1,06 * 0,987 * 1,143 = 1,195 \text{ or } 119,5\%$$

V. Absolute change in gross yield:

$$\Delta B = \sum B_1 - \sum B_0 = 3180 - 2660 = 520 \text{ centners}$$

This change can be broken down as follows:

a) Change resulting from crop yield variation:

$\Delta V_h = \sum Y_1 P_1 - \sum Y_0 P_1 = 3180 - 3000 = 180$ centners, gross yield increased by 180 centners;

b) Change resulting from shifts in crop area structure:

$\Delta V_{str} = \sum Y_0 P_1 - \sum P_1 = 3000 - 38 * 80 = 3000 - 3040 = -40$ centners, gross yield decreased by 40 centners

c) Change resulting from the overall size of crop areas:

$\Delta V_{area} = (\sum P_1 - \sum P_0) = 38(80 - 70) = 380$ centners, gross yield increased by 380 centners.

Thus, the absolute increase in gross yield amounted to 520 centners:

$$\Delta V = a + b + c = 180 + (-40) + 380 = 520$$

According to the calculated results, 34.6% of the increase was attributable to higher crop yields, while 73.1% resulted from the expansion of crop areas. Meanwhile, changes in the structure of crop areas reduced gross yield by 7.7%.

The values presented in the original calculations have been retained where appropriate, while the percentage associated with the structural change has been expressed as 7.7% to reflect the calculated decrease of 40 centners relative to the total increase of 520 centners.

The factors affecting production efficiency on farms can be evaluated using correlation analysis.

In many scientific studies, a multivariate correlation analysis of the profitability of total grain and raw cotton production and sales costs has been conducted using the Gauss method in the Windows XP PASCAL software environment. For this purpose, the following factors affecting profitability ($\Pi(Y)$) were identified:

- x1 – average selling price per centner of product, thousand UZS;
- x2 – average cost per centner of product, thousand UZS;
- x3 – profit or loss from the sale of one centner of product, thousand UZS;
- x4 – labor input, person-hours per unit of output;
- x5 – quantity of products, thousand tons;
- x6 – crop yield, centners per hectare;
- x7 – cultivated area, thousand hectares.

Based on the calculations, three factors with the greatest influence on overall grain profitability were selected. By solving the system of normal equations, the following regression equation was developed for the three-factor model:

$$Y = 4,170 + 2,062 x_6 - 0,002 x_2 + 0,012 x_1;$$

The correlation coefficient representing the relationship among the factors was $R=0.721$, while the Fisher criterion, indicating the statistical significance of the model, was $F=36.657$.

Based on these findings, the following conclusions can be drawn: an increase in crop yield of one centner per hectare contributes to a 2.062-percentage-point improvement in overall grain profitability; effective management of production costs supports the maintenance of profitability; and an increase of one UZS in the selling price contributes to a 0.012-percentage-point increase in profitability.

Similarly, a three-factor regression model was developed to identify the factors with the greatest influence on the profitability of raw cotton production. The resulting regression equation is as follows:

$$Y = 34,270 + 0,005 x_3 + 1,166 x_6 - 0,003 x_2;$$

In this model, $R=0.685$ and $F=44.236$.

CONCLUSIONS AND SUGGESTIONS

Based on the findings, it can be concluded that the profitability of raw cotton production is influenced by several key economic factors, including profit, crop yield, and production costs. The results indicate that a one-unit increase in profit is associated with a 0.005-percentage-point increase in profitability, while an increase in crop yield of one centner per hectare contributes to a 1.166-percentage-point rise in profitability.

In contrast, a one-UZS increase in production costs leads to a 0.003-percentage-point decrease in profitability. These findings highlight the importance of improving crop productivity, managing production costs, and strengthening the economic efficiency of agricultural operations. Therefore, farms should focus on applying resource-efficient technologies, optimizing the use of labor and material inputs, and adopting effective cost-management practices. Such measures can help improve profitability, support the sustainable development of cotton production, and strengthen the overall financial performance of agricultural enterprises.

REFERENCES:

1. Лин Цфу, Цой Фан, Ли Чжоу. Китайское чудо: экономическая реформа, стратегия развития. – М., 2001. С.68.
2. Jan Mathis Schopbach "Foreign direct investment in agriculture the impact of out grower schemes and large-scale farm employment on economic well-being in Zambia" Master of Arts, University of Zurich accepted on the recommendation of Prof. Dr. Rolf Kappel, examiner Prof. Dr. Isabel Gonther, co-examiner Prof. Dr. Jann Lay, co-examiner, diss. eth no. 22287 2014. – p. 21-28.
3. Susan Chiona, BSc "Technical and allocative efficiency of smallholder maize farmers in Zambia" A thesis submitted to the University of Zambia in partial fulfillment of the requirements of the degree of Master of Science in Agricultural Economics, The University of Zambia Lusaka, 2011. – p.64.
4. Агаркова Л.В. Формирование механизма устойчивого развития плодовоовощного подкомплекса: теория и практика. – Ставрополь: Ставролит, 2007. –С.168.
5. Баранов И.А. Совершенствование коммерческой работы торговых и заготовительных организаций потребительской кооперации. Автореф. дисс.д-ра экон. наук. – М.: РГБ, 2003. – С.39.
6. Попов Н.А. Экономика сельского хозяйства. – М.: Дело и сервис, 2005. – С.56.; Афанасьева А.В. Статистическая оценка динамики производства сельскохозяйственной продукции в системе государственного регулирования продовольственного рынка. Автореф.дисс. на соис.канд. экон. наук. – Самара.2008. – С.26.
7. "Qishloq xo'jalik mahsulotlarini yetishtirishga talab etiladigan mehnat va moddiy resurslar me'yorlari" to'g'risidagi 2007-yil 7-aprelda (11/48-1-sonli xati bilan tasdiqlangan) ma'lumotlari asosida ishlab chiqilgan.

Proofreader: Zokir ALIBEKOV

Layout and Designer: Oloviddin Sobir ugli

2026. № 10

© When materials are reproduced, the INNOVATION SCIENCE AND TECHNOLOGY journal must be cited as the source. Authors are responsible for the accuracy of the information in materials and advertisements published in the journal. Editorial opinions may not always align with those of the authors. Submitted materials will not be returned to the editorial office.

To publish articles in this journal, you may submit articles, advertisements, stories, and other creative materials through the following links. Materials and advertisements are published on a paid basis.

You may subscribe to the journal at any time using the following details. Once subscribed, please send a screenshot or photo of your payment confirmation to our Telegram page @iqtisodiyot_77. Based on this, we will send the latest issue of the journal to your address each month.

“The journal “INNOVATION SCIENCE AND TECHNOLOGY” has been registered by the Agency for Information and Mass Communications under the Administration of the President of the Republic of Uzbekistan from 09.10.2024 under the registration number №390637. License number: C-5669633. PNFL: 30407832680027

Our address: Tashkent city, Yunusobod district, 19th block,
House 17.



Acceptance of articles

Published every
monthly



Directions

Social, economic, political,
technological, scientific



Scopus || Scientific electronic journal specializing in Scopus

CERTIFICATE NUMBER: №390637

**ORDER NUMBER ACCORDING TO
THE LICENSE REGISTER: C-5669633**

CONTACT:



Contact us
+998 50 737 87 88



Telegram channel
t.me/scopus_IST2100



Journal official website
<https://ist-journal.uz/index.php/IST>