

Agro Inform

Agrar-iqtisodiy, ilmiy-ommabop jurnal
Аграрно-экономический, научно-популярный журнал
Agricultural and economical accessible science journal

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Rayosatining 2021-yil 31-iyuldagi
303/5-sonli qarori bilan
Oliy attestatsiya komissiyasining
ilmiy jurnallar ro'yxatiga olingan.

Jurnal 2000-yildan buyon chiqa boshlagan
The journal has been published since 2000

N3 [13] 2024

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THE INFLUENCE OF SOWING DATES AND MINERAL FERTILIZER RATES ON THE ECONOMIC EFFICIENCY OF WINTER BARLEY CULTIVATION

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Abstract. This article provides data on the economic efficiency and the level of profitability in the cultivation of barley at different sowing dates and fertilizer application rates. Based on the biological characteristics of winter barley varieties, as well as depending on the timing of sowing and fertilizer rates, the greatest income for the Mavlonov variety was obtained (8406900 soums) during sowing on October 15 with the use of Fon + N180 kg /ha, and for the Bolgali variety it amounted to 7832600 soums, the conditional net income for the varieties was 2050000; 1475700 soums, the cost of 1 kg of grain 114900 and 123400 soums, the profitability level of 32.2 and 23.2%.

Keywords: Winter Barley, Varieties, Productivity, Quality, Precipitations, Mineral Fertilizers, Economic Efficiency.

Introduction. Since gaining independence, the country has made significant progress as a result of the consistent implementation of reforms in the development of agriculture. The large-scale reforms carried out in the country's agricultural sector and the development of a strategy for the modernization and future development of the industry are of great importance.

Prices for seeds, local and mineral fertilizers, toxic chemicals, tillage, harvesting, transportation and cleaning of grain, wages, fuels and lubricants, etc. Used to determine the cost of a hectare of

irrigated crops, including barley. The total cost of crops, the cost of 1 hectare of arable land, the cost of 1 ton of grown grain, conditional net profit per hectare, the level of profitability varies depending on the timing of sowing and the rate of fertilization.

With timely planting of autumn varieties, taking into account the soil and climatic conditions of the region, the net profit will be higher due to an increase in yield.

On the irrigated lands of the country in autumn, barley is grown on an area of more than 14 thousand hectares, giving a yield of 30-35 centners per hectare of grain per hectare. This, of course, is a

low yield and does not contribute to an increase in barley crops on irrigated lands. Thus, the analysis of economic efficiency made it possible to assess the effectiveness of all agrotechnical measures used in growing winter barley for food, their impact on yield, economic indicators by calculating income by converting a grain crop together with a grain crop into fodder units. In our study, the economic efficiency of the grown product varied depending on the volume of the product produced from this crop, its quality and the amount of total costs incurred to grow a particular crop unit [1]-[5].

As a result, given the high demand for barley grain in the country, it is important to conduct research on the selection of varieties suitable for the soil and climatic conditions of irrigated lands, and the improvement of optimal agricultural technologies for cultivation.

The analysis of the profitability of experiments in terms of planting dates and fertilization rates showed that the profitability of growing autumn and round varieties of barley is high with the correct choice of fertilization rates at a suitable planting time for the variety, taking into account biological factors. characteristics of varieties.

The calculation of the economic efficiency of the factors studied in the study was based on the agreed purchase price of cereals approved by the Ministry of Finance of the Republic of Uzbekistan for the completed years of field experiments (2010-2012) and production (2013-2017).

The prices of seeds, mineral fertilizers, pesticides, soil cultivation, harvesting, grain transportation, wages, current repairs and maintenance of agricultural machinery in determining the cost of a hectare of arable land in irrigated light gray soils of Kashkadarya region and the cost of lubrication, production and general operating costs were analyzed.

Materials and Methods. When performing scientific research, conducting laboratory and field experiments, phenological observations and

biometric measurements, taking soil and plant samples, as well as their analysis, the methods «Methodology for conducting field experiments», «Methodology for field experiments with grain crops», «Methodology of State Variety Testing» were used agricultural crops», «Methods of agrochemical studies of soils in Central Asia», «Methodological recommendations for assessing the quality of grain», «Methods of biochemical research of plants», and the statistical processing of the data obtained was carried out using the Microsoft Excel program and based on the «Methods of field experience» B. A. Dospekhov [6].

The economic efficiency of the cultivation of winter barley is calculated based on the results of research in agriculture according to the methodology for determining profitability. The cost of cultivating one hectare of winter barley was determined in accordance with the standards adopted in the country, prices, purchase prices [7].

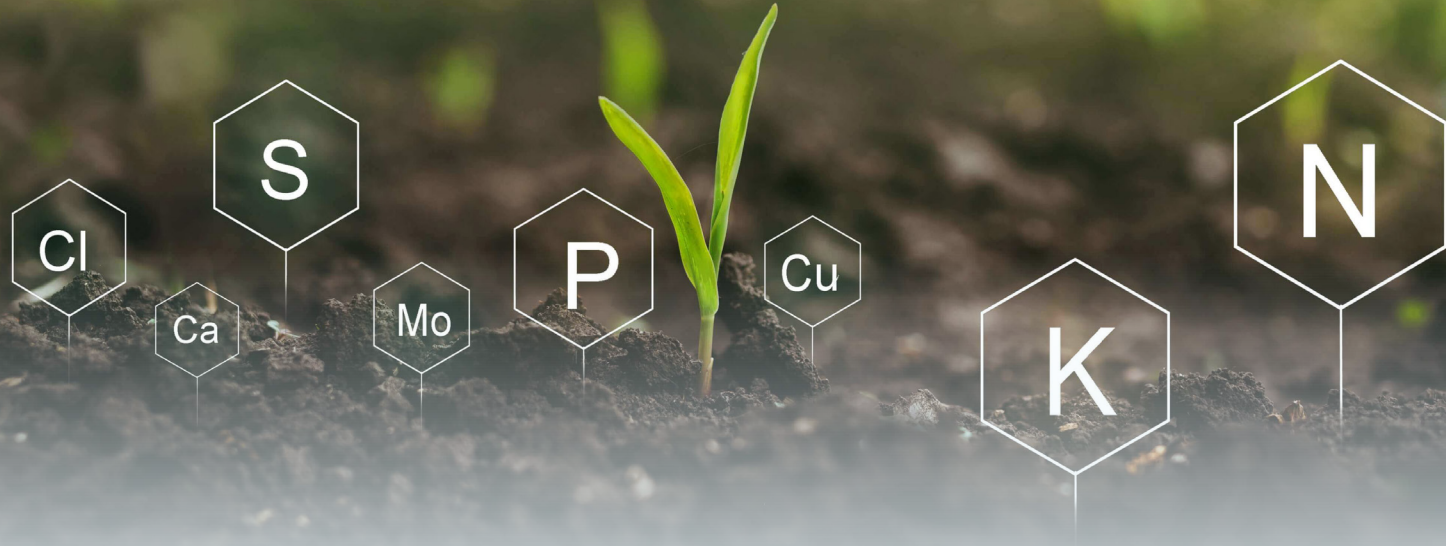
Research Findings and Discussion.

Analysis of the economic efficiency of barley varieties Mavlono and two-handle Bolgali on irrigated land, the gross value of the crop (grain and straw), the cost of 1 hectare of arable land, the cost of 1 ton of grown grain and straw, the conditional net profit per hectare, the level of profitability that varies depending on the norms mineral fertilizers and their interactions [8]-[10].

The results of the analysis of the profitability of growing winter barley varieties Mavlono and Bolgali on irrigated lands depending on the sowing time and the rate of application of mineral fertilizers (table 1; 2; 3; 4) showed that the highest gross yield per hectare (grain and straw) was observed in the second half October, 15 October, during the sowing period of winter varieties Mavlono and two-handle Bolgali.

In the cost-benefit analysis, barley straw was also used as food, gross income (tables 1 and 2) and costs were determined.

Indicators of economic efficiency in options



for early planting (1-October), depending on the fertilization rate of the Mavlonno variety, gross profit per hectare (from grain and straw) ranges from 6,544,100 to 1,2006,000 soums, costs from 3,970,000 to 6,256,900 thousand soums. conditional net profit increased from 2574100 to 5749100 soums, the cost of 1 cent. grain from 92,100 to 79,200 soums, the level of profitability from 64.8 to 98.0%. At the same time, the maximum yield per hectare was obtained with the option Fon + N180 kg / ha, while the highest conditional net profit, the lowest cost of 1 centner of grain, the highest profitability was observed with Fon+N120 kg/ha.

Similar changes in economic indicators (1.X) were observed in the Bolgali variety, in the non-fertilized version of Fon + N180 kg / ha, the gross profit was from 6801700 to 6256900 soums, and in the Fon +N120 c / ha, the conditional net profit from 2831700 to the maximum the cost is 4,848,900 soums, the cost of 1 centner of grain is 83,200 soums, the yield is 83.2%.

If the highest income from the norms of mineral fertilizers used in the optimal planting period, due to the biological characteristics of barley varieties, was received in the amount of 13,580,100 soums in the variant planted on October 15 in the Mavlonno variety and applied to the Fon + N180 kg / ha, then in the Bolgali variety it was received 12652600 sum. When applying the option against the background of Fon+ N120 kg / ha, the conditional net profit is 7,223,200 soums in accordance with the varieties: 1 centner of grain

costs 71,200 thousand soums for the Mavlonno varieties, the profitability rate is 113.6%; The lowest cost of 1 centner of grain is 75,700 thousand soums for Bolgali varieties, the rate of return is 101.0%.

The purchase price of 1 kg of feed was 1520 soums (the purchase price of 1 kg of oats). The purchase price was determined by taking the yield of 1 ha of straw per 100 kg at the rate of 33 feed units and adding to the income from 1 ha.

To obtain a high yield and a fodder unit for the Bolgali two-handed barley variety in the conditions of irrigated light gray soils of the Kashkadarya region, it is recommended to sow seeds on October 15 (in the second half of October), and apply mineral fertilizers for cultivation with a rate of P90K60N120 kg / ha.

If the sowing dates are delayed relative to the optimal sowing period (1 XI and 15 XI) in the applied Fon + N180 kg / ha, the notional net profit decreases, although the costs per hectare and the gross profit per hectare increase. For both varieties, it was found that the cost of 1 ton of grain increased, the level of profitability decreased. It was found that sowing barley varieties on irrigated light gray soils of the Kashkadarya region at the end of November 1 and 15 reduces the profitability of mineral fertilizers compared to October 15 and is acceptable during these periods N120P90K60 kg / ha (Tables 3 and 4). It was noted that the economic efficiency of the Mavlonno variety is higher than that of the Balgali variety at all sowing periods and fertilization rates.

Table 1. The influence of the sowing time and the norms of mineral fertilizers on the indicators of the economic efficiency of the cultivation of winter barley of the Mavlonov variety, taking into account the straw yield (2010-2012)

Sowing time	Fertilizer rate, kg / ha	Productivity, c / ha	Consumption per feed unit of grain yield, c / ha	Straw productivity, c / ha	Consumption per feed unit of straw yield, c / ha	Price for 1 centner of oats, soums	Fodder unit of the received grain and straw from 1 ha, c / ha	Income from 1 ha, thousand soums
1.X	No fertilizers	25,4	30,5	38,1	12,6	152000	43,1	6544,1
	P ₉₀ K ₆₀ (Fon)	32,8	39,4	49,2	16,2	152000	55,6	8450,6
	Fon+N ₆₀	39,8	47,8	59,7	19,7	152000	67,5	10254,1
	Fon+N ₁₂₀	45,1	54,1	67,7	22,3	152000	76,5	11622,1
	Fon+N ₁₈₀	46,6	55,9	69,9	23,1	152000	79,0	12006,0
	No fertilizers	27,9	33,5	41,9	13,8	152000	47,3	7190,7
15.X	P ₉₀ K ₆₀ (Fon)	35,3	42,4	53,0	17,5	152000	59,9	9097,2
	Fon+N ₆₀	43,9	52,7	65,9	21,7	152000	74,4	11312,9
	Fon+N ₁₂₀	48,7	58,4	73,1	24,1	152000	82,6	12549,6
	Fon+N ₁₈₀	52,7	63,2	79,1	26,1	152000	89,3	13580,1
	No fertilizers	26,4	31,7	39,6	13,1	152000	44,7	6801,7
	P ₉₀ K ₆₀ (Fon)	29,7	35,6	44,6	14,7	152000	50,4	7654,4
1.XI	Fon+N ₆₀	35,2	42,2	52,8	17,4	152000	59,7	9068,9
	Fon+N ₁₂₀	40,6	48,7	60,9	20,1	152000	68,8	10460,2
	Fon+N ₁₈₀	42,6	51,1	63,9	21,1	152000	72,2	10975,5
	No fertilizers	23,3	28,0	35,0	11,6	152000	39,5	6005,5
	P ₉₀ K ₆₀ (Fon)	27,1	32,5	40,7	13,4	152000	46,0	6984,6
	Fon+N ₆₀	33,5	40,2	50,3	16,6	152000	56,8	8633,4
15.XI	Fon+N ₁₂₀	37,4	44,9	56,1	18,5	152000	63,4	9635,7
	Fon+N ₁₈₀	34,9	41,9	52,4	17,3	152000	59,2	8994,1

Table 2. Influence of sowing dates and rates of mineral fertilizers on indicators of economic efficiency of cultivation of winter barley variety Bolgali two-handle, taking into account the straw yield (2010-2012)

Sowing time	Fertilizer rate, kg / ha	Productivity, c / ha	Consumption per feed unit of grain yield, c / ha	Straw productivity, c / ha	Consumption per feed unit of straw yield, c / ha	Price for 1 centner of oats, soums	Fodder unit of the received grain and straw from 1 ha, c / ha	Income from 1 ha, thousand soums
1.X	No fertilizers	26,4	31,7	39,6	13,1	152000	44,7	6801,7
	P ₉₀ K ₆₀ (Fon)	30,3	36,4	45,5	15,0	152000	51,4	7809,0
	Fon+N ₆₀	36,9	44,3	55,4	18,3	152000	62,6	9509,4
	Fon+N ₁₂₀	41,6	49,9	62,4	20,6	152000	70,5	10717,8
15.X	Fon+N ₁₈₀	42,6	51,1	63,9	21,1	152000	72,2	10975,5
	No fertilizers	29,2	35,0	43,8	14,5	152000	49,5	7523,1
	P ₉₀ K ₆₀ (Fon)	33,7	40,4	50,6	16,7	152000	57,1	8685,0
	Fon+N ₆₀	40,5	48,6	60,8	20,1	152000	68,7	10436,9
1.XI	Fon+N ₁₂₀	46,4	55,7	69,6	23,0	152000	78,6	11954,5
	Fon+N ₁₈₀	49,1	58,9	73,7	24,3	152000	83,2	12652,6
	No fertilizers	27,2	32,6	40,8	13,5	152000	46,1	7007,8
	P ₉₀ K ₆₀ (Fon)	32,3	38,8	48,5	16,0	152000	54,8	8324,3
15.XI	Fon+N ₆₀	37,9	45,5	56,9	18,8	152000	64,3	9767,1
	Fon+N ₁₂₀	42,7	51,2	64,1	21,2	152000	72,4	11003,7
	Fon+N ₁₈₀	43,8	52,6	65,7	21,7	152000	74,2	11284,6
	No fertilizers	23,3	28,0	35	11,6	152000	39,5	6005,5
15.XI	P ₉₀ K ₆₀ (Fon)	28,1	33,7	42,2	13,9	152000	47,6	7242,2
	Fon+N ₆₀	33,5	40,2	50,3	16,6	152000	56,8	8633,4
	Fon+N ₁₂₀	37,1	44,5	55,7	18,4	152000	62,9	9561,0
	Fon+N ₁₈₀	36,9	44,3	55,4	18,3	152000	62,6	9509,4

Table 3. The influence of the sowing time and the norms of mineral fertilizers on the indicators of the economic efficiency of the cultivation of winter barley of the Mavlonov variety (2010-2012)

Sowing dates	Fertilization rates, kg / ha	Feed unit of grain and straw from 1 ha, c / ha	Gross income from 1 ha, thousand soums / ha	Expenses for 1 g, thousand / soums	Conditional net profit, thousand, soums / ha	Cost of 1 centner of grains, thousand soums	Profitability level, %
1.X	No fertilizers	43,1	6544,1	3970	2574,1	92,1	64,8
	P ₉₀ K ₆₀ (Fon)	55,6	8450,6	5092,7	3357,9	91,6	65,9
	Fon+N ₆₀	67,5	10254,1	5480,8	4773,3	81,2	87,1
	Fon+N ₁₂₀	76,5	11622,1	5868,9	5753,2	76,7	98,0
	Fon+N ₁₈₀	79,0	12006,0	6256,9	5749,1	79,2	91,9
	No fertilizers	47,3	7190,7	3990	3200,7	84,4	80,2
15.X	P ₉₀ K ₆₀ (Fon)	59,9	9097,2	5132,7	3964,5	85,7	77,2
	Fon+N ₆₀	74,4	11312,9	5540,8	5772,1	74,5	104,2
	Fon+N ₁₂₀	82,6	12549,6	5948,9	6600,7	72,0	111,0
	Fon+N ₁₈₀	89,3	13580,1	6356,9	7223,2	71,2	113,6
	No fertilizers	44,7	6801,7	3970	2831,7	88,8	71,3
	P ₉₀ K ₆₀ (Fon)	50,4	7654,4	5092,7	2561,7	101,0	50,3
1.XI	Fon+N ₆₀	59,7	9068,9	5480,8	3588,1	91,8	65,5
	Fon+N ₁₂₀	68,8	10460,2	5868,9	4591,3	85,3	78,2
	Fon+N ₁₈₀	72,2	10975,5	6256,9	4718,6	86,7	75,4
	No fertilizers	39,5	6005,5	3960	2045,5	100,3	51,7
	P ₉₀ K ₆₀ (Fon)	46,0	6984,6	5082,7	1901,9	110,5	37,4
	Fon+N ₆₀	56,8	8633,4	5470,8	3162,6	96,3	57,8
15.XI	Fon+N ₁₂₀	63,4	9635,7	5858,9	3776,8	92,4	64,5
	Fon+N ₁₈₀	59,2	8994,1	5480,0	3514,1	92,6	64,1

Table 4. The influence of the sowing time and the norms of mineral fertilizers on the indicators of the economic efficiency of the cultivation of winter barley cultivar two-handle Bolgali (2010-2012)

Sowing dates	Fertilization rates, kg / ha	Feed unit of grain and straw from 1 ha, c / ha	Gross income from 1 ha, thousand soums / ha	Expenses for 1 g, thousand / soums	Conditional net profit, thousand, soums / ha	Cost of 1 centner of grains, thousand soums	Profitability level, %
1.X	No fertilizers	44,7	6801,7	3970	2831,7	88,8	71,3
	P ₉₀ K ₆₀ (Fon)	51,4	7809,0	5092,7	2716,3	99,1	53,3
	Fon+N ₆₀	62,6	9509,4	5480,8	4028,6	87,6	73,5
	Fon+N ₁₂₀	70,5	10717,8	5868,9	4848,9	83,2	82,6
15.X	Fon+N ₁₈₀	72,2	10975,5	6256,9	4718,6	86,7	75,4
	No fertilizers	49,5	7523,1	3990	3533,1	80,6	88,5
	P ₉₀ K ₆₀ (Fon)	57,1	8685,0	5132,7	3552,3	89,9	69,2
	Fon+N ₆₀	68,7	10436,9	5540,8	4896,1	80,7	88,4
1.XI	Fon+N ₁₂₀	78,6	11954,5	5948,9	6005,6	75,7	101,0
	Fon+N ₁₈₀	83,2	12652,6	6356,9	6295,7	76,4	99,0
	No fertilizers	46,1	7007,8	3970	3037,8	86,1	76,5
	P ₉₀ K ₆₀ (Fon)	54,8	8324,3	5092,7	3231,6	92,9	63,5
15.XI	Fon+N ₆₀	64,3	9767,1	5480,8	4286,3	85,2	78,2
	Fon+N ₁₂₀	72,4	11003,7	5868,9	5134,8	81,1	87,5
	Fon+N ₁₈₀	74,2	11284,6	6256,9	5027,7	84,3	80,4
	No fertilizers	39,5	6005,5	3960	2045,5	100,3	51,7
15.XI	P ₉₀ K ₆₀ (Fon)	47,6	7242,2	5082,7	2159,5	106,8	42,5
	Fon+N ₆₀	56,8	8633,4	5470,8	3162,6	96,3	57,8
	Fon+N ₁₂₀	62,9	9561,0	5858,9	3702,1	93,1	63,2
	Fon+N ₁₈₀	62,6	9509,4	5480,0	4029,4	87,5	73,5

Conclusion. When analyzing the indicators of the economic efficiency of mineral fertilizers used at the optimal sowing time, based on the biological characteristics of barley varieties, a high income per hectare was obtained from sowing on October 15 with the Fon + N180 kg / ha and amounted to 13580100 soums from the variety Mavlonov, and from the Bolgali variety 12652600 soums, the conditional net income from the Mavlonov variety 7223200 soums, and from the Bolgali variety 6295700 soums, the cost of 1 centner of the Mavlonov variety grains 71200 soums, the level of profitability is 113.6%. The Bolgali variety has the lowest cost price of 1 centner of grains, 75700

soums, the highest profitability level of 101.0% was determined with the Fon + N120 kg / ha.

To obtain a high yield and a fodder unit for the winter barley varieties Mavlonov and two-handle Bolgali in the conditions of irrigated light gray soils of the Kashkadarya region, it is recommended to sow seeds on October 15 (in the second half of October), and apply mineral fertilizers with a rate of P90K60N180 kg / ha when cultivating the Mavlonov variety, and for the Bolgali variety P90K60N120 kg / ha. If sowing is delayed after 1 November for both varieties, apply the rate of mineral fertilizers P90K60N120 kg / ha.

References:

1. Anderson, R.L. (2008). Diversity and No-till: keys for pest management in the U.S. Great Plains, *Weed Science*. 56. 141-145. DOI: <http://doi.org/10.1614/WS-07-007.1>
2. Bair, B.K. and Ullrich, S.E. (2008). Barley for Food: Characteristics, Improvement, and Renewed Interest, *Journal of Cereal Science*. 48. 233-242. DOI: <http://dx.doi.org/10.1016/j.jcs.2008.02.002>
3. Blandino, M. and Marinaccio, F. and Reyneri, A. (2015). Enhancing grain yield and quality of winter barley through agronomic strategies to prolong canopy greenness, *Field Crops Research*. 170. 109-118. DOI: <https://doi.org/10.1016/j.fcr.2014.10.002>
4. Brown, P. (2008). Barley planting and growing conditions: In Europe and mid west USA, *Bre. And Pistill. Int.* 6. 10-11.
5. Czembor, P.C. and Pietrusinska, A. and, Czembor, H.J. (2006). Mapping new resistance gene to *Puccinia hordei* Otth. in barley. In: *Cereal Science and Technology for Feeding Ten Billion People: Genomics Era and Beyond*. Proceedings from EUCARPIA, Cereal Section Conference, Spain, Lleida, 13-17 Nov 2006. 54.
6. Dospehov, B.A. (1985). *Methodology of field experience (with the basics of statistical processing of research results)*. 5th ed., revised. and additional. Moscow, Agropromizdat. 351 pp. [Russian]
7. Fillipov, E.G. and Dontsova, A.A. (2014). Selection of winter barley. Rostov n/d: ZAO, "Kniga". 208 pp. [Russian]
8. Singh, Z. and Kumar, J. and Saini, A. (2008). Studies on quality of grains of barley varieties for nutritional malting purposes, *Proceedings of the National Academy of Sciences, India*. 78(4). 338-342.
9. Yarkulova, Z. and Kadirov, A. (2021). Optimization of Sowing Dates and Seeding Rates with Adaptive Control of The Technology of Cultivation of Winter Barley Varieties Mavlonov, *Indian Journal of Agriculture Engineering*. 1 (1). DOI:10.54105/ijae.A1501.051121
10. Yarkulova, Z. (2019). Influence of timing of crops and norms of mineral fertilizers for winter barley yield, *Asian Journal of Science and Technology*. 10(05). 9669-9670.
11. Yarkulova, Z. and Khalilov, N. (2019). Influence of Seeding Norms and Mineral Fertilizer Rate on the yield of Winter Barley, *International Journal of Recent Technology and Engineering*. 8(3S). P. 508-510. DOI:10.35940/ijrte.C1107.1083S19

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O'zbekiston Respublikasi Prezidenti huzuridagi Axborot va ommaviy kommunikatsiyalar agentligi tomonidan 2021-yil 24-iyunda 1191-sonli guvohnoma bilan qayta ro'yxatdan o'tkazilgan.

Jurnal respublika bo'yicha tarqatiladi, sotuvda kelishilgan narxda. Jurnal sahifalarida chop etilgan materiallardan foydalanilganda "Agro Inform" jurnalidan olindi, deb ko'rsatilishi shart. PR belgisi bilan berilgan maqolalar tijorat maqolalari hisoblanadi.

Tahririyatga kelgan qo'lyozmalar muallifga qaytarilmaydi.

ISSN 2181-2411 (Print)
ISSN 2181-2519 (Online)

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Jurnal "Agro Inform" MChJ
kompyuter markazida
sahifalandi:
23.10.2024-yil
chop etildi:
27.10.2024-yil
Guvohnoma raqami: №990721
2021-yil 17-mayda berilgan.

Qog'oz bichimi 60x84¹/₈.
Buyurtma № 02.
Adadi: 1100 nusxa.

Manzil:
Toshkent viloyati, Qibray
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