

# THE DURATION OF PLANTING, THE NORM AND THE EFFECT OF THE NORMS OF ORE FERTILIZERS ON THE PROTEIN CONTENT OF THE GRAIN OF AUTUMN RYE VARIETIES

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## Abstract

This article studied and analyzed the effect of planting winter rye varieties "NS Savo" and "Vakhshskaya 116" as well as fertilizing with different rates of fertilizers on the amount of protein in the conditions of light gray soils of the Kashkadarya region.

**Keywords:** rye, variety, sowing time, sowing rate, mineral fertilizer rate, protein content, "Ns Savo" and "Vakhshskaya 116".

## Introduction

As you know, for the growth, development and high yield formation of agricultural crops in moderation – the introduction of scientifically based crop rotation, the placement of the crop after the best predecessor, the creation of the optimal water-air, nutrition regime for the good development of the root system when working the soil, the effective use of organic-ore fertilizers, the use of harmonized methods in the fight against weeds, diseases and pests, the optimization of planting periods, norms and, it is necessary to carry out timely high-quality harvesting activities without loss [1; 2; 3;].

Our scientific research, terms 01-05.10 and 20-25.10 of planting in the "Ns Savo" and "Vakhshskaya 116" varieties of autumn Rye, in the Central Experimental area of the Scientific Research Institute of Southern agriculture, Karshi district, Kashkadarya region in 2020-2022, 4.0; 5.0; 6.0 mln.control of one unit of grain/ga standards and ore fertilizers (without fertilizer); as well as two units  $N_{200}P_{100}K_{75}$ ;  $N_{240}P_{120}K_{90}$  kg/ga were carried out in the order of standards. In field experiments, the total number of options was 36, placed in 1 Yarus and 3 repetitions, systematically. In the experiment, the number of paikals was 108, giving each paikal a total area of  $360 M^2$ , 50 m long and 7.2 m wide.

In our studies, it turned out that the protein content of rye varieties in cereals is from 6.9% to 12.9% gacha in all variants. In this case, it was found that the amount of protein in the grain was significantly influenced by the timing of planting, norms and norms of ore fertilizers (Table 1).

In particular, when the seeds of autumn Rye varieties were sown in the period 01-05.10, the protein content of cereals was from 7.7% to 12.9% gacha, while in Rye varieties sown in the period 20-25.10 of sowing, the protein content of cereals by options was from 6.9% to 12.2% gacha. In this case, it was found that due to the fact that the sowing of seeds of rye varieties is carried out at a period of 01-05.10-20.25.10, the protein content in the grain decreased by 1.2%.

Also, in studies, the planting of rye varieties was carried out within the period of 01-05.10 and amounted to 4.0 million.when planted in moderation per unit/ha, the protein content of the grain



was 8.3-12.9%, compared to 5.0 million of sowing.the protein content of cereals in moderation per unit/ha is 4.0 mln.up to 0.2-1.8%, compared to the norm per unit/ga, 6.0 million.when planted in moderation per unit/ha, 5.0 million.it was found to have decreased by 0.1-1.8% compared to the DOA/ga norm. In Rye varieties, similar comparative analyzes were carried out during the 20-25.10 period of planting, as well as the above trends were observed, in which 4.0 million of planting was carried out.nibatan 5.0 million per unit/ga norm.the protein content of cereals in moderation per unit/ha is 0.3-0.8%, 5.0 million.6.0 million units/ha compared to the norm.the DOA / ga norm recorded a decrease of 0.2-1.4%.

**Table 1. Autumn Rye varieties of various factors contribute to the amount of protein effect.**

№	Rye varieties	Planting norm, mln.dona/ga	Mineral fertilizers, kg/ha	Sowing dates	
				01-05.10	20-25.10
1	«Ns Savo»	4	Control (Without Fertilizer)	8,3	7,7
2			N <sub>200</sub> P <sub>100</sub> K <sub>75</sub>	12,2	11,5
3			N <sub>240</sub> P <sub>120</sub> K <sub>90</sub>	12,9	12,2
4		5	Control (Without Fertilizer)	8,0	7,4
5			N <sub>200</sub> P <sub>100</sub> K <sub>75</sub>	11,9	10,9
6			N <sub>240</sub> P <sub>120</sub> K <sub>90</sub>	11,1	11,5
7		6	Control (Without Fertilizer)	7,9	7,1
8			N <sub>200</sub> P <sub>100</sub> K <sub>75</sub>	10,1	9,5
9			N <sub>240</sub> P <sub>120</sub> K <sub>90</sub>	10,7	10,2
10	«Vaxshskaya 116»	4	Control (Without Fertilizer)	8,1	7,4
11			N <sub>200</sub> P <sub>100</sub> K <sub>75</sub>	11,8	10,9
12			N <sub>240</sub> P <sub>120</sub> K <sub>90</sub>	12,3	11,7
13		5	Control (Without Fertilizer)	7,9	7,1
14			N <sub>200</sub> P <sub>100</sub> K <sub>75</sub>	11,5	10,3
15			N <sub>240</sub> P <sub>120</sub> K <sub>90</sub>	10,6	10,9
16		6	Control (Without Fertilizer)	7,7	6,9
17			N <sub>200</sub> P <sub>100</sub> K <sub>75</sub>	9,8	9,1
18			N <sub>240</sub> P <sub>120</sub> K <sub>90</sub>	10,3	9,9

In particular, according to the results of our research, the Rye variety "NS Savo" has a duration of 01-05.10 and a value of 4.0 million.it was noted that when sowing in moderation and feeding with Ore fertilizers (control) was not carried out on them, the protein content in cereals was 8.3%, when applying the norm of ore fertilizers to N<sub>200</sub>P<sub>100</sub>K<sub>75</sub> kg/, the protein content increased by 3.9%, and when applying ore fertilizers to N<sub>240</sub>P<sub>120</sub>K<sub>90</sub> kg/ha, it was increased by 4.6%. The planting rate is 5.0 million.the amount of protein in cereals per unit/ga compared to the option not fed (controlled) with Ore fertilizers N<sub>200</sub>P<sub>100</sub>K<sub>75</sub> and n<sub>240</sub>p<sub>120</sub>k<sub>90</sub> kg/ha the amount of protein in proportion to 3.9 and 3.1%, compared to 6.0 million of sowing.in the DOA / ga norm, however, it was found to increase by between 2.2 and 2.8% in line with the above comparisons.

Also, the variety "Vakhshskaya 116" of Rye has a duration of 01-05.10, 4.0 million.when the norms of ore fertilizers N<sub>200</sub>P<sub>100</sub>K<sub>75</sub> and N<sub>240</sub>P<sub>120</sub>K<sub>90</sub> kg/ha are applied, when the protein content of the grain is not fed with (controlled) fertilizers, the protein content of the grain is 3.7 and 4.2%, in proportion to the comparisons as above, when the norms of ore fertilizers N<sub>200</sub>P<sub>100</sub>K<sub>75</sub> and n<sub>240</sub>p<sub>120</sub>k<sub>90</sub> kg / ha are applied.by 3.6 and 2.7% per unit/ga norm, 6.0 million.the DOA / ga norm was 2.1 and 2.6% higher.



So, in the conditions of light-colored oxen soils of the Kashkadarya region, the varieties "NS Savo" and "Vakhshskaya 116" of autumn Rye have a duration of 01-05.10, 4.0 million. as a result of feeding with a norm of  $N_{240}P_{120}K_{90}$  kg/ha of ore fertilizers, sowing in units/ha, the protein content of cereals is 12.9-12.2%. 6.0 million of rye varieties seeds.sowing in moderation per unit/ha, as well as seeds 5.0 million.applying ore fertilizers in moderation to  $N_{240}P_{120}K_{90}$  kg/ha in the options planted in moderation to/ga will cause the plants to lie down and negatively affect the quality indicators of the grain.

### References

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