



## Effect of Liquid Nitrogen Fertilizers on the Increase of Cotton Yield Elements

**F. E. Tukhtashev**

*Basic doctoral student of Fergana Polytechnic Institute*

**Q. A. Davronov**

*Doctor of Agricultural Sciences. Fergana Polytechnic Institute*

**Abstract:** The article presents the results of studying the effect of new liquid fertilizers on the growth, development of cotton and, most importantly, on the increase in the elements of cotton yield when it is treated with Уну-агро and Cyneп-KAC preparations. In addition, the effect of liquid nitrogen fertilizers on an increase in the elements of cotton yield and fiber quality has been studied, and the optimal norms for their recommendation to production have been determined.

**Keywords:** cotton, fiber, yield, twig, rate, growth, development, fertilizer, mineral fertilizer, organic fertilizer, liquid fertilizer, complex fertilizer, soil, suspension, spreading rate, microelement, agronomic measures, yield element, yield

**Date of Submission:** 15-10-2021

**Date of Acceptance:** 29-11-2021

The main crops in Uzbekistan's agriculture are cotton and winter wheat, which play an important role in obtaining high and high-quality crops from various agro-technical measures, disease and pest control measures. In particular, in increasing the weight and quality of the cotton crop, attention is paid to the timely and quality implementation of agro-technical measures during the growing season of cotton, primarily to preserve more of the elements of the crop.

A variety of mineral and organic fertilizers are used to ensure that the micro-elements in the soil are well absorbed by the plant. In order to increase the yield of cotton, based on the study and determination of the application of liquid nitrogen fertilizers in plant nutrition, it is important to increase the yield of cotton to at least 4-5 s / ha in the soil climate of Fergana region.

It is also necessary to study the timing and norms of the use of liquid complex fertilizers in the cultivation of cotton in order to actively absorb nutrients from the soil in the cultivation of cotton. recommendations need to be developed. Дала тажрибасида ҳосил тугунчаларининг тўкилиш даражаси ўсимликларни ўсиши ривожланиши ҳолатини фенологик кузатувлари асосида кузатиб борилиб, ҳар бир вариант бўйича ҳосил тугунчаларини сақланиши ёки тўкилишида бўлаётган ўзгаришларни таҳлил қилиш билан баҳоланади.

Based on the results of the study, it should be noted that when treated with Uni-agro, the plant height is 1.5-3.8 cm, yield branches 0.3-0.5, stems up to 2.6-2.7, stems 0.4 -1.0 more.

**Table 1 The effect of application of uni-agro and Super-KAS fertilizer during cotton weeding during shedding of crop nodules.**

№	Experiment options.	Plant height cm.		Harvest horn pieces.		cottonswab, pcs		Number of flowers, pcs	cotton ball, pcs.
		1.07	1.08	1.07	1.08	1.07	1.08	05.07	1.08
1	Control	56,1	77,2	9,9	11,6	15,0	18,4	0,6	9,6
2	Suspension	56,0	77,8	9,6	12,3	15,5	19,4	0,7	9,7
3	Uni - Agro3l / ha	55,4	78,3	10,1	11,9	15,7	19,2	0,7	9,3
4	Uni – Agro 5l / ha	52,4	84,5	9,9	12,1	15,5	20,6	0,9	10,0
5	Uni – Agro 7l / ha	53,4	78,6	9,6	12,1	15,3	19,1	0,7	9,2
6.	Uni - Agro9l / ha	54,0	77,1	9,4	11,8	15,3	19,2	0,8	10,0
7.	Super-KAS 3l / ha	55,8	78,6	10,0	11,1	15,4	19,2	0,9	9,9
8.	Super-KAS 5l / ha	55,3	80,1	9,1	11,7	15,0	19,5	0,7	10,4
9.	Super-KAS 7l / ha	55,6	78,4	10,0	11,4	15,4	19,0	0,9	9,5
10.	Super-KAS 9l / ha	57,1	79,6	10,4	11,4	15,7	18,9	0,7	9,8

At the end of the growing season, similar data were obtained (1.08). When treated with Uni-agro and Super-KAS fertilizers during sowing and mowing, the length of cotton is 4.1-9.1 cm higher than the control, the yield is 1.0-1.4, the number of pods is 1.4-2.0. found to be more.

During the research, data from field experiments show that we can observe that the plant achieves great positive results in the preservation of crop nodes by feeding from its leaves.

At the same time, as of July 15, the number of cotton stalks was 14.0 in the control variant, 14.2-16.0 in the versions with Uni-agro and Super-KAS fertilizers, and the number of stalks was 0.2-2.0 compared to the control. found to be more. The opening of cocoons was also 4.4 units under control, which was 4.8-5.4 units, ie 1.5-3.3% more than in the variants using Uni-agro and Super-KAS fertilizers.

**2-жадвал. Уни-агро ҳамда Супер-КАС ўғитини ғўзанинг шоналаш даврида қўллашнинг ўсимликнинг ҳосил элементларига таъсири, 1.09.2020 й.**

№	Experiment options	cottonswab, pcs	Of these, %	
			pcs	%
1.	Control	11,6	3,9	33,6
2.	Suspension	10,5	4,8	50,4
3.	Uni - Agro3l / ha	8,4	3,7	44,0
4.	Uni – Agro 5l / ha	11,0	4,5	40,9
5.	Uni – Agro 7l / ha	11,1	4,0	36,0
6.	Uni - Agro9l / ha	11,7	3,7	31,6
7.	Super-KAS 3l / ha	14,1	4,8	34,0
8.	Super-KAS 5l / ha	14,1	4,4	31,2
9.	Super-KAS 7l / ha	13,1	5,2	39,7
10.	Super-KAS 9l / ha	16,0	6,5	40,6

This fact was proved on September 15 and it was found that the number of cocoons was 1.0-2.2 more than in the control variant.

Based on the results of the above analyzes, high yields and efficiency can be achieved by feeding cotton with Uni-agro and Super-KAS fertilizers in addition to agro-technical measures to prevent the shedding of cotton crop nodules.

In the experiment, treatment with Uni-agro during the milking period of cotton had a specific effect on the cotton yield (Table 3).

The average annual cotton yield in the control variant is 33.5 s / ha, Suspension (urea) 35.0 and Uni - Agro 5-10-15-20 l / ha 35.7-37.0-33.8-32.4 s / ha, Super-KAS 5-10-15-20 l / ha was 35.4-35.6-34.9-34.3 s / ha.

In the variants used uni-agro, the yield was 1.4-3.4 s / ha more than the control, which was 0.5-2.0 s / ha more than the suspension (urea).

In the variants using suspension and Super-KAS fertilizer for cotton leaf feeding, 1.4-2.1 s / ha more cotton was produced than in the control, and in 7-8 variants using Super-KAS fertilizer, the cotton yield was 5-10 l / ha higher than the control. was found to be 1.9-2.1 s / ha higher when applied.

In the experiment, the highest yields were obtained in the variants using Suspension (urea) and Uni-Agro fertilizers and Super-KAS fertilizers, Uni-agro fertilizer in the amount of 5-10 l / ha, SUPER-KAS fertilizer in the amount of 5-10 l / ha in the applied variants. An additional cotton yield of -3.4 s / ha was obtained.

Thus, when comparing the results of the study, it is possible to achieve high yields by feeding the cotton with liquid nitrogen fertilizers from the leaves during the 3-4-leaf and mowing periods compared to the uncontrolled variant.

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