



IMPORTANCE OF APPLICATION OF SUSPENSIONS PREPARED ON THE BASIS OF MINERAL FERTILIZERS IN AGRICULTURE

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Annotation

The article finds that the effect of the suspension of cotton on the basis of different norms of KAS and urea fertilizers in the "Andijan-35" variety of cotton in the conditions of typical gray soils of Andijan region depends on the developmental stages of cotton. It has been proved that cotton has no effect on the yield of phosphorus and potassium fertilizers, which are insoluble in water in the suspensions used on farms, during the period of 2–3 leaves, mowing and flowering, only the optimal standards of suspension based on KAS and urea fertilizers should be applied.

Keywords: urea-ammonium nitrate, urea fertilizer, humus, 2–3 chin leaves, combing, flowering, ripening, macronutrient microelement, phenological observation.

Adequate amounts of nutrients such as nitrogen, phosphorus, potassium, calcium, boron, zinc, magnesium, manganese, iron, copper, sodium, molybdenum and other macro- and micronutrients are necessary for the optimal growth and development of cotton. It should be noted that the cotton plant is mainly fed by roots. In this case, it has been proven in many years of experience that fertilizers should be applied mainly before plowing, before sowing, in conjunction with sowing and during the application period [2,3]. However, due to the impossibility of applying fertilizers to a certain depth of the soil between rows to feed grain crops by root during the application period, the method of leaf feeding has been used in western countries, although today crops that do not require intercropping are fed by leaves [2,4].



The largest increase in mineral fertilizer consumption in recent years was in East Asia (28%), South Asia (22.2%), Northeast and Southeast Asia (19.3%), as well as in Latin America (20.5%). observed. The main consumers of CAS (urea-ammonium nitrate) and urea-based liquid fertilizers are Latin American countries and Southeast Asia, Vietnam, Thailand, as well as India. The use of urea-based complex mineral fertilizers is also observed in the above regions, North America, Western Europe. Application of mineral fertilizers in the soil allows efficient and targeted use of arable land in agriculture [2,3]. The first experiments on leaf feeding of cotton were conducted by GM Oganov. Later in Uzbekistan M.Ikramov, F.I.Uchevatkin and A.A.Boradulina, K.H.Abdullaev, B.Kh.Tillabekov, K.Tojiev, as well as foreign scientists Bould C., NicholasD., Tolhurst J.A. and H. Potter's scientific research has shown that the transfer of nutrients through plant leaves to other organs [5,8].

In previous years, a mixture of mineral fertilizers (zinc, copper) was used in leaf feeding of cotton farms of the Republic, first as a pest control measure, and then as a supplement [2,3,6]. In this regard, it is important to determine the optimal standards for the widespread use of suspensions based on nitrogen fertilizers such as KAS and urea in the care of cotton.

The purpose is to determine the norms of application of the suspension on the basis of urea fertilizers of cotton variety "Andijan-35", grown in the conditions of typical gray soils of Andijan region, during the development of cotton, its effect on plant growth and development, cotton yield.

Research "Methods of agrochemical, agrophysical and microbiological research in irrigated cotton areas", "Methodology of field experiments with cotton under irrigation conditions" conducted on the basis of methodological guidelines. Mathematical and statistical analysis of the data was performed using the method of B.A. Dospekhov and Microsoft Excel [1].

In the conditions of typical gray soils of Andijan region, it was found that the effect of the suspension of cotton in the variety "Andijan-35" on the basis of different norms of KAS and urea fertilizers depends on the period of development of cotton. It has been proved that during the period of 2–3 leaves, mowing and flowering of cotton, water-insoluble phosphorus and potassium fertilizers in suspensions used on farms have no effect on cotton yield, only the optimal standards of suspension based on KAS and urea fertilizers should be applied.

Table 1 Agrochemical parameters of experimental field soils
(2019 - 2020 yy)

Cross section №	Depth	Humus%	General, %			Painstaking, mg/kg			Carbonates CO ₂	Gypsum SO ₄ %
			N	P ₂ O ₅	K ₂ O	N-NO ₃	P ₂ O ₅	K ₂ O		
K-1	0-22	1,12	0,074	0,215	1,70	11,24	37,2	305	7.60	0.156
	22-37	0,87	0,044	0,195	1,53	9,0	33,64	252	7.42	0.099
	37-58	0,75	0,039	0,144	1,19	7,74	30,32	223	7.66	0.115
	58-103	0,63	0,031	0,118	0,87	9,73	28,98	215,5	7.63	0.123
	103-130	0,34	0,025	0,075	0,77	9,24	26,32	203	7.66	0.139

The soil of the experimental farm is a typical glacial soil that has been irrigated since ancient times. This soil contains 1.12-0.87% humus, total nitrogen 0.074-0.044%, total phosphorus 0.215-0.195%, and total potassium 1.70-1.53% in the 0-22 and 22-37 cm layer. [7], the ecosystem indicates that the nutrients used are very small and environmentally friendly (Table 1). The moving forms of nutrient elements of the experimental field were N - NO₃ 11,24-9,0 mg / kg, P₂O 537,2-33,64 mg / kg and K₂O 305-252 mg / kg in the driving layer of 0-22 and 22-37 cm. .

The soil is not saline, and this soil is permeable to water, with a complexity of softening. The experimental field was not adequately supplied with nitrogen and phosphorus. If manure and organic fertilizers are built in, what can be extracted from the field ecology can do.

The scientific significance of the results of the study is explained by the fact that the optimal architecture of suspensions prepared on the basis of KAS and urea students is scientifically based on the conditions that affect the yield and quality of cotton.

For high-quality and low-quality performance of urea-based suspensions on farms, recommendations were given on the development of normative norms of the house, built at the beginning of the flowering and flowering period of 2–3 leaves, and built on the leaves.

In the cultivation of cotton it is necessary to feed the cotton on the basis of improved agro-technologies of urea-ammonium nitrate suspension prepared from mineral



fertilizers, [6] in 2019-2020 at home in the house of Ulugnor side of Antidion region as a result of taking a person out of the house As a result, KAS fertilizer from a suspension prepared in the architect 6.0 l / ha had a potency of 2.0 ts / ha compared to the control in the application of cotton in a circle of 2-3 leaves. When the cotton swab period KAS was applied at 8.0 l / ha, an additional yield of 2.4 ts / ha was obtained compared to the high cotton yield control. When KAS was applied at 9.0 l / ha at the beginning of the flowering period, the cotton yield was 3.6 ts / ha in orbit relative to the control (30.4 ts / ha), resulting in a 15% higher yield.

Table 2 In suspensions prepared on the basis of KAS and urea fertilizer The most effective norms of nitrogen

Periods of development of cotton	K A S		Urea	
	Fluff	pure nitrogen, kg/ha	Fluff	pure nitrogen, kg/ha
When removing 2–3 true leaves	6,0 l/ha	1,97	5,0 kg/ha	1,86
honing	8,0 l/ha	2,70	7,0 kg/ha	3,1
in bloom	9,0 l/ha	3,54	10,0 kg/ha	4,4

Phenological observations were made at the beginning of the developmental stages of cotton (2-3 chin leaves, combing, flowering and ripening), the height of the cotton stalk (1.06; 1.07; 1.08 and 1.09), the number of chin leaves (1.06), the number of combs (1.07), yield the number of branches (1.08, 1.09) and the number of stalks (1.09) were determined.

Before and after spraying the suspensions, the change in the surface area of the cotton leaf was determined by the Nichiporovich method in all variants [5, 6] and also the pure productivity of photosynthesis was calculated.

From the beginning of the flowering period of cotton - at the beginning of flowering, and during flowering and ripening, the dynamics of the opening of the pods were determined on the basis of methodological guidelines. At the beginning and end of the growing season of cotton, the actual seedling thickness in the calculated areas in all variants was calculated. The change in weight of a piece of cotton and the yield of cotton were calculated on the basis of the harvest in all returns and variants.



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