

Study of Terms and Standards of Application of Liquid Nitrogen Fertilizers in Cotton Farming

Tukhtashev Farrukhjon Esonali ugli
Doctoral Student of Fergana Polytechnic Institute

Abstract:

This article examines the effects of foliar feeding of cotton with liquid nitrogen fertilizers on the growth and development of cotton. Physiologically active substances play a very important role in the care of crops in agriculture, in increasing seed germination and germination capacity, in improving plant growth and development, in increasing resistance to drought, salt, disease and pests. they have a positive effect on the plant.

Keywords: cotton, cotton, fertilizer, harvest elements, product horn, cotton, complex fertilizer, mineral fertilizers, nitrogenous fertilizers, productivity, suspension, number of flowers.

Introduction

During the transition period of the development of our republic to market relations, it is necessary that all cultivated agricultural products have quality indicators that meet the requirements of the world market.

Therefore, it is urgent to develop high-quality agrotechnologies for the creation and maintenance of high-yielding, fast-growing, high-quality and disease-resistant cotton varieties that meet world requirements.

Physiologically active substances play a very important role in the care of crops in agriculture, in increasing seed germination and germination capacity, in improving plant growth and development, in increasing resistance to drought, salt, disease and pests. , they have a positive effect on the plant.

liquid fertilizers prepared from local raw materials in our republic , to develop the terms and standards of application, the meadow soil of the Fergana region was treated with the newly produced Uni-agro liquid nitrogen fertilizer . -We are conducting experiments to study the effect of treatment of cotton variety 6524 during 2-3 ginseng, tillering and flowering periods on the growth, development and productivity of seedlings, as well as to determine the optimal standards and recommend them for production.

Field experiments are being conducted at the experimental field sites of the farm of Fergana scientific experimental station of PSUYeAITI.

Research on cotton in the conditions of meadow soz soils The importance of using Uni-agro fertilizer in increasing cotton yield and their effect on plant growth and development is being studied.

The irrigated area of Fergana region is divided into two parts depending on soil formation: soils located on plains in the desert region and areas with gray soils. In the soils of the desert region, the level of saline seepage water is close to the ground level, and the soils of this region are to varying degrees saline or prone to salinization.

70% of the total irrigated and cultivated area of the region is grassland and grassland, 20.8%





is gray soil, 5.2% is stone-gravel, 2.7% is grassland-barren, and 1.3% is grass. marshy soils form. According to the mechanical composition, the soil fund is divided as follows: 31.1% light sand, 24.5% medium sand, 15.7% heavy sand, 11.1% gravel of various thicknesses, 10.1% sand and sand and 7.5% other types soils form.

The soil of the experimental field is loamy, with low salinity and heavy mechanical composition. Underground (seepage) water 1.8 m is located at a depth of 1.6. The amount of humus (humus) is around 2%, it is poorly supplied with mobile nitrate nitrogen, the amount of mobile phosphorus is moderate and it is satisfactorily supplied with potassium. In our experiments Uni-agro fertilizer is being used to feed cotton from leaves.

It should be noted that these fertilizers are in liquid form, and nutrients do not settle when preparing a solution from them, and there is no need for filtering, as in farms.

Research years cotton growth development in the conditions of 20-21 years in the conditions of the cotton treated only with water control, in the variant the height of the cotton head stalk is 11.1 in proportion to the observation periods; 51.4; 56.1 and 77.2 cm, and the number of leaves was 5.4. In 2 variants treated with Urea (1.5 l/t), the height of the main stem was 12.2 cm, or the number of leaves was 5.8. It was found that it was 1.1 cm and 0.4 more than the control.

during this (end) period of cotton development, the height of the main stem in the control option was 77.2 cm, the number of branches was 11, the number of 8 bolls was 9.6, including 3.4 opened ones, which was 35.4%. 0.7 l/t and 0.4 l/ha during the flowering period of cotton were used in the treatment of seeds with urea preparation - in option 2, the above indicators are proportionately 77.8 cm 12, 3; 10, 5; 4.8 pieces and 45.7% compared to the control, the height of the main stem is 0.6 cm, the number of branches is 0.5 pieces, the number of pods is 0.9 pieces, and the opened ones are 1.4 pieces or 10.3%. was observed to be high.

Uni-agro fertilizer was applied at the rate of 5 l/ha during the cotton flowering period (4), at the end of the application period, the height of the main stem was 84.5 cm, the number of crop branches was 12.1 pieces. 7.3 cm, 0.3 compared to the control, with the number of cysts being 10 pieces and 4.5 pieces or 40.9% opened; 0.4 and 0.6 units or 3.6% higher. This was almost equal to the effect of Urea, only the percentage of opened cysts 1.1 g was lower.

It should be noted that this last indicator is 3.6% higher than the control, but 1.1% less when using suspension urea is the main indicator, because our goal is to grow the cotton crop even if it is 1-2 days earlier. However, when "Uni-agro" fertilizer was applied at the rate of 5 l/ha during the flowering period, the height of the main stem 99.5 cm, the number of branches, and the number of pods were 13.0 (at 15.09). 12.2 pieces including 6.7 pieces or 65.0% were opened. These indicators were equal to the effect of Urea, and it was observed that the degree of opening of the blisters was 0.3% higher. This difference of 0.3% indicates that the fertilizer "Uni-agro" can be used as a stimulator and in the form of a suspension in cotton foliar feeding.



References

1. Davronov KA, Ibragimov OO, Karaboyev IT, Karimov Sh. Effektivnost primeneniya jhidkogo azotno-kalsiynogo udobreniya dlya preduprejdeniya elementov urojaya // Jurnal. It's a real problem sovremennoy science _ Moscow. 2017 . No. 6 . S 139 - 143. (06.00.00., No. 6).
2. Davronov QA, Ibragimov O. (2017) The effectiveness of the use of liquid nitrogen fertilizer callicum to prevent the elements of the crop // International Scientific Journal Theoretical & Applied Science. SOI: 1.1/TAS DOI: 10.15863/TAS.
3. Davronov KA, Tukhtashev FE Izucheniye conditions and norms of application of liquid azotnykh udobreni pri vyrashchivani klopka v usloviyax poslednix pochv // Universum: tehicheskiye nauki: elektron. nauchn. Journal. 2021. 6(87). URL: <https://7universum.com/ru/tech/archive/item/12010>
4. Nazirova Rahnamohon Mukhtarovna, Usmonov Nodirjon Botiraliyevich, & Musayeva Iroda. (2022). Classification of Functional Products for Children's Food. Eurasian Journal of Engineering and Technology, 13, 36–39. Retrieved from <https://geniusjournals.org/index.php/ejet/article/view/2904>
5. Nazirova Rakhamohon Mukhtarovna, Hursanaliyev Shohjaxon, & Usmonov Nodirjon Botiraliyevich. (2022). Apple Fruit Storage Technology. Eurasian Journal of Engineering and Technology, 13, 40–43. Retrieved from <https://geniusjournals.org/index.php/ejet/article/view/2905>
6. Nazirova Rakhamohon Mukhtarovna, Makhmudov Nozimjon Nuriddin ugli, Usmonov Nodirjon Botiraliyevich. Technology of industrial storage of carrots. Web of Scientist: International Scientific Research Journal. Vol. 3 No. 6 (2022). pp 1455-1460. Retrieved from <https://wos.academiascience.org/index.php/wos/article/view/2068>
7. Nazirova Rakhamohon Mukhtarovna, Aminjonov Hokimjon, Usmonov Nodirjon Botiraliyevich, Marufjonov Abdurakhmon Musinjon ugli. Production of alternative vegetable milk. Web of Scientist: International Scientific Research Journal. Vol. 3 No. 6 (2022). pp 1449-1454. Retrieved from <https://wos.academiascience.org/index.php/wos/article/view/2067>
8. Nazirova Rakhamohon Mukhtarovna, Khodjimaton Javlon, Usmonov Nodirjon Botiraliyevich, Marufjonov Abdurakhmon Musinjon ugli. Complex processing of pumpkin fruit. Web of Scientist: International Scientific Research Journal. Vol. 3 No. 6 (2022). pp 1461-1466. Retrieved from <https://wos.academiascience.org/index.php/wos/article/view/2069>
9. Nazirova Rakhamohon Mukhtarovna, Akhmadjonov Avazbek Akmaljon ugli, Usmonov Nodirjon Botiraliyevich. Rootstock growing technology. International journal of research in commerce, it, engineering and social sciences. Vol. 16 No. 5 (2022): May. pp 1-5. Retrieved from <http://www.gejournal.net/index.php/IJRCIESS/article/view/442>
10. Мухтаровна, Н. Р., Ботиралиевич, У. Н., & ўғли, М. А. М. (2021). Особенности Обработки Озоном Некоторых Видов Плодов И Овощей Для Их Долгосрочного Хранения. Central Asian Journal of Theoretical and Applied Science, 2(12), 384-388.



- Retrieved from
<https://cajotas.centralasianstudies.org/index.php/CAJOTAS/article/view/367>
11. Mukhtarovna, Nazirova R., et al. "Study of the Influence of Processing on the Safety of Fruit and Vegetable Raw Materials." *European Journal of Agricultural and Rural Education*, vol. 2, no. 6, 2021, pp. 43-45. Retrieved from <https://www.neliti.com/publications/378976/study-of-the-influence-of-processing-on-the-safety-of-fruit-and-vegetable-raw-ma#cite>
 12. Nazirova Rakhnamokhon Mukhtarovna, Tursunov Saidumar Islomjon ugli, & Usmonov Nodirjon Botiraliyevich. (2021). Solar drying of agricultural raw materials and types of solar dryers. *European Journal of Research Development and Sustainability*, 2(5), 128-131. Retrieved from <https://www.scholarzest.com/index.php/ejrd/article/view/824>
 13. Nazirova Rahnammokhon Mukhtarovna, Akramov Shokhrukh Shukhratjon ugli, & Usmonov Nodirjon Botiraliyevich. (2021). Role of sugar production waste in increasing the productivity of cattle. *Euro-Asia Conferences*, 1(1), 346–349. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/110>
 14. Nazirova Rahnammokhon Mukhtarovna, Akhmadjonova Marhabo Makhmudjonovna, & Usmonov Nodirjon Botiraliyevich. (2021). Analysis of factors determining the export potential of vine and wine growing in the republic of uzbekistan. *Euro-Asia Conferences*, 1(1), 313–315. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/99>
 15. Nazirova Rakhnamokhon Mukhtarovna, Holikov Muhridin Bahromjon ogli, & Usmonov Nodirjon Botiraliyevich. (2021). Innovative grain reception technologies change in grain quality during storage. *Euro-Asia Conferences*, 1(1), 255–257. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/79>
 16. Nazirova Rakhnamokhon Mukhtarovna, Tojimamatov Dilyor Dilmurod ogli, Kamolov Ziyodullo Valijon ogli, & Usmonov Nodirjon Botiraliyevich. (2021). Change in grain quality during storage. *Euro-Asia Conferences*, 1(1), 242–244. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/75>
 17. Nazirova Rakhnamokhon Mukhtarovna, Rahmonaliyeva Nilufar Nodirovna, & Usmonov Nodirjon Botiraliyevich. (2021). Influence of seedling storage methods on cotton yield. *Euro-Asia Conferences*, 1(1), 252–254. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/78>
 18. Nazirova Rakhnamokhon Mukhtarovna, Otajonova Baxtigul Bakhtiyor qizi, & Usmonov Nodirjon Botiraliyevich. (2021). Change of grape quality parameters during long-term storage. *Euro-Asia Conferences*, 1(1), 245–247. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/76>
 19. Nazirova Rakhnamokhon Mukhtarovna, Mahmudova Muhtasar Akhmadjon qizi, & Usmonov Nodirjon Botiraliyevich. (2021). Energy saving stone fruit drying technology. *Euro-Asia Conferences*, 1(1), 248–251. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/77>
 20. Nazirova Rahnammokhon Mukhtarovna, Akhmadjonova Marhabo Makhmudjonovna, & Usmonov Nodirjon Botiraliyevich. (2021). Analysis of factors determining the



- export potential of vine and wine growing in the republic of Uzbekistan. Euro-Asia Conferences, 1(1), 313–315. Retrieved from <http://papers.euroasiaconference.com/index.php/eac/article/view/99>
21. Nazirova R. M., Qahorov F.A., Usmonov N. B. Complex processing of pomegranate fruits. Asian journal of multidimensional research. 2021, Volume: 10, Issue: 5. pp. 144-149. Retrieved from <https://www.indianjournals.com/ijor.aspx?target=ijor:ajmr&volume=10&issue=5&article=020>
 22. Mukhtarovna N. R., Alimardonugli S. A., Botiraliyevich U. N. Features of treatment of winter wheat seeds by different processors //International Engineering Journal For Research & Development. – 2021. – Т. 6. – С. 3-3.
 23. R.M.Nazirova, M.X.Xamrakulova, N.B.Usmonov. Moyli ekin urug'larini saqlash va qayta ishlash texnologiyasi. O'quv qo'llanma. Фергана-Винница: ОО «Европейская научная платформа», 2021. – 236 с. <https://doi.org/10.36074/naz-xam-usm.monograph>
 24. Усмонов, . Н. (2023). ЧЎЛ МИНТАҚАСИ ҚУМЛИ ТУПРОҚЛАРИ ШАРОИТИДА ҒЎЗАНИ ЕРЁНҒОҚ БИЛАН ҲАМКОР ЭКИШ ТЕХНОЛОГИЯСИ. Естественные науки в современном мире: теоретические и практические исследования, 2(4), 67–69. извлечено от <https://in-academy.uz/index.php/zdtf/article/view/13456>
 25. Usmonova Ozodakhon Qakhramon qizi, & Usmonov Nodirjon Botiraliyevich. (2022). Theoretical Foundations of Studying the Term Concept in English-Uzbek Information Communication Technologies. Eurasian Journal of Humanities and Social Sciences, 14, 53–57. Retrieved from <https://geniusjournals.org/index.php/ejhss/article/view/2641>
 26. Usmonov Nodirjon Botiraliyevich. (2022). EFFECT OF SEED GERMINATION OF INTERCROPPING COTTON AND PEANUT. E Conference Zone, 1–2. Retrieved from <http://www.econferencezone.org/index.php/ecz/article/view/1423>
 27. Usmonov Nodirjon Botiraliyevich. (2022). Effect of Intercropping of Cotton and Peanut on Quantity and Quality of Soil Microorganisms. Eurasian Scientific Herald, 11, 12–15. Retrieved from <https://geniusjournals.org/index.php/esh/article/view/1990>
 28. Usmonov Nodirjon Botiraliyevich. (2022). BENEFITS OF CO-PLANTING COTTON WITH PEANUTS. Conferencea, 90–92. Retrieved from <https://conferencea.org/index.php/conferences/article/view/1040>
 29. Usmonov Nodirjon Botiraliyevich. (2022). EFFICIENCY OF CO-PLANTING OF COTTON AND PEANUTS IN SANDY SOILS OF THE DESERT REGION. Web of Scientist: International Scientific Research Journal, 3(7), 458–461. <https://wos.academiascience.org/index.php/wos/article/view/2228>
 30. A.S.Abduraximov, N.B.Usmonov. Effectiveness of co-planting crops in sandy soils. Plant Cell Biotechnology and Molecular Biology (SCOPUS JOURNAL). 2020. 21(65&66). pp 1-9 <https://www.ikppress.org/index.php/PCBMB/article/view/5688>



31. Usmonov Nodirjon Botiraliyevich. (2023). Technology of Intensive Planting of Sunflower and Soybean for Grain in Sandy Soils. Web of Agriculture: Journal of Agriculture and Biological Sciences, 1(8), 21–24. Retrieved from <https://webofjournals.com/index.php/8/article/view/313>