

## Terms of Education of Cotton

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### Abstract:

During the growing season, cotton undergoes several stages of development that differ in quality, which also affects the nutritional process. There are developmental stages of cotton sprouting, combing, flowering, weeding and ripening. The results of a study of how fertilizers affect cotton yields and the development of cotton during the growing season suggest that plant life should be divided into six periods. Plants do not always need the same amount of nutrients, both quantitatively and qualitatively. This factor varies depending on the growth, development and overall season of the plant. In this sense, all field crops are divided into two groups: short and long feeding during the growing season. For example, cotton is a plant that can be eaten for a long time during the growing season. It absorbs nutrients from the soil from the time the seeds germinate until the end of the growing season. After the autumn frosts hit the cotton, its growth period ends.

**Keywords.** Cotton, growth period, nutrition, seed germination, weeding, flowering, germination and ripening periods, nutrient uptake, fertilizer efficiency, cotton stalks.

### Introduction

It is known that the effectiveness of fertilizers depends in many ways on the period of their application to the cultivated fields, and the period of application of fertilizers, in turn, depends on their interaction in the soil. Plants do not always require the same amount of nutrients, either in terms of quantity or quality. This factor varies depending on the growth and development of the plant and the time of the season in general. In this regard, all field crops are divided into two groups, i.e. short and long feeding during the growing season. In particular, cotton is considered a plant that is fed for a long time during the growing season. It absorbs nutrients from the soil from the time of seed germination until the end of the growing season. After the autumn frost hits the cotton, its growth period ends.

During the growth period, cotton goes through several stages of development, which differ in terms of quality, which affects the nutritional process. Cotton has development periods consisting of germination, carding, flowering, boll bearing and ripening. The results of the study of how weeds affect the cotton yield and the development of cotton during the growing season indicate that the life of the plant can be divided into six periods.

The first period is the time from the germination of the seed to the appearance of the first leaf in the seedlings. Seedlings require a lot of phosphorus during this period. The demand for nitrogen increases later when the first leaf is released.

The second period is the time that passes from the formation of a single leaf in cotton to the appearance of the first boll. At this time, cotton's demand for nitrogen and phosphorus is much higher than the amount. True, at this time, the nutrients consumed by the plant are not much more than the total amount of nutrients that cotton receives from the soil during the season to accumulate yield and dry matter. Because cotton does not produce a lot of dry matter until it begins to bloom. But from the second part of the growing season, the demand for nitrogen increases sharply. It should also be noted that nitrogen affects the development of plant life and



the amount of cotton yield.

The third period is the time that passes from the time the first boll is released until the first flower opens. At this time, the process of obtaining nitrogen and potassium from the soil by the plant increases. Because the effect of fertilizer on the growth and development of cotton is greatly increased. All the cotton-growing countries recognize the need to feed cotton with nitrogen (nitrogen-potassium, if necessary) fertilizers during the ginning period. Experiments show that the later nitrogen fertilizers are applied to cotton, the higher the cotton yield will be. Because late application of nitrogen fertilizers not only reduces the yield of the first crop, but also reduces the overall yield. When the fertilizer is applied soon after cotton picking, the opening of the bolls accelerates, the productivity increases significantly, especially the amount of first grade cotton increases.

The fourth period is the period of flowering and fruiting of cotton, which lasts a long time. At this time, cotton plants are rapidly growing, nutrient absorption from the soil, and the demand for nitrogen-phosphorus fertilizers increases, potassium fertilizers applied at this time will increase the yield of cotton. does not show. So it is not recommended to use it. In the first 30-35 days of the period of flowering and fruiting, cotton requires a lot of nitrogen-phosphorus fertilizers, but in the second half of this period, the amount of nutrients from the soil decreases sharply. Meanwhile, the growth of vegetative organs of cotton slows down and sheds its nodes. It is time for the plant to produce flowers and buds if it is born, it enters the period of new development - ripening. The ripening period of cotton begins long before the opening of the bolls. Thus, the fourth development period of cotton is completed by the time the bolls begin to ripen. Regardless of whether cotton is sufficiently supplied with fertilizers, especially nitrogen fertilizers, it is very beneficial to fertilize them in the fourth development period. But if it is planned to feed cotton once during the growth period, it is considered useful to give this fertilizer during the period of combing. Fertilizers intended for the periods of flowering and fruiting of cotton should be given at the beginning of this period of development, no later than when the first 10-12 flowers open.

The fifth period lasts until the opening of the first cotton bolls. Fertilizing cotton at this time is often useless. Nitrogenous fertilizers, in particular, cause cotton to grow quickly and produce new branches. After that, the crop nodes will not ripen due to lack of heat and will not produce any cotton fibers. Because it takes at least 75-80 days for the buds that appear at the end of August and the beginning of September to ripen.

The sixth period is the bud opening period, which lasts from the opening of the first bud to the end of the growing season. During this period, cotton begins to rapidly absorb substances again. At the moment, an increase in nitrogen and partly phosphorus in the content of cotton branches was found.

Thus, it is necessary to create conditions in the early stages of plant life for good plant development and early opening of buds, as well as abundant and high-quality harvest, at that time they are provided with enough nutrients, o The effectiveness of fertilizers depends in many respects on their application to the needs of fertilizers in the stages of cotton development.



## References

1. B.Umarkulova. (2022). EVOLUTION OF IRRIGATED SOILS "CENTRAL FERGANA" UNDER THE INFLUENCE OF ANTHROPOGENIC FACTORS. *American Journal Of Agriculture And Horticulture Innovations*, 2(05), 30–35. <https://doi.org/10.37547/ajahi/Volume02Issue05-06>
2. Umarqulova Barchinoy Nematovna. (2022). Cotton Fertilization Periods and Their Effect on The Plant. *Eurasian Scientific Herald*, 14, 61–63. Retrieved from <https://www.geniusjournals.org/index.php/esh/article/view/2708>
1. 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>
2. 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>
3. 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>
4. 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>
5. 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>
6. 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>
7. 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>
8. 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>
9. 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>
10. Nazirova Rakhnamohon 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>



11. Nazirova Rakhnamohon 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>
12. Nazirova Rakhnamohon 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>
13. Nazirova Rakhnamohon Mukhtarovna, Khodjimatom 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>
14. Nazirova Rakhnamohon 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>
15. 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>
16. 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>
17. 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/ejrds/article/view/824>
18. Nazirova Rahnamokhon 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>
19. Nazirova Rahnamokhon 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>
20. Nazirova Rakhnamokhon Mukhtarovna, Holikov Muhrudin Bahromjon oqli, & 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>
21. Nazirova Rakhsamokhon Mukhtarovna, Tojimatov Dilyor Dilmurod oqli, Kamolov Ziyodullo Valijon oqli, & 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>
22. Nazirova Rakhsamokhon 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>
23. Nazirova Rakhsamokhon 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>
24. Nazirova Rakhsamokhon 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>
25. Nazirova Rakhsamokhon 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>
26. 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>
27. 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. – T. 6. – C. 3-3.
28. 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>

