



Cotton Fertilization Periods and Their Effect on The Plant

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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.

It is known that the effectiveness of fertilizers depends in many respects on the timing of their application to cultivated fields, and the timing 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 the seed germinates until the end of the growing season. After the autumn cold hits 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 the effect of fertilizers on the yield of cotton and the development of cotton during the growth period 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 one 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 in general are not much more than the total amount of nutrients that cotton receives from the soil during the season for the production and accumulation of 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. In all cotton-growing countries, it is recognized 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 before the time of carding, the opening of the bolls accelerates, the productivity increases significantly, especially the amount of the 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 in rapid growth, nutrient absorption from the soil, and the demand for nitrogen-phosphorus fertilizers increases, potassium fertilizers applied at this time will increase the cotton yield. 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 fertilizer, but in the second half of this period, the amount of nutrients from the soil decreases sharply. At this time, the growth of the vegetative organs of cotton slows down and sheds its nodes. If the plant continues to produce flowers and buds, it enters the period of new development - ripening. The ripening period of cotton begins long before the opening of the bolls. Thus, the fourth period of development 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 gnawing period. 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. Nitrogen fertilizers in particular cause cotton to grow quickly and produce new branches. After that, the nodes of the crop will not ripen due to lack of heat and will not produce any cotton fibers. Because the end of August, beginning of September It takes at least 75-80 days for the buds 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 partially 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.

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