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EFFECT OF LEBOSOL GROUP STIMULATORS ON COTTON GROWTH AND DEVELOPMENT

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Abstract. There is a need to develop agro-technologies for obtaining high harvests of cotton under unfavorable and changing weather conditions. In cotton, it is possible to obtain an additional harvest of up to 3.4-6.6 t/s by processing the stimulators belonging to the lebosol group in a complex way in different periods and rates, during the growth period of cotton.

Keywords. Cotton, Lebozol, growth, development, stimulant.

Аннотация. Необходима разработка агротехнологий для получения высоких урожаев хлопчатника в неблагоприятных и меняющихся погодных условиях. На хлопчатнике можно получить дополнительную урожайность до 3,4-6,6 т/с при комплексной обработке стимуляторами, относящимися к группе лебосолов, в разные периоды и нормы, в период роста хлопчатника.

Ключевые слова: Хлопок, Лебозол, рост, развитие, стимулятор.

Түсініктеме. Қолайсыз және құбылмалы ауа райы жағдайында мақтадан жоғары өнім алу үшін агротехнологияларды дамыту қажет. Мақтада лебозолдар тобына жататын стимуляторлармен әр түрлі кезеңдер мен нормада, мақта өсу кезеңінде кешенді өңдеу арқылы 3,4-6,6 т/с дейін қосымша өнім алуға болады.

Негізгі тірек сөздер: Мақта, Лебозол, өсу, даму, ынталандырушы.

INTRODUCTION

Today, the scope of use of various stimulants in plant care in agriculture is increasing. These stimulators enable plants to recover from stress under various adverse conditions and increase productivity through additional foliar feeding. Growth regulators have a positive effect on photosynthesis process, enzyme activity, amino acids, nucleic acids and protein biosynthesis, phytohormones exchange and substance distribution in plant metabolism.

When Boms preparation was used in cotton care, the height of the stem of plants was 8.9-9.8 cm higher than the control option, and the number of sympodial branches increased by 13.9-15.1, which is 1.0-1.8 more than the control option. The number of bolls increased from 6.7 to 7.6, and the weight of cotton per boll increased under the influence of Boms drug. This indicator was 5 g, compared to the control option, it increased by 1.8 g. It was noted that 38 t/ha harvest was observed in the variant where Boms drug was used at 600 kg/ha [1]



In the care of cotton varieties Porloq-4 and Porloq 7, when treated with DAG-1, Rizokom-1, Harvest, Mikro-1, Mikro-2 and Bioducs biopreparations, compared to the control, the cotton yield is 9.5 t/ha when NPK + Rizokom-1 preparation is used, They recognized that it increased by 8.4 t/ha when using NPK+DAG-1, and 3.3 t/ha when using NPK+Harvest biological preparation [4]. Baikal EM-1 microbiological fertilizer is applied in the background of mineral fertilizers N-200 R-140 K-100 kg/ha, 10 l/ha before plowing, 10 l/ha before sowing seeds, 2-3 pine leaves (3 l/ha), during planing (3.5 l/ha) and when applied at the beginning of the flowering period (3.5 l/ha), it was determined that optimal conditions were created for the growth and development of cotton and the accumulation of crop elements. [5]

By treating plants with various stimulants during the growing season and before planting, the harvest increases [2], [3].

MATERIALS AND METHODS

In the study, Lebozol PK Max, Lebozol Magfos and Nutriplant 8-8-6, Lebozol Boron, Lebozol MagS SK, Lebozol Kaliy 450, Lebozol Quadro Mix and Aminozol, which are part of the Lebozol group, were used as a set of stimulants on plants in 3-4 chinbar, tillering and flowering periods at different rates. the effect on growth, development and productivity was studied. The research was conducted in the conditions of typical light gray soils of Kibrai district of Tashkent region.

In the research works, experimental options were placed in 3 tiers in 3 rows in field conditions, and the options were 25 m long, 2.4 m wide, and the experimental area was 60 m², of which the calculation area was 30 m².

RESULTS AND DISCUSSION

In the experiment, when phenological observations of plants were made at the end of the growing season, in the control option without the stimulant, the plant height was 80.0 cm, the number of branches was 14.0 and the number of pods was 11.0 As a standard, Uzgumi stimulator was 0.3-0 in the periods of pruning and flowering. In the variant used at the rate of .4 l/ha, the height of the plant was 85.1 cm, the number of branches was 14.2 and the number of pods was 12.4.

When the stimulators belonging to the Lebozol group are applied collectively to the plants during the growing season, at different periods and rates, the length of the cotton is 79.9-90.3 cm, the number of harvested branches is 14.0-14.9 pcs., the number of pods is equal to 12.8-14.1 pcs. was observed and it was found that the height of plants, the number of harvest kings and the number of pods increased compared to the control and standard variants.

The following results were obtained when cotton productivity was analyzed in the study. The harvest obtained in the control variant, which was not treated with the stimulator, was 28.7 t/ha, and when the Uzgumi stimulator was used as a benchmark, the yield was 31.8 t/ha. The yield was 32.1-35.3 ts/ha in variants that used Lebozol stimulants in different periods and rates. These indicators were 3.4-6.6 ts/ha higher



than the control variant. 0.3-3.5 t/ha additional yield was achieved compared to the reference option.

CONCLUSIONS

From the experiment, it can be concluded that stimulants belonging to the Lebozol group have a positive effect on the growth and development of plants when applied to cotton in different periods and rates. In the varieties where Lebozol stimulants were used, the height of the cotton was high, the number of bolls and bolls increased, and the cotton harvest was found to be higher from 3.4 to 6.6 t/s.

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