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EFFECT OF DEFOLIANTS ON COTTON WEIGHT

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Abstract:

Objective. When using the liquid defoliant CMD at a rate of 8.0 l/ha, the weight of a piece of cotton was 0.1 g less than in the control. This can be expressed in the harsh and rapid action of the defoliant and the opening of the pods before they are fully ripe due to the drying of the cotton leaves.

Based on this point of view, the development of standards for the use of new soft-acting defoliants, taking into account the sharp differences in the properties of defoliants created in recent years, climate change and the mechanization of harvesting operations, is an urgent issue.

Methods. It was carried out in soil conditions at a depth of -1.8 meters. In the experiment, 8 variants were obtained for each variety and placed in 3 repetitions..

Results. A relatively high result was obtained when Entodefol defoliant was applied at the rate of 0.20 l/ha, and the weight of cotton in one boll in this variant was 5.72 g on average, which is 0.3 g more than the control, and 0.4 g compared to the effect of the model SuyuqXMD was high.

Conclusion. In conclusion, it should be said that the effectiveness of the used defoliants is directly dependent on the biological characteristics of the cotton varieties, and in our research, in the S-8290 cotton variety (30-40%), the control option in the 1st season, the weight of one boll was 5.42 g on average over the years. , and 0.01-0.1 g of cotton variety S-6775, respectively. turned out to be in love with.

Keywords: types of defoliation and defoliants, cocoons, cotton mass.

Introduction

It is known that scientists have proven that if the defoliants used in cotton are exceeded, they will have a negative effect on the quality of the fiber and seeds, and if they are used in a small amount, they will not give the expected effect, that is, the cost will be wasted. Taking this into account, the development of acceptable standards of new defoliants is an urgent issue. In this regard, on August 21, 2017, the President of our country Sh.M. Mirziyoev issued PQ-3229 "On comprehensive organizational measures for timely and effective cotton defoliation in 2017" regarding the harvesting of the cotton crop grown this year. » decision was issued, in which the measures for quality defoliation of cotton were clearly indicated [1-4].

Based on this point of view, the development of standards for the use of new soft-acting defoliants, taking into account the sharp differences in the properties of defoliants created in recent years, climate change and the mechanization of harvesting operations, is an urgent issue [5-11].

Research methodology

Based on the above urgent tasks, during 2018-2019, our research on the topic of the scientific experimental station of the Cotton Selection, Seeding and Cultivation Scientific Research Institute of Cotton Selection, Seeding and Cultivation, located in Kuva District, Fergana Region, is heavy sand, low salinity, seepage water according to its mechanical composition. It was carried out in soil conditions at a depth of -1.8 meters. In the experiment, 8 variants were obtained for each variety and placed in 3 repetitions.

The specified standards of the above defoliants were applied to the selected variants of the S8290 and S6775 cotton varieties during the opening period of 30-40% and 50-60% respectively, and their optimal application rate and duration were determined. It was carried out on the basis of the manuals of "Methods of Conducting Field Experiments [12-17].

Research results and their discussion

In the conducted observations and analyzes, in the conditions of 2018-2020, the control variant of the S-8290 cotton variety, the weight of cotton per boll was 5.41-5.41-5.43 g, and the average was 5.42 g. When SuyuqXMD defoliant was applied at the rate of 8.0 l/ha, the weight of one bag of cotton decreased by 0.1 g compared to the control. This can be expressed by the hard and fast action of the defoliant, causing the cotton leaves to curl up and open the pods before they are fully

ripe. A relatively high result was obtained when Entodefol defoliant was applied at the rate of 0.20 l/ha, and the weight of cotton in one boll in this variant was 5.72 g on average, which is 0.3 g more than the control, and 0.4 g compared to the effect of the model SuyuqXMD was high.

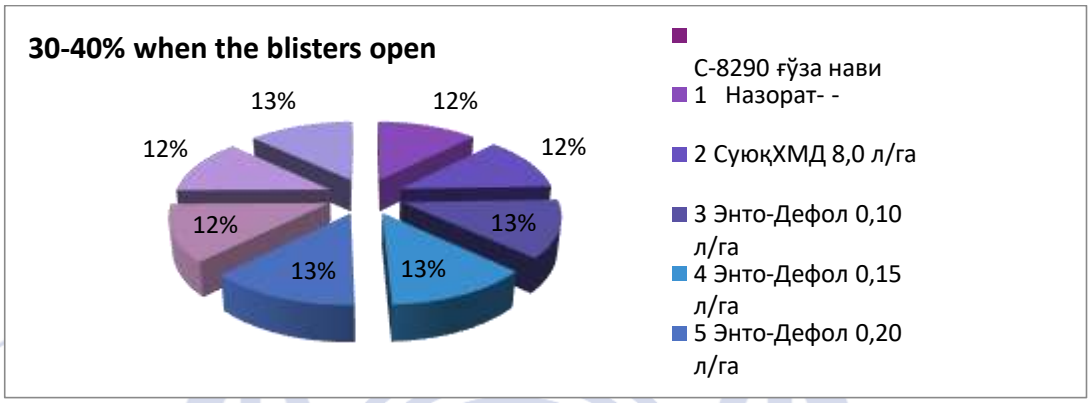

Figure 1. S-8290 cotton bolls at 30-40% opening period

It was found that the average weight of one bag of cotton at the rate of 7.0 l/ha of FanDEF-excellent defoliant is 0.2-0.3 g more than the control and standard (LiquidXMD 8.0 l/ha) options. (Figure 1).

The reason for the increase in the weight of one boll in these variants is that, as we mentioned above, in these variants, as a result of shedding of cotton leaves up to 90.0-96.0%, because the bolls effectively use the light and heat from the sun, there is a greater accumulation of cellulose, as well as oil and fat in the seed. we came to the conclusion that it increased due to the increase of proteins.

According to the classification of the second studied cotton variety S-6775, the weight of one boll is 5.7-6.5 g. up to, it certainly depends on how the agrotechnical event is carried out and the soil and climate conditions.

The weight of cotton in one boll was 5.24-5.45-5.55g, and the average weight was 5.41g in the control variant of S-6775 cotton variety in the background of 30-40% opening. When liquid XMD defoliant was applied at the rate of 8.0 l/ha, it was observed that the weight of one bag of cotton was 0.05 g less than the control.

Against this background, Entodefol defoliant showed a relatively high result when applied at the rate of 0.20 l/ha, and the average weight of cotton per bag was

5.77 g, which was 0.36 g more than the control, and 0.41 g compared to the effect of the model Liquid XMD. was higher. (Figure 2).

It was found that the average weight of one bag of cotton at the rate of 7.0 l/ha of FanDEF-excellent defoliant is 0.35-0.4 g more than the control and standard (LiquidXMD 8.0 l/ha) variants [18-23].

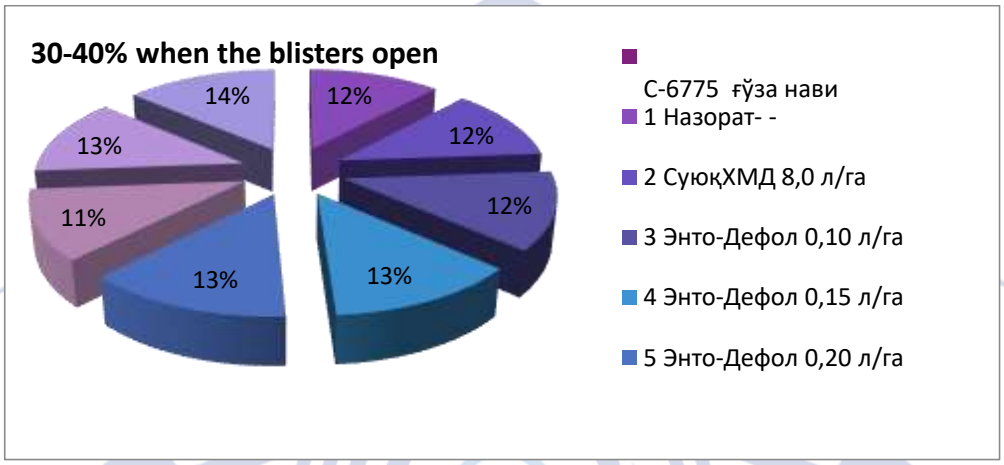

Figure 2. S-6775 cotton bolls at 30-40% opening period

Conclusions

In conclusion, it should be said that the effectiveness of the used defoliants is directly dependent on the biological characteristics of the cotton varieties, and in our research, in the S-8290 cotton variety (30-40%), the control option in the 1st season, the weight of one boll was 5.42 g on average over the years. , and 0.01-0.1 g of cotton variety S-6775, respectively. turned out to be in love with.

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