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# Effects Of Improved Agrotechnical Measures On Harmful Harvesting Of Medium-Fiber Cotton Varieties

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**Annotation:** The article shows that in the cotton farms of Surkhandarya region in recent years there is an effective method of improved agro-technical measures against handcuffs, which cause great damage to the cotton crop. It has been scientifically proven that cotton yields increase the percentage of damage to the elements.

**Keywords:** Cotton Shackles, Seedling Thickness, Twig, Entogen, Yield Elements.

## Introduction:

Along with implementing of agricultural high techniques and other measures in the planned harvest of cotton and other agricultural crops, protection from pests, diseases and weeds is one of the necessary and very important factors. Failure to take pest control measures can result in a 30% crop failure. To prevent this, the results of scientific and practical research should be introduced into production on a regular basis. Uzbekistan is one of the world's major cotton producers. Despite the existence of recommendations developed by agricultural scientists of the country and adopted for use in agriculture, as a result of non-compliance with them, the damage to agriculture from pests and diseases is still observed. One of the main directions in the application of modern agriculture in cotton growing is a scientifically based harmonized control complex for the protection of plants from pests, which consists of a set of control methods that can meet the requirements of agro-technical, chemical, biological and other methods.

Harmonized control complex and science-based crop rotation, organizational measures that allow extremely low use of chemicals, can not only reduce the number of pests, but also keep them below the level of economic damage, preserve natural resources and the purity of nature. Measures, which ultimately allow to grow high and quality crops. All this should be based on predicting the development of pests, diseases and weeds, their quantity and the development of plants.

In recent years, due to the influence of anthropogenic factors in the natural environment, the species composition of pests specializing in cotton and other agricultural crops has changed. Pests that have been harming plants for years are being replaced by new ones. Harmful caterpillars are such pests that have very few natural entomophagous species in nature, which makes them more difficult to control biologically. Along with plant protection, the issue of preventing pollution of the environment with harmful chemicals is also in focus. In the context of scientific and technological progress, the use of integrated plant protection methods, the widespread introduction of biological methods and the focus on minimizing the use of toxic chemicals are crucial in solving these problems.

There are two types of pests: suckers and rodents. Depending on the size of the yard, only one or two plants will fit. The semi-rigid winged caterpillars are insects that cause serious damage to cotton and other crops and have a sucking mouthpiece. Therefore, chemical control methods are often ineffective. The use of such methods leads to the contamination of the environment with toxic pesticides and the destruction of beneficial entomophagous substances found in nature. Therefore, the development of environmentally friendly and effective methods of controlling this dangerous pest is a topical issue.

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## Literature review:

Cotton is most affected by alfalfa. The clover stalk infects cotton buds, flowers and pods with its oral apparatus. Height 6.5-9.5 mm. The body is dark or yellowish-green, the males are earthy, with 2 black dots on the shoulders. Winters in the egg phase. Gives 3-4 generations during the season. The field canopy is 3.5-4.0 mm long, green and black. Eggs inside leaves and leaf blades. The incubation period lasts 1.5 weeks, larval development lasts 25-30 days. It infects the entire surface of cotton from early spring to late autumn. Gives 3–4 generations in a lifetime.

Belonging to a semi-rigid, winged family, these insects feed mainly on alfalfa, beets, sorghum, hemp, and several other species of plants. There are 20 types of handcuffs in cotton fields, of which field handcuffs cause the most damage to cotton. Specialized natural cousins of field shackles are not found in the Republic. However, they are somewhat reduced by golden owl larvae, buzzing beetles, beshiktervatar, bees and birds (Hasanov, Khamrayev et al., 2002).

Influence of alfalfa (Adelphocoris lineolatus) and field lynx (Lygus protensis) on cotton yield was observed in fine and medium fiber cotton fields in different soil and climatic conditions of Surkhandarya region (Khamrayev and others, 2000; Kuchkarov and others, 2011).according to observations made in cotton fields, the damage of alfalfa shackles, field shackles and cotton shackles (Creontiades pallidus), a new species for the region, was found to be significant. The most common of these species, the dominant one, is the cotton candy (Creontiades pallidus) (Ochilov and others, 2016).

The eggs are 1.0-1.5 mm long, 0.4 mm wide, pale white, with a sharp tip and curved edges. The female is protected from the time she lays her eggs until she is born, and is light green in color. After the third jump, the wings begin to form. The larvae hatch in an average of 8-14 days during the summer. The larvae hatch 4 times and become adults after 5 years (Suleymanov, Jumayev, 2021).

Kandala first infects young leaves and flower buds, then stems, flowers and fruit buds, immature seeds, growth points and stems. One-year-old larvae infect parts of the lower layers of the plant. The second-generation larvae infect the upper part of the plant and the adult larvae infect the plant's reproductive organs. (Kosobutsky, 1949; Yakhontov, 1957) found that green pods damaged by handcuffs could later be damaged by fungi and bacteria, causing cotton fibers and seeds to break down and become infected with gluten bacteriosis.

## Research Methodology:

Field experiments were conducted in 2018-2020 on the experimental farm of Surkhandarya scientific-experimental station of PSUYEAITI according to the experimental system listed in Table 1. In the experiment, the Bukhara-102 medium-fiber cotton variety was planted in 3 different seedling thicknesses and processed by 3 different chipping methods.

Observations, calculations and research in experiments and production tests "Methods of field experiments with cotton (2007), Methods of state testing of varieties of agricultural crops" (Moscow, colossus, 1969), "Methods of agro physical research" (1973, 4th edition, SoyuzNIXI) and "Methods of agrochemical analysis of soil and plants" (1977, 5th edition, Tashkent, SoyuzNIXI).

**Table 1**
**EXPERIMENTAL SYSTEM-1**

| Options | Species Name | Seedlings | Chilpish method |
|---|---|---|---|
| 1- variant | Bukhara-102 | 90-100 thousands seedlings / ha | Chilpish is not held |
| 2- variant | | | Chilpish is held |
| 3- variant | | | Enthusiastic + chilpish |
| 4- variant | | 110-120 thousands seedlings / ha | Chilpish is not held |
| 5- variant | | | Chilpish is held |
| 6- variant | | | Enthusiastic + chilpish |
| 7- variant | | 130-140 thousands seedlings / ha | Chilpish is not held |
| 8- variant | | | Chilpish is held |
| 9- variant | | | Enthusiastic + chilpish |

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**Research results:**

During the growing season, handcuffs severely damage the stems, flowers, buds, and buds of the cotton, causing the elements to fall out and the cotton yield to decline.

The research examined the effects of agronomic practices on seedling thickness, the number of cotton handcuffs, the impact of cotton elements on plant-eating handcuffs, and cotton yields.

According to the results of agro-technical measures on the thickness of seedlings and methods of pruning to damage the cotton with handcuffs, when the damage to the plant leaves 90-100 thousand seedlings / ha - in the variant without pruning 14 , 7%; 10.8% in the version with the chirping; and in the entogen-treated variant, 8.8% of the yield elements were damaged. In the non-chipped variant, the percentage of damage was 3.9% higher than in the chipped variant, and 5.9% more in the entogenous variant.

Bukhara-102"variety with a seedling thickness of 110-120 thousand seedlings - 17.7% without pruning; 12.4% in the case of a whipping; and in the entogen-treated variant, 10.2% of the yield elements were damaged.

Similar experiments were performed on 130-140 thousand seedlings per hectare, 24.3% without pruning; in the variant with pruning 15.6% and in the variant with endogenous treatment 13.2% of crop elements were found to be damaged. 9.6% more and 6.6% more than those planted on 110-120 thousand seedlings. An increase in the number of seedlings has been observed to cause more damage to the elements of the cotton crop.

**Figure 1. Appearance of cotton buds damaged by handcuffs**

**Conclusion:**

In conclusion, it was found that the thickness of the cotton seedlings and the spinning of the cotton play an important role in damaging the elements of the cotton crop by the handcuffs. It has also been found that as the number of cotton seedlings increases, the degree of damage to the cotton-growing elements increases in non-cotton-spun varieties.

The most effective agro-technical measures in the fight against handcuffs in clusters and farms are the care of the cotton crop with a number of 90-100 thousand seedlings, the timely weeding of cotton, the use of entogenous weeding. Agro technical measures.

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