WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979 (Volume 2, Issue 9, Sep., 2021

# EFFICIENCY OF APPLICATION OF HERBICIDES WHICH ARE SAMURAY 33% E.K., ZELLEK SUPER 10.4% E.K. AND TRIFLUREX 48% E.K. AGAINST WEEDS IN COTTON FIELDS

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**Abstract**
In this paper, in the conditions of irrigated meadow alluvial soils, the control of weeds in cotton fields involves the development of agrotechnology for high-quality production of cotton through the sequential application of pesticides and herbicides with different effects.

**Keywords:** Weeds, herbicide application rate, yield, climate, soil, growth and development, cell sap concentration.

## Actuality of the topic

One of the most damaging factors in agriculture, especially cotton, is weeds. There are 209 species of weeds that cause damage to crops, of which 57 percent are annual and 43 percent are perennial weeds. In many countries of the world, such as China, USA, Brazil, Germany, Australia, South Korea, India, Russia, where agriculture is developed, high efficiency is achieved as a result of a combination of agro-technical and chemical weed control measures. Alternating and sequential application of

herbicides with different tillage methods and areas of exposure to the soil is important in the timely and effective reduction of weeds in crop fields.

**The aim of the study** is to develop agrotechnology for high-quality cotton production through irrigated meadow alluvial soils, weed control methods in cotton fields, and sequential application of herbicides with different effects.

**Tasks of the research:**

- Determination of soil tillage methods and the effect of herbicides on soil agrophysical and agrochemical properties in the conditions of alluvial soils of grasslands of Tashkent region;
- determination of the optimal rate of herbicide Samuray 33% e.k. against weeds in cotton fields on lands plowed with a simple and two-tiered plow;
- to evaluate the effect of successive application of herbicides Samurai 33% e.k. and Zellek super 10.4% e.k. on weeds;
- to determine the effect of alternate application of herbicides Samuray 33% e.k. and Triflureks 48% e.k. against weeds in cotton-grown fields;
- to determine the effect of herbicides applied to weeds on ordinary, two-tiered plowed lands on the growth, development and yield of cotton;
- assessment of the impact of agro-technical and chemical measures on the technological properties of raw cotton;
- Determination of the effectiveness of herbicides against weeds in cotton cultivation on arable lands with a simple and two-tiered plow.

**Research method**

Observations, measurements and analyzes on cotton are generally accepted in the field of "Methods of conducting field experiments", "Methods of agrochemical, agrophysical and microbiological research in pollen grains", "Methods of growing and vegetative experiments with cotton". Mathematical and statistical analysis of the results of the experiments was performed using the method of B.A. Dospekhov using Microsoft Excel.

**Results**

In the conditions of alluvial soils of the Tashkent meadow, plowing the soil to a depth of 30 cm in a two-tier plow improves the agrophysical and agrochemical properties of the soil, reducing the number of annual weeds in cotton fields by 22.6-28.0%, perennial weeds by 17.4-20.6%. provided.

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By plowing the soil to a depth of 30 cm in a two-tiered plow, gained when the the herbicide Samurai 33% e.k. is applied at a rate of 1.5 l / ha, it is reached 86.7-90.4% of decrease in annual weeds, serial application of herbicides Samurai 33% e.k. (1.5 l / ha) with Zellek super 10.4% e.k (1.0 l / ha) decreased the annual weeds by 90.0-92.7%, it is reached 89.9% - 93.7% of decrease by perennials application of annual weeds, 87.1-89.4% decrease by rotation of annual weeds, 87.9-88.2% decrease by reduction of annual weeds.

Successive application of herbicides Samurai 33% e.k. (1.5 l / ha) with Zellek super 10.4% e.k. (1.0 l / ha) yielded an additional yield of 4.0-5.4 ts / ha of cotton, an increase in net profit of 390631.6-496102.9 soums / ha, a yield of 42.7-46 , Increased by 1%. After Samurai, Triflurex is 48% e.k. At the rate of 1.5 l / ha, when applied alternately, favorable conditions for the growth and development of cotton are created, and the yield of additional cotton is higher by 4.0-4.3 ts / ha.

**Conclusions**

In the alluvial soils of the Tashkent region, cotton fields are dominated by annual weeds, mainly black currant, olabuta, ituzum, wild rose hips, semizoot, perennial aphids, gumay and koypechak, which account for 9.84-15.2% of the cotton crop. and in heavily affected areas, 20.5% or more is lost

2. Carrying out a combination of agrotechnical and chemical control measures for effective control of weeds with different biological properties, as well as updating the types of herbicides to increase the effectiveness of chemical control measures against the background of plowing the soil in a two-tier plow, alternating and sequestrating herbicides you will need to apply the kit.

3. Plowing in a two-tier plow, relative to the soil plowed in a normal plow, the soil volume mass is 0-10; 10-20; Reduces 0.02-0.03 g / cm3 in layers of 20-30 and 30-50 cm, increases porosity by 0.7-0.8% and increases the number of annual and perennial weeds by 22.6-28.0; 17.4-20.6%, dry mass 30.0-36.0; Provides a reduction of 19.0-25.4%.

4. Plowing the land with a two-tiered plow and application of herbicide Samurai 33% e.k. at a rate of 1.5 l / ha, annual weeds 86.7-90.4%, dry mass 85.8-90.4%, when applied in series with herbicides Samurai 33% e.k. (1.5 l / ha) with Zellek super 10.4% e.k. (1.0 l / ha), while single and perennials 90.0-92.7; 89.9-93.7%, dry mass 89.0-94.0; 91.4-93.3%, after Samurai Triflurex-48% e.k. at a dose of 1.5 l / ha respectively 87.1-89.4%, 85.6-90.3% and after Triflurex Samurai provides a reduction of 87.9-88.2%, 87.0-92.4% when applied alternately at a rate of 33% e.k.1.5 l / ha.

5. Application of Samurai 33% e.k. at a rate of 1.5 l / ha, compared to the control option 3.1-4.4 ts / ha, Samurai 33% e.k. (1.5 l / ha) with Zellek super 10.4% e.k. (1.0 l / ha) allows the cultivation of high cotton yields of 4.0-5.4 ts / ha when applied in series of herbicides.

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