

DIFFERENT SHADES IN THE SOIL AND CLIMATE CONDITIONS OF
KHORAZM REGION
INDICATORS OF PHOTOSYNTHESIS RATE OF VARIETIES

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Abstract. Izucheny bioekologicheskie i morphofysiologicheskie osobennosti razlichnyx sortov soi v usloviyax Khorezmskoy oblasti. Opredeleny fotosinteticheskie pokazeteli (ploshchadi listev, sodержaniya pigmentov, intensivnost photosynthesis, productivity photosynthesis) razlichnyx sortov soi.

Ключевые слова: sorta soi, rost, razvitie, periody ontogeneza, urojajnost, photosynthesis, pigment, ploshchadi listev, intensivnost photosynthesis, productivity photosynthesis.

Abstract: In this article given results of bioecological and morphological features of the perspective varieties of soybean in the conditions of Khorezm region. Certain photosynthetic index (areas of leaves, maintenance of pigments, intensity of photosynthesis, productivity of photosynthesis) of different varieties of soy.

Key words: varieties of soy, growth, development, periods of ontogenesis, productivity, photosynthesis, pigment, areas of leaves, intensity of photosynthesis, productivity of photosynthesis.

Photosynthesis is one of the main processes in the plant organism, and its dynamic state is determined by the organic effect of internal and external factors [80,88]. Any change in environmental conditions primarily affects the speed and direction of photosynthesis processes. This ultimately leads to changes in plant growth, development and productivity. The growth and productivity of plants in different climatic and soil conditions depends on the adaptation of various physiological processes, especially photosynthesis, to environmental conditions.

Therefore, the main indicators of photosynthesis processes in the leaves of different soybean varieties - leaf surface, photosynthesis rate, net productivity of

photosynthesis and amounts of plastid pigments were studied in the specific soil and climate conditions of the Khorezm oasis. The experiments were carried out in a vegetative way.

The rate of photosynthesis in the leaves of the studied soybean varieties was determined three times during the day, that is, at 9:00 a.m., at noon, at 1:00 p.m. , and at 5:00 p.m. in the evening . The obtained results are presented in Table 3.4.

The results of the experiments revealed that the rate of photosynthesis in the leaves of soybean plants grown in vegetative containers varies depending on the characteristics of the plant variety, development periods, and during the day. In all soybean varieties, the rate of photosynthesis at the leaf stage was found to be the highest in the midday hours. During the season, the rate of photosynthesis increased to the period of gross flowering of plants, and it slowed down slightly to the period of pod formation. Also, during the periods of flowering and formation of pods , a slowdown (depression) of the rate of photosynthesis was observed in the afternoon and later hours (13⁰⁰ , 17⁰⁰).

Among the studied soybean varieties, the highest photosynthesis rate was determined in the Genetic variety in all periods of vegetation.

It is known that the process of photosynthesis in plants takes place in the leaves. Therefore, the structure of the leaves and their condition depends on the genotype of the plants and growing conditions, and determines the productivity of photosynthesis processes. Different soil-climatic conditions affect the size and condition of the leaf. Taking this into account, vegetative experiments on the study of the rate of photosynthesis in different soybean varieties were carried out in the experimental field. Plants of different soybean varieties changes in the leaf surface during development periods were studied. The obtained results are presented in Table 1.

Table 1

The rate of photosynthesis in the leaves of soybean varieties (mg C O₂ /dm² h), (vegetative experiment)

Shadow varieties	Development periods	Fixed hours		
		9 ⁰⁰	13 ⁰⁰	17 ⁰⁰
A dream	chinchilla	12.6±0.22	17.7 ± 0.29	15.4 ± 0.22
	bloom	17.2 ± 0.26	14.8 ± 0.22	12.9 ± 0.22
	pod formation	15.3 ± 0.22	12.9 ± 0.22	11.4 ± 0.22
Genetic	chinchilla	14.7 ± 0.22	21.6 ± 0.30	17.1 ± 0.22
	bloom	18.3 ± 0.28	20.8 ± 0.31	19.4 ± 0.29
	pod formation	16.6 ± 0.24	19.7 ± 0.30	18.7 ± 0.37
Uzbek-2	chinchilla	11.2 ± 0.22	16.7 ± 0.22	14.3 ± 0.22

Conclusion . O ' of the wire The rate of photosynthesis is directly related to the position of the leaves on the plant, the length of the day , the increase in temperature and relative humidity . was determined .

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