

DIFFERENT SOYBEAN VARIETIES LEAF SURFACE AND THE NET PRODUCTIVITY OF PHOTOSYNTHESIS INDICATORS (KHOREZM PROVINCE SOIL-CLIMATE CONDITION EXAMPLE)

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Abstract: The article presents the data obtained on the study of bioecological and morphophysiological characteristics of different soybean varieties in Khorezm region. During the experiments, the photosynthetic indicators - leaf surface area and net productivity of photosynthesis were determined. Based on the cited results, it was noted that the above parameters change to different degrees in the section of varieties depending on their biological and variety characteristics.

Key words: soybean cultivars, photosynthesis, leaf area, net photosynthetic productivity.

According to the results of the experiment, the leaf level of all studied soybean varieties increases according to the development periods. During budding, 1191.3 ± 12.47 cm² during general flowering, and 1410.8 ± 12.84 cm² during pod formation. Organized.

In the genetic variety these indicators were equal to 307.5 ± 2.03 , 1226.4 ± 11.55 and 1523.7 ± 12.98 cm², respectively.

Mid-season varieties of soybean - Uzbek-2 varieties have a leaf level of 361.6 ± 2.78 cm² during budding, 1316.9 ± 12.32 cm² during general flowering, and $1692.4 \pm$ during pod formation. It was 14.17 cm² (Table 1).

Table 1

Changes in the leaf surface of soybean varieties (in cm²/plant)

Soy varieties	Periods of development		
	budding	gross bloom	pod formation
A dream	290.4 ± 1.86	1191.3 ± 12.47	1410.8 ± 12.84
Genetic	307.5 ± 2.03	1226.4 ± 11.55	1523.7 ± 12.98

Uzbek-2	361.6 ±2.78	1316.9 ±12.32	1692.4 ±14.17
Friendship	382.2 ±3.05	1380.5 ±11.42	1713.3 ±14.33
Uzbek-6	391.3 ±3.88	1422.6 ±12.71	1796.1 ±15.12

Thus, it was observed that the formation of the leaf surface of the studied soybean varieties depends on the biological characteristics of the varieties and the direct influence of the conditions. In this case, it was found that the leaf level of one bush of a plant was larger in mid-ripening varieties than in early soybean varieties. The leaf surface increases throughout the growing season until the formation of pods, and then sharply decreases due to the withering of the lower leaves.

It is known that various compounds necessary for the growth, development and reproduction of plants are formed in the process of photosynthesis. Depending on the plant's genotype and habitat, the assimilation in photosynthesis is used differently efficiently. Therefore, the net productivity of the process of photosynthesis of different soybean varieties in Khorezm conditions was determined in different vegetation periods. The obtained results are presented in Table 2 .

Table 2

Net productivity of photosynthesis in different soybean varieties (g/m² .day)

Soy varieties	Periods of development		
	budding	gross bloom	bean formation
A dream	6.15 ± 0.08	6.34±0.14	6.26±0.12
Genetic	6.36±0.15	6.58±0.08	6.41±0.11
Uzbek-2	6.14±0.09	6.43±0.12	6.22±0.10

It was found that the net productivity of photosynthesis in plants of different soybean cultivars is different in different periods of vegetation depending on the biological characteristics of soybean cultivars. It was observed that the net productivity of photosynthesis was higher in the early varieties of soybean (Orzu

and Genetic) than in other varieties. In all soybean cultivars, net photosynthetic productivity increases from budding to pod formation: it reaches its maximum value during gross flowering and then slows down. In most cases, there is an inverse relationship between the leaf area of soybean plants and their photosynthetic productivity. For example, plants of the early Orzu and Genetic varieties of soybeans have less leaf area, but their photosynthetic productivity is high. In all studied periods, the leaf area of the mid-season Uzbek-2 variety of soybean was large compared to other varieties, but it was found that the photosynthetic productivity was relatively low.

Summary. It was determined that the rate of photosynthesis of the plant is directly related to the position of the leaves on the plant, the length of the day, the increase in temperature and the relative humidity.

LIST OF REFERENCES USED

1. Baxriddinova R. U., Musurmonovich F. S. Soybean-as a source of valuable food //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 6. – С. 165-166.
2. Musurmonovich F. S., Komiljonovna X. S., Qudrat o'g'li S. A. Some Photosynthetic Indicators of Soybean Varieties //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 5. – С. 255-257.
3. Ergashovich K. A., Musurmonovich F. S. Some Characteristics Of Transpiration Of Promising Soybean's Varieties //The American Journal of Agriculture and Biomedical Engineering. – 2021. – Т. 3. – №. 05. – С. 28-35.
4. Фозилов Ш. М. Периодичность роста и формирования урожая у внутривидовых форм пшеницы //Интернаука. – 2019. – №. 45-1. – С. 18-20.
5. Baxriddinova R. U., Musurmonovich F. S. Distance Learning System in Educational System Instead, and Significance //Texas Journal of Multidisciplinary Studies. – 2023. – Т. 21. – С. 11-13.
6. Normuminovna Q. D., Musurmonovich F. S. Bioecological Properties of Salvia Officinalis L //Texas Journal of Multidisciplinary Studies. – 2022. – Т. 6. – С. 249-252.

7. Baxriddinova R. U. Methodology For Solving Problems of Food Chains and Ecological Pyramids and Its Significance //Texas Journal of Multidisciplinary Studies. – 2024. – T. 28. – C. 19-22.

8. Fozilov S., Ziyodova M. MAKTABLARDA STEAM TEXNOLOGIYASINI JORIY ETISHNING XUSUSIYATLARI VA AFZALLIKLARI //Biologiyaning zamonaviy tendensiyalari: muammolar va yechimlar. – 2023. – T. 1. – №. 5. – C. 819-821.

9. Fozilov S. THE EFFECT OF DROUGHT ON THE WATER REGIME IN THE LEAVES OF SOYBEAN VARIETIES //Science and innovation in the education system. – 2023. – T. 2. – №. 9. – C. 25-28.

10. Fozilov S. EFFECT OF STRESS FACTORS ON SOME PHYSIOLOGICAL PARAMETERS OF SOYBEAN PLANT //Science and innovation in the education system. – 2023. – T. 2. – №. 7. – C. 722-74.