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The Role and Importance of Space Factors in Plant Life

Janazakova Dilbarkhon Djumaboevna, Kholdarova Sevarakhon Rakhmatjon Daughter, Masardinov Khushnudbek Bozorboy Ogli
Andijan Institute of Agriculture and Agrotechnology

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Today, the agricultural sector is developing rapidly, bringing new modern agro-technologies and achieving high results. In the "Strategy of Action" developed in 2017, the head of our state Sh.M.Mirziyoev also paid special attention to agriculture and outlined the work to be done. This strategy is designed for five years and a number of works are underway to implement it. Each plant grows and develops by assimilating the external environmental factors it needs. Each of these factors plays an important role in plant life. Among these factors, space (spatial) factors (heat, light) stand out. The growth and development of plants depends on their supply of water, heat, light and air.

Plant growth, development and harvesting processes always require a certain amount of factors. These factors are divided into two: Cosmic (spatial) factors - light and heat, and terrestrial factors - carbon dioxide, oxygen, water, nitrogen, phosphorus, potassium, calcium and other ash elements. [1] Of these factors, the role of cosmic factors in plant life is unique. Without these factors, the plant world cannot grow and develop. Cosmic factors are inextricably linked with terrestrial factors, and high efficiency is achieved due to the interaction of the two.

The spatial factors in plant life cannot be roughly regulated in agriculture. It is optimized primarily due to the soil factors of the plants. [2] Therefore, these spatial factors cannot be controlled.

Plants need light, heat, water and nutrients for growth. Each species, even a genus of plants, differs from each other in its demand for the above factors. Lack of any of the factors negatively affects the growth and development of plants, leading to a decrease in productivity. Non-communicable diseases are caused by deficiency or excess of any of the substances necessary for plant nutrition, high or low temperature, low or high relative humidity, pollution of the environment with harmful substances. [3] If there are not enough conditions for the plant, favorable conditions for their pests will emerge and the plant will be damaged. Adequate light and heat are acceptable for them.

If there is no light, the rate of assimilation of plants decreases sharply. For example, in the Tashkent region, according to AB Blagoveshensky, 1.46 g of organic matter was synthesized in 1 hour on the surface of 1 m^2 of leaf surface of Navrotsky cotton, but on a cloudy day this figure was 0.075 g. Also, the formation of cotton fiber in the shaded area is slowed down or completely stopped. [4]

Plants are very sensitive to light. If it is not enough for the plant, it will not grow normally, the stem will become thinner and more flat, the grain and protein content in the spikes of grain crops will be reduced, and the accumulation of sugar in sugar beets will decrease. Due to the current average agro-technical measures, 6-8 g of photosynthetic products are obtained from one m2 of leaf surface of dicotyledonous plants. [5] Plants are divided into light-loving plants and shade-loving plants

according to their demand for light. Light-loving plants that require a lot of light for good development, such as cotton, if the light is not enough, it grows thin, weak, long, yellowish, the leaves are even low in chlorophyll. If the light is sufficient, it will grow well. [6]

The main condition for the existence of life on Earth is the solar energy that comes from the universe. Solar energy provides energy to biological processes that take place in ecosystems. Solar energy serves as a source of energy for photosynthesis, participates in the storage of heat generators in organisms, and provides water exchange. [7]

The most important factor for plant life is the stability of the atmosphere and soil. The germination of seeds of heat plants also regulates all physiological processes, growth and development, from which electricity is removed. Soil movement played a huge role in the early stages of plant life. [8]

In most cultivated plants, the minimum for photosynthesis is around 0-5^{o}C, optimally every 20-30^{o}C. Above this, photosynthesis slows the wound, stopping it completely when it exceeds 40-45 (maximum). [9] This means that excess heat can also damage the plant. Then buy enough of the plant itself, as long as it is acceptable for the plant.

All plants are divided into two groups depending on heat demand: 1) Plants growing in temperate climates (barley, wheat, rye, oats, green peas, alfalfa, etc.). Their seeds germinate at an average temperature of 1–5^{o}C, bloom and do 10–12^{o}C. 2) Heat-loving plants (cotton, corn, pupil, rice, melon, watermelon, etc.). The seeds of these plants germinate at + 10-12^{o}C and bloom at 15-20^{o}C. [2] These plants were divided into groups based on biological charges.

Air and soil movement have a strong effect on the transition location of all developmental phases in plants. For example, it takes an average of 60 days for a cotton plant to bloom and ripen. When the weather is a little higher, it is reduced to 55 days of storage. On the contrary, if it is always low, it lasts for 65-70 days. If the cotton is every 30-36o during the fruiting period, the maturation of the cocoon seeds and fibers is accelerated. When Hilamat is 40^{o}C and older, the growth and development of the cotton slows down. Corn and maize grasses lose their viability at minus 2-0^{o}C and cotton at 0os. When the heat demand of the plants is met, they are terminated. [2]

One of his vital factors. For seed germination, then growth and development requires known temperature control in the air and soil. Plants' heat requirements vary. Most grasses always start with flour at 1-2^{o}C, while the seeds of oats, waterlogged, etc. start with it only at 10-12^{o}C. If the plant is not heated during the growing season, it will not mature. [3] When the seeds also decide to germinate, their physical, chemical, and physicochemical processes pass normally, and the seeds germinate.

Any plant can also be seen at low temperatures. However, physical injuries are slow. For example, [4] winter wheat seeds are beginning to appear at 1-2^{o}C ora. However, in such a situation, the biochemical and physical processes in wheat are slow. as the temperature rises, these processes intensify and the supply of nutrients to the growing bud accelerates. [10] From this we can see how great the heat is.

Conclusion. From the above, it can be seen how important cosmic (phase) factors are in plant life. Without their participation, no wounds in plant life will occur in the builders. Taking into account the fact that cosmic factors cannot be controlled by man, we need light and heat when we plant, and we both need it. Somewhere, somewhere, when we choose a region, we definitely work all year round. Only then can we achieve the productivity we envision.

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