



**INFLUENCE OF VARIOUS FACTORS ON THE CULTIVATION OF SEEDLINGS IN THE GREENHOUSE**

Tashmatov Muhammadyusuf Rustamjon ogli  
Andijan Institute of Agriculture and Agrotechnology.  
Teacher, department of intensive vegetable growing,  
horticulture, viticulture and greenhouse.

Usmanov Ilyosbek Tajimahammad ogli  
1<sup>st</sup> year student, Andijan Institute of Agriculture and Agrotechnology.  
Faculty of storage and processing of agricultural products.  
Course of Study Organization and management of greenhouses  
Email: ilyosbekusmonov509@gmail.com

Diyorbek Murodjon ogli Komoldinov  
1<sup>st</sup> year student, Andijan Institute of Agriculture and Agrotechnology.  
Faculty of storage and processing of agricultural products.  
Course of Study Organization and management of greenhouses  
Email: komoldinovdiyorbek2@gmail.com

**Annotation**

Greenhouses are the most advanced type of building in which crops can be grown with the help of modern engineering tools to create optimal conditions for growing plants. The role of greenhouses is to grow crops off-season, as well as to grow seedlings for protected and open ground. In the past, seedlings were often grown in biologically heated greenhouses and nurseries. Today, seedlings for the open ground are grown mainly in heated film greenhouses, and in backyards and backyards in small film-heated greenhouses in film greenhouses.

**Keywords:** greenhouses, conditions, microclimate, soil, meteorological conditions, heat, heating system, ventilation, irrigation and nutrition

One of the main directions in the selection of varieties of indoor melons is the adaptation to these conditions. It is known that the conditions (microclimate) necessary for the plant in the greenhouse are created artificially. Therefore, growing plants indoors requires the costs associated with creating the conditions. That, in turn, affects profitability. In the closed ground conditions, the microclimate is artificially created, the main factors of which are heat, light, humidity, air and soil. It is a necessary, irreplaceable and interconnected condition for the plant. The microclimate in the greenhouse depends on the soil and meteorological conditions (climatic conditions), the optical properties of the material covered by the greenhouse, the structure and equipment (heating system, ventilation, irrigation and nutrition).



By controlling the microclimate in the greenhouse, it is possible to achieve good growth and development of the crop. High humidity in the closed soil often causes tomatoes to be infected with various diseases. This, in turn, leads to a sharp decline in productivity (25-50%). Cultivation of tomato varieties for indoor soil depends on the shape of the structures, the duration of cultivation and the characteristics of the external environment. For example, for greenhouses, which are used mainly in winter and spring, tomato stalks are of indeterminate type, varieties with short joints and close to each other produce 4-5 fruit spikes.

In addition, such varieties should be able to withstand the lack of light in the winter. Tomato varieties grown for indoor soils should provide high yields in the conditions of light, temperature and water regime in the facilities used. The anatomical and morphological features of the plant structure play an important role in increasing the resistance of plants to insects and pests. The period of easy transition by disease carriers depends on the coincidence of the critical flight phase of the plant in the tomato with the period of mass flight of the insect. According to the data, germination - flowering and flowering - the period of short fruiting (early ripening) varieties give the bulk of the crop before the onset of the disease.[1]

Depending on the light activity, there is a change in the parameters of the leaf blade, the growth process, the transition period to flowering and fruit formation slows down, the cycle of inflorescence formation is disrupted, the unevenness in the color of the fruit (or spots) and a number of other defects in the normal development of the plant. Lack of light during the mating season in the first inflorescence disrupts the process of germ cell formation and shedding of the combs, resulting in decreased productivity in the first inflorescence, which in turn leads to the death of the early crop.

In order to increase the use of light in the cultivation of tomatoes in the closed ground, it is advisable to improve the lighting regime, the use of energy-efficient sources, the use of small-scale technology in the cultivation of tomatoes, the use of light-reflecting materials. In film greenhouses, there is a special air temperature regime. On sunny days, the temperature inside the device will be much higher than outside. At night, however, it almost drops to an outside level. The temperature changes very sharply. If the interior of the film greenhouse is not ventilated frequently, the relative humidity of the air will increase significantly. Such greenhouses should be ready 10–15 days before sowing seeds or seedlings, because during this period the soil and air become much warmer.[2]

The formation of condensate (conversion of steam into water) on the inner walls of the film due to sudden changes in temperature causes fungal diseases. As soon as the smell of mold appears, the air temperature should be lowered to 70%. When ventilating the greenhouse air, the cucumber should not be allowed to touch the fan. During the first period of autumn-winter rotation, the temperature should not exceed 35 ° C. 25-30 °, should be 18-20 ° on cloudy days, around 18-20 ° at night, but not lower than 12 °. Soil temperature will be 15-17 °.[3]

Bioheat provides the required amount of heat due to the activity of bacteria in the local fertilizer. Good bioheat contains the required amount of nitrogen and is soft, at 65-70% humidity. The system of control and management of the microclimate of the greenhouse provides conditions for the growth of the plant



24 hours a day. The system works through sensors that alert you to the situation outside and inside the greenhouse.

Light is a source of energy for plants. Green plants, which contain chlorophyll, have the ability to create and accumulate organic matter using light energy, which in turn ensures crop formation. Light is also a source of energy used for respiration, transpiration, and the movement of matter.[3]

The intensity and spectral composition of light, as well as the length of daylight, are important for the growth, development and yield of greenhouse vegetable crops. The more light from the sun, the higher the air temperature and CO<sub>2</sub> content (up to the appropriate norm). FFR (photosynthetically active radiation) is an optical radiation field with a wavelength of 380 to 720 nm that provides photosynthesis. Physiologically active radiation and heat-generating short-wave infrared (720 to 800) containing long-wave ultraviolet light (280 to 380 nm), which increases the vitamins in plants and cold resistance, preventing the elongation of the stem nm li) rays are also important.[4]

Temperature has a great influence on the processes of plant life, changes in the rate of photosynthesis and transpiration, assimilation of minerals and other physiological processes. Temperatures that are too low or too high can lead to irreversible changes in the cells that can lead to plant death. Temperature limits that destroy the whole organism or parts of it are called biological minimum (low temperatures) or maximum (high temperatures). The optimum temperature is the temperature at which each crop has a positive effect on the life processes and leads to a high yield.

It is advisable to use state private enterprise mechanisms to support agricultural producers. Lease financing is an effective tool for ncreasing the competitiveness of agricultural producers. The competitiveness of domestic agricultural producers is largely determined by their technical equipment.[5]

In the practice of foreign countries, it has become an international practice where the crimes of bribery of officials are widespread. In some countries, it was even possible to get deductions from your company's tax liabilities in exchange for bribes, and this is not surprising, as multinational corporations around the world have already paid bribes to support their businesses. [6]

The heat demand of each plant is not the same at different stages of the growing season. Seed germination occurs better when the temperature is 4-7 ° C higher than the optimum temperature for vegetative growth. From the time, the seed germinates until the appearance of two true leaves (3-7 days) the temperature should be reduced to about 7 ° C on cloudy days, which is higher than the temperature inclined for adult plants. After that, the plants need to keep the temperature high as the vegetative growth intensifies.

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