

ANALYSIS OF BIOLOGICAL CHARACTERISTICS OF CROPS GROWN IN GREENHOUSES

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Annotation: the article presents data on the composition of the soil of the Bukhara oasis, improvement of the condition of cultivated soils, enrichment with enzymes and proteins, growing plants in greenhouse conditions and analysis of biological cultures.

Key words: plant, culture, soil, saline, enzymes, irrigation, proteins, tomatoes, tomatoes, salt-resistant.

In the following years, humanity's need for high-quality and environmentally friendly products has been growing. Taking into account the salinity of the soils of the oasis of the Bukhara region of the Republic of Uzbekistan and the fact that the climate is sharply continental, the issue of growing agricultural food in an open field is very difficult. The soils of open arable lands are poor in humus, in our conditions it is difficult to achieve crop yields by increasing the fertile properties of such soils.

Nevertheless, at our Faculty of Agronomy and Biotechnology, a huge amount of work is being carried out to reduce the level of soil salinity, increase the amount of humus and active enzymes in their composition. Such works include the research work of Professor Holliyev A.E. from the Department of Botany and Plant Physiology, research associates Togaeva M.P., Aripov B. A. In the course of their research, they do a lot of work to increase the level of soil salinity, plant salt-resistant plants, reduce the level of salinity naturally, increase soil fertility in a biotechnological way.

Many vegetable crops, such as tomato, pepper, eggplant, cucumber, by their origin belong to thermophilic plants, so it is problematic to grow them without the use of closed, protected soil. They will not be able to transfer temperatures below 0 °C. The optimal development temperature for these vegetable crops is within +20 +30 ° C. Pepper, cucumber die at +5 + 6 ° C. A long period of low temperature, that is, below optimal, can negatively affect the ability of tomatoes to tie fruits.

It should also be understood that in different phases of their development, vegetables require a certain temperature. For example, when seeds germinate, a high temperature is necessary; they germinate faster at +20 +25 ° C, regardless of which group a particular type of vegetable belongs to.

In our conditions, it is better to grow agricultural products in protected soil.

Protected soil solves two main tasks: get an earlier harvest and provide comfortable conditions for the growth and development of heat-loving crops.

Among the variety of types of protected soil, there are:

insulated soil, greenhouses and greenhouses.

Greenhouses and greenhouses are combined into one general concept – cultivation rooms.

In the insulated soil, early vegetables and seedlings are grown for planting in the open ground. Without large investments, vegetable harvests are obtained 7-25 days earlier than in the open ground. Due to a more favorable thermal regime and the extension of the growing season in insulated soil, as a rule, the productivity of cultivated crops increases markedly.

Green crops, such as lettuce, spinach, dill, and radishes, both in the first and in the second crop rotation, are grown as an independent crop, or as compactors of the main vegetable plants, such as cucumbers and tomatoes. They are demanding of light, but relatively little demanding of heat.

When compacting the main crops, they are sown in a greenhouse a few days before planting seedlings of the main crop, then grown together for 20-30 days, which increases the yield of vegetable products from 1 m² of greenhouses.

Tomatoes have been compacted since the beginning of February with special varieties of radish, lettuce and spinach, cucumber is compacted with shallots, onion samples of onions.

Most of the lands of the Bukhara region are saline and sandy, and there is not enough water. The hydroponics method is very convenient for growing agricultural products in such places. Therefore, by Presidential Decree of July 10, 2018, the free economic zone "Bukhara-Agro" was created. 3 thousand hectares of land were allocated for this zone from the Jondor, Kogon, Peshkin, Romitan and Bukhara districts. Direct investments were attracted, which created a wide range of conditions for the cultivation, processing and export of agricultural products within the cluster system.

One of such projects is the Bukhara-VARNET project, built on a plot with a total area of 180 hectares, our professors and researchers are taking due care to make this project privileged and special, like all other greenhouses in the region. We attach great importance to the modernization of production, as each individual greenhouse should make the region an export center with high quality production of vegetables and fruits. Our first goal in this greenhouse, being engaged in production in the winter season, is to produce about 30-35 kg/ m² of cluster tomatoes annually.

In the near future, seedlings were grown in this greenhouse using the invitro method. "Invitro" is a Latin word meaning "in a glass jar". Some industries, in particular, the invitro method, are being boldly introduced into agriculture. In this regard, we are talking about the microclonal reproduction of a variety while maintaining its best genetic characteristics. In the Bukhara-Varnet greenhouse, which occupies almost three hectares of land and has created the necessary microclimate with the help of special systems, 90 million seedlings are grown by this method. Seedlings are sold to greenhouses. Now there is a buyer for a significant part of these seedlings.

Here it is possible not only to germinate seedlings of fruit trees, such as tomatoes, but also peaches, apples, cherries, bananas in this way and supply them to the domestic and foreign markets.

All plants grown in greenhouses generally differ in their biological characteristics, currently hydroponic cultivation of plants using special water pipes has been established.

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