

ROLE OF HALOPHITE PLANTS IN SOIL PHYTOMELIORATION

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Annotation. *The article presents information on the widespread use of halophyte plants in salinity reduction in areas with different degrees of salinity, i.e., medium, strong salinity lands, salt marshes, and the use of them to reduce the salt content of the soil.*

Key words: *soil, seepage waters, meadow, halophyte (Galophyta), black saxovull.*

The source of water-soluble salts in soil and groundwater is the weathering of minerals and rocks that make up the lithosphere, mother earth, mineralization of plant and animal remains, etc.

In addition to these, irrigation water, river, reservoir, collector water, water from vertical wells are also mineralized to one degree or another, therefore, even in the areas irrigated with these waters, different amounts of salts remain in the soil layers, enter the plant body, fruits, and crops. In this process, it is important to study the role of elements, salts, anions and cations, and other compounds in the chain of biogeochemical action.

Based on the existing classification, according to the indicator of the total amount of salts in the water absorption of the researched irrigated meadow saz soils, it belongs to the medium salinity group. In terms of quality, it belongs to the sulfate and chloride-sulfate type, and the dry residue is 1.10% in the driving layer and 1.37% in the sub-driving layer.

It is known that the total amount of water-soluble salts in the composition of saline soils is more than 0.3%, the amount of chlorine is more than 0.01%, and the amount of sulfates is more than 0.2-0.3%. If we take into account that the studied irrigated meadow saz soils are moderately saline, it was noted that they are mostly sulfated in salinity, that is, they are saline with Na_2SO_4 , MgSO_4 , SaSO_4 .

The salinity tolerance of cultured plants is determined in different ways, and it is higher in natural, that is, halophyte plants that grow in the wild. Cultivated plants differ from other types of plants in that they can die even in very low concentrations of saline soils. Therefore, these soils need to be cleaned from salt periodically. These things can be done with the help of plants in a certain sense, it is enough to take halophytes as an example of such plants.

Halophyta (*Galophyta*) plants, this is a kingdom of plants growing in various degrees of salinity, saline, saline soils. The group of plants Halophyta (*Galophyta*) includes a collection of plants growing in soils with varying degrees of salinity. During their life, they accumulate the soil solution while withstanding different concentrations and different effects of salts.

Halophyta (*Galophyta*) plants are adapted to grow in saline soils, but the soils are not uniformly saline, that is, it is possible to see cases where saline soils and non-saline soils are located next to each other. So, it can be seen that the plants are also arranged in this way. The reason for this is the effect of microrelief, and the second reason is the nature of the plant. For example, the remains of the black saxovull (*Holohylon aphyllum*), i.e. leaves or branches that fall on the ground during its growth and development, change the composition of the upper part of the soil to a certain extent, because the spilled biomass contains different amounts of salts and minerals.

If we consider the specific characteristics of plants growing in saline soils, it is enough to mention the following. It is a type of halophilous plants that are common in deserts. This plant grows well in areas with a water depth of 2.5 m. Kumuzim does not lose its vitality even if the salt content is up to 30%. The amount of salts in kumuzim leaves reaches 57%. Chloride salts make up 14% of this amount.

Another plant that is common in saline soils and salt marshes is caragan. The caragan plant is a small bush, its height is 80-150 cm, depending on the distribution of water, and its root spreads accordingly. Sulphate, that is, salts of Ca and Na accumulate in plants belonging to this group. One-year ash can contain up to 21% Na₂SO₄. Karagan accumulates 63.3 t/ha of organic matter per year in the growing area. As a result of the mineralization of these plants, 520 kg of ash falls on the soil per hectare, and it contains nutrients such as S, Mg, K, Na, P, N, as well as a number of trace elements.

Currently, studying the importance of holophytes in agriculture and national economy and developing methods of their effective use are topical topics. Because we can prevent or eliminate various environmental problems related to salts as a result of our proper use of halophilic plants. In particular, halophilic plants are still widely used, for example, in the medical industry. Halophiles are used as valuable feed in agriculture and animal husbandry. Dyes are obtained in industry.

Black saxovol (*Holohylon aphyllum*) is the most valuable plant in desert reclamation. In the chemical industry, raw materials are also obtained, that is, acetic acid, methyl alcohol, acetone, clean coal, etc. are obtained from it.

Among the succulent plants, sarsazan (*Halocnemum*) stands out, it contains up to 23% glauber salt (mirabilite - Na₂SO₄·10H₂O). Potash is also present in this plant, so this plant is used in the process of making soap in industry.

In order to reduce salinity in the above-mentioned areas, i.e. medium, strongly saline lands, it is advisable to use halophytic plants and to remove the salts contained in the soil outside the fields. But the current state of research in this regard is not enough, therefore, conducting new research using individual plant species in special experimental areas will bring good results.

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