

WATER REGIME OF TYPICAL GRAY SOILS

Marufjonov Javahirbek

Student of Fergana State University

Sayramov Fayzullo

Student of Fergana State University

Abstract: *through the article, you can get general information about the water regime in soils, as well as information about the water regime of typical gray soils.*

Key words: *soil, south, geographic, latitude, landscape, mountain, precipitation, altitude, humidity, annual precipitation, water, regime.*

Our republic is located in the southernmost part of the Soviet Union. Rainfall in this region is very low, an average of 80-150 mm per year (mountainous regions are excluded from this), and the amount of water consumed from the soil is very high (1000 mm per year and more more than). However, Uzbekistan has a variety of soil types and vegetation due to its large geographical area, different landscape (geomorphology) and vegetation cover. However, it should be noted that the main source of water that moistens non-irrigated and conditionally irrigated lands is rainfall. For example, during spring rains, forest soils in mountain areas are moistened to their deep layers (even up to 7 meters) and have enough moisture for the development of plants. Under these conditions, moisture in the layer where plant roots develop (at a depth of 0.5-1 m) reaches the end of July.

Due to the fact that the rainfall in mountainous regions is somewhat less than in mountainous regions, the depth of soil moisture is somewhat smaller. In the part where the plant roots of the typical gray soil layer, widespread in these regions, are maximally spread, the shortage of soil water is acutely felt at the end of May and beginning of June.

Due to the low rainfall in these light-colored soils in the low plains, especially in the desert zone, the soil moisture depth is 20-100 cm (sometimes a little more than this indicator). The amount of moisture that can be absorbed can be used up already in the first ten days of May, due to the lack of moisture, the plants wilt and dry up. For this reason, ephemeral (one-year) grasses grow in these places, in some cases they do not even form a full layer, often they are small, small. Therefore, in such areas, grass yields less.

The territory of Uzbekistan is divided into mountains, sub-mountains and desert lowlands. If we want to look at this division from the point of view of the distribution of soils, then in the mountainous regions - mountain soils, forest chestnut soils, etc., in the mountainous hills, it is partially dark, mostly typical and light. z soils: desert lowlands - barrens, brownish brown, loamy and sandy desert soils, etc. are common.

Typical gray soils are quite widespread in Uzbekistan, they mainly occupy the foothills, hills and steppe zones at an altitude of 300-800 m above sea level. A large part of the typical

gray soils is occupied by irrigated agriculture, due to the good nutrition and water regime that ensures high crop yields, these lands are now completely involved in the farming system. The main horticultural farms of our republic are located in the zone of typical gray soils with high potential productivity. Raw material supply in such fields is based on saving and using the natural moisture present in the soil, and it is called dry farming.

In the zone of typical gray soils, the annual amount of precipitation is 300-400 mm, the depth of soil moisture reaches 0.6-0.8 m. The wettest time of the soil is at the beginning of April, when the amount of moisture in the 2 m thick layer of the soil in the water separator reaches 420 mm, of which 230 mm is useful asset that can be absorbed by the plant. But since the air temperature in this zone is relatively high and the relative humidity is low, the active humidity will be completely consumed by the end of May. By July, the amount of moisture in the upper one-meter layer of the soil will decrease even below the withering moisture. And in the uppermost 40 cm layer, moisture is even less. In typical gray soils, moisture content at a depth of 50 cm is low throughout the year. The main reason for this is that, depending on the amount of rainfall, the depth of natural moisture in these soils does not exceed 50-60 cm (and in some years it can be up to 70-80 cm).

A typical gray soil zone consists of nearby hills. Therefore, it is necessary to take drastic measures against the washing of the soil and wasteful use of moisture in such lands. For this, it is necessary to plow the land immediately after harvesting. Otherwise, water erosion will increase and less moisture will accumulate in the soil. When the land is plowed, it rises in the form of steam, condenses and turns into water. Before the beginning of the rainy season, a little moisture accumulates in the arable layer of the soil. This ensures that autumn crops germinate before frost and grow vigorously after the first rain. Such lawns are more resistant to cold, the root system is strong and well developed.

As soon as the soil is matured, light honing ensures the air exchange of the soil layers, rainwater absorption into the soil, and reduces the loss of moisture in the surface layer of the soil due to evaporation due to the influence of wind and temperature.

In places where such agrotechnical measures are applied, the 2 m layer of the soil will have enough moisture that the plant can absorb even during the growing season. Regardless of the ground level, 420-480 mm or 4200-4800 tons (cubic meters) per hectare of moisture accumulates in a 2-meter layer of soil in early spring. Active moisture reaches from 23 tons to 3000 tons per hectare. Under these conditions, 22 s of grain yield and 24 s of nutritious straw are obtained from each hectare. The amount of hay (in dry weight) that can be harvested from each hectare of unplowed reserve land has reached 54 s.

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