TECHNIQUES FOR CONDUCTING VEGETATIVE EXPERIMENTS IN THE CONDITIONS OF LOOSE SOILS OF A LIGHT TONE FORMED IN SOUTHERN FERGANA.

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Annotation: *vegetation experiments carried out on many soils were also carried out on loose soils of a light tone, which were distributed precisely in the Southern Fergana area. Through this article, you can learn about the growing processes that take place in the soils of the Southern Fergana area. Additionally, there have been references to growing and fertilizing the plant based on its conditions.*

Keywords: *soil, southern, vegetation, environment, experience, result, irrigation, fertilizing, Meyer, cultivation, plant, fertilizer*

INTRODUCTION

For experiments, two types of containers are used that differ in the method of watering - without holes and with a hole at the bottom. For more accurate experiments, pore-free containers are used, which are only watered with mass and protected from rainwater. Containers with holes in the bottom should have a tray under the container to collect excess water, and experiments on them are carried out on racks under the net. Containers can be plastic, glass and metal. To protect against light and protect against intense heat, glass containers (sometimes also plastics) are covered with a thick double layer of cloth or thick paper (cardboard). To prevent oxidation and corrosion, metal containers are coated with preservatives (inside with asphalt varnish, outside with white paint) or glazed. The dimensions of the containers can be different, but the most convenient are plastic and glass with a cylindrical size (cm) diameter of 15-30 and a height of 20-25, with a diameter of 20-30 metals and a height of 20-30. Plastic, glass and metal crystallizers with a diameter of 20-30 cm and a depth of 10-12 cm can be used as containers. The choice of sizes of dishes is of great practical and fundamental importance. They should be such that plants should be able to develop normally in them.

CONCLUSION AND DISCUSSION

The experiment will require different crops as well as containers of different sizes. For example: 5-7 kg of soil for cereals, legumes and herbs; for potatoes, cabbage - 25-30 kg of soil; for sugar beets and other root crops - 15-25 kg of soil. The choice of sizes of experimental pots depends not only on the types of crops, but also on the objectives of the

experiment. Therefore, in short-term experiments, they usually use wide containers, without worrying about their depth. Large pots are rarely used for Sandy crops.

Soil crops are experiments in which plants are grown in pots filled with soil. This is the most common modification of the growing season method. To experiment in soil crops, the following materials and equipment are required: soil, fertilizers, quartz sand, growing containers, broken glass for drainage, glass tubes, gauze, basins for mixing fertilizer with soil, technochemical and glass scales of appropriate weight (weights), structures for the frame, seeds, preparations for processing seeds and thermostat for germinating seeds, measuring cylinders, pipettes, spoons, cups for determining moisture, bags will be needed for the crop. The selection of plant and soil samples is also important. When setting up experiments, a number of basic sequential operations are performed.

Take the soil and prepare it for planting. The place where the soil is obtained, in accordance with the subject of the experiment, is carefully selected in the spring, in a non-wet state, and in a strictly defined order, in which its fragments are easily destroyed by friction. The resulting soil (without allowing it to dry out) is brought to a homogeneous mass state by mixing well, removing stones, large roots, crop residues and sifting through a 3 mm hole. Bringing the soil to a homogeneous state is necessary for a satisfactory approximation of the results of repetition and, as a result, for the accuracy of the experiment.

Preparation of samples. To maintain the same conditions, containers with similar height, size and weight are selected. The weight of the samples can vary no more than 100 g, the diameter of the samples can vary no more than 0.5 cm.in terms of the number of options and repetitions, the selected dishes are thoroughly washed, dried and (if necessary) labeled. To pour water into the bottom of the container, glass pipes are placed,1-1.5 cm in diameter and 2-3 cm in length above the sample. For drainage, 200-300 g of pre-washed and dried broken glass is placed at the bottom of the containers. After that, they begin to calibrate the dishes, that is, level their mass by adding (or reducing) broken glass or quartz sand. When calibrating containers, the drain window slides into the wall so that it occupies no more than 75% of the bottom area, and it is covered with a circle of gauze, in which there is a hole for a glass tube. Well for watering. The tube is inserted through the hole in the gauze into a pile of broken glass, and the gauze is straightened so that it is covered. For experimentation, moderate doses of fertilizers are selected.

Taking into account nitrogen fixation, without nitrogen fixation and 4-5 times more drainage glass and part of the free space at the bottom of the container. When calibrating (if necessary), quartz sand is placed on the gauze covering the bottom of the container.

Fertilizers. The dosage of fertilizers for each container is calculated depending on the active ingredient. Depending on the goals and objectives of the experiment, the size of the pots and the crops grown, the dosage of nutrients can be different, and if this does not contradict the subject of the experiment, it is better to use chemically pure salts as food.

Not fertilizers, but sources, since they contain a minimum amount of ions. In experiments with grain crops, the following are usually added to dishes of five to six kilograms: 0.5-0.6 g N. 0.2-0.3 g P2O5 and 0.3-0.4 g K2O. Fertilizer doses can be calculated in grams of nutrients per kilogram of soil applied.

If the soil is unilaterally rich in some element, the dose of the corresponding element is reduced by 2-5 times. Fertilizer (or pure salts) is added to the container, mixing them with soil in the form of solutions, powders and granules. It is more convenient to apply high-soluble fertilizers in the form of percentage solutions with a known concentration (1-10%). When adding small volumes of solutions (up to 50 ml), they are measured with a pipette or Burette; for large volumes (more than 50 ml) - using graduated cylinders. The dosage of fertilizer is calculated depending on the active ingredient. Suppose each of the 50 vessels needs 0.5 g of KO in the form of potassium chloride, which contains 60% KO, so each vessel needs 0.5,100.

It is convenient to apply the calculated amount of fertilizer, for example, in the form of a solution with a volume of 30 ml. Knowing the number of samples, a little more solution must be prepared (in case of spilling). For 30 ml, 0.833 g of potassium chloride and 2 liters will be needed. 0.833 g-2000 ml x=30 ml 2 - 55.5 g), dissolve 55.5 g of fertilizer in 2 liters of distilled water to obtain a solution, 30 ml of which contains the required amount of fertilizer in each container. Poorly soluble and insoluble fertilizers or salts are applied dry and it is recommended to weigh up to 5 g on the analytical scales and more than 5 g on the technochemical scales.

Filling containers with soil. By testing a single container, the weight of the soil for all containers is determined. To the soil sample specified according to the experimental project, first add a dry fertilizer sample and mix well, then add fertilizer solutions and mix well again. If the soil is not sufficiently moistened, add distilled water until the moisture content is acceptable for packaging. The optimal humidity is considered when the soil is squeezed in your hands, forming a lump that easily decomposes when falling out of your hands. The total amount of distilled water and fertilizer solutions should be the same in all containers. At the bottom of the container, quartz sand soaked in 60% PV (15 ml of water per 100 g of sand) is placed on gauze in a layer of 1.5-2 cm, which is used to press the edges of the gauze.

Then they transfer the soil to the container with a spoon or hands, compressing it constantly evenly, especially on the walls of the container and in the pipe, which should stand vertically at a distance of 1.5-2 cm from the container wall. With the correctly performed filling technique, the soil level in the container should be 2.5-2 cm lower than the upper edge of the container. A person should fill the containers, starting with fertilizer-free options, so that the compaction of the soil in all containers is the same. Especially when moving from one option to another, it is necessary to ensure a thorough cleaning of hands and dishes. The filling of dishes should be carried out in accordance with a pre-prepared statement in the experimental Journal, which states: date of laying, subject of

experiment, name, moisture and weight of the soil in the container, weight, weight of the container. for each home version of the container for watering, culture, scheme, the appropriate weights of the container numbers and fertilizers or the amount of solutions. Preparation and sowing of seeds. Seeds for sowing can be dry, soaked and germinated, but clean in terms of variety. Before sowing, soaking and germination, the seeds are treated; cereal seeds, for example, are treated with a 1% formaldehyde solution for 5 minutes, mixed constantly, and then washed off with water until the formaldehyde smell completely disappears. Seeds germinate in ditches or baking trays, quartz sand 1.5-2 cm thick is poured into it, moistened until completely saturated with water and covered with filter paper, and seeds are laid on top. Cover the seeds with 1-2 sheets of filter paper on top, gently cover the baking tray with glass to reduce evaporation, put it in a thermostat and germinate the seeds at a temperature of 20-25°C. Germinated seeds are sown when the length of the roots does not exceed 0.2-0.4 cm, and the roots are sown several times more than necessary for sowing to select seeds of the same length.

Before planting, the surface of the soil in the containers is leveled and moistened. Holes 1.5-2 cm deep are made on the surface of the container using a template and a glass stick with a stopper, which ensure an even distribution of seeds.When planting, seeds are selected with tweezers and placed in holes. With roots. Spreading the seeds, they are sealed by pressing the back end of the tweezers against the edge of the holes. Then cover the soil surface with a thin layer of quartz sand. When sowing dry seeds, their germination rate is checked, which should be about 100%.

Seeds should be planted 5-10 pieces. more plants than should remain after thinning. The number of plants in the pot depends on the size of the pot and the type of plant. After thinning, leave in medium-sized containers: 20-25 grain plants, 10-15 legumes, 12-15 buckwheat, 35-40 flax plants. After the end of planting, cover the pots with paper and moisten the top layer of soil every day; when shoots appear, the paper is removed.

Plant care. Thinning (bringing the number of plants to a certain number) is carried out when the risk of death of seedlings has passed and the plants have developed sufficiently. For example, for cereals, this is the beginning of processing. By thinning all the veins at the same time, damaged, poorly and overdeveloped plants are removed, and an equal number of the most flattened plants remain. The removed plants are pulled out with seeds and roots, placed in numbered bags according to pots, dried and pulled. When the plants are growing, a metal frame is placed in the pots, or wooden sticks are placed to protect the plants from breaking and settling. The mass of the frame or pillows should be the same for all experimental dishes. In experiments with soil and sand crops, an extremely important condition is to maintain the moisture content of the substrate at an optimal level.

Maintaining the necessary soil moisture is carried out by watering the plants according to the mass of the container. The watering mass of the container consists of a combed container, absolutely dry soil, sand, water, frame and cover masses. Suppose, by definition, the total moisture capacity of a soil is 50% of that of an absolutely dry soil, and

the optimal soil moisture is 60% of that of an MC. Therefore, the soil moisture in the containers should be 50.60-30%. 100 30% absolutely dry soil. Soil moisture at the time of packing is 15%, while the weight of raw soil is 6 kg per container. Consequently, the weighted amount of absolutely dry soil in the pot is 6000-100 -5217 g, and the mass of water when the soil is moistened is 115. 30% to 5217-30 100 --1565 g.Sprinkled on top of the soil. With a moisture content of about 25%, 200 g of sand and 60% PV corresponds to 15% of sand moisture, and therefore 30 g of water is needed for 200 g of sand. Similarly, calculate the amount of water to moisten the sand placed on the bottom of the container. Summarizing all the conditions, we take the watering mass of the container, it is recommended to round it, for example, from 7890 to 8000 g: from 9550 to 9600 g, between the watering, the humidity varies from the intake in both directions. experience, for example, 60 ± 5%, yes and round masses are easier to weigh.

When watering the container with a mass, which is carried out once a day, water is alternately supplied through the pipe from above and below. If you need to water twice a day (in hot weather), water once, depending on the weight of the container, and the second according to the volume of water. When watering by volume, the latter is determined by weighing 3-4 containers from different options. To equalize the lighting conditions for plants during watering and protect external containers from overheating, containers on trolleybuses are rearranged, the veins of the outer and middle rows are replaced.

CONCLUSION

Soil crops are distilled or watered with tap water, the latter should not be used on low-buffered soils, and if the soil reaction or calcium content are the factors under study. Observations, harvesting and harvest recording. During the growing season of plants, observations are made on them, the results of which are recorded in the journal. Dates are recorded for each pot: the appearance of important stages (and the number of sprouts), the appearance of the second and third plants leaves; thinning (with the number of remaining plants), processing, loading, heading, flowering, Milky, waxy and full ripeness. The difference in the development of plants according to the options is recorded by measuring plants, the results are recorded in the journal or by photographing the veins with plants. Depending on the purpose and tasks of the experiment, plants are harvested at different periods of the growing season, but often at the stage of full ripening.

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