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MOBILE PHOSPHORUS AND POTASSIUM IN THE SOIL DETERMINATION.

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Abstract: Nowadays, man's influence on the external environment is increasing, as a result of which not only living nature but also dead nature suffers. As a result of man's conscious exposure to the soil, his condition is deteriorating, which is affecting the organisms that live in the soil. This article discusses the determination and use of "mobile" phosphorus and potassium in soil.

Keywords: mobile phosphorus, mobile potassium, ammonium carbonate, potassium chloride, filtrate.

Introduction

The method for the determination of mobile phosphorus is based on the separation of a 1% phosphorus compound using a 1.0% ammonium carbonate solution, in which phosphoric acid is formed with an air-colored complex compound (MoO2 · 4MoO3) 2N3PO4 · 4H2O with molybdenum anhydride and potassium chloride . Procedure: 5 g of soil was removed (1 mm sieve), placed in a 200-250 ml conical flask and 100 ml of 1% ammonium carbonate (NH) 2CO3 solution was poured into it, shaken for 5 minutes and left for 18-20 hours. . It was then filtered, 10 or 20 ml of the filtrate was removed, 2 ml of a 15: 100 solution of dilute sulfuric acid and 4 ml of 0.5 N potassium permanganate solution were added and boiled for 2-3 minutes. Organic matter decomposes in an acidic environment at high temperatures under the action of potassium permanganate, resulting in the release of oxygen and discoloration of the solution, ie: To neutralize excess potassium permanganate, 1 ml of 10% glucose solution was poured into the boiling solution and the mixture was cooled. To neutralize the sulfuric acid, 5 drops of the indicator dinitrophenol were added to the cooled solution, a 10% solution of soda was added until a light yellow color was added, and 2 ml of molybdenum oxide was added and filled with distilled water to the mark of the flask. Then add 0.5 ml of potassium chloride solution, and after 5 minutes the solution turned airy. The optical density of the mixture was measured with a colorimeter on a red light filter. Calibration line using standard solutions of P2O5 (0.01-0.50 mg / 100 ml) was built. To determine the mobile phosphorus, 5-10 ml of the prepared solution was taken and poured into a 50 ml chemical and photometer. The flammability of the experiment in a beaker was determined from a special table to determine the amount of potassium. It can be defined as 100 g or 1 kg of soil, to determine the dynamics of changes in the activity of enzymes and microorganisms under the influence of bios. These experiments were performed by evaluating the effect of different methods on seed growth in cotton soils. For laboratory experiments, irrigated meadows were sampled from the topsoil, and under the influence of mineral fertilizers, green algae and biofertilizers, soil enzymes, as well as the quality and quantity of respiratory microorganisms, were studied. The experiment was conducted as follows.

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Procedure for conducting experiments in the laboratory.

Experience	The norm of fertilizer, in g per 1 kg of soil in the pot		
	mineral fertilizers, g / kg	green algae, g / kg	biofertilizer, g/kg
Soil + NPK	$N_1P_{0,8}K_{0,2}$	-	-
Soil + green algae	-no	green algae suspension 0.8	-no
Biofertilizer	no-	no-	85

For 1 kg of purified experiment, the pots were filled with a mixture of fertilizers, cotton seeds of Bukhara-6 variety (untreated) were soaked in a suspension of green microflora for 20-24 hours, and 10 seeds were sown in each pot. % humidity was maintained. The experiment was repeated 4 times. During the experiment, soil samples were taken and the enzyme activity and the total number of microorganisms (in all defined variants) were determined.

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