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# THE PARTICIPATION AND ADMINISTRATIVE PARTICIPATION OF IMPLEMENTATION OF PULL AND DELIVERY FRAMES IN IRRIGATED LANDS OF ANDIJAN REGION

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**Abstract.** This article analyzes and synthesis, statistical, analytical methodologies have been used, and theoretical-methodological bases have been studied on the basis of international standards by analyzing international scientific articles from the publishing portals of the world's most prestigious research developments for 2012-2017, as well as the conditions and methods of cotton and leguminous crops cultivation in Andijan region irrigated fields were experimented.

**Keywords:** irrigated fields, cotton, legume crops, irrigation order and technology

**Introduction.** Today, the total population of the country is more than 34 million people. The future is expected to reach 50 million by 2030. Taking into account that, one of the major tasks of the state is to ensure the food products of our people.

From this point of view, the President of the Republic of Uzbekistan, Sh. M. Mirziyoev, is working on measures to ensure food security in our country. In particular, scientists solve the problem of increasing irrigated land, yielding two or

three crops per year from one field. For example, the cultivation of winter wheat and the cultivation of leguminous crops in cotton fields. A positive solution to the problem of quality planting in the spring, without interfering with the use of cotton and legumes (beans, mush), is of great importance in addressing the food problem of our republic.

**Research Methods.** In this article, theoretical-methodological foundations were analyzed on the basis of international standards, by analyzing international scientific articles based on portals publishing the most authoritative research developments in the world for the last 5 years, including the experimental, analysis and synthesis of the research. , using a special analytical methodology. The researches were conducted using the necessary measuring instruments, conducting field observations and theoretical researches in accordance with existing methods.

**Literature review.** Irrigated land improvement and sustainable use of land is one of the most pressing issues in the use of resource-saving irrigation techniques, techniques and technologies.

R.R. Schreder finds that the ratio of optimal moisture to degraded dampness (ChDNS) for vegetable bottles of less than 60 percent, while A. Studentov divides this moisture to 70 percent for light soil and 60 percent for heavy loam soil. Such experiments were conducted by M. Pereskokov (1923) and G. Zayszev (1929). Consequently, similar research has been carried out by a number of scientists.

In order to determine the lowest level of moisture content for the cultivated soils of the field of experimental soil, the following measures were carried out prior to the application of each running water: soil moisture was determined in all

varieties for cotton. Soil samples were collected from 0 to 100 cm depth during harvesting and 0-70 cm during flowering of cotton.

Irrigation, on the one hand, affects the development of the plant on the one hand, and on the other hand, negatively affecting the timely manner.

In order to keep the irrigation system in order, the number of irrigation should be set differently and the water needs to be varied. This results in the amount of irrigation.

Experience in the experimental site on the Fergana field of experimental Surveys showed that if the water is normally 8000 m3 / s, salts of one meter soil will not increase.

N.T. According to Laktaev (1978), existing irrigation norms are 25-30% higher in irrigated lands than in Uzbekistan, and 80-100% more recently in the cultivated lands (Mirzachul, Central Fergana).

Successive water distribution techniques play a crucial role in the smooth distribution of water to the field and quality watering of the irrigation.

Agro-physical and water-physical properties of soil are important in determining the elements of irrigation technics (Sh. Nurmatov, 1992, B. Gambarov, 1994). The water-physic and technical properties of the water in the canals in the canals, according to the method of the Mirzixulava, have proved to be of great importance (M. Kuznetsov, V. Grigoryev, 1988).

The basic theory of parameters of irrigation techniques is N.T. Laktaev's theory (1978) is that it must be changed to some extent to be widely used. Only one table with the suggestion of irrigation techniques can not satisfy their need for

different types of soil. Observations show that excessive moistening of the head part of irrigation and lack of moisture in the skid can lead to aggravation of soil degradation. Therefore, it is desirable to correct this theory by selecting the irrigation method depending on the soil type. A.M. Maod (1980) emphasized the change in soil irrigation regimes based on soil length, depending on soil type, geological and hydrogeological conditions, and climatic conditions.

From 1978 to 1983, academician N.R. A group of scientists led by Khamraev conducted experiments on discrete watering technology and technological processes. The experiments were carried out mainly in the area of sown areas with a range of 0.9m and fur lengths of 400-500m. The irrigation rate is 800-900 m3 / ha, and all flood water is pumped up to 0.5-2.5 l / sec and continuous flow. According to them, the duration of irrigation in the continuous flow has been 25-30 hours and has increased from 1200 to 1600 m3 / ha. 30% of water was dripping and 15-20% of water. As a result, flat moistening was not achieved along the fracture. In turn, the yield has decreased by 20-25%. In the experiments conducted in Tashkent region, when the water is impelled, the time of reaching 350-400 m at the end of flooding is 2.3-3.5 hours. On the other hand, the distribution of moisture was uniformly distributed along the furrow length.

When the water was periodically discharged to the ETP, it was proved that uniform distribution of moisture on the fur length and water economy (Nurmatov NK, Gulyamjonov A. 1979).

A.A. According to Terpigorev (1984), when water is discharged, the water is expelled into the soil. Kostyakov adheres to the infiltration law proposed by him,

but noted that during the break, water leakage would diminish to 2 times in the soil.

Discrete technology of moving irrigation with moving mobile PPA-165 brand. Arfev (1973) developed and compared with continuous flow and proved the advantage of discrete irrigation.

G. Woodward (USA, 1968) experimented with technology close to the discrete watering technology. The water for irrigation has been set two times higher than that of irrigation, dipping, and double furrows. However, it did not achieve the same moisture content as the furrow length.

I.Virlev (Bulgaria, 1973) in his experiments on discrete technology: 46% of the water was saved, but the difference in yield was virtually absent. In the Parier district of Texas, Yu.T.Mosik (USA, 1987) studied different technologies for corn irrigation.

Compared to the discreet technology of spatial irrigation and experiments with siphon irrigation, 30% of water has been saved in 50% of caraway, 33% in carrots and 30% in corn irrigation (K.Jonis et al., USA, 1987).

R. Testetslayf (USA, 1987) and others studied the process of pumping irrigation water with impulses and continuous flows in lush soils, sown with soybeans, wheat and cotton. In discrete irrigation, the rate of water displacement in all types of soil has been less than 1/3 to 2/3 relative to the control, and less water consumption.

Dg Goldhamer (USA, 1987) and others have shown that in light and heavy sandy fields, the groundwater flow has always been 2800 m3 / ha for irrigation and

1770 m3 / ha in impulses. The loss of water to deep layers, respectively, amounted to 1220 and 635 m3 / ha respectively. The water distribution efficiency was 35% and 60.4% respectively.

Many mathematical models have been developed in the United States to find an effective way of irrigation by means of discrete technology (D.G. Keller, 1979; U. R.Uolker et al., 1981; A. Khamfriz 1983, F. T.Izuno and T.X. Podmor, 1985; B.Izadi and D.F.Heerman, 1987; NM.Alemi and D. Goldhammer, 1988). One of the most important of these is the kinematic wave model, which, according to this, changes its flow during the period before the end of the current, ie, constant flow of moisture during moisture nourishment, or by irrigation impulses based on the model B. Izadi and D. Herman will be removed.

In the United States, the discrete irrigation system equipment is characterized by the fact that the equipments are adapted to the precise calculated area and constant pressure. Water wells have the advantage of controlling the flow of water.

In irrigation, solid, portable irrigation pipes are used to regulate the types of porcelain and hydraulic valves (A. Humphriz, 1981-1982), and the most commonly used irrigation scheme is the most commonly used programmatic electronic programmable program.

The concept of water absorption on the furrows was proposed by Strinhem and Keller at the 1979 conference on American Irrigation and Drainage of Civil Society. B.B.Shumakov, V.A.Arefev, N. Stepanenko (1980), in the former Soviet Union (1980, No. 11).

Nowadays, irrigation can be used under different conditions in the method of water impulses. When flowing through the entire stream, the flow can be reduced by decreasing the flow of water or increasing the flow rate in heavy soils.

In the state of Utah (USA), he experimented with the impulse irrigation system during Allen (1980) and Poll (1981). The system consists of tubes, valves and control-management device. The plant is irrigated by planting the corn. The gravel is sandy soil with a property of 1.5%. Irrigation efficiency of impulses was 87%, and in irrigation - 59%.

Colidj et al. (1981) describes the effect of the pinching velocity on the flow velocity and flow rate. When the initial water flow is 0.3 l / s and the pulse period is 20 minutes, the average pinch speed after a few impulses is equal to ¼ in the continuous stream. Kolidj (1982) came to the following conclusion; - Water supply period has a significant impact on the performance of the impulse irrigation system; - The break does not work. Surprisingly, after the furrows are filled with water, the rate of pinching is very low. As a result of this experiment, dozens of experiments conducted in various field conditions have been proven. (Volker et al 1982a, 1982v, Podmore et al., 1981; Evans et al., 1983).

**Results.** The massive soil of the study is composed of grassy soils, with a small amount of humus content, a very small amount of mineral deposits. Changes in the upper layers range from 9 to 13m. eqw (up to 100g soil). The content of humus is 1.38%. The constant nitrogen content of the film is 0.10-0.14%, phosphorus 0.16-0.21%, relative to soil mass (Table 1).

**Table 1 Water - physical, agrochemical and mechanical properties of soil**

| Film thickness, cm | Volume weight, g / cm 3 | Growth rate,% | Field moisture content,% | Contents% | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | m3 / ha | Threshold (mm) | gumus | Idle | |
| | | | | | | | nitrogen | phosphorus |
| 0-50 | 1.36 | 49.7 | 19.0 | 1292 | 43.7 | 1.38 | 0.12 | 0.19 |
| 50-100 | 1.33 | 49.9 | 19.2 | 1324 | - | - | - | - |
| 0-100 | 1.37 | 48.3 | 20.1 | 1376 | - | - | | - |

The main nutrient content of the soil is nitrogen in nitrate and ammonia. The mechanical composition of the soil consists of gray soils that are made of small-sized fractions and tend to thicken. From the geomorphologic point of view, the massif is located at the foot of the cone-exit of alluvial-prolyuvial deposits of Mirzachul age of the Arovonsay River. Relief - the general inclination consists of a wave plain directed eastward to the west. Thin and fine-grained sand and pebble layers with breakeven depths up to 5 m depth, with a filtration coefficient: for soils - 0.37 m / s, cereals - 0.54 m / s, sand - 0, 85 m / day.

From the hydrogeologic point of view, the scientific research object is located in the territory of the unit complex of irrigated and groundwater. The surface water level lies at a depth of 0.75 m.

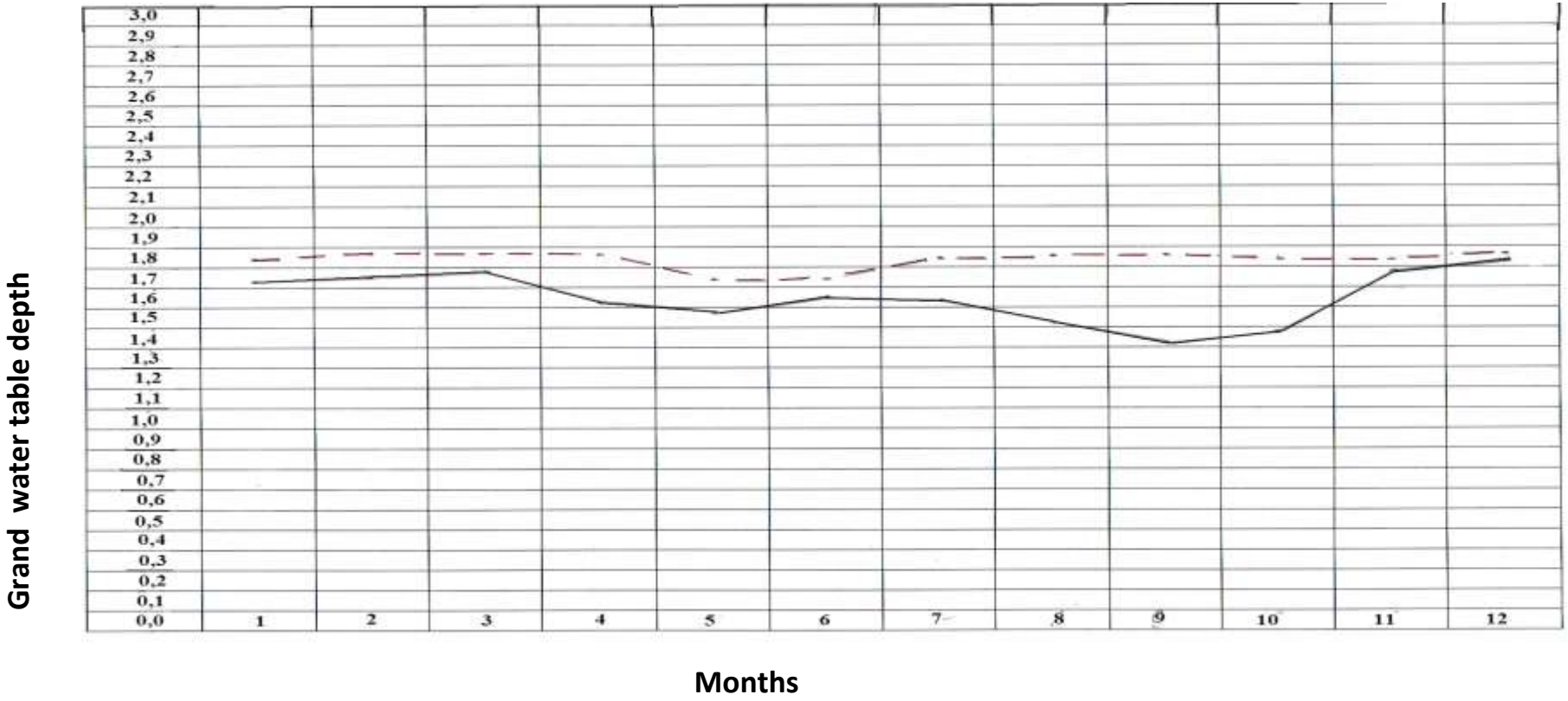
Changes in the depths of deep water tracking wells located in Jurrapolvon, Buloqboshi district, were observed in 2015 and 2016. Specifically, the average difference in the 4/1 observation well was 0.04, whereas for wells 5/3, 5/4 and 6/5 respectively 0.21; 0.25 and 0.12m respectively. The observation wells 4/1 and 5/3 show that the indoor slopes are actively operating in their area, and most

importantly, the efficiency of closed beds, commissioned in 2016, is evident in monthly observations.

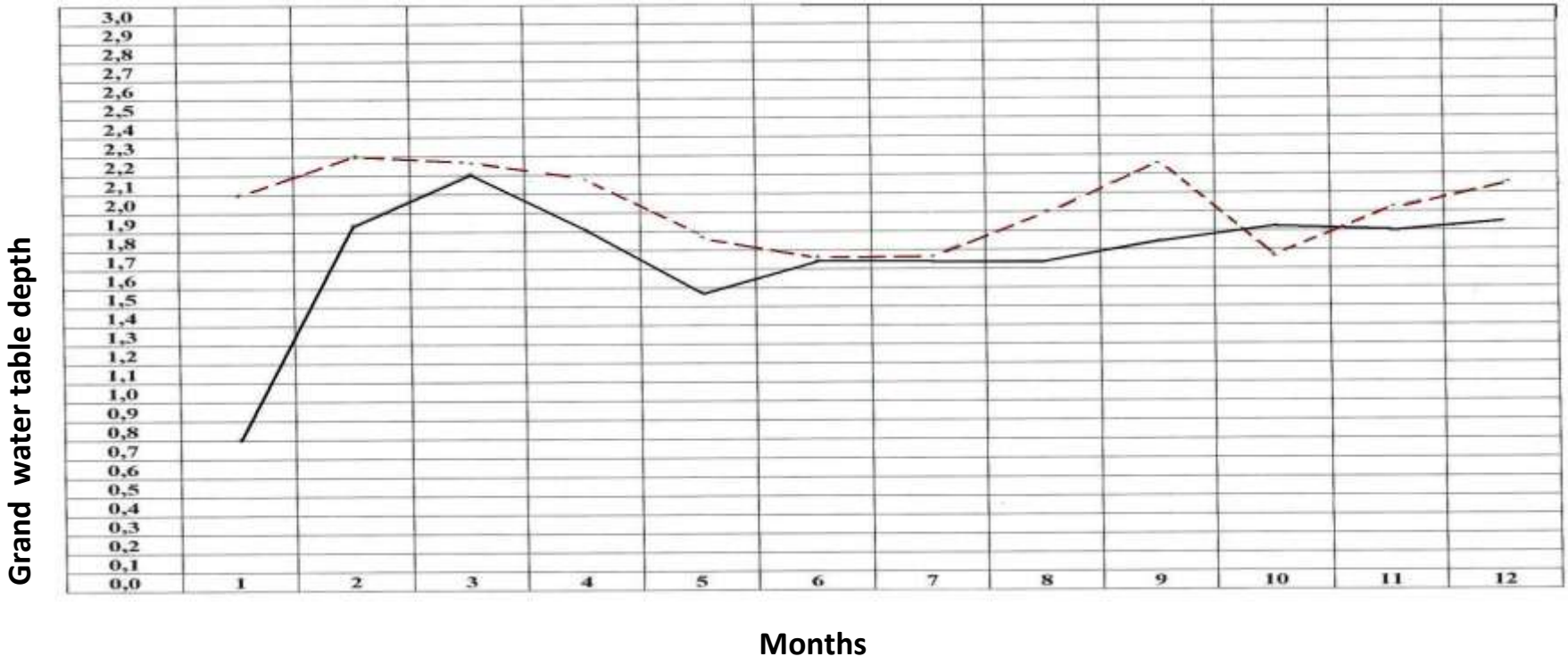
**Table 2**

## Information about Deep Surfing Surface waters in Bulogboshi district block

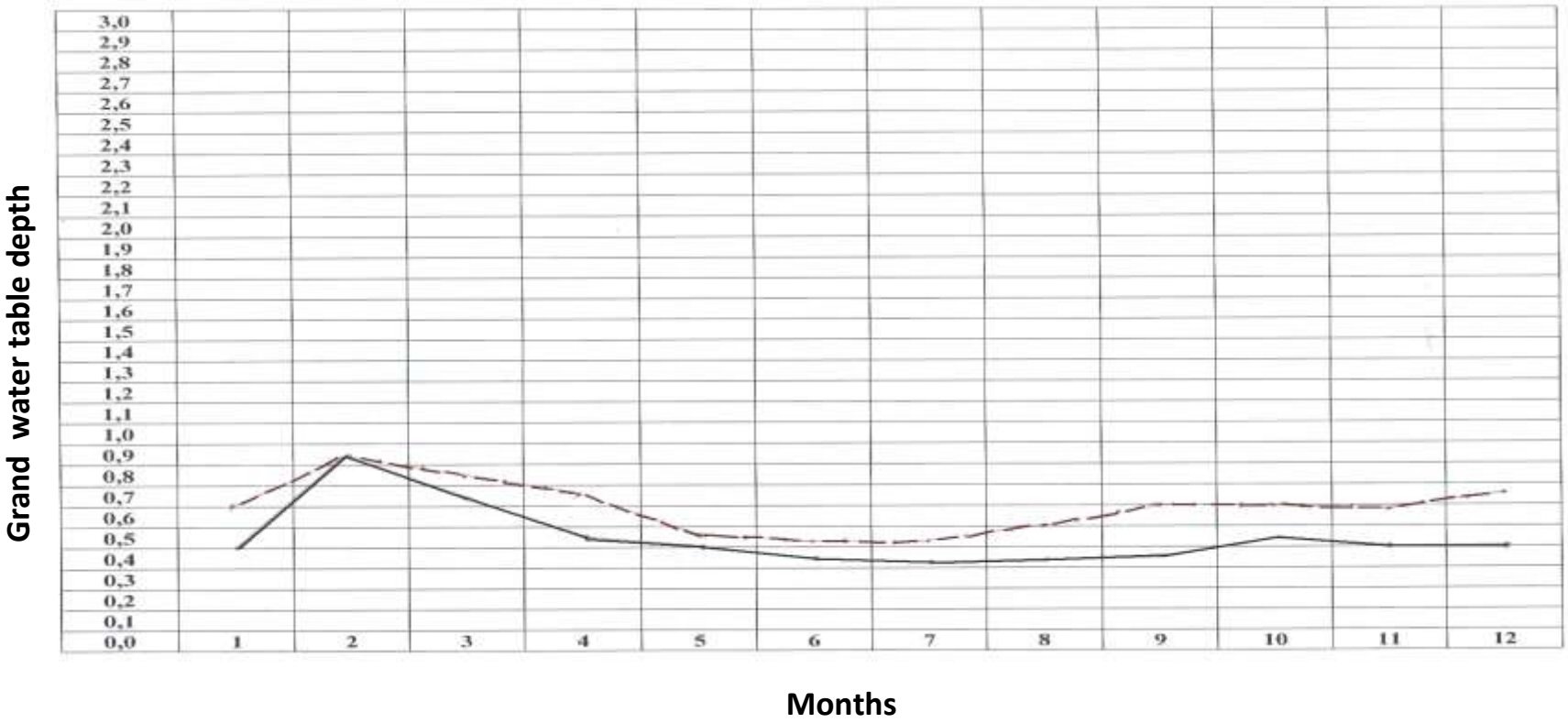
| T.p. № | Deep observation sump | Month | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 0 1 5 year | | | | | | | | | | | | | |
| 1. | 4/1 | 1,71 | 1,75 | 1,79 | 1,61 | 1,58 | 1,65 | 1,62 | 1,51 | 1,41 | 1,49 | 1,79 | 1,82 |
| 2. | 5/3 | 0,80 | 1,92 | 2,02 | 1,90 | 1,59 | 1,73 | 1,72 | 1,72 | 1,85 | 1,91 | 1,90 | 1,94 |
| 3. | 5/4 | 0,50 | 0,92 | 0,73 | 0,55 | 0,50 | 0,45 | 0,41 | 0,42 | 0,45 | 0,53 | 0,50 | 0,50 |
| 4. | 6/5 | 0,95 | 1,15 | 1,23 | 1,04 | 0,96 | 0,96 | 0,85 | 0,83 | 1,17 | 1,15 | 1,16 | 1,16 |
| 2 0 1 6 year | | | | | | | | | | | | | |
| 1. | 4/1 | 1,84 | 1,86 | 1,86 | 1,86 | 1,73 | 1,73 | 1,83 | 1,84 | 1,85 | 1,83 | 1,83 | 1,86 |
| 2. | 5/3 | 2,10 | 2,30 | 2,26 | 2,19 | 1,88 | 1,76 | 1,77 | 2,00 | 2,25 | 1,77 | 2,01 | 2,15 |
| 3. | 5/4 | 0,70 | 0,94 | 0,85 | 0,76 | 0,56 | 0,52 | 0,52 | 0,60 | 0,70 | 0,70 | 0,68 | 0,75 |
| 4. | 6/5 | 1,30 | 1,45 | 1,52 | 1,44 | 1,19 | 1,12 | 0,98 | 1,10 | 1,21 | 1,04 | 1,31 | 1,28 |



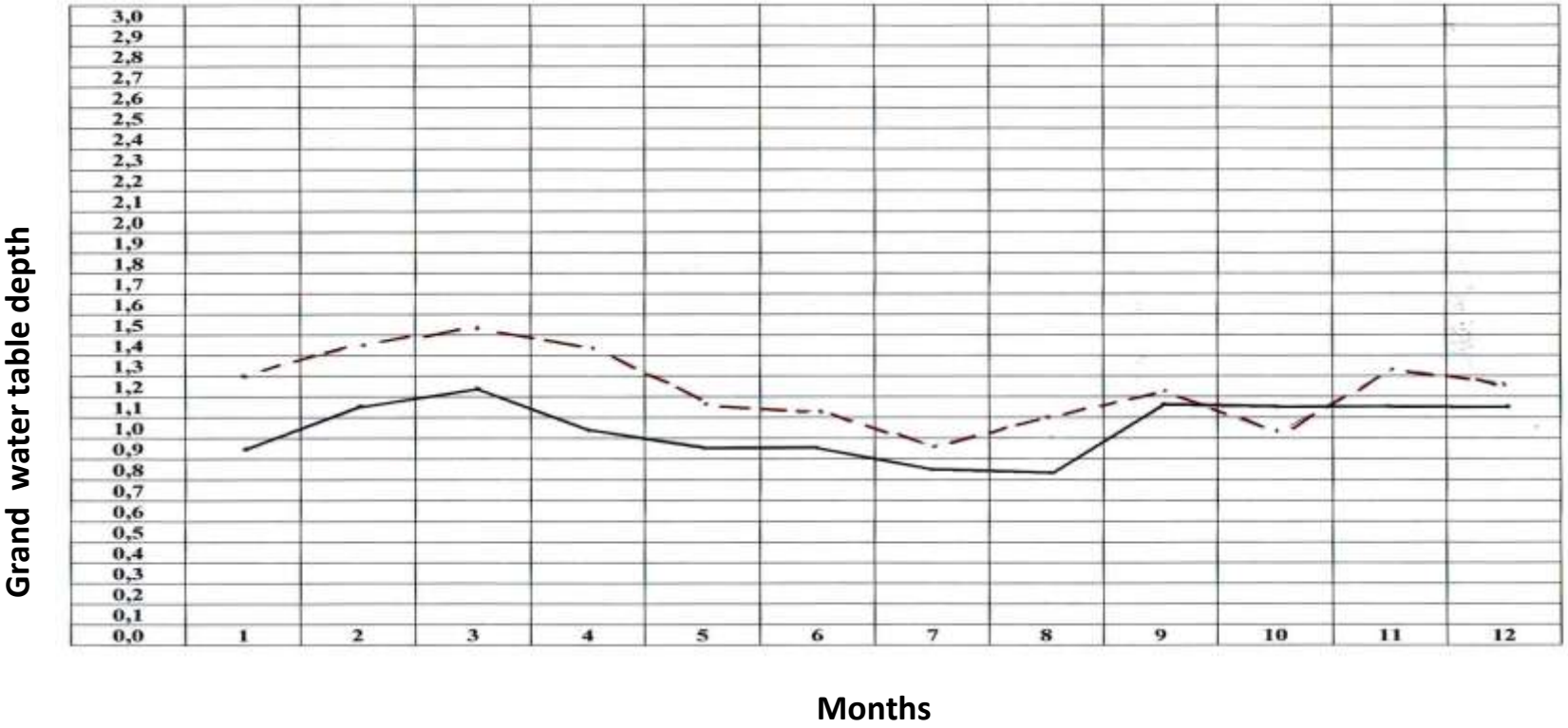

**ıre 1. Changes of grand water table depth in 4/1 deep observation sump in Buloqboshi district Jurapolvon block**




**ıre 2. Changes of grand water table depth in 5/3 deep observation sump in Buloqboshi district Jurapolvon block**




**Picture 3. Changes of grand water table depth in 5/4 deep observation sump in Buloqboshi district Jurapolvon block**




**Picture 4. Changes of grand water table depth in 6/5 deep observation sump in Buloqboshi district Jurapolvon block**

**Conclusions**. The massive soil of the study is composed of grassy soils, with a small amount of humus content, a very small amount of mineral deposits. Changes in the upper layers range from 9 to 13m. eqw (up to 100g soil). The content of humus is 1.38%. The constant nitrogen content of the film is 0.10-0.14% to the soil mass, to 0.16-0.21% for phosphorus.

From the geomorphologic point of view, the massif is located at the foot of the cone-exit of alluvial-prolyuvial deposits of Mirzachul age of the Arovonsay River. Relief - the general inclination consists of a wave plain directed eastward to the west.

The climate of the Fergana valley, surrounded by the mountainous terrain, is unstable. Western winds play an important role in its formation. These winds often bring dry air even if they frequently come into contact with damp air. The average air temperature during the cotton period is 21.6 - 22.6 0S. The average air temperature in April is 15.6 0C, July - 27.3 0C and 13.6 0C in October. The sum of useful temperature for the plant growth from 22 April to 20 October rises to 2286 0S. The average annual precipitation is 261 mm.

Hydrogeology meliorative status is poorly underground water depth. This indicates that the groundwater fluctuation amplitude from 0.50 to 1.1 m in 2015-2016.

The results of the chemical analysis of the water solubility were used to determine soil salinity. The volume of soluble salt and gypsum is 0.29-0.42%.

The waste water is not salinized by the degree of degradation, in some places it is less saline with a concentration of from 0.69 to 1.68 g / l.

After sowing, the next day, after the sowing of biscuits, legumes and beans were sown by 5 cm from the seeds, and the beard was planted 3-4 pieces and bean seeds 2-3.

The leguminous cereal crops intended for bacterial cultivation of azotophysic bacteria without lice and beans have the ability to attach airborne nitrogen to the plant, which is unable to absorb the plant.

The bacterial fats and beans were sown before the sun was released early in the morning. The sun may cause the fungus and beans to lose their bacterial properties.

To experiment in the experimental field, cotton "Andijan-35", "Oltin" and "Pobeda" varieties were used.

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