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WAYS TO INCREASE THE FERTILITY OF DEGRADED SOILS.

Umarov Muhammad Ismatullaevich[1], Raupova Nodira Bahromovna[2], Mukhitdinova Dildora Haytmatovna[3],Umarbekova Gulnora Anvarbekovna[4] Turayeva Nargiza Nigmatullayevna[5]

[1,2,3,4]Tashkent State Agrarian University

[5]Bukhara state University

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Abstract In this article presents the results of observations of various deflationary processes in irrigated lands on the territory of Mirzachul (Syrdarya and Jizzakh regions).

Keywords: Mirzachul region, wind erosion, deflation, pilot site, backstage crops, soil fertility.

Introduction.

Scientific research aimed at maintaining and increasing the fertility of degraded soils the world's leading scientific centers and institutions of higher education, including Kafrelsheikh University and Mansoura University, Egypt (Egypt), Debrecen University, Hungary (Venus), University of Bari, Italy (Italy), Natural Resources Conservation Service, USDA (USA), V.V.Institute of Soil Science named after Dokuchaev (Russia), M.V.It is conducted at Lomonosov Moscow State University (Russia), Research Institute of Soil Science and agrochemistry (Uzbekistan).

President of the Republic of Uzbekistan on June 17, 2019Decree of the president of the Republic of Uzbekistan on measures to ensure more effective organization of the process of acquisition of rights over land parcels and other immovable property as part of the South Caucasus pipeline expansion project more ... To a certain extent, this dissertation study will serve to carry out the tasks defined in the resolution № PP-4575"on the implementation of the tasks defined in the strategy for 2020-2030 years in 2020" and other normative-legal acts related to this activity.

One of the factors of the meeting of degradation of soils-the main deflation furnace in our Republic in Fergana region, Vobkent, Gadzhduvan, Romiton and Karakol of Bukhara region, Bekobod, Kashkadarya region of Tashkent region, Koson, Nishan, Termez, Muzrabad, Angor districts of Surkhandarya region, as well as northern regions – the Republic of Karakalpakstan, Khorezm region, Khovas, Yangier and Mirzachul of Sirdarya region. The study of the state of dangerous lands in deflation, their assessment and the development of anti-erosion measures is one of the pressing issues of Agriculture. According to the UN, nearly 7 as a result of deflation in the world every year mln.ga the arable land is falling out of the category of Agriculture. As for the present time, during the history of civilization of Man 2 mlrd.ga fertile land has become a desert.

According to the results of the research, more than 2 million hectares of irrigated lands of the Republic were subjected to soil deflation.

Complex organizational-economic, agrotechnical and forest-reclamation measures should be carried out on the lands exposed to wind erosion. Bunda, in order to reduce the wind blowing speed in areas where the wind is strong, it is necessary to properly organize anti-erosion measures, taking into account the peculiarities of soil release and cultivation of agricultural crops, the essence of the organizational and economic event to restore the shrubs of the IOTA step by step perpendicular to the wind.

What measures should be taken in this regard?!

A total of 11 key areas covering Mirzachul (Jizzakh and Sirdarya region)in 2003-2006, as well as a pilot area consisting of 2 hectares for field experiments in Zamin District of Jizzakh region (Chilonzor) were selected and researches were carried out.

The basis of the research method are generally accepted methods in Soil Science [1, 2, 3, 4, 5, 6] will constitute.

Results of the study and their discussion. The soils of the mirzachul region consist of different mechanical composition, are associated with the genesis of soil-forming rocks and irrigation-economic activity of humans. The main soil-forming rocks on the territory are alluvial, prolyuvial-alluvial, Lake-alluvial, lyoss, lyosimum comets, alluvial-prolyuvial, delyuvial-prolyuvial deposits. In the mechanical structure of soils, from heavy sand to sand, threeraydi. The variety of mechanical composition is observed at the border of each soil cross section.

The mechanical composition of the soils of the mirzachul Meadow, Burz-Meadow is characterized by a richness of large dust fractions (particles of 0,05-0,01 mm li). In the 0-1 meter layer of soil, its volume is from 41
It varies up to 63%. It should be noted that the central part of the Mirzachul characterizes the soils of the Boz-meadow, which are watered anew
19-the incision is made above the amount of fine sand particles (0,25-0,05 mm li) (from 47 to 67%) and evenly distributed [7].

The next characteristic feature of the mechanical composition of Boz-Meadow soils is that – in the upper layers there is an abundance of fractions of fine sand (0,1-0,05 mm), the sum of which exceeds the sum of medium and fine dust fractions in one meter layer of soil.

Data on the mechanical composition of irrigated Burz-Meadow soils indicate that the amount of large dust fractions in the upper one-meter layer of soil is from 30 to 55%, in the lower layers from 45 to 68%, the amount of medium and small dust fractions in the same layer of soil (0,01-0,001 mm) is from 3-7 to

The amount of microaggregates, consisting of particles of 0,25-0,01 mm li, is observed around 80-95%, microaggregates of 0,25-0,05 mm-30-45%. The amount of microaggregates smaller than 0,01 mm in this soil in the amount of 0,5-3%. Microaggregates on irrigated Burrow and Meadow soils were manifested mainly in granules 0,1-0,05 and 0,05-0,01 mm. In this area, large dust particles formed the main amount of microaggregates in the soil-forming rock. The amount of microaggregates N. for the soils of light-medium-Sandy Meadow soils irrigated from the old, light-sandy Meadow irrigated from the new, light-sandy Boz-Meadow irrigated from the

old, light-sandy Boz-Meadow irrigated from the new, light-sandy Boz-Meadow soils irrigated from the old.A.According to Kachinsky Method [2], very low

It is observed in the range of 35-46% from 27-32% to 54-59% for newly irrigated light-bearing Meadow, and for arable Bush-Meadow soils, the upper 82-86%.

The aggregate composition of the upper layer of soils with a heavy mechanical composition, non-deflationary, can be explained as follows:

The coefficient of wind-resistance K (the sum of the aggregates mass<1 mm
The ratio of the sum of the aggregate mass to >1 mm) is equal to the greater
3,6-5,0. In defrosted soils, K decreases to 1,7-1,9.

The amount of eroded aggregates in the upper layer of toasted soils is 2 even compared to non-deflated soils

It increases by 3 times. One of the common areas of wind erosion in our country is Mirzachul. Therefore, this territory is also subjected to deflation, mainly soils with a light mechanical composition.

Dust storms kuchaygan years in some farms, 30-40% and more yield is lost in cotton raw materials. Wind erosion negatively affects the ability of the soil to produce and the restoration of its fertility.

In practice, it is desirable to draw up a map of the risk of deflation of irrigated lands on a large, medium and small scale, since it is very convenient to use large-scale maps for agriculture. When the working maps are compacted, the capillaries disappear unnoticed, resulting in difficulty dividing the soils into levels of danger.

In this regard, in order to draw up a clear soil map of the key points studied in the research conducted by us, a map of the risk of small and medium-scale deflation of irrigated soils was drawn, as well as levels q.M.Mirzajanov [4, 5] and S.M.Differentiated according to the methods of Elyuboev [1:
Level I – no risk of 100% deflation;
II degree-95% risk of deflation weak, 5% no risk of deflation;
III degree-55% risk of deflation on average, 30% weak, 15% no risk;
IV degree-70% risk of deflation strong, 20% weak, 10% risk free;
V degree-80% deflation risk is very strong, 15% weak, 5% no risk [7];

As mentioned above, the studied semi-gomorph (Boz-Meadow) and gomorph (Meadow, Meadow-swamp) soils were divided into "no risk of deflation", "weak", "moderate" and "strong" risk groups according to the category of deflation hazards [7].

Field protection (kulisli) crop poles are of great importance in the fight against wind erosion.
Kulisli crop poles at the same time the wind power, dust storms and their impact on cotton and other crops dramatically weaken.

Kulisli crop poles, regardless of the number of rows, protect the soil and goose crop almost at the same distance from wind erosion, its highest impact distance does not exceed the height of the crops. From this it follows that the width of the fields in which there is wind erosion should not exceed 150-160 m, the length of which can be up to 100 m and more. It is necessary to support agrotechnical or chemical measures

against wind erosion until the Kulisli crop poles reach a certain height and can protect the soil from wind erosion.

For the protection of irrigated soils, a lane laying of protective crops is used. Corn poles of 20-25 meters of corn well protect the corn crop from the wind, the Bush will be 130-135 meters of corn, depending on the mechanical composition of the soil. In our observations it is revealed that the main "dust" mass, which is contained in the wind, flies at a height of 0-50 CM. This dust permeates the young cornflowers. A protective device (corn) with a height of 2 meters can hold this dust and prevent it from pressing the cotton.

According to practical research, Clover under willow or rye very well holds dust and protects the soil from deflation. At the time of cotton planting (early April) the height of alfalfa and Willow

It reaches 40-50 CM, and in may 90-100 CM. Planted alfalfa protects the soil from wind erosion and increases the fertility of deflated soils.

In general, high bushes from protective crops well protect the soil from tumbling. The range of protective seedling bushes, consisting of 3, 6 and 12 row plants, is 8-10 CM, placing perpendicular to the direction of the wind [7]. Anti-erosion kulisli crops are a solid means of protecting the soil from wind erosion.

Conclusions.

1. In order to produce protective crops, it is possible to use autumn crops, corn, corn, Sudanese grass and other fast-growing crops from the Kulis. The distance between the Such protective crops is 15-25 m, while their feed should not exceed 2-2, 5 m.

2. Winter planting of Willow and Rye is carried out in the autumn, and the range of rows is pre-softened at a depth of 7-9 CM on the softener. Bug'd it is necessary to water the plant 2-3 times before the end of the vegetation period, in the spring it is recommended to inject ammonium nitrate per hectare on the account of pure nitrogen to 100 kg/ha to accelerate its growth.

3. In the period when the activity of forest poles and ikhota crops to prevent soil deflation process begins (1-3 years), chemical preparations K-9, TNM-1 and bentonitlarni can be used. The use of these drugs increases the production capacity of deflated soils with low humus and nutrient elements.

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