

The Degree of Study and Productivity of Soils of Syrdarya and Jizzakh Region Some Ways to Restore

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Abstract:

In this article you will get acquainted with preliminary scientific research conducted in the regions of Syrdarya and Jizzakh regions, as well as the results of various deflationary monitoring processes in the fight against wind erosion, reducing the impact of wind force on the soil, and irrigated lands in the region. The results of the experiment suggested planting protective crops to restore the fertility of deflated soils.

Keywords. Foci of deflation, northern regions, deflationary lands, soil fertility, soil deflation, experimental site.

Introduction

After achieving independence, great attention is paid to the regulation of land relations, the development of scientific and practical foundations for the effective and rational use of land reserves, which are the basis of agricultural production.

In solving the problems of effective use of land resources, especially irrigated soils, maintaining and increasing their fertility, it is important to determine the limiting factors of soil fertility and establish the scientific basis for their elimination. Based on an in-depth analysis of the state of soil degradation under the influence of various natural and anthropogenic factors in the Mirzachol oasis, a historical settlement, in the irrigated agricultural regions, the basis of agricultural production in our country is irrigated soils, Effective use of such categories of land, restoration, maintenance and increase of soil fertility Regularly increase the yield of agricultural crops remains one of the main tasks today.

Deflation processes play a special role among the factors limiting soil fertility.

The implementation of this process has been studied in the republic, including the Mirzachol region. The study of soil cover in the Mirzachol region has been studied in detail by many researchers, meliorators, soil scientists and other experts.

The main deflationary kilns are in Fergana province, Wobkent, Gijduvon, Romiton and Karakol in Bukhara province, Koson, Nishon, Kashkadarya province in Termez, Muzrabad,



Angor districts and northern regions – Republic of Karakalpakstan, Occurs in Khorezm Province and Mirzachol. The study of the situation of inflation-hazardous lands, their assessment and the development of anti-erosion measures are currently one of the most pressing issues in agriculture.

Mirzachul is one of the major cotton-growing regions from time immemorial is. Mirzachul took up the mountain, and the salkam, which is embodied in the plains, received 1 million. it covers an area of about per hectare. The irrigated land of Syrdarya and Jizzakh regions of Uzbekistan (471.2 thousand. to) Chimkent region of the Republic of Kazakhstan (122.4 thousand. to) and The lands of the Khojand region of the Republic of Tajikistan (14.2 thousand. to) spread A.V. Shuravilin [21].

The study of wind erosion was first conducted by A.D. Started by Bychixin [2]. He studied the effects of wind on the soil, the importance of soil structure and the amount of humus in its resistance to erosion, and the tendency of soils with light mechanical content to stagnate. M.A.Pankov [12] argues that the erosion of soils by wind depends on their mechanical composition, structure, humidity, mineralogical and chemical composition, in addition to atmospheric precipitation and economic conditions.

S.S.Sobolev [14] drew up a map of soil erosion, separating areas where water and wind erosion were prevalent, to study erosion processes in detail.

A.G.Gael, L.F. Smirnovas [3] In order to prevent wind erosion, to create the least plowing conditions in easily mechanically composed soils, to create barriers from long-stemmed plants with the use of wheeled planting device (disk seyalka) in the planting of autumn rolls, as well as those who offered to drive without overturning.

V.V. Dokuchaev [4] was one of the first to recommend forest protection poles in his work, in connection with the effects of wind on soil formation, improper use of land, increased erosion processes. This is the most optimal way to protect the soil from wind erosion and drought.

Observation of the negative effects of wind erosion on soil properties and plants on irrigated geese is the first in Uzbekistan to be carried out by the Central Asian Forestry Research Institute –. Since 1947, the impact of field protection forest lanes on microclimate (soil moisture, air, movement and wind speed), cotton yield and other crops in various regions has been affected by A.M. Korotun, V.P. Fimkina, N.V. Bondarenko [8] and others learned. According to Q.M Mirzajonov [11], the deflation process in Fergana region is –saz, swamp – meadow and sur beetle, meadow alluvial, bald, sandy – desert and sur. brown, occurs mainly in soils with light mechanical content. Wind erosion of soils occurs as a result of misuse of land. Deflation – is widespread in wind-blown areas, mainly in the desert regions of Uzbekistan, as well as in Mirzachol.

According to Q.M.Mirzajonov [12], the acceleration of deflation is influenced by the following key factors: wind strength, direction, high temperature, ease of mechanical composition of the soil, and hokoza. Human impact can also be added to these factors at present. Under the influence of the factors listed above, wind erosion processes in Mirzachol are intensifying.

Based on the above, in the context of the research object

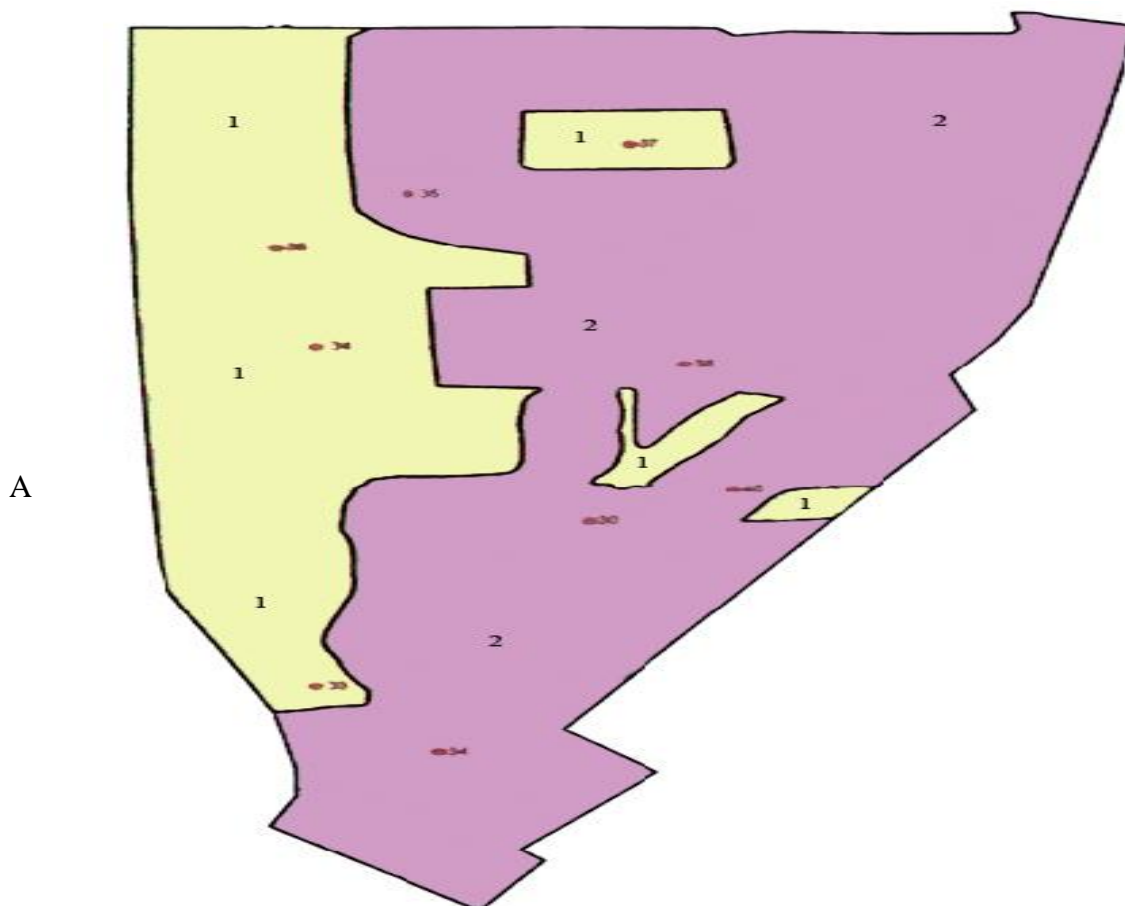
In 2003 – 2006, Mirzachol, a large area of agricultural production, was selected to conduct



scientific research on the subject.

In order to comprehensively study the current state of irrigated soils, identify, assess deflation-hazardous lands and develop measures against wind erosion, 11 key areas covering the Jizzakh and Syrdarya regions of Mirzachol were selected. Including,

**“Mirzachol” card-scheme of deflationary hazards of the soil of the company
(Mirzaabad district)**

Scale 1: 5,000



| Colors | Deflation rate | Field, at the expense |
|---|----------------|-----------------------|
|  | Average | 430 |
|  | Strong | 866 |

2/7 Soil separations and their boundaries
 ⊗ The point where the cut is located

Also, for field experiments "Chilonzor" AKHM in Zomin District of Jizzakh region, a 2-hectare experimental site was selected.



On wind-eroded lands, it is necessary to conduct complex organizational and economic, agrotechnical and forest-reclamation activities. In this case, the essence of the organizational and economic event of the fight against wind erosion is the correct Organization of anti-erosion activities, taking into account the soil relief and the specificity of agricultural crop production.

Research Methodology

Studies of general methods in Soil Science [1, 2, 3, 4, 5, 6] performed on the basis of. The studies were conducted in field and laboratory settings. “ Methods of agrochemical analysis of soil and plants ”, “Agrophysical research methods ” were based on methodological guidelines. Soil humus - by I.V. Tyurin method, total nitrogen - by Keldal method, total phosphorus and potassium - by E.M. Shcheglova and V.V. Vulfius method, in phosphorus and potassium moving in the soil.

In the experiments, – was planted as an agro-technical measure as a corn protection crop. Field experience has been established in 4 variants (in the case of cotton) in order to determine the effectiveness of corn planting as a means of increasing its resistance to deflation.

Classification of experimental field soils:

Field experience data in Mirzachol have significant diagnostic significance in determining morphological signs and types of soils, characterizing soil properties, as well as determining deflation risk levels. According to research, the Mirzachol region has been divided into countries at risk of weak, medium and strong deflation. Therefore, field experiments were conducted to develop measures to protect the risk of deflation from strong ground wind erosion processes. Field experiments were performed on re-irrigated light mechanical soils.

The Mirzachul plain areas of Jizzakh region account for more than 30% of the irrigated land area, while sand dunes of light mechanical composition account for 31.5% of the irrigated land area of Syrdarya region. The total irrigated land area of mirzachol is about-530428 hectares, of which 31.2% of the land area is of light mechanical composition, V.E. Sektimenko, A.J. Ismanov [15].

«Chilonzor» Agro-service center area is located in the northern part of Zomin district –, the soils of irrigated areas are in the sectarian region: subtropical mountain ‘ front chala desert area, consists of deluvial alluvial and proluvial deposits of the open-faced soil region mountain ‘ The lower sloping plains are scattered in geomorphological areas and are developed under various lithological, hydrogeological and soil – climatic conditions. The total area of the farm is 857.0 hectares, of which the area of irrigated land is also 857.0 hectares, from which it is possible to plant various agricultural products.

Research results and their analysis

In studying the morphological performance of the soil, deflation processes and the effect



of measures against them –, special attention was paid to the humus layer thickness, wisdom and mechanical composition of the soil of each incision. Here we present samples from morphological records of soil incision taken for the second time from the field experimental area.

Ward 2 M.I. Umarov (25.10.2004.). Moderately deflated, freshly irrigated light loamy, moderately saline, gravelly soil. Cotton field, 600 m north of the highway.

0–30 cm - Gray, the upper part of the layer is slightly dry, the lower side is moist, lightly sandy, fine-grained, moderately dense, salt spots scattered and vascularized, small roots occur, by the color of the transition to the next layer.

30-57 cm - light gray, moderately moist, light sandy, powdery small, very dense, rhizomes and salt points are found. The transition to the next layer is gradual.

57-104 cm - of light gray, wet, light sandy, small granular, non-compacted, roots and insect tracks and rotten roots are also found, the transition to the next layer is by mechanical composition.

104–129 cm Gray, moist, heavy-duty, layered cut-off, extremely dense, the roots are less common, there are small insects, according to the color of the transition to the next layer.

129 –145 cm Light gray and dark gray spots, new wounds of carbonates and gypsum particles, wet, heavy sore, cut-off, compacted, rust spots, according to the color and mechanical composition of the transition to the next layer.

According to applied research, under wheat or rye, alfalfa retains dust very well and protects the soil from deflation. During planting cotton (in early April), alfalfa and wheat reach a height of 40-50 cm, and in May 90-100 cm. Planted alfalfa protects the soil from wind erosion and increases the fertility of deflated soils. Simultaneously with the use of alfalfa from soil protectors as an anti-erosion control, cotton-alfalfa was studied and introduced as an alternating planting.

High stems from protective crops provide good protection against soil contamination. The range of protective seedling molds, consisting of 3, 6 and 12 rows of plants, is 8-10 cm and places perpendicular to the direction of the wind. Anti-erosion ash crops are a robust tool in protecting the soil from wind erosion. It reduces wind speed in the air layer on the surface of the earth and distributes the same across the field.

Conclusions, suggestions and recommendations.

1. Cornice not only reduces the speed of winds that destroy crops, but also creates a microclimate that increases the humidity of the air relative to unprotected fields, resulting in very high temperatures gradually falling to the norm –, this will allow for good growth and development of agricultural crops. The effects of corn ash have a positive effect on soil moisture and crop yields, and are well effective in reversing inter-couset wind speeds.

2. Irrigated meadow – In the field of maize, which is 90 cm wide and 3, 6, 12 rows wide, in the conditions of oblique soils, the yield of agricultural crops has increased compared to unprotected control. Cotton yield –20.5 s / ha when corn ash is 3 rows; 6 rows – 27.6 s /ga; In 12 rows, – 25.2 s / ga and in the control option it was 15.7 s /ga.

3. K-9, TNM-1 and bentonites can be used from chemicals at the beginning of the activity (1-3 years) to prevent soil deflation of forest lanes and ixota crops. The use of mazkur drugs



increases the production capacity of deflated soils with low humus and nutrients.

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