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Investigation of Optimal and Ratios of Mineral Fertilizers in Enhancing Fertility of Eucalyptus Plants

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ABSTRACT

The study of simple, sophisticated mineral fibers under agricultural crops on the erosioned soils of different mountain and foothill zones of the republic and their influence on the size, development and productivity of the plant on the background of improvement of fertility parameters of the affected lands Over the past 30 years, a fairly valuable material has been collected from research in other CIS countries. However, the physiological and biochemical bases of the different types of mineral fertilizers were not studied under cereal crops in the erosion lands of the country. A study on the problem of lighting this problem was devoted to the results of the study of the physiological and biochemical bases of microelements on the background of simple, complex fibers and complex tubes under the autumn-grade arable herbs in moderately eroded degraded brown soils in the southeastern part of the Greater Caucasus.

Keywords: *Degenerate, mountain-brown, erosion process, biochemical, fermentative processes, microelements, complex fertilizers, and i.a.*

INTRODUCTION

The problem of rational use of land, which is the main production tool for agriculture and increasing the production of foodstuffs, has been faced with agricultural science. The mountainous zone lands are a great source of resources for increasing agricultural products. In general, anti-erosion measures must be taken to effectively use soil cover in the mountainous regions, as well as on the southeastern slopes of the Greater Caucasus.

This is explained by the fact that erosion process is widespread here due to inaccurate economic activity in complicated geomorphologic conditions. As a result of the soil erosion process, which has been formed for many years, the wash is disintegrated, fertility is deteriorated, the amount of nutrients decreases and their mobility is significantly restricted.

In the erosioned soils, the amount of decay is significantly reduced; its fractional composition is worse, and the volatile portion of humic acids, which are agronomical valuable, decrease. Thus, the erosion process negatively affects the basic parameters of the humus formation process in soils. The erosion process also weakens all biochemical, fermentative processes going on in the soil and the intensity of carbon dioxide (CO2) export. The erosion process also worsens the microbiological process, which is one of the main factors of soil fertility.

Soil microfiber is a decisive factor in the biochemical processes going on in it and regulates the synthesis and mineralization of those processes, especially humus. In general, as a result of the erosion process, the physical, agrochemical properties of the soil water and the food regime become worse. As a result, the productivity of agricultural crops is decreasing. This, in turn, has a negative impact on our planet's biolog /The use of mineral fertilizers is of great importance in increasing the fertility of erosion soils, along with other agro technical measures for the purchase of fixed and high crops from agricultural plants.

Application of fertilizers on erosioned soils in mountainous and mountainous foothills of Azerbaijan does not meet demand. Here, the physiological and biochemical foundations of the application of mineral fertilizers, especially microelements, have been studied and, therefore, the scientific basis of the fertilizer system under basic agricultural crops has not been developed in eroded soils. So, the use of fibers in eroded soils is spontaneous.

Naturally, it is more likely to speak about the increase of productivity and improvement of the quality of the crops. Scientific research has been devoted to the above mentioned issues.

Purpose Study

The following issues were solved in front of the research:

- To study the fertility of degraded brown soils that have been exposed to erosion and untreated, to determine the effects of erosion on soil fertility parameters.
- The study of the effect of the differentials and proportions of the fibers.
- Study the effect of microelements (nickel, zinc, copper, bar, manganese and molybdenum) on the size of the mineral fertilizers in the soils.
- Erosioned soils of nitrogen, phosphorus and potassium in mineral fertilizers.
- Influence of macro and microspheres on quantities and dynamics of microelements in those lands.
- To study the role of humus in the erosion lands of mineral fibers and microelements.
- Investigation of the effects of mineral and micro bubbles on biochemical and physiological processes on the plant

The surface of mineral fibers and micro elements Effect on end productivity. On the south-eastern slopes of the Greater Caucasus, simple mineral fertilizers and their influence on microelements on the background, the development and productivity of the scarlet plant have been studied in moderately eroded degraded brown-brown soils in the Shamakhi region. It's not accidental to experiment with the herb plant in the soils. Thus, the herbaceous plant is considered to be a valuable meliorant to restore the fertility of erosioned soils.

Object and Methodology

The object of research was winter pastures located in the territory of Shamakhi their main soil and vegetation. Soil erosion studies conducted under the experience of subsoil land in the gray-brown terrain of dangerous gray rock erosion in the study site were analyzed and agro-ecological assessment was carried out on the basis of generally accepted methodology.

Hashan's herb is an indispensable source of protein for animals, and it is also important to explore a complex research proposal. Practice The experimental-test base of the Institute of Erosion and Irrigation was constructed in the area of Melam in Shamakhi region. The schedule of the experimental scheme is not necessarily indicated. The phonological observations and biometric measurements have shown that the use of mineral fibers in the soil increases the quantity of nutrients in the soil, and its biological and microbiological activity is substantially revitalized. All this has ensured the normal development of the rhizome. As seen from the figures in Table 1, when the height of the hive was 53.4 cm in the control version, the size of the plant was increased by 2.4 to 15.7 cm.

Table1. *Stones of mineral fibers and microelements longitudinal effect of the beetle*

Practice options	29 / U length of the pike (cm)
Control (without crawling	53,4
N30P60K30	55,8
N60P60K60 (background)	63,3
N90P90K90	69,1
Background + 3 kg / ha Ni	74,8
Background + 3 kg / ha Co	76,0
Background + 3 kg / ha Mn	77,3
Background + 3 kg / ha Zn	76,4

Compared with the control (optional) option, the size of the plant increased by 21.4-23.9 cm in microelement options

The maximal increase in hectare was in the variants of N90P90K90 kg and 3 kg of manganese and zinc. In these variants the relative size of the crust was 15.7, 23.9 and 23.0 cm, respectively. Apparently, the surface mass of plants has grown considerably in experimental choices, which has resulted in increased yields. This table, in the figures, is grasses of raspberries, increased by 10.9-24.1 centers per hectare, with 87.5 quintals per hectare. The maximum increase was achieved when giving hectare N90P90K90 kg.

Table2. *Stones of mineral fibers and microelements effect on end productivity*

Practiceoptions	You get productivity from every hectare (sentner)	Increase	
		sentner	%
Control (without crawling)	87,5	98,4	12,4
N30P60K30	98,4	10,9	15,54

N60P60K60 (background)	101,1	13,6	27,5
N90P90K90Background)+3 kq/ha N	108,9	24,1	24,5
Background)+ 3 kq/ha Co	112,8	25,3	28,9
Background)+ 3 kq/ha Mn	109,8	22,3	25,5
Background)+ 3 kq/ha Zn	113,4	25,9	29,6

NCP0.5 = 12 you. Sx% = 5.57% (24.1 centners).

The use of microelements in the background of simple tubes (N60P60K60 kg) has further increased productivity.

a b c

a- *appearance of harvesting fruit tree;* ***b****-cultivation cycle of the foliage plant in the field ;* ***c****-ground cutting in practice*

FRAGMENTS FROM THE FIELD OF PRACTICE

As can be seen from the figures in Table 2, the productivity of rice increased by 21.4-25.9 quintals per hectare compared to the caffeine-free option. The maximum increase was achieved in hectares of 3 kilograms of cobalt and zinc. In these options, the increase was 25.3-25.9 centers, respectively.

Mathematical processing of product numbers (according to Dospexova) showed the integrity and accuracy of the experiment. Influence of mineral fibers and microelements on the quality indicators of the plant The results of many scientific studies showed that mineral fibers, as well as microelements, have greatly improved the productivity and product quality of multi-year herbaceous plants (Aliyev B.H. Shihiyev M. M., Kuliyev V.F., Hasanova A.F and others). As it is well known, the quality of the fodder plants depends on the quality of the livestock products. Improving the quality of herbs is especially important for eroded soils. This is explained by the fact that the quality of agricultural crops in recent years has deteriorated considerably. In the research year, the total nitrogen, phosphorus, potassium and crude protein content were analyzed in plant samples taken from the experimental options (from the herb plant). As can be seen from Table 2.1, the total nitrogen content in the samples taken from coffeecake variants was 2.44%, total phosphorus 0.33%, total potassium 1.30% and raw protein was 13.90%. In simple variants, the total nitrogen content is 0.11-0.38%, total phosphorus - 0.05-0.14%, total potassium - 0.24-0.70%, raw protein - 0.63-2, Increased by 17%.

In the variant given to the hectare N90P90K90 kg, this increase was even greater. When applying micronutrients on the background of simple fibers, the ratio of caffeinated variants to total nitrogen 0, 38-0.47%, total phosphorus 0,14-0,15%, total potassium 0,46-1,30%, raw protein 13 is 2,17 -2.45% increase. The highest growth was achieved in the hectares of 3 kilograms of cobalt and manganese.

Table2.1 *Mineral fertilizers and microelements impact on quality indicators*

Practice options	Total nitrogen,%	Crude protein,%	Common phosphorus,%	Total potassium,%

Control (withoutcrawling)	2,44	13,90	0,33	1,30
$N_{30}P_{60}K_{30}$	2,55	14,53	0,38	1,54
$N_{60}P_{60}K_{60}$ (background)	2,68	15,27	0,44	1,76
$N_{90}P_{90}K_{90}$	2,82	16,07	0,47	2,00
(background)+ 3 kq/ha Ni	2,84	16,18	0,47	1,76
(background)+ 3 kq/ha Co	2,91	16,58	0,48	2,40
(background)+ 3 kq/ha Mn	2,87	16,35	0,47	2,60
(background)+ 3 kq/ha Zn	2,82	16,07	0,47	2,00

RESULTS

The following results are consistent with the following research

- Mineral fibers and microelements improve the food balance of eroded brown mountain-brown soils and ensure the normal development of the hawthorn.
- Mineral fibers and microelements significantly increase the biological, microbiological and fermentative activity of eroded soils.
- Mineral fibers and microelements increase the product of the scaly plant on the moderately eroded gray-brown soils and significantly improve the quality of the product

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