

SURFACE FLOW AND FLOOD IN THE SHAMAKHI DISTRICT LOCATED IN THE SOUTH-EAST PART OF THE GREAT CAUCASUS

R.F. Bagirova

Institute of Soil Science and Agrochemistry of ANA

***Corresponding Author:** R.F. Bagirova, Institute of Soil Science and Agrochemistry of ANA

Received: July 08, 2022; **Accepted:** July 19 2022; **Published:** July 28 2022.

Citation: R.F. Bagirova, (2022). Surface flow and flood in the Shamakhi district located in the south-east part of the great Caucasus. *Pesticide Science and Pest Control*. 1(1). DOI: 10.58489/2833-0943.JPSPC.1.1.004.

Copyright: © 2022 R.F. Bagirova, this is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract

After gaining independence, the Republic of Azerbaijan, as in all areas, has undergone significant changes in the field of economic regions, territorial production complexes and their development. In this modern period of formation and deepening of market relations, ensuring the sustainable development of the economy and improving the social living conditions of the population attracts attention with its urgency. In this regard, the study of soil erosion problems of industrial complexes in the Shamakhi economic region of the Mountainous-Shirvan region and the study of the erosion danger of these lands and the development of complex anti-erosion technologies to prevent damage to the country's economy. is of great relevance in terms of scale application.

Keywords: *surface flow; Shamakhi district; south-east par*

Introduction

After gaining independence, the Republic of Azerbaijan, as in all areas, has undergone significant changes in the field of economic regions, territorial production complexes and their development. In this modern period of formation and deepening of market relations, ensuring the sustainable development of the economy and improving the social living conditions of the population attracts attention with its urgency. In this regard, the study of soil erosion problems of industrial complexes in the Shamakhi economic region of the Mountainous-Shirvan region and the study of the erosion danger of these lands and the development of complex anti-erosion technologies to prevent damage to the country's economy. is of great relevance in terms of scale application.

As it is known, economic regions are characterized not only by specialization, but also by the complex development of production here.

In the economically developed economic regions of the country, the location of the economy in the form of territorial production complex (TPC) is clearly

visible.

One of the main tasks of the socio-economic policy pursued in the country is to direct the results of economic development to the solution of the main problems of economic regions. The dynamic development that has taken place as a result of economic policy pursued for a specific purpose creates an objective basis for solving the social problems arising from the current situation.

In the future, it is necessary to further increase the socio-economic potential of the Shamakhi region and study the factors that will ensure its development, and to conduct a comprehensive scientific study of the existing problems in the area in modern times. Ways to investigate and solve these problems ensure the relevance of the research topic.

The report refers to the relevant literature and patent materials, and examines the pros and cons of irrigation and fertilization systems. In addition, the report discusses the fertilization and irrigation of arable lands to increase agricultural production in the country, the application of advanced irrigation techniques and the application of water-saving irrigation systems in mountainous and foothill regions,

meeting the water needs of plants and creating a microclimate around plants.

Purposeful and correct determination of irrigation and fertilization works are among the factors that will ensure the expected productivity.

In general, three factors should be considered when studying irrigation systems for certain fertilizers.

1. The principle of structural change of soil, ie change of aggregate composition and violation of ecological balance. (Surface runoff, infiltration, rising groundwater level, etc.)

2. Select and apply cost-effective fertilization and irrigation techniques.

3. Ensuring the plant's daily nutritional needs depend on water evaporation and the application of a fertilization system.

These three conditions are one of the most important factors shaping the impact of irrigation techniques and fertilization systems on plants.

The region, which covers the south-eastern part of the Greater Caucasus, includes the administrative territories of Agsu, Gobustan, Ismayilli and Shamakhi districts. With a total area of 613,000 hectares, it is 7.1% of the country's territory.

The surface structure is mainly mountainous. In the south, parallel to the mountainous area, in the Shirvan plain, the altitude drops to about 200 m. The area stretching from the foothills to the watershed (Babadag to 2629 m) is divided by deep river valleys. The mountainous area, which gradually descends to the south-east, is characterized by small plateaus and ridges. The Hinaldagh, Hingar, Langibiz ranges in the north and northeast of the area and the lowland area in the south (Shirvандuzu) have created significant complexity in the relief of the region. The application of irrigation techniques and fertilization in mountainous and foothill areas is more difficult than in plain areas. These difficulties are that in mountainous and foothill areas we face steep slopes, and in order to create a stable pressure for each slope, it is necessary to use special protectors, regulators, special structures that implement the principle of equal distribution of irrigation water and proper fertilization. to be held. Therefore, in mountainous and foothill areas, the proper use of irrigation and fertilization systems that meet the needs of the day (including the application of aqueous solutions of fertilizers through irrigation techniques, is the most important issue to increase productivity). The research will study the important role of the Shamakhi region in improving the fertility of eroded

soils on the south-eastern slopes of the Greater Caucasus.

For this purpose, effective soil protection measures have been studied. Experimental research is being carried out in the area to determine. According to the results of the experiments to be carried out at the research site, mineral fertilizers and irrigation will be applied in the optimal norms and proportions compared to the natural land area.

In this regard, in accordance with the calendar plan of the current research year in the 2nd stage of the work, the improvement of the suitability of eroded soils in the area as an important technology in the modern scientific approach to the regulation of erosion hazards developed here. the role of given mineral fertilizers; The expected positive results in the dynamics of nutrients in the soil, the accumulation of humus and nitrogen in the soil, the dynamics of total moisture in the study area, changes in the structural and aggregate composition of these soils, the effect of irrigation and fertilization on surface and ground mass.

During this period, in accordance with the calendar plan of the current year, 2 sections were made in the field of experiment selected on the research topic, soil samples were taken and brought to the institute and handed over to the chemical laboratory for analysis. In addition, field preparations were carried out in the research area - terrace leveling works, fertilization works in the field of young fruit plants (apple and pear), etc. conducted.

In addition, barley and grass grown in the experimental field were harvested, and sunflower and corn could not be harvested, as these plants were destroyed by drought.

For the known purpose, 2 short-term scientific trips were organized to the territory of the research object. As noted during the current research year, the results of literature analysis and patent studies, laboratory analysis of cuttings and soil samples taken from the study area showed that due to the large amount of legumes planted in the field, formation of humus was observed. This, in turn, proves the innovations that will be achieved to increase the effectiveness of large-scale application of the results of numerous studies conducted to improve the structural and aggregate composition of eroded soils, known to science.

References

1. Bohacs, K. (2012). Relation of hydrocarbon reservoir potential to lake-basin type: an integrated approach to unraveling complex

- genetic relations among fluvial, lake-plain, lake margin, and lake center strata.
2. Ecological and geochemical features of mountain-meadow soils of the southern slopes of the Greater Caucasus. Materials of the scientific-practical conference dedicated to the 95th anniversary of Academician G. Aliyev, Baku, (2002), 314 p.
 3. Sh, S. Z., & Ibragimov, I. O. (1983). Long-term pasture agrophytocenoses in the arid zone of Uzbekistan. *Tashkent: Fan*.
 4. Guy, P. (2022). The Solar Stag of the Chamalals and Tindals and other masonry petroglyphs in the upper Andiiskoe Koisu region of Dagestan and their relationships to similar phenomena in the mountain communities of the Caucasus: Socio-ecological and historical perspectives. *Юг России: экология, развитие*, 17(2 (63)), 150-155.
 5. Prof. Dr. Murat Altyn, professor, doctor of medical sciences. Ahmet Gokkush, professor, doctor of medical sciences. Ali Koch Chaiyr Reform Measure (2005), 468 pp.
 6. Babirov S.K., Mustafaev R.B. Mamedov Zh.K.- (2003), Recommendations on the accounting of agricultural costs and the calculation of the cost of production. Baku, Tural.
 7. Pof. Dr. Riza Avcioglu, prof. Dr. Rustu Khatiroglu, prof. Dr. Yasar Karadag Yembitkileri Genel Bölüm Tsilt-I.Izmir-(2009), 276 pages
 8. Prof. Dr. Riza Avcioglu, prof. Dr. Rustu Khatiroglu, prof. Dr. Yashar Karadag Yembitkileri. Baklagil Yembitkileri Cilt-II. Izmir-(2009), 545 pages
 9. Aliyev, R. A. Improvement and rational use of winter and summer pastures in Azerbaijan/Aliyev RA, Hacıyev VD et. al. *Baku, NA Az. SSR,–1965.–46 p.*
 10. Improvement and rational use of winter and summer pastures of Azerbaijan Baku (1965)