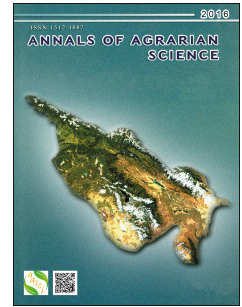


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H.Gh. Ghazaryan, S.Z. Kroyan



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GENETIC AND AGROINDUSTRIAL FEATURES OF MEADOW BROWN
IRRIGATED SOILS OF REPUBLIC OF ARMENIA IN TERMS OF CLIMATE
CHANGE AND DESERTIFICATION

H.Gh. Ghazaryan., S.Z. Kroyan

Branch of Armenian National Agrarian University "Scientific centre of
Soil Sciences, Agrochemistry and Melioration after H. P. Petrosyan"

Admiral Isakov ave. 24, Yerevan, Republic of Armenia

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Corresponding author:

S.Z. Kroyan, kroyan.samvel@mail.ru

Branch of Armenian National Agrarian University "Scientific centre of Soil Sciences,
Agrochemistry and Melioration after H. P. Petrosyan

ABSTRACT

On the territory of the Republic of Armenia the irrigated meadow-brown soils evolve within the slightly sloping piedmont parts of the Ararat plain, in the conditions of the prolonged irrigation process and semi-hydromorphic or automorphic humidification. In this territory the primary soil formation proceeded in the conditions of the capillary ground humidification, but much later groundwater and capillary fringe detached from the soil layer and soil formation proceeded in the automorphic conditions, under the influence of irrigation.

This work is dedicated to the study of the causes of degradation and desertification of irrigated meadow-brown soils of the Republic of Armenia. It is shown that the prolonged and indiscriminate use of these soils of the Ararat plain leads to the degradation and desertification. Studies show that some negative changes are observed in these soils that adversely affect agricultural crop yields. In particular, by comparing new- and old-irrigated variants, a noticeable reduction of humus content and absorbed basis is being observed in the arable layer of soils. The prolonged irrigation helped compact the soil mass at a considerable depth, as well as leach or redistribute the part of products of the soil formation. The accumulation of silt fraction in the upper horizons is mainly due to the prolonged irrigation of these soils by muddy irrigation waters.

In the case of prolonged and indiscriminate use the destruction of agronomically valuable structure and reduction of the content of water-stable aggregates occur in humus horizons. This paper provides suggestions of the ways for improving and increasing the fertility of these soils in the conditions of global climate change.

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