



## Influence on ecological salinization of irrigated soils at the delta rivers Zeravshan and Kashkadarya in Uzbekistan

H.T. Artikova, R. Yunusov\*, S.K. Narziyeva, G.R. Yunusova (Please write full name)

Bukhara State University, Bukhara, Uzbekistan

### Abstract

In Uzbekistan, in particular and on deltas rivers Zerafshan and Kashkadarya concerning to Bukhara and Kashkadarya areas, land users become the farms testifying, that regions of our country really pass to market derivative attitudes. Such social and economic transformations and progress of productive forces is objective law. Nevertheless, scales and paces of progress of irrigated agriculture here requires search of the most appropriate forms of interoperability of farmers in various elementary soil areas (ESA) and structures of a soil cover (SSC). Because, progress and propagation secondary saltiness in the form of ESA and SSC on irrigated fields characterizes various degrees and characters salt accumulation. On the irrigated grounds of characterized territories are widespread deserted sandy, gray-brown and alluvial meadow grounds. Subsoil waters in territory of these soil lies on depth of 1-3 m, a mineralization of subsoil waters fluctuate within the limits of 3-10 gr l<sup>-1</sup> and more, and on a chemical compound they concern to chloride-sulphatic and sulpho-chloride to types salinization. Evaporation of these mineralized subsoil waters in years hot days assists accumulation on a surface and in rooting a layer irrigated soil toxic salts NaCl, Na<sub>2</sub>SO<sub>4</sub>, MgCl<sub>2</sub>, Na<sub>2</sub>SO<sub>4</sub> and partly NaHCO<sub>3</sub>. The increase of these processes of accumulation of salts in the top horizons of soil, one step at a time leads to expansion of their areas in space. This process causes to occurrence on district various ESA salted seasonal, seasonally-spotty, is constant-spotty, etc. soil among cultivated fields. The researches executed by us directed on improvement of an ecological condition highly saline soil. The above-stated oases show, that the lead washings, lay-out and entering organomineral fertilizers, also compliance with agrotechnical rules of irrigation, of 20-50 ha and more assist transformation motley on structure salted ESA and SSC in the expressed fertile fields homogeneous well the area. It makes possible models of stable progress of agriculture in territory of farms by land improvement and integration small ESA (3-5 ha) in the large homogeneous and fertile areas of the soil. For example, in territory newly irrigated highly salted deserted sandy soil with characteristic for them motley spotty (3-5 ha) salt accumulation after a lay-out and their washings, have been organized crop of cotton on the area of 48 ha. Having watered cotton it was made under the diagram of 70-70-65 % of maximum-field humidity, and it has been brought nitrogen of 250 kg ha<sup>-1</sup>, phosphorus and potassium according to on 200 both 100 kg ha<sup>-1</sup> and manure of 25 kg ha<sup>-1</sup>. Thus productivity of cotton has risen from 5-11 up to 28.4 μ ha<sup>-1</sup>.

**Key words:** Soil, elementary soil areas, structures of a soil cover, secondary saltiness, organomineral fertilizers, propagation, salt accumulation.

\*Corresponding author : Rustam Yunusov

Bukhara State University, 200100 Bukhara, Uzbekistan

Tel : +83652288619

E-mail : [anijnag@mail.ru](mailto:anijnag@mail.ru)

Примечание [WU1]: Please write full name

Примечание [WU2]: Please write full name

Примечание [WU3]: Please write full name

Примечание [WU4]: Please write full name