



New technological methods for protecting underground waters from agricultural pollution

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The agricultural production on the irrigated grounds can not carry on without mineral fertilizers, pesticides and herbicides. Especially it is shown in Uzbekistan, in cultivation of cotton. There is an increase in mineralization, rigidity, quantity of heavy metals, phenols and other pollutions in the cotton fields. Thus there is an exhaustion of stocks of fresh underground waters. In the year 2003 we were offered to create the ecological board to prevent pollution to get up to a level of subsoil waters in the top 30 centimeter layer of the ground. We carried out an accumulation and pollution processing. This layer possesses a high adsorbing ability for heavy metals, mineral oil, mineral fertilizers remnants, defoliants and pesticides. In order to remediate a biological pollution treatment processing should be take into account. The idea is consisted in the following. The adsorption properties of coal is all well-known that the Angren coal washing factories in Tashkent area have collected more than 10 million tons of the coal dust to mix with clays. We have picked up association of anaerobic microorganisms which, using for development, destroys nutrients of coal waste pollutions to a harmless content for people. Coal waste inoculation also are scattered by these microorganisms on the field before plowing.

Deep (up to 30 cm) plowing brings them on depth from 5 up to 30 cm. Is created by a plough a layer with necessary protective properties. The norm of entering depends on the structure of ground and the intensity of pollutions. Laboratory experiments have shown that 50% of pollutions can be treated by the ecological board and are processed up to safe limit.