



Present aspects concerning the behavior in exploitation of subsoil draining and drainage, associated to modeling in ridge strips, in the Baia experimental field - Moldova hydrological basin

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The natural conditions in the extra-Carpathian zone of the Moldova river meadow and hydrographical basin from the Păltinoasa-Timișești field, which also includes the Baia Depression, have favoured water excess in soil. Subsurface drainage, associated to modeling in ridge strips from the Baia experimental field was set up in 1978 on a stagnic-glosic albic Luvisol. The project comprised an area of 3.00 ha, on which six technical solutions of conducting low depth subsoil drainage were found. Before conducting the works of subsoil drainage, soil was used only as natural meadow with perennial hygrophite vegetation. In the first stage of the years 1978-1995, the soil from drainage field was first cultivated with annual plants. In the second stage of the years 1996-2007, soil was used for animal grazing. The pasture was formed as a result of field sowing with a mixture made of 70% grasses and 30% legumes. The behaviour in exploitation of soil improvement works was studied as concerns the sustainability of the projects for subsoil drainage, associated to the modeling in ridge strips and the evolution in time of some characteristics of drained and cultivated soil. After the first cycle, we have determined, according to the accurate measurements of geometric leveling, an average height of ridges of 18-29 cm, compared to the level of channels. The average transversal slope of profiles was of 2-3%. The average initial depth of placing suction drains at 0.942 m has registered after the first exploitation cycle the value of 0.812 m, as a result of land modeling in ridge strips and, respectively, the process of settling the drained soil. After the second cycle, when no works of restoring the field modeling in ridge strips were done, and soil from the drainage field was used as natural meadow, the constructive parameters were maintained within the limits relatively close to the first period.