



Comparative study between the natural soils and soils degraded by mining from Gorj district

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The Gorj District has a 250,268 ha. Of all this surface, 7.6% which means 19,140 ha is affected by mining activity as follows: 6,861.2 ha quarries (35.85%); 440.8 ha micro quarries (2.3%); 7,971 ha sterile dumps (41.65%); 3,867 ha underground mines (20.2%). Within the not affected soils by the surface mining activity predominates typical eutricambosols and within the affected soils by mining activity there are mostly spodic typical entiatrosoil. Between these two soil types there are the following differences: the texture is silty with typical entiatrosoil and very heterogeneous from sandy to clayey – silty yet predominates materials with sandy silty texture, silty or silty clayey (60%) on spodic typical entiatrosoil. The organic matter content is between 1.80 and 2.48% on typical eutricambosol and it is 0.16 and 6.04% on spodic entiantrosoil (the higher values are influenced by the silt content or coal crumbles from the soil mass). The available phosphorus has low values on typical eutricambosol, between 6.5 – 10.0 ppm and higher, between 3.2 and 49.0 ppm on spodic entiantrosoil. The available potash has lower values on the typical eutricambosol, between 46 and 66 ppm and higher, between 22 and 172 ppm on spodic entiantrosoil. The exchangeable bases sum is between 13.9 and 20.9 me/100 g soil with the typical eutricambosol and 7.2 and 39.5 me/100 g soil with the spodic entiantrosoil. The typical eutricambosol has the average evaluation mark of 82 being enclosed within the first class and the spodic entiantrosoil has the evaluation mark of 73 being enclosed within the third quality class.