Abstract
In Zlatna area, because of Ampellum S.A activity, large quantities of heavy metal and oxides sulfates that caused the soil and plants contamination were issued. Due to heavy metal pollution, the soils productivity has a decrease. Soil quality assessment was done using land evaluation system both under natural and heavy metal pollution conditions for grasslands. Land evaluation, in natural conditions, was based on indicators of ecological characterization of soil – land territorial associations (TEO) provided by the methodology for studied soils, (ICPA, 1987 – Volume II), while for the pollution with heavy metals condition, the methodology proposed by Dumitru et al. (1994; 2008) was used. As a result, the average land evaluation marks and the areas for each class of land evaluation were established on grasslands, under natural conditions and corrected then according to pollution. In natural conditions, the quality classes of the grasslands varies between Ist and Vth classes. The largest areas belong to IInd (32.210 ha), followed by Ist (10.470 ha), IIIrd (4.650 ha), Vth (920 ha) and IVth quality classes (70 ha). On the whole area, the average evaluation mark is 70, belonging to the IInd quality class. Land evaluation marks of grasslands, in pollution condition, ranged from 6 to 81 points and on the whole area, the average mark was 48 points, belonging to the third quality class. Compared with natural conditions, the average evaluation mark obtained under pollution conditions decreased with 22 points, leading to a decrease with one quality class.

Key words: soil, land evaluation, Zlatna area, heavy metals pollution