

# INFLUENCE OF SOIL ACIDIFICATION ON SOME SOIL PHYSICAL PROPERTIES (WATER STABLE AGGREGATES AND DISPERSION)

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**Abstract** During non-ferrous metallurgical plant from Zlatna were emitted into the air both sulfur dioxide and powder of metal sulphides and metal oxides. Dioxide and trioxide sulfur in contact with rain water converts to sulfuric acid that leading to the formation of acid precipitation, which in contact with soils lead to its acidification. Acid soils have less favorable physical properties including poorly formed or damaged structure. In this paper is studied the influence of soil acidification on some physical properties as water stable aggregates and dispersion. In the reserached area, the water stable aggregates of soils range in the field of small-very large values, with median belongs to moderate class values and only 10% had values that belong to high and very high classes. In the soils investigated from Zlatna area, the water stable aggregates is significant, respectively, very significantly influenced by the soil physical and chemical properties as: clay, content of humus, Ca<sup>2+</sup> ions, percentage of base saturation, sum of exchangeable bases, soil reaction, and cation exchange capacity. Lowest correlation was established with soil reaction ( $r=0.338^*$ ) and the strongest correlation was with total cation exchange capacity ( $r=0.756^{***}$ ). Dispersion ranges in the field of low-very high values and over 75% of the values belong to classes of high-very high values.

**Key words:** soil, Zlatna, water stable aggregates, dispersion