

BIOLOGICAL PARAMETERS AS INDICATORS FOR THE EFFECT OF
DIFFERENTLY TRACTED SEWAGE SLUDGE ON DEGRADED SOILS
RECLAMATION

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The aim of this work was to evaluate the differences on the effect of application of fresh (F), composted (C) or thermally dried (T) sewage sludge on β -glucosidase activity, total and soluble carbohydrate content, microbial biomass and basal respiration of a clayey and a sandy soil. Two high doses of every type of sludge were applied to both soils in a laboratory experiment. Enhancing effect over the soil studied parameters of the three sludge types had this gradation: T>F>C. Beta-glucosidase mixtures activity diminished with time and their evolution was very similar to that of their organic matter content. During the entire experiment microbial metabolic quotient showed higher values in control soils than in the mixtures, this indicating a microbial stress induced by sludge treatment. The qCO_2 value found in any T containing mixture is always lower than that of control soils. Added sludge organic matter, especially that of F and T, is quickly mineralised in soils. Statistical test, relating all the before mentioned parameters, are in progress in order to more clearly distinguish differences among the three types of sludge