

Plants as Alternative Covers at Contaminated Sites

Authors : M. Grifoni, G. Petruzzelli, M. Barbaferi, I. Rosellini, B. Pezzarossa, F. Pedron

Abstract : Evapotranspiration (ET) covers are an alternative cover system that utilizes water balance approach to maximize the ET process to reduce the contaminants leaching through the soil profile. Microcosm tests allow to identify in a short time the most suitable plant species to be used as alternative covers, their survival capacity, and simultaneously the transpiration and evaporation rate of the cover in a specific contaminated soil. This work shows the soil characterization and ET results of microcosm tests carried out on two contaminated soils by using *Triticum durum* and *Helianthus annuus* species. The data indicated that transpiration was higher than evaporation, supporting the use of plants as alternative cover at this contaminated site.

Keywords : contaminated sites, evapotranspiration cover, evapotranspiration, microcosm experiments

Conference Title : ICEBESE 2017 : International Conference on Environmental, Biological, Ecological Sciences and Engineering

Conference Location : Paris, France

Conference Dates : October 19-20, 2017