



Effect of soil water table on soil respiration in a riparian forest of northeast Spain.

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Soil respiration is a major component in ecosystem carbon cycle and is strongly affected by soil water content. Soil respiration consists of autotrophic and heterotrophic respiration, which may have different sensitivities toward soil water content. The objectives of this study are: (1) to analyze the seasonal variation in soil water table and soil respiration in a Mediterranean riparian forest. (2) To examine difference in soil respirations of tree species. We measured the soil respiration rate along the soil water table with 5 transects of three tree species. Soil respiration rate decreased significantly from riverside to middle hill and showed clearly seasonality. Soil respiration rate also showed significantly different among tree species. Heterotrophic respiration rate contributed to the soil respiration rate from 48% to 95% depends on season and species.