The Investigation of Forest Fire on Soil Respiration

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We investigated the effect of forest fire disturbance on soil respiration. This study was conducted in Vezirkopru Forest area of Samsun Province, Turkey. We made measurements of soil respiration, soil moisture and soil temperature in the 80 to 100 years old larch stand by controlled burning. Measurements were made between November, 2013 and October, 2014. As a result of the measurement of soil respiration; was found statistically significant effect on soil moisture and soil temperature by time. There were not significant differences between fire and control area with regard to variables of fire intensity and slope ($P > 0.05$). In general, soil respiration had negative relationship with soil moisture and positive relationship with soil temperature ($P < 0.05$). Soil respiration increases depending on the fire intensity. Soil respiration ranged from 2.63 to 0.94 g C m^{-2} $gün^{-1}$.

Keywords: Soil Respiration, Soil Moisture, Soil Temperature, Fire Intensity.