

Surface soil erosion after prescribed burn in the *Pinus nigra* stands

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Abstract: Forest fires are an integral part of the fire-dependent ecosystem. However, in some ecosystem fire can create undesirable conditions like reduction in soil quality and increase in soil erosion. In this study, the effects of different forest surface fire intensities and slope levels on surface soil erosion were studied using 5x2 m runoff plots. For this purpose, four prescribed burning sites, located on high (60%) and low (10%) slope areas under old *Pinus nigra* stands subjected to high and low fire intensities, were being selected to conduct the study at Kunduz Province, Vezirkopru District in Samsun. In general, results from the study reveal that burned sites experienced almost 3 times as high surface soil erosion as did control sites. The magnitude of erosion after the prescribed burn was consider to be low (ranged from 98 to 363 kg/ha) indicating that prescribed fire can be used as fire management tool to reduce fuel load up, particularly in the low-sloped areas of forest.

Keywords: Surface erosion, *Pinus nigra* stands, Prescribe fire

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