

Variation of carbon content in the soil of red pine plantations area at different ages

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Abstract: Forest ecosystems have a considerable influence on the storage of CO₂ from greenhouse gases, which play an important role in global climate change. Carbon deposits are made not only by forest trees, but also by forest soils. In forest soils, more carbon accumulation occurs compared to agriculture and pasture lands. Factor such as leaves, litter, climate, stand type, soil properties, tree species, landform and processing of land are influential in this carbon accumulation that occurs in forest soils. In this study, changes in the amount of carbon in the soil in different depth layers were determined in the red pine plantation areas of different ages. As a result of this study the value of the average amount of carbon at top soil layer (0-10 cm); for a age class 62,18 t/ha; b age class 61,63 t/ha; c age class 71,42 t/ha and for control parcel 56,4 t/ha. In the lower soil layer (10-20 cm); for a age class 64,55 t/ha; b age class 66,21 t/ha; c age class 72,67 t/ha and for control parcel 52,69 t/ha.

Keywords: Red pine, Soil organic carbon, Sinop, Turkey