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Determining The Ecological Parameters of Hazelnut (Corylus sp.) Plantation in Giresun Province, Turkey

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Abstract

Ecological parameters referred as physiographic, edaphic, climatic, and biotic factors constitute the main components of terrestrial ecosystems. All these factors are important for natural and plantation forests. Naturally, hazelnut (Betulacea; *corylus* sp.) species are one of the understory vegetations in shrub layer of the northern forest ecosystems. In several decades, this species has been cultivated for commercial purposes in this region that provide 67% of the world hazelnut demand. Furthermore, the highest quality hazelnut is cultivated in north eastern Turkey, Giresun province. Therefore, it is important to know about the site index and ecological parameters of hazelnut plantation in this region. This study was conducted to determine ecological factors of hazelnut (*Corylusavellena* L. and *Coryluscolurna*L.) plantations in three different (Piraziz, Keşap and Görele) micro-site in Giresun province. Soil samples were taken at topsoil (0-30 cm) and subsoil (30-60 cm) depths in each micro-site. Some soil properties (Texture, particle size density, aggregate stability, bulk density, porosity (%), compaction, pH in water, EC, SOM (%), AWHC (%)) were analyzed. Besides aspect, slope, altitude, climate and predator as biotic factor were determined. Consequently, soil texture vary between sandy loam to heavy clay and PSD; 2.29-2.64 gr/cm^{-3}, AGS; 0.732-0.807, BD; 1.02-1.28 (g cm^{-3}), P; 44.7-55.2(g cm^{-3}), Compaction;1-4 MPa, pH; 4.49-5.87, EC;1.44-2.00 (dS/m), OM;1.8-3.1, AWHC; % 8.02-14.17, aspect; east-southeast-north, slope; 20-70%, altitude; 30-300m, biotic predator; Red **Velvet** Mites (Trombidiidae; Trombidium sp.) and climate is humid (annual average temperature;14.45 °C and annual rainfall; 1266 mm) were determined.

Keywords: Ecological factors, Hazelnut plantation, *Corylus sp.*,site