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COMPARISON OF BIOMASS ESTIMATION APPROACHES BASED ON INVENTORY DATA: A CASE STUDY IN KAPIKAYA FOREST (TURKEY)

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Abstract

The aim of this study is to evaluate different above-ground biomass (AGB) estimation approaches and to investigate if there are significant differences between the AGB estimations of these approaches using analysis of variance. In this study, the capabilities of three approaches including Biomass Conversion and Expansion Factor (BCEF) method, Biomass Conversion and Expansion Factor based on Tree Species (BCEFTS) method and Allometric Equation (AE) method were evaluated in estimation of AGB using forest inventory data in Kapıkaya Forest District (FD) located in the city of Kahramanmaraş in Turkey. The AGB values estimated by three approaches were 587362,4 tons, 587679,0 tons and 834112,3 tons for the BCEF, BCEFTS, and AE approaches, respectively. According to result of the analysis of variance, there was a significant difference between the AGB estimations of three approaches. AGB estimation of the AE approach was statistically different from the estimations of BCEF and BCEFTS.

Key words: allometric equation, biomass conversion and expansion factor, carbon sequestration

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