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agric@tubitak.gov.tr

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Operation Research Methods in The Forest Management Planning

Altay Uğur GÜL
Karadeniz Teknik Üniversitesi, Orman Fakültesi Orman Amenajmani Anabilim Dalı, Trabzon-TÜRKİYE

Abstract: The purpose of this study is to approximate the actual forest state to an aptimal forest state within different conversion period lenghts, to ensure the sustainability of allowable cut over planning horizon, to maximize the total present net value calculated with financial analysis. A linear programming model was developed and used to test 436 different strategies for planning of Gazipasa Forest Management Unit. The value of the objective function of the solution that maximized the total present net value is 63352171000 TL and the amount of the total volume is 9054041 m3. For the first plan period, when the objective function was the total present net value, the regeneration, afforestation area and allowable cut was 7029.5, 3007.7 hectar and 1000782 m3, respectively, whereas, when the objective function was the total volume, the regeneration, afforestation area and allowable cut was 3546.0, 6914.4 hectar and 492596 m3, respectively.