A linear programming method to derive optimal thinning strategies for classes of stochastic forest models

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Abstract. We apply an infinite dimensional linear programming approach to the problem of optimal thinning of stochastic forest models. Specifically, we investigate the Faustmann on going rotation problem for models which might be affected by catastrophic failures and for which the interest rate is state dependent. This novel approach provides an easy way to determine optimal thinning and harvesting rules. The method will be illustrated by analyzing simple examples.

Keywords Forest rotation; infinite dimensional linear programming; thinning; state dependent interest rates.