Abstract

The performance of a forest nursery to produce seedlings of Pinus patula was evaluated according to the replacement of peat substrate (Peat moss®) by composted walnut husks, using an area of 1,000 m2, located in the community of Zitlalcuautla Tetela de Ocampo, in the state of Puebla. Indicators of economic evaluation were used: net present value (npv), benefit-cost ratio (b/c), net benefit and investment (n/k) and internal rate of return (irr) for the analysis of profitability. The results obtained using walnut shells for periods of 5 years were: npv = 1,035,383.275, B/C = 1662, n/k = 4.0 and IRR = 17.60. Based on these indicators, it was concluded that the project is feasible from an economic point of view and the quality of seedlings of Pinus patula are not affected. At 7.5 months seedlings that developed in treatment 1, control mixture (peat moss vermiculite ® 33% + 33% + 33% perlite) and treatment 2 (Nutshell 33% + 33% + perlite vermiculite 33%) had similar values for the Dickson quality index, for the control (0.25 g.cm-1) and the treatment 2 (0.24 g.cm-1) which were not statistically different. The profitability of the investment project is excellent, the use of agriculture by-products of the Municipality of Tetela de Ocampo have good market prospects and production costs were reduced by 12% compared to peat moss® therefore contributing to the forestry production sector in the region.

Keywords

Index Dickson, Compost, Peat Moss®, Profitability, Economic Indicators.