

ECONOMIC AND ENVIRONMENTAL EFFICIENCY OF *Acacia hybrid* AMONG THE AGE 4, 5 AND 6 IN U MINH HA FOREST ZONE, CA MAU PROVINCE

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Summary

The objective of the study was to compare the efficiency of *Acacia hybrid* cultivation on harvesting cycles at level ages of 4, 5 and 6 on the basis of tree biomass calculation and CO₂ absorption. The experiment was arranged at the Kanh Dung experiment station of Tay Nam Bo Forestry Research Experimental Center, located at U Minh Ha, Ca Mau. Standard plot (5m x 100m) and tree diameter (D_{1,3}) were used to collect data and apply correlated equations to determine biomass and CO₂, at the same time apply algorithms to calculate Net Present Value (NPV), Benefit – Cost Ratio (BCR) and Internal Rate of Return (IRR). The results show that: wood production aged 5 increased by 81% compared to age 4, but only increased by 30% when extended to age 6. Net Present Value (NPV) at the age 5 was 61.43 million VND/ha/crop compared to the age 4, but the age 6 was only 24.84 million VND/ha/crop compared to the age 5. Benefit – Cost Ratio (BCR) of *Acacia hybrid* at the age 5 higher than about 2.73 times the age 4, but when the age 6 only reached a higher than the age 5 was 1.28 times. Internal Rate of Return (IRR) of *Acacia hybrid* 4 was 13.82%, only more than 1 year but age 5 increased 1.62 times and to age 6 increased 1.05 times. Thus, within the scope of this study, the most appropriate time for harvesting of *Acacia hybrid* was at age 5.

Keywords: *Acacia hybrid*, economic efficiency, biomass, CO₂ absorption, U Minh Ha, Ca Mau province.