

Durability assessment of preservatives treated *Bambusa vulgaris* in unsterile soil burial tests

Abstract

Cultivated *Bambusa vulgaris* at internodes 6, 7 and 8 of 2 and 4 years old culms were chemically treated with preservatives Ammoniacal-copper-quaternary (ACQ), Borax-Boric Acid (BBA) and Copper-chrome Arsenate (CCA). Preservatives strength at 1, 2, 4 and 8% were introduced to the bamboo through vacuum impregnation, soaking and high pressure sap-displacement processes. Unsterile soil laboratory burial laboratory tests were then conducted on the bamboo blocks taken from internodes 7. At the end of the testing period (8 weeks), the 2 year-old *B. vulgaris* were found to experiences higher weight loss than the 4 year-old to attack of decaying fungi. The treatment process of vacuum impregnation proved to be better than soaking and high pressure sap-displacement with the treated blocks showing lower weight loss against decaying fungi. This is followed by soaking and high pressure sap-displacement processes. The 4% preservatives solution strength was found to be sufficient in controlling the decaying fungi.