

Abstract

In Algeria, the aging of palms is a significant constraint, since 30 % of the palms are over the age of production and they will consequently waste planting areas. A series of experiments have been accomplished to observe the possibility of converting the date palm stem into valuable woodworking products. This paper reports the results of an experimental investigation on the physical, chemical and mechanical properties of date palm trunk (*Phoenix dactylifera* L.) from Biskra oasis in Algeria. First, their chemical composition was studied and showed that they have amounts of holocellulose, lignin and cellulose similar to those encountered in softwood and hardwood. Results of flexural strength showed that the modulus of elasticity (MOE) and modulus of rupture (MOR) were 6647.04 MPa and 35.04 MPa, respectively. The compression modulus and strength were 5.35 MPa and 2.338 MPa in parallel compressive tests, respectively