

International Agrophysics

Polish Journal of Soil Science

Acta Agrophysica

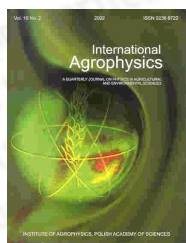
Instytut Agrofizyki

International Agrophysics

General information

Issues

Search



International Agrophysics

publisher: Institute of Agrophysics
Polish Academy of Sciences
Lublin, Poland

ISSN: 0236-8722

vol. 22, nr. 3 (2008)

[previous paper](#) [back to paper's list](#) [next paper](#)

Temperature variation in a sawdust oven using different wood species

[\(get PDF\)](#) 

O.A. Ajayi , O.K. Owolarafe

Department of Agricultural Engineering, Obafemi Awolowo University, Ile-Ife,
Nigeria

vol. 21 (2007), nr. 4, pp. 311-316

abstract An investigation was carried out on the use of sawdust as fuel for firing oven. An oven was fabricated and fired with sawdust from four selected wood species (Triplochitus scleroxylon, Milicia excelsis, Khaya sinegalensis and Celtis zenkeri). The temperature of the oven was measured at four different levels. The results indicate that the temperature of the oven increases with the degree of hardness of the wood species and nearness to the heat source. The temperature was the highest for khaya sinegalensis followed by milicia excelsis, celtis zenkeri and triplochitus scleroxylon, respectively. The average temperatures recorded for the species in that order were 209.62, 173.50, 166.37 and 104.19°C. Statistical analysis of the data obtained indicates that the separate and interactive effects of all the factors (duration of heating, location and wood species) were significant at 99%.

keywords temperature variation, sawdust oven using, wood species

Instytut Agrofizyki PAN
ul. Doświadczalna 4
20-290 Lubline-mail: sekretariat@ipan.lublin.pl
tel.: +48817445061
fax.: +48817445067