



Agricultural Journals

Research in

AGRICULTURAL ENGINEERING

[home](#) [page](#) [about us](#) [contact](#)



us

Table of Contents

IN PRESS

RAE 2013

RAE 2012

RAE 2011

RAE 2010

RAE 2009

RAE 2008

RAE 2007

RAE 2006

RAE 2005

RAE 2004

RAE 2003

RAE Home

Editorial

Board

For Authors

- **Authors Declaration**
- **Instruction to Authors**
- **Guide for Authors**
- **Copyright Statement**
- **Submission**

For Reviewers

- **Guide for Reviewers**
- **Reviewers Login**

Subscription

Res. Agr. Eng.

**Ndukwu M.C.,
Asoegwu S.N.:**

Functional

vertical-shaft centrifugal palm nut cracker

Res. Agr. Eng., 56 (2010): 77-83

A vertical-shaft centrifugal palm nut cracker was presented and evaluated. The cracker efficiency and kernel breakage ratio are some of the most important parameters for evaluating the cracker performance. From the result of this work, the two parameters are function of cracking speed, moisture content and feed rate. The result showed that for the lowest speed of 1,650 r/min, and the highest feed rate of 880 kg/h and for all moisture contents, the cracking efficiency was not up to 65%, therefore the efficiency increases with an increase in machine speed and a decrease in feed rate. The kernel breakage ratio ranged from 0– 0.18 (0– 18%) for all feed rates and moisture contents. It increased with moisture content and cracking speed, but decreased with feed rate. All the parameters determined have a linear relationship with moisture content.

Keywords:

kernel; cracking efficiency; feed rate; throughput capacity; shaft speed; kernel breakage

[[fulltext](#)]

© 2011 Czech Academy of Agricultural Sciences

XHTML11 VALID

CSS VALID