Title The thin-layer drying characteristics of the seeded breadfruit or breadnut

Author Lisa Harrynanan and Clement K. Sankat

Citation 2005 ASAE Annual International Meeting, Tampa Convention Center, Tampa, Florida, 17-20 July

2005, Paper Number 056157, 12 p.

Keywords Breadnut; seeded breadfruit; diffusion equation; thin-layer drying

Abstract

The seeded breadfruit (*Artocarpus altilis*) commonly known as breadnut, is a popular fruit of the Caribbean and known for its deliciously boiled or roasted mature seeds. The fruit in its partially immature form is sometimes used as a vegetable. The thin-layer drying characteristics within a temperature range of 35°C to 80°C and a flow rate of 1.2 m/s were investigated for pretreated (cooked in salted water for 35-40 min at 100°C) and untreated in-shell mature seeds. The results indicated that drying of the in-shell seeds took place exclusively in the falling rate period and can best be described by a two-term solution of the diffusion equation. Results also suggest the importance of the shell as a constraint to moisture transfer from the kernel.