

**101. DRYING PEANUT SEED USING AMBIENT TEMPERATURE AT LOW RELATIVE HUMIDITY. F.C. Krzyzanowski<sup>1</sup>; S.H. West<sup>2</sup>; J. de B. França Neto<sup>1</sup>** (<sup>1</sup>Embrapa Soja, Caixa Postal 231, CEP 86001-970, Londrina-PR, e-mail: fck@cnpso.embrapa.br; <sup>2</sup>University of Florida - Agronomy Department, P.O. Box 110770, 32611, Gainesville, FL, USA).

**SUMMARY** - The moisture content of peanut kernel (*Arachis hypogaea* L.) at digging ranges from 30 to 50% on a wet basis (w.b.). The seed moisture content must be reduced to 10.5% or below before they can be graded and marketed. After digging, peanuts are cured in the windrow for two to five days then mechanically separated from the vine. Heated air is used to further dry the peanuts from approximately 18 to 10% moisture content w.b. Drying is required to maintaining peanut seed and grain quality. Traditional dryers pass a high temperature and high humidity air stream through the seed mass. The drying time is long because the system is inefficient and the high temperature increases the risk of thermal damage to the kernels. New technology identified as, heat pipe technology (HPT) is available and has the unique feature of removing the moisture from the air stream before it is heated and passed through the seed. A study was conducted to evaluate the performance of the HPT system in drying peanut seed. The seeds inside the shells were dried from 17.4% to 7.3% in 14 hours and 11 minutes, with a rate of moisture removal of 0.71% mc per hour. This drying process caused no reduction in seed quality as measured by the standard germination, accelerated ageing and field emergence tests. It was concluded that the HPT system is a promising technology for drying peanut seed when efficiency and maintenance of physiological quality are desired.

**Key Words:** *Arachis hypogaea*, quality, vigor, germination, drying.

**Revisores:** Ademir Henning; Elemar Woll (Embrapa Soja).