

**Title** Moisture-dependent physical properties of tef seed  
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#### **Abstract**

Moisture-dependent physical properties of tef (*Eragrostis tef* (Zucc.) Trotter) were studied at moisture contents (w.b.) 5.6%, 11.03%, 14.95%, 21.43%, 25.11% and 29.6%. The length, width, equivalent sphere diameter, and thousand seed mass increased from 1.01 to 1.27 mm, 0.59 to 0.68 mm, 0.71 to 0.87 mm and 0.257 to 0.421 g, respectively, with increase in moisture content from 5.6% to 29.6% w.b. The sphericity decreased from 0.70 to 0.63 with increase in the moisture content from 5.6% to 21.43% and increased to 0.69 with further increase in moisture content to 29.6%. The bulk and true densities decreased from 840 to 696 and from 1361 to 1207 kg m<sup>-3</sup>, respectively. The porosity and angle of repose increased, respectively, from 38.31% to 42.32% and 23.74° to 51.16° linearly with increase in moisture content under the experimental condition. The coefficient of static friction  $\mu$  increased from 0.29 to 0.50, 0.36 to 0.51, and 0.18 to 0.48 for mild steel, plywood and glass, respectively, with increase in moisture content.