Title Physical properties of sweet corn seed (*Zea mays saccharata* Sturt.)
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Abstract

The physical properties of sweet corn seed were determined as a function of moisture content in the range of 11.54–19.74% dry basis (d.b.). The average length, width and thickness were 10.56 mm, 7.91 mm and 3.45 mm, at a moisture content of 11.54% d.b., respectively. In the moisture range from 11.54% to 19.74% d.b., studies on rewetted sweet corn seed showed that the thousand seed mass increased from 131.2 to 145.5 g, the projected area from 59.72 to 75.57 mm^2, the sphericity from 0.615 to 0.635, the true density from 1133.8 to 1225.5 kg m^{-3}, the porosity from 57.48% to 61.30% and the terminal velocity from 5.56 to 5.79 m s^{-1}. The bulk density decreased from 482.1 to 474.3 kg m^{-3} with an increase in the moisture content range of 11.54–19.74% d.b. The static coefficient of friction of sweet corn seed increased the linearly against surfaces of four structural materials, namely, rubber (0.402–0.494), aluminium (0.321–0.441), stainless steel (0.267–0.401) and galvanised iron (0.364–0.477) as the moisture content increased from 11.54% to 19.74% d.b.