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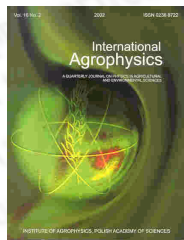
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Stress and deformation of wheat in direct shear test

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abstract A method was developed and a device constructed to measure the force of internal friction of granular materials. The angle of internal friction of wheat grain was determined for two displacement speeds (0.5 and 5 mm/min) in the normal pressure range from 2.8 to 48 kPa. The angle of internal friction was found to decrease with an increase in normal pressure. Slip-stick behaviour was observed when the shearing speed equaled 0.5 mm/min. With an increase in displacement the deformation is localised in a shear zone. The thickness of the shear zone stabilised soon after the shear stress reached maximum value.

keywords wheat, friction, direct shear test

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