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The effect of hydrostatic vs. shock pressure treatment on plant seeds
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hydrostatic pressure and shock response of plant seeds have both been previously
investigated (primarily driven by an interest in reducing bacterial contamination
of crops and the theory of panspermia respectively). However, comparisons have
not previously been made between these two methods of applying pressure to plant
seeds. Here such a comparison has been undertaken based on the premise that any
correlations in such data may provide a route to inform understanding of damage
mechanisms in the seeds under test. In this work two varieties of plant seeds were
subjected to hydrostatic pressure via a non-end-loaded piston cylinder set-up and
shock compression via employment of a 50-mm bore, single stage gas gun using
the flyer-plate technique. Results from germination tests of recovered seed samples
have been compared and contrasted, and initial conclusions made regarding causes
of trends in the resultant data-set.

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