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A Quick Seeding Test for Allelopathic Potential of Bangladesh Rice Cultivars

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Abstract: The allelopathic potential of 102 Bangladesh rice cultivars (60 traditional and 42 high yielding) against four test plant species, cress (*Lepidium sativum* L.), lettuce (*Lactuca sativa* L.), barnyardgrass (*Echinochloa crus-galli* (L.) Beauv) and *Echinochloa colonum* (L.) Link was determined for shoot and root growth. In the two-way analysis of variance, the effect of rice cultivar, test plant species and their interactions were significant ($P < 0.0001$). The significant effects of cultivar and the interactions indicated that there was variation in allelopathic activity among the rice cultivars. This result suggests that rice cultivars which were allelopathic against one plant species were not always allelopathic towards other plant species. However, the high-yielding rice cultivar, BR17 marked the greatest inhibitory activity with an average of 59% growth inhibition on shoots and roots of cress, lettuce, barnyardgrass and *E. colonum*. The present research suggests that BR17 is the most allelopathic among 102 Bangladesh rice cultivars and may be one of the candidates for research on Bangladesh rice allelopathy for isolation and identification of allelochemicals.

Keywords: [Allelopathy](#), [Bangladesh rice](#), [Barnyardgrass](#), [Cress](#), [Donor-receiver bioassay](#), [Echinochloa colonum](#), [Lettuce](#)

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