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ALLELOPATHIC EFFECTS OF CITRULLUS
(*CITRULLUS COLOCYNTHIS*L.) EXTRACT ON SEED GERMINATION
AND SEEDLING GROWTH OF
PURSLANE (*PORTULACA OLERACEA* L.)

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The study of allelopathic properties of plants is one of up-to-date biological and ecological methods, which can lead to discover the bio-herbicides and growth inhibitors. In order to study the allelopathic effects of Citrullus (*Citrullus colocynthis* L.) on seed germination and seedling growth on Purslane (*Portulaca oleracea* L.), these experiments were conducted. The extracts of Citrullus different organs including fruit, stem and root were applied at five concentration levels (0 as control, 0.25, 0.5, 0.75 and 1%) through a factorial experiment based on a completely randomized design with three replications. The results showed that different organ extracts had different negative effects on seed germination and seedling growth of the species in such a way that fruit extracts had the highest inhibitory effect. With increasing extract concentrations of Citrullus, the seed germination and seedling growth of the species was reduced significantly. The minimum amount of seed germination and growth of the seedlings were observed at 1% extracts concentration of fruit. Also, Purslane seedlings appeared to be more sensitive to Citrullus extracts seedlings. The extracts of Citrullus different organs had inhibitory effects on seed germination and seedlings growth of Purslane. Also, the highest inhibitory effects were related to fruit extracts.

References

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