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192 - Allelopathic potential of *Rhododendron formosanum* Hemsl in Taiwan

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Bidens pilosa was used as a test species in greenhouse and laboratory experiments. The powdered leaves of *R. formosanum*, when mixed in soil at 1% concentration, moderately suppressed the growth of *B. pilosa* seedlings. Aqueous leachates of *R. formosanum* flowers, leaves, litter, and organic matter inhibited the radicle growth of *Ageratum houstonianum, Amaranthus inamoenus, Brassica chinensis, Bidens pilosa, Lactuca sativa*, and *Ocimum basilicum*. The aqueous leaf extract contained the phytotoxins *p*-hydroxybenzoic acid, trans *p*-coumaric acid, syringic acid, vanillic acid, *cis* ferulic acid, methyl ferulate, coumarin, protocatechuic acid, and (-)-catechin. These findings and identification of phytotoxins suggests that the lack of understory species beneath an *R. formosanum* canopy was due to allelopathic effects.

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Protection of Agricultural Productivity, Public Health and the Environment (01:00 PM - 05:00 PM)
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