

Phagostimulatory responses of third-instar larvae of *Chilo Partellus* to phenolic components identified in an ethyl acetate extract of the leaf whorls of 3-week-old plants of *Sorghum bicolor* cultivar IS 18363 were studied in no-choice bioassays. The major components in the extract were identified as 4-hydroxybenzaldehyde and 4-hydroxybenzoic acid, with 4-hydroxy-3-methoxycinnamic acid, 3,4-dihydroxycinnamic acid, and 4-hydroxycinnamic acid present in minor amounts. All but 4-hydroxycinnamic acid were stimulatory at the doses tested. 4-Hydroxybenzaldehyde was more stimulatory than other potential biogenetic analogs. Hydroxybenzoic acids generally elicited greater feeding response than cinnamic acids, and the pattern of oxygen substitution in the benzene ring was related to bioactivity.