

BTH AS A COWPEA DEFENSE INDUCER AGAINST THE ROOT-KNOT
NEMATODE *MELOIDOGYNE INCOGNITA*

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Cowpea is an important legume consumed in Africa and parts of the Americas. *Meloidogyne incognita* is one of the main nematodes that cause yield losses of cowpea worldwide. Attempts to protect plants from pathogen attacks using the plant defense activator BTH (Acybenzolar-S-Methyl Ester) have already been reported. This study reports on induction of the defense proteins Peroxidase (POX), β -1,3-glucanase (GLU) and Phenylalanine ammonia-lyase (PAL), and protection of cowpea against *M. incognita* upon BTH treatment. Ten-day-old plants were sprayed with different concentrations of BTH and 48 hours after spraying root proteins were extracted and the enzymatic activities determined. Roots of BTH treated plants were also inoculated with infective juveniles (250 J2/plant) and the egg mass, gall and egg numbers determined at 30 and 60 days after inoculation (DAI). POX activity was similar compared to control, whereas GLU and PAL activities increased at 2.0 and 0.3 mM BTH treatments, respectively. At 30 DAI, 11.1% and 19.7% reductions in the gall number were observed with 0.3 and 0.5 mM BTH, respectively. At 60 DAI, a 34.2% reduction in the egg number was detected with 0.5 mM BTH treatment. These above results suggest BTH treatment could be used as an additional tactic to diminish *M. incognita* infection on cowpea.

Keyword: *Vigna unguiculata*, *Meloidogyne incognita*, BTH, defense proteins

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