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RESISTANCE OF THE CULTIVATED MUSHROOM *PLEUROTUS SAJOR CAJU* TO *APHELENCHOIDES AGARICI*

by
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Summary. Out of three commercially grown mushroom species, viz. *Agaricus bisporus*, *Agaricus bitorquis* and *Pleurotus sajor caju* in India, only *Pleurotus sajor caju* showed resistance against the myceliophagous nematode *Aphelenchoides agarici*.

Agaricus bisporus (Lange) Singer is highly susceptible to the myceliophagous nematodes whereas *Agaricus edulis* (Quel.) Sacc. is resistant (Cayrol, 1971). The resistance of the commonly grown mushroom *Agaricus bitorquis* (Quel.) Sacc. and *Pleurotus sajor caju* Singer to *Aphelenchoides agarici* Seth et Sharma was investigated in laboratory tests.

Mycelia of *A. bisporus*, *A. bitorquis* and *P. sajor caju* were separately grown on malt agar extract medium in petri dishes. Eight dishes of each species were inoculated with ten *A. agarici* per dish and four dishes remained uninoculated as controls for the assessment of mycelial damage by the nematodes. The dishes were kept at $25 \pm 1^\circ\text{C}$ and data on mycelial damage and nematode multiplication were recorded 15 and 30 days after nematode inoculation.

At 15 days mycelial depletion was estimated at 43% in *A. bisporus* and 33% in *A. bitorquis* but there was no sig-

nificant damage in *P. sajor caju*. At 30 days, mycelial damage was assessed as 92 and 85% respectively for *A. bisporus* and *A. bitorquis* but mycelia of *P. sajor caju* remained undamaged indicating a high level of resistance to *A. agarici*.

A. agarici increased 5 times by 15 days and 28 times by 30 days on *A. bisporus*; the comparable rates for *A. bitorquis* were 4 and 17 times. *A. agarici* failed to reproduce on *P. sajor caju* suggesting that resistance to the nematodes was due to its inability to feed on the mycelium.

Literature cited

CAYROL J.C., 1971 - Possibilities for the use of resistant strains of *Agaricus bisporus* in the control of mycophagous nematode *Ditylenchus myceliophagus* Goodey, 1958. VIII Int. Musbr. Sci. London, pp. 631-640.