Hyphae were first pale and later became dark brown, smooth and septate measuring 2 to 4 μ thick. Conidiophores were flexuous, septate reddish brown upto 150 μ long. Generally the conidiophores were shorter measuring 3 to 7 μ thick. Conidia were straight elliptical or oblong rounded at the ends. Conidia were pale brown to mid-reddish brown in colour. Mostly the conidia were with 3 pseudosepta rarely with 4 or 5 pseudosepta measuring 13 to 40 μ (mostly 18–33 μ) long and 6 to 11 μ (mostly 8–10 μ) wide. The isolates were identified at CMI, Kew, England IMI Nos. 255462 (a) and 255464.

The colonies of *D. hawaiiensis* (Bugnicourt) Subram and Jain ex M. B. Ellis a state of *Cochliobolus hawaiiensis* Alcorn. were effuse, grey to dark blackish brown. Hyphae were pale to mid-brown smooth and septate measuring 1 to 3 μ thick. Conidiophores were flexuous septate pale to mid brown in colour measuring upto 120 μ long. Generally the conidiophores were shorter, measuring 2 to 7 μ thick. Conidia were straight, ellipsoidal oblong or cylindrical, rounded at the ends. Conidia were pale to mid-brown with 2 to 7 pseudosepta (mostly 5 septa), 12 to 37 μ (24.5 μ) $\times$ 5 to 11 μ (8.2 μ). The culture was identified at CMI, Kew, England, IMI No. 259978. So far these two species have not been reported on potato.

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A NOTE ON THE OCCURRENCE OF *CYLINDROCLADIUM CLAVATUM* HODGES AND MAY IN LESIONS CAUSED BY *RADOPHOLUS SIMILIS* ON COCONUT ROOTS

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ASSOCIATION of the fungus *Cylindrocladium* sp. with coconut palm, *Cocos nucifera* L. was reported by Batista[1]. Coleman[2] reported *Cylindrocladium scoparium* Morgan from root and bole region of coconut. Sosamma and Koshy[5] reported the occurrence of *Cylindrocarpon effusum* Bugn. and *C. lucidum* Booth from lesions caused by *Radopholus similis* (Cobb) Thorne in coconut roots. Newly formed lesions on creamy white portion of the main roots collected from palms at C.P.C.R.I. farm, Kayangulam were selected for isolations. Small lesions with very little of surrounding cortical tissue were scooped out with a blade and the surface sterilised with 0.1% mercuric chloride for 1 min followed by three washings in sterile water and transferred to the potato dextrose agar medium. Ten per cent of the isolations site of examination. On some plants the occurrence of *Cylindrocladium*. The fungus was identified as *Cylindrocladium clavatum* Hodges and May (IMI-266240). Diamande *et al.*[4] reported enhancement of *Cylindrocladium crotalariae* root rot by *Meloidogyne arenaria* on a peanut, *Arachis hypogae* L. cultivar resistant to both pathogens. Physiological changes and root wounding are considered important in the interaction involving *M. hapla* or *Macroposthonia ornata* and *C. crotalariae* on pea nut (Diamonde and Beaute[3]).

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RECORD OF *CHRYSOPA* (APERTOCHRYSA) CRASSINERVIS ESBEN-PETERSON FROM INDIA

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DURING November, 1981, a few stalked eggs of *Chrysopa* was noticed on a castor plant in the Bapatla-Chirala tobacco nurseries of Andhra Pradesh. A small culture of the same was identified and confirmed by C.I.E. London. Earlier studies indicate that in India,

Chrysopa was first reported from Punjab[1]. The biology of *Chrysopa* scelestes Banks was later reported from Lyallpur[2,3]. This was followed by a collection and description of *Chrysopa cymbele* Banks from Lyallpur[4]. Therefore, the present species is a new record from India. The biology of this insect indicates that the pre-oviposition period was 4.4±0.5 days, the oviposition period 5.4±2.1 days, the number of eggs laid by a female 17.8±9.1, the egg period 4.5±0.5 days, the larval period 22.4±1.6 days, the pupal period 9.9±2.2 days and the adult life period 23.1±2 days. It was noticed that eggs of *Corcyra cephalonica* Stainton served as food for the larvae of *Chrysopa*. These observations agree with those of *Chrysopa scelestes* Banks which is also incidentally mass bred at Central Tobacco Research Institute for biological control of *S. litura* F and *M. persicae* Sulz on tobacco. A characteristic feature of this insect is that stalked eggs are laid in groups of 4–6 whereas in *C. scelestes* Banks eggs are laid singly and evenly distributed in a given area. The larvae are highly active and fed voraciously on *Corcyra* eggs, *M. persicae* Sulz, *Bemisia tabacci*, eggs, and just hatched larvae of *S. litura* F. The larva has a raised tail and the debris of food is heaped on its back as a shelter. A similar phenomenon was reported in many other *Chrysopids*[5]. The pupa is whitish and roundish. The adult in the lab fed on a mixture of protein hydrolysate, glucose, vitamin E and water given on a swab, readily. Possibilities of using the predator for biological control of *M. persicae* Sulz and *S. litura* F., in tobacco fields and nurseries are anticipated.

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FIELD RESPONSE OF FINGER MILLET (*ELEUSINE CORACANA*) TO INOCULATION WITH *AZOSPIRILLUM BRASILENSE*

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The occurrence of nitrogen-fixing *Azospirillum* in the roots of maize, sorghum, rice, wheat and several grasses is well known[1-5]. The beneficial effects of seed inoculation with *A. brasilense* on grasses, rice, wheat, barley, sorghum and fodder oats in pot and field trials have been reported earlier[6-8]. Finger millet, one of the minor millets, commonly known as *Ragi* (*Eleusine coracana*) is grown on an estimated 2.5 million ha in India and often fertilizer nitrogen is not adequately used in its cultivation. The present report deals with results of field experiments conducted at different locatons in India to assess the effects of inoculating seeds of finger millet (*Ragi*) with *A. brasilense*. A carrier-based inoculant prepared from the laboratory-grown cultures was used to pre-treat the seeds[8]. Field experiments were conducted during rainy season of 1981–82 at Bangalore (Karnataka), Dholi (Bihar), Almora (U.P.) and Dindori (M.P.), using locally recommended varieties of the millet, at different levels of urea with and without *Azospirillum* inoculations.

Seed inoculation increased the straw and grain yield of finger millet at all locations ranging from 9.1 to 19.1% and 12.9 to 30.9% respectively (table 1), although it was statistically significant at Bangalore (for grain) and Dholi (for straw) centres.

A similar trend towards increase in grain yield due to seed inoculation with *A. brasilense* was seen when the inoculation was done in the presence of urea. The increase was, however, significant only in conjunction with 30 kg N/ha application at Almora centre to the extent of 128% over the corresponding control (table 1). In general, the results reveal that *Azospirillum* inoculation is beneficial for *Ragi* cultivation in the country.

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