

The organism was isolated on potato dextrose agar medium. Hyphae are hyaline to light brown, branched, septate and 5 to 6 μ wide. Sclerotia are readily formed in culture; young sclerotia are white, changing to brown or dark tan at maturity. They are small, spherical with smooth surface, measuring about 1 to 2 mm in diameter. Based on the morphological and cultural characters, the organism was identified as *Rhizoctonia solani* Kuhn. The characters of the isolate compared well with those enumerated by Parmeter and Whitney¹.

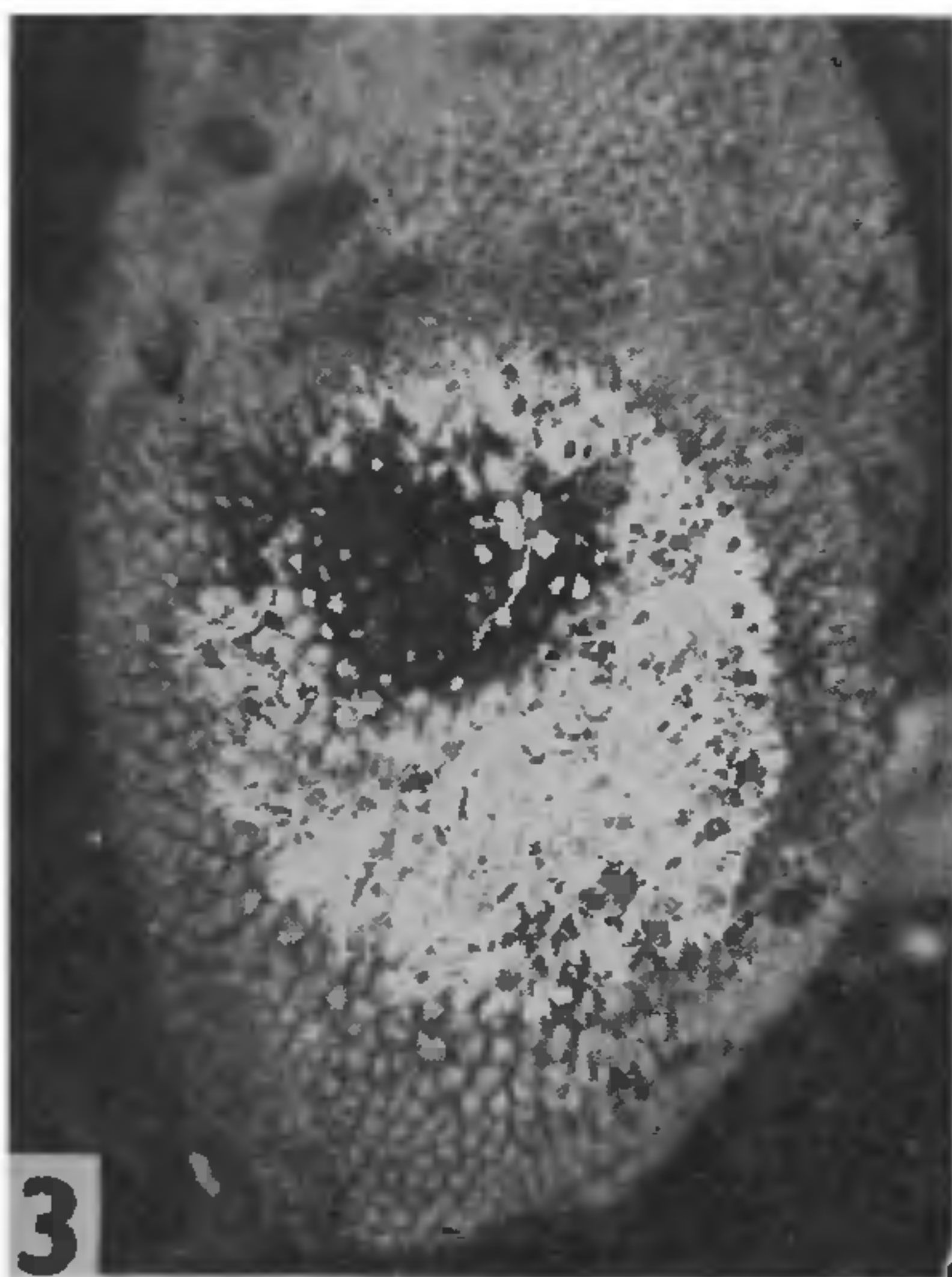


FIG. 3. Mycelial growth and sclerotia over the infected area.

Pathogenicity of the organism was proved by inoculating healthy jack fruits. Characteristic symptoms developed within three days of inoculation, under high humid conditions. There are no reports of *R. solani* affecting jack fruit and hence this is the first record of the same.

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1. Parmeter, J. R. Jr., and Whitney, H. S., In *Rhizoctonia solani Biology and pathology*, J. R. Parmeter Jr. (ed.), University of California Press, Berkeley, 1970, p. 7.

OCCURRENCE OF ROOTKNOT NEMATODE ON WINGED BEAN

DURING survey of plant parasitic nematodes on horticultural crops at the Experiment Station, Indian Institute of Horticultural Research, Hessaraghatta, Bangalore, the winged bean plants [*Psophocarpus tetragonolobus* (L.) D.C.] were observed to be stunted with chlorotic foliage. On critical examination, the root-knot nematode *Meloidogyne incognita* (Kofoid and White, 1919) Chitwood, 1949 was found causing abnormal galls on both tuberous and nontuberous roots (Fig. 1).



FIG. 1. Winged bean roots infected with the root-knot nematode, *Meloidogyne incognita*.

Among six varieties of winged bean (Table I) tested for their reaction to the root-knot nematode (*M. incognita*) all were found highly susceptible.

TABLE I

Sl. No.	Variety	Source
1.	Ac. 12597	CARE Sri Lanka
2.	Ac. 12605	Kerala Agricultural University
3.	Ac. 12771	Nigeria Pbt. 2
4.	Ac. 12772	Nigeria Pbt. 6
5.	Ac. 12781	Ec. 27884, Plant Introduction, I.A.R.I., New Delhi
6.	Ac. 12783	Indonesia Collection No. 909

The root-knot nematode on winged bean had been reported from Mauritius¹, Philippines² and Papua New Guinea³. This is the first record of the root-knot nematode on winged bean from India.

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1. Sornay, P. de, *Zes Plantes tropicales Alimentaires et industrielles de la Famille des Legumineuses* pt. 3. A. Challamel, 1913.
2. Fajardo, T. G. and Palo, M. A., *Philipp. Journ. Sci.*, 1933, 51, 457.
3. Shaw, D. E., *Plant Pathogens and Other Microorganisms in Papua New Guinea*, Research Bulletin No. 1, Department of Agriculture Stock and Fisheries, 1963, pp. 51.

A REPORT OF VIVIPARY IN BUCKWHEAT (*FAGOPYRUM* SP.)

BUCKWHEAT (*Fagopyrum* sp.) belongs to the family polygonaceae and is cultivated as a main or subsidiary crop in various countries (Singh *et al.*⁴). In India, it is generally grown as a food crop in the temperate regions of Himalayas and hilly areas of Tamil Nadu (Singh⁵). Apart from its importance as a food crop, it has been reported as one of the economical sources of rutin (Couch *et al.*¹).

Seeds of several local collections of the two important species, *Fagopyrum esculentum* Moench. and *F. tataricum* Gaertn., cultivated in Himachal Pradesh as rainy season crop, were sown in the third week of April, 1978 at the departmental experimental area, S. N. S. Hort. Complex, Solan (H.P.) in order to study the grain as well as rutin yield in different collections. The plants started flowering after 55-60 days and fruit ripening started after 100-130 days of sowing.

Some of the seeds in the collections of *F. esculentum* showed germination within the inflorescence, a well-known phenomenon referred to as vivipary (Fig. 1) and a characteristic feature of mangrove

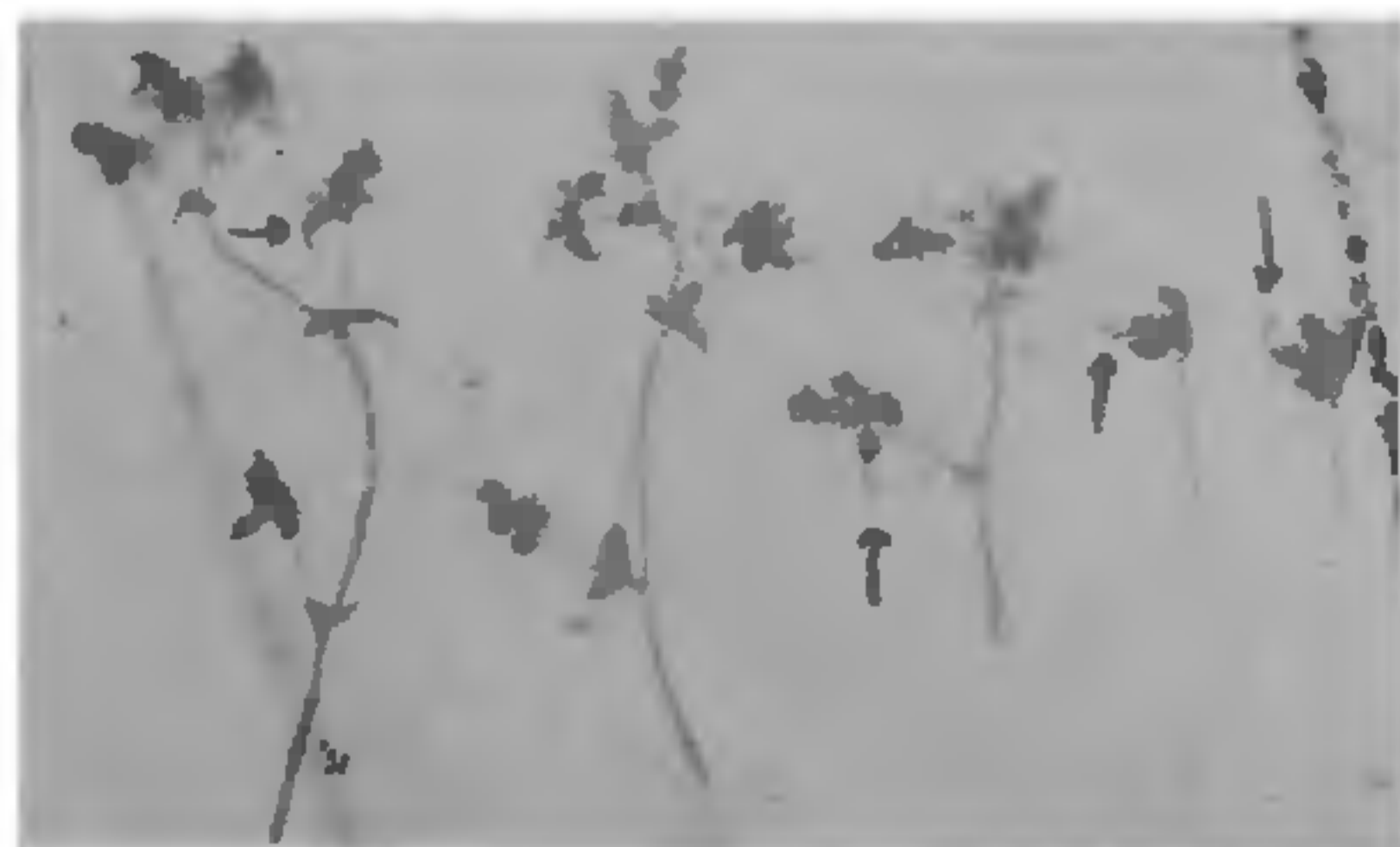


FIG. 1. Twigs of *F. esculentum* showing vivipary (→) and normal seeds (→+).

species. The phenomenon of vivipary in other plant species has also been reported by many workers (Stebbins⁶, Heslop Harrison², and Jain *et al.*³).

In the present investigation, usually ripe seeds brown black in colour, exhibited this phenomenon. However, a few unripe seeds, green in colour also showed the same. Different collections of *F. esculentum* displayed different percentage of viviparous seed germination (Table I). No such phenomenon could be observed in any collection of *F. tataricum*.

TABLE I
Percentage of viviparous seeds in different local
collections of *F. esculentum* Moench.

Name of collection	% of seeds showing vivipary
Him. 1001	3.4
Him. 1005	14.6
Him. 1025	5.1
Him. 1030	3.4
Him. 1041	1.5
Him. 1043	1.7
Him. 1044	7.1

Since both of the species under study show indeterminate growth and as a result, many seeds ripen much before the harvesting is done. Thus the loss in yield in *F. esculentum* due to vivipary is quite obvious and this phenomenon may account for the low yield of *F. esculentum* as compared to *F. tataricum*.

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1. Couch, J. P., Naghski, J. and Krewson, C. F., *Science*, 1946, 103, 197.
2. Heslop-Harrison, J., *New Concepts in Flowering-Plant Taxonomy*, Heinemann, London, 1953, p. 29.
3. Jain, N., Iyar, H. L. and Gupta, B. K., *The Indian Forester*, 1977, 103, 822.
4. Singh, A. and Atal, C. K., *Cultivation and Utilization of Medicinal and Aromatic Plants*, Edited by C. K. Atal and B. M. Kapoor, Regional Research Laboratory, Jamu-Tawi, 1977, p. 135.
5. Singh, H. B., *I.C.A.R. Cereal Crop Series No. 1*, 1961, p. 46.
6. Stebbins, G. L., *Variation and Evolution in Plants*, Columbia University Press, N.Y.P., 1951, p. 382.