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## Banded blight-a new record on finger millet in Karnataka

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Finger millet is important small millet in Southern Karnataka. The banded leaf blight caused by *Rhizoctonia solani* was for the first time seen in a farm at Narasapura village in Kolar district, Karnataka during kharif 2006. The disease appeared as oval to irregular, light to dark lesions on the lower leaf sheath. Later central portion of lesions turned white to straw with narrow, reddish brown border. Regularly distributed such spots were also seen on leaf blades. On peduncles, fingers and glumes irregular to oval, dark brown to purplish necrotic lesions are formed. The pathogen isolated from different diseased parts of the plant yielded *Rhizoctonia solani*.

**Key words:** *Rhizoctonia solani*, Banded leaf blight, finger millet, new report

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Finger millet [*Eleusine coracana* (L) Gaertn.] is a staple food crop of South India, particularly in Southern parts of Karnataka. It is locally called as ragi, an important component in rural diet. Owing to its nutraceutical values viz., low fat and sugar and high calcium and iron content, finger millet is becoming a major component in urban diet as well.

The disease, Banded leaf blight caused by *Rhizoctonia solani* was for the first time seen in a farm on GPU-28, at Narasapur village in Kolar district, Karnataka during kharif 2006. However, the

first occurrence of this disease was reported from Vellayani, Kerala, India (Das and Girija, 1989) as Sheath blight. Subsequently, the disease was observed in a severe form in 1993 in the experimental plots of Birsa Agricultural University, Ranchi, Bihar (now Jharkhand) with more severity on exotic genotypes (Dubey, 1995). The disease was severe affecting finger millet production even in Orissa and Jharkhand states owing to hot and humid weather as has been seen during the monitoring visits (Anil Kumar *et al.*, 2003, Anon., 2008).



Fig. 1 : Field view of banded blight

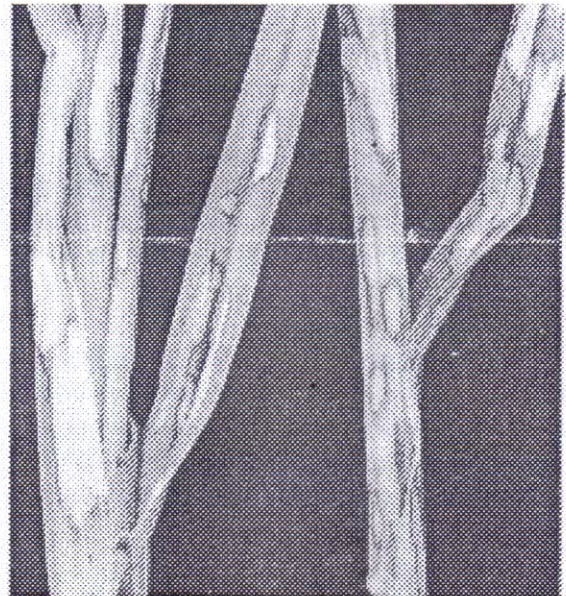


Fig. 2 : Close view of banded blight on leaf and sheath

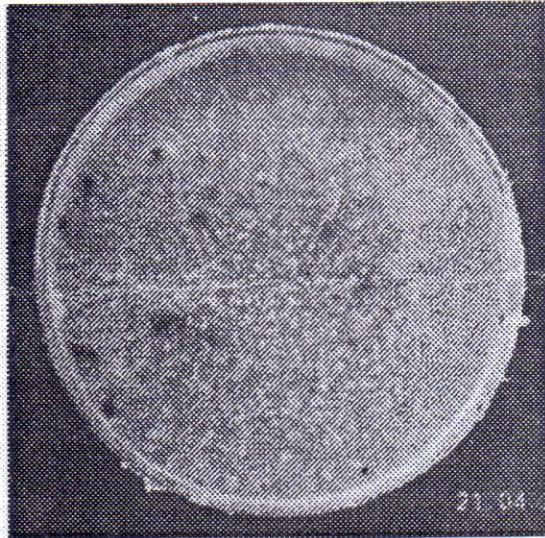


Fig. 3 : White mycelium of the fungus

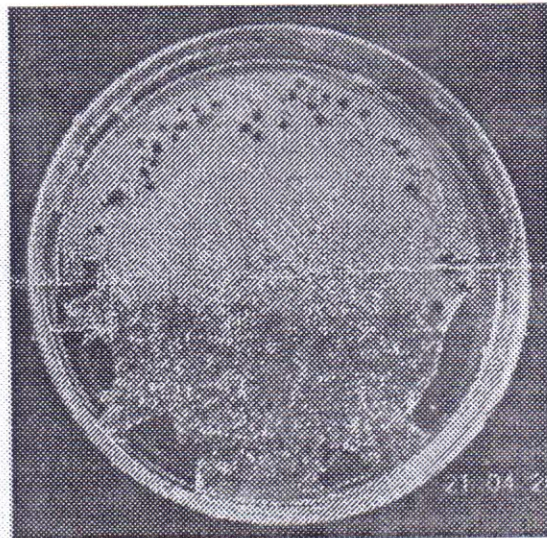


Fig. 4 : Sclerotial bodies of the pathogen

The symptoms of the disease were studied in the field. The plants suspected to be infected by *Rhizoctonia solani* were labeled and the symptoms were recorded.

The pathogen was isolated from diseased parts using standard tissue isolation method on PDA. The pathogen was confirmed by morphological characters of mycelium and sclerotial bodies. However, the same pathogen is known to infect rice and maize causing sheath blight (Patra, 2007).

The disease appeared as oval to irregular, light to dark brown lesions on the lower leaf sheath. Later central portions of lesions turned white to straw with narrow, reddish brown border. Spots were also seen on leaf blades (Fig. 1). A temperature of around 28–30°C and a relative humidity of >70 per cent favoured rapid development of disease. The lesions enlarged rapidly and coalesced to cover large portions of the sheath and leaf lamina. At this stage the disease was characterized by a series of copper or brown coloured bands across the leaves giving a very characteristic banded appearance (Fig. 2).

On peduncles, fingers and glumes irregular to oval, dark brown to purplish necrotic lesions were formed. The sheath infection before peduncle emergence, led to disorganization and reduced size. The infected glumes produced smaller and shriveled

grains. The symptoms produced on every part of the plant gave a characteristic banded appearance. The pathogen isolated from different diseased parts of the plant yielded *Rhizoctonia solani*. On the basis of mycelia (Fig. 3), sclerotia and monilioide cells, the isolated pathogen was identified as *Rhizoctonia solani*.

The pathogen also produced sclerotial bodies on PDA under ambient conditions in the laboratory (Fig. 4). They were similar to those isolated from disease plants.

Thus, the Banded blight of finger millet is caused by *Rhizoctonia solani* which is a new record on ragi in Karnataka.

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