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Short Communication

INTERCEPTIONS OF PLANT PATHOGENIC FUNGI ON IMPORTED SEED MATERIAL FROM 1989 TO 1992

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The accelerated movement of germplasm is necessary for utilisation in crop management programme by international, national and private organisations. But there has been an inherent risk of introduction of serious exotic plant pests and pathogens into the country. To minimize the chances of such inadvertent inttroduction, constant vigil has to be maintained, therefore, it is absolutely necessary to subject all introduced seed/planting material to strict quarantine examination using the available standard and sensitive detection techniques.

Hyderabad Plant Quarantine Regional Station of the National Bureau of Plant Genetic Resources is catering the quarantine needs of South India. The present note gives details about the pathogenic fungi intercepted during 1989-1992. To detect associated fungi, the seed material was first visually examined under illuminated magnifier and subsequently representative samples were plated on three layers of moistened blotter papers in plastic Petri plates. The plates were incubated at 20°C (±1°C) under 12 hours of alternate light and darkness for 8 days (ISTA, 1976). The plates were then observed under stereoscopic microscope for identification of associated fungi. The intercepted exotic fungi alongwith thier host crops and source countries are listed in Table 1.

A persual of literature showed that *Botryodiplodia theobromae, Botrytis cinerea,* and *Pestalotia* sp. on *Atylosia scarabioides, Colletotricum lini* on sorghum, *Drechslera maydis* on chickpea have not been reported on these crops. This clearly indicates that some of the seed borne fungi of quarantine importance could also be carried through non-host crops and get established. During seed health testing care must be taken to look not only for the pathogens reported on a specific crop but also for other pathogens of quarantine importance.

Table 1. Important plant pathogenic fungi intercepted in imported seed material

Fungi intercepted	*Crop (Source)*
Acremomium sp.	Maize (USA)
Ascochyta rabiei (Pass.) Labrousse	Chickpea (Myanmar)
Botryodiplodia theobromae Pat.	*Atylosia* sp. (Sri Lanka), Pigeonpea (Sri Lanka), Chickpea (Myanmar)
Botrytis cinerea Pers. ex Perb.	Indian paspalum (Philippines) *Atylosia* sp. (Sri Lanka) Sorghum (philippines) *Setaria* sp. (Philippines)
Claviceps fusiformis Loveless	Pearl millet (Zimbabwe)
Colletotrichum sp.	Pigeonpea (Togo)
C. graminicola (Ces.) Wils.	Sorghum (UK, Namibia, Togo, Mexico, Rwanda, Zimbabwe)
C.lini (Westend) Tochinai	Sorghum (Mexico)
Drechslera maydis (Nisik.) Subram. and Jain	Sorghum (USA, Philippines, Central African Republic), Pearlmillet (Togo, USA), *Pennisetum glaucum* (USA), Chickpea (USSR), *Pennisetum* sp. (UK), Sudangrass (USA)
D. nodulosa (Berk. and Curt.) Subram. and Jain	Finger millet (Nepal)
D. borghicola (Lefevre and Sherwin) Richardson and Fraser	Sorghum (Mexico)
D. sorokiniana (Sacc.) Subram and Jain	Sorghum (Zimbabwe)
Fusarium moniliforme Sheld.	Maize (USA)
F. oxysporum Schlecht. extr.	Pigeonpea (Sri Lanka)
F. solani (Mart.) Sacc.	Sorghum (Zimbabwe)
Gleocercospora sorghi Bain and Edg. Deighton	Sorghum (USA
Macrophomina phaseolina (Tassi) Goid.	Okra (USA) Pigeonpea (Togo) Groundnut (Niger) Sorghum (Philippines)
Periconia sp.	
Pestilotia sp.	*Atylosia* sp. (Sri Lanka)
Phoma sp.	Chickpea (Pakistan)
Phomopsis sp.	Pigeonpea (indonesia)
Pyricularia grisea Sacc.	Finger millet (Nepal)
Rhizoctonia solani Kuhn	Pigeonpea (UK)
Tolyposporium penicillariae Bref.	Pearlmillet (USA, Namibia)

Although some of the fungi intercepted are known to occur in India, there is a risk of introducing new and more virulent races and biotypes of such fungi. New races and biotypes have been reported in *Ascochyta rabiei, Colletotrichum graminicola, Drechslera oryzae, D. maydis, D. sorokiniana, Fusarium oxysporum,* and *Macrophomina phaseolina.*

Since many of the pathogens intercepted are of quarantine importance and pose problems to our agriculture, strict quarantine measures and proper salvaging treatments were followed before release of such infected seed material (Chakrabarty and Prasada Rao, 1989).

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