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A NEW REPORT OF *SEPTORIA HELIANTHI* LEAF SPOT OF SUNFLOWER FROM SINDH

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Of the non-traditional sources of edible oil, sunflower (*Helianthus annus* L.) is grown on a large scale for increasing its yield due to higher economic return. During a survey work, sunflower plants var. Hysun 33 growing at the campus of Karachi University and in the suburb of Karachi (Malir) during Rabi season (Nov. 2006 – March 2007) showed small irregular spots on lower leaves which gradually spread to upper leaves. On an average 5-8% plants showed leaf spot symptoms. Initially leaf spots were of pinhead size but gradually increased to 10-15 mm in diam., scattered all over but mostly at margins on the upper part of leaf blade. The well developed spots were delimited by leaf veins giving angular to an irregularly polygonal shape to the spots. The spots mostly starting from the margins of leaves coalesced resulting in the development of yellow to dark brown irregular blotches (Fig. 1). Later many pycnidia became visible giving a black appearance to the necrotic spots. The pycnidia were found to be dark with hyaline areas at the margin (Fig. 2). Pycnidia brown to dark-brown, spherical to sub-globose measuring 100-150 µ in diam. with protruding beak and ostiole 30-30 µ (Fig. 3). Conidiphore hyaline clavate originating from the inner-basal lining of the pycnidium. Conidia were seen coming out from the ostiole of pycnidia (Fig. 4). Conidia filiform, hyaline with 3-5 septa, straight to slightly curved, tapering towards the apex, truncated at the base measuring 50 to 70 µ (Fig. 5).

The aforesaid characteristic features of the disease caused by the pathogen as seen with the naked eye and observed under microscope supported by photographic plates was in conformity with the descriptions given by Fraudsen (1948), Saharan & Singh (1976), Kubenkova (1980), Middleton (1971), Hoes (1962) and Beach (1919) and was therefore identified as *Septoria helianthi* Ellis & Kellerman.

The septoria leaf spot on sunflower was first observed by Henry & Gilbert (1924) and subsequently reported from many countries of the world including India and from Islamabad, Pakistan, situated 1300 Km away from Karachi with a different climatic zone by Siddique & Yasmeen (1982). *Septoria helianthi* Ell. & Kell., leaf spot of sunflower is a new report from Karachi, Sindh, Pakistan.

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Fig. 1

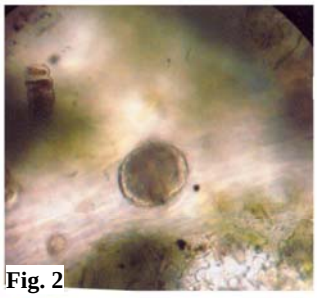
Fig. 2

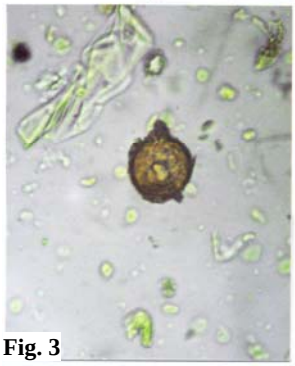
Fig. 3

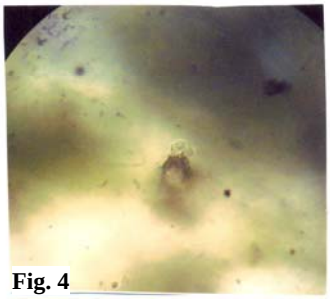
Fig. 4

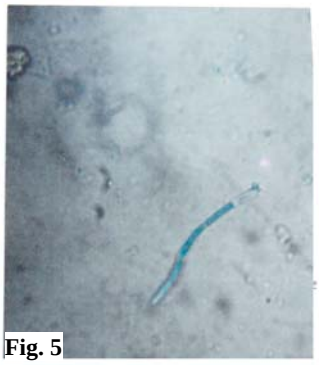
Fig. 5

Fig 1. Leaf spots at margin of a leaf forming yellow brown blotches.
Fig 2. A Pycnidium of sunflower characteristically bounded by colorless circumference.
Fig 3. Pycnidium dark brown sub-globose with protruding beak and ostiole.
Fig 4. Conidia coming out through ostiole of a pycnidium (seen in the back ground).
Fig 5. A conidium with 3 indistinct septa slightly curved, tapering at apex, truncated at base.

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