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A SHORT NOTE

FLYSPECK OF APPLE IN PAKISTAN

Inam Ullah Khan and Muhammad Riaz*

Different apple varieties selling in the fruit markets of Gujranwala and Lyallpur during the months of October and November, 1975, were found to be badly infected with the flyspeck disease. The fungal spots were present on the surface of the apple fruits and there was hardly any exception. Though the disease is of minor importance, it renders the fruit unattractive and thus diminishes its price in the market. The diseased apples came from the Murree Hills and Parachinar area of NWFP. This disease appears to have not been studied in Pakistan before.

SYMPTOMS OF THE DISEASE

Tiny, black, shining dots of pinhead size occur on the surface of apple fruits often in concentric circle (Fig. 1). The aggregate circle is 1/4th to 1/2 an inch in diameter (Fig. 2). The circles are scattered over the rind of the fruit in random fashion. The pinheads of flyspecks are only rind deep. The flesh of the fruit is not affected.

THE CAUSAL FUNGUS

The flyspeck disease of apples and plums is of common occurrence all over the world. According to Wormald (1955) the disease is caused by *Leptothyrium pomi* (Mont & Fr.) Sacc. and the sclerotia like specks are

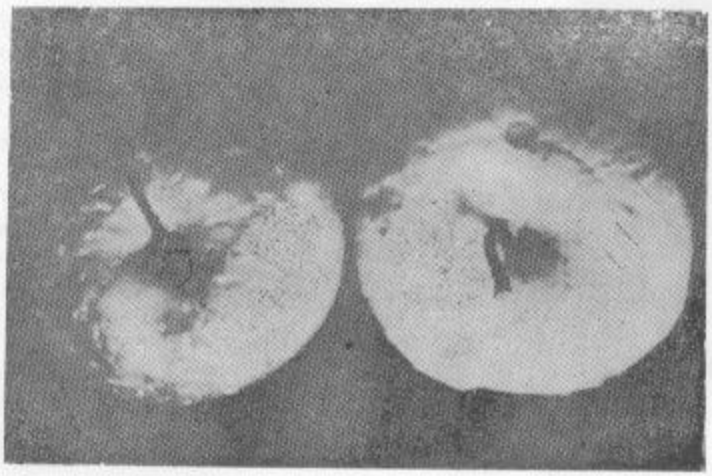

Fig. 1. Flyspeck spots on apple fruits.

*Department of Plant Pathology, University of Agriculture, Lyallpur.

fungal bodies which at this stage do not produce spores. Durbin *et al* (1953) have, however, observed that no fungus of *Leptothyrium pomi* type has ever been shown to be a part of the cycle of *Microthyriella rubi*, which they emphasize as the actual cause of the flyspeck of apples. They also observe that *Zygophiala jamaicensis*, is the conidial stage of *M. rubi* which has been reported on a wide host range comprising 15 families including apples and 17 wild plants. They have not been able to isolate the pycnidial stage of the fungus and have thus proposed that the commonly used name i.e. *Leptothyrium pomi* should de discarded in favour of *Microthyriella rubi*.

In the preliminary studies carried out by the authors at Lyallpur, they have isolated the pycnidial stage of the flyspeck fungus. Black carbonous pycnidia are borne superficially in the mycelial growth over chickpea agar and their size ranges from 101.0-146.9 x 73..4-100.8 /u. Some of the pycnidia bear two ostioles but mostly they are uniostiolate (Fig. 3). Since the proposal of change of nomenclature of the fungus made by Drubin *et al* (1953) cannot be supported due to non-sporulation of the causal fungus, we follow Wormald in designating the fungus as *Leptothyrium pomi* (Mont & Fr.) Sacc. Further studies to determine the true status of the fungus are in progress and shall be reported later.

Fig. 2. Flyspecks (close-up view).

Fig. 3. Ostiolate Pycnidia of *Leptothyrium Pomi*

LITERATURE CITED

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