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FUNGI ASSOCIATED WITH SESAME SEED

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Sesame seed samples were collected from different localities of the Punjab. Samples were analysed for seed mycoflora. *Alternaria sesami, Fusarium oxysporum, F. semitectum, F. moniliforme, Macrophomina phaseolina* and many other fungi were recorded. All these fungi are first recorded on sesame seed from Pakistan.

INTRODUCTION

In the Punjab, till is grown over an area of 15.15 thousand acres with an annual production of 7.39 thousand tons (Anonymous, 1987). Sialkot, Gujranwala and Gujrat districts and some Barani tracts are the main sesame growing areas. Sesame oil is used as edible oil, in paints and soap industry and also has great medicinal value. This crop suffers from many pest and diseases like other crops. *Fusarium* wilt *(Fusarium oxysporum),* charcoal rot *(M. phaseolina),* leaf spot *(A. sesami),* powdery mildew and phytophathora blight are the most common diseases (Kotle, 1985). Charcoal rot is well known disease in the Punjab (Saleem, 1985). Most of the diseases are known to be seed borne in nature. *A. sesami, F. oxysporum, M. phaseolina* and eight other fungi are known to be seed borne and are cause of different diseases (Richardson, 1979). No systematic work has been carried out on the seed borne fungi of sesame and their effects on yield in Pakistan. The present studies were initiated to study the seed borne fungi on sesame prevalent in the Punjab, Pakistan.

MATERIALS AND METHODS

Twenty five seed samples of sesame were collected from various localities of the Punjab and were analysed for their mycoflora following standard blotter method (ISTA, 1976). Four hundred random seeds from each sample were studied. Twenty five seeds were plated in plastic petridishes having three well moistened layers of blotter paper. The seeds kept at 22 ± 2 ° C for seven days with an alternate cycle of light and darkness in the growth chamber where fluorescent light facility was provided. On the eighth day of plating, seeds were examined under stereoscopic microscope and identification was made on the basis of growth pattern where the difficulty was faced, the high power microscope was used. The recorded fungi were isolated from seeds of each and maintained on potato dextrose agar medium for further studies.

RESULTS AND DISCUSSION

Twenty five samples of sesame seed were examined for the presence of fungi. The fungi isolated were *A. sesami, F. semitectum, F. moniliforme, F. oxysporum* and *M. phaseolina.* The average percentage of isolated fungi and their range are given in Table 1.

Other fungi recorded were: *A. tenuis, Cephalosporium* spp., *Cladosporium* spp., *Drechslera halodes, D. tetramera, Aspergillus* spp. and *Myrothecium roridum. A. sesami,*

Table 1. Fungi associated with sesame seeds

Fungi	Average (%)	Range (%)
A. sesami	1.00	0.00-6.50
F. semitectum	1.40	0.00-5.00
F. moniliforme	0.24	0.00-2.00
F. oxysporum	2.04	0.00-40.00
M. phaseolina	2.88	0.00-72.00

F. oxysporium and *M. phaseolina* have been reported on sesame (Kotle, 1985). These are reported for the first time on sesame seed from Pakistan (Mirza and Qureshi, 1978). Effects are in progress to find out the control measures through seed treatment.

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