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RESEARCH NOTE

ALTERNARIA DAUCI - A NEW RECORD ON CARROT SEED IN PAKISTAN

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Carrot (*Daucus carota* L.) is an important winter vegetable and is sown in most parts of the Punjab province. Its various diseases are: *Alternaria* blight (*Alternaria dauci*), *Cercospora* leaf blight (*C. carota*) and *Alternaria* root rot (*A. radicina*). *Alternaria dauci* and twelve other fungi have been reported to occur on carrot seed in the world (Richardson, 1979). *Alternaria* root rot and fungal leaf blight are known to occur in Pakistan (Mirza, 1978; Mahmud and Aslam, 1984). Wahid *et al.* (1986) reported *Stemphylium botryosum, Botrytis cineria, Fusarium solani, Alternaria radicina, Aspergillus flavus* and *Alternaria alternata* on carrot seed collected from Faisalabad. Present studies revealed the occurrence of *Alternaria dauci* on carrot seed in Pakistan.

Eleven seed samples of carrot collected from vegetable markets of Faisalabad were analysed during 1991 in the Department of Plant Pathology, University of Agriculture, Faisalabad for seed borne fungi following standard blotter method (ISTA, 1976). Four hundred seeds of each sample were tested.

Table 1. Frequency of fungi on carrot seed

Fungi	Average (%)	Rage (%)
Alternaria dauci	69.00	0.00-93.00
A. alternata	45.50	0.00-84.00
A. radicina	22.00	0.00-44.25
Aspergillus flavus	1.27	0.00-1.00
Drechslera tetramera	1.22	0.00-13.00
Fusarium semitectum	0.66	0.00-5.50
Stemphylium botryosum	0.54	0.00-1.25
Aspergillus niger	0.47	0.00-12.25
Arthrobotrys sp.	0.25	0.00-1.50
Drechslera hawiiensis	1.22	0.00-1.25
Curvularia lunata	0.12	0.00-1.25
C. pallesence	0.12	0.00-1.25

Twenty seeds were placed in each petridish having three moistened blotter paper and petridishes were incubated at 20 ± 2 °C for seven days in a growth chamber. After seven days of incubation, the fungi were isolated, maintained on Potato Dextrose Agar (PDA) and identified with the help of available literature (Ellis, 1971; Booth, 1971).

Eleven seed samples yielded different species of *Alternaria, Fusarium, Curvularia, Drechslera, Aspergillus, Stemphylium* and *Arthrobotrys* in different frequencies (Table 1).

Alternaria dauci was recorded in maximum percentage (69%) compared to other fungi. It is a well known pathogenic fungus of carrot seed as reported in Nepal, Israel, Netherlands, Italy and Germany by Richardson (1979) but it is first record in Pakistan. The presence of various fungi on carrot seed indicates that field surveys should often be made to have an up-to-date knowledge about carrot seed borne fungi. This sort of studies also help in assessing the seed health of carrot.

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