

**Plant Pathology**

**STORAGE MYCOFLORA ASSOCIATED WITH THE SEEDS OF *VIGNA RADIATA* (L.) WILCZEK VAR. *RADIATA* AND *V. MUNGO* (L.) HEPPEL**

R. M. SAXENA and S. SINHA\* *Botany Department, Agra College, Agra*

*V. radiata* (L) and *V. mungo* (L) are two important pulse crops of India essentially stored for their protein-rich seeds for domestic consumption and next sowing. Christensen (1957) has arbitrarily divided the seed microflora into, 'field fungi' and 'storage fungi' depending upon their nature of invasion of the seeds. According to a conservative estimate 4 % of the world-stored grains is lost through the activity of the fungi and other micro-organisms. (Adcock, 1968).

To investigate the storage mycoflora, freshly harvested seed samples were stored for one year in bamboo paper bags kept inside a wooden container, under laboratory condition, where temperature and relative humidity of the atmosphere vary from season to season. The storage mycoflora was investigated after 60, 120, 180, 240, 300 and 360 days of storage by routine mycological techniques, and identified by standard methods. The dominant fungal species were got confirmed from CMI, Kew, England.

The results indicate that as soon as freshly harvested seeds are kept in storage, a heavy invasion of the fungi follow them during the first 4 months when the relative humidity ranges between 45%-80.2% and temperature 6.2-24.2°. However, during subsequent storage, the total fungal counts were highest when the R.H. ranged between 62-87% with a corresponding temperature range of 18.90-31.7°. The invading fungi included *Aspergillus tamarii* Kita; *A. terreus* Thom; *A. varicolor* Thom & Raper; *A. sulphureus* Thom & Church; *A. ochraceus* Wilhelm; *A. quadrilineatus* Thom & Raper; *A. avenaceus*; *Chaetomium indicum* Corda; *C. spirale* Zopf; *Epicoccum* sp.; *Humicola* sp.; *Mucor hiemalis*; *Mucor* sp.; *Oidium* sp.; *Penicillium oxalicum* Currie & Thom; *P. crustosum*; *P. frequentans* Westling; *P. cyclopium*; *P. wortmanii* Klocker; *Papulaspora* sp.; *Periconia* sp.; *Paecilomyces varioti* Bainer; *Rhizopus nigricans* Eshreneb; *Tricoderma viridi*; *Trichurus* sp., and *Torula* sp.

It is noteworthy and interesting that the seeds if used for sowing purposes (Last week of June/First week of July in Northern India), carries a large number of storage fungi, mainly, the species of *Aspergillus* and *Penicillium* which may produce several types of pre-emergence and post-emergence damping off symptoms as also reported in many other crops (Jorgensen 1974; Kanyanasoon & Mathur, 1961; Sekhon & Shivpuri, 1971).

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\* Present address : Professor Emeritus of Botany, Kumaon University, Nainital (U.P.)

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