

STATUS OF COMPLETE BUNT OF WHEAT IN PAKISTAN

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Complete bunt of wheat is an important and destructive disease of wheat in the upland areas of Pakistan where an incidence as high as 25% has been recorded (Hafiz., 1996; Hassan, 1971) with losses upto 33% in individual fields (Kausar, 1955). Two allied species of *Tilletia* viz., *T. laevis* Kühn (syn, *T. foetida* (Wall.) Liro) and *T. tritici* (Bjerk.) Winter (syn. *T. caries* (DC.) Tul., have been reported by Malik & Virk (1968), Hassan (1971) and Mirza & Qureshi (1978) whereas only *T. tritici* has been mentioned as the cause of bunt of wheat in Pakistan by Hafiz (1986). An extensive survey of upland areas of Balochistan, NWFP and the Punjab was therefore carried out to determine the present status of complete bunt of wheat caused by *T.laevis* and or *T.tritici*.

Samples of ear heads of different wheat varieties were collected from the upland areas of Pakistan viz., Quetta and Kalat in Balochistan, Swat in the NWFP and Murree, Rawalpindi and Sialkot in the Punjab during 1988-90. From 4 different wheat fields in each area, atleast 100 ear heads were collected at random from each field of 100 sq. yards. The soral mass of infected grains from the bunted heads after maceration when examined under the microscope showed the presence of teliospores which were globose to sub-globose, brownish black in colour, smooth walled, 17-22um in diam., which is characteristic of the teliospores of *T. laevis* (Vanky, 1985). In contrast, globose brownish black teliospores, 15-20 um in diam., with reticulate wall which is characteristic of *T. tritici* (Vanky, 1985) were not found in any of the samples examined. Infection percentage recorded according to the method of Rodenhiser & Holton (1945) showed an incidence of 30-40% in wheat fields of Quetta and Kalat, 5% in Murree, 0.2-0.5% in Swat and in traces in Sialkot and Rawalpindi. It would suggest that complete bunt of wheat in Pakistan is due to *T. laevis* and that the taxon *T. tritici* does not seem to occur in wheat fields of upland areas of the country.

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