

Short Communication

Pakistan J. Sci. Ind. Res., Vol. 26, No. 6, December 1983

RACE L-2, A NEW VIRULENCE OF *Tilletia foetida* IN PAKISTAN

M. Siddique Mirza and S.F. Hassan*

National Agricultural Research Centre, Islamabad

(Received June 25, 1981)

In Pakistan pathogenic specialization in *Tilletia foetida* (Wallr.) Liro., is a major factor contributing to the problem of controlling wheat bunt by growing resistant varieties in the upland areas of Pakistan. Thus, the need for information on the number, kinds, and distribution of races is self evident. Choudhry [1] tested 2 collections of *T. foetida* collected from Quetta, against many varieties including 11 standard differentials but did not assign any race number. However, his results indicate that the 2 collections used by him were quite different from races reported so far.

Qt-96 yielded a new race L-2. Its comparative reaction together with the reactions of three previously known races are shown in Table 1 below.

The new race L-2 appears to be least virulent as compared to L-8 and L-9 and represent a distinctly new pathogenic type which has not been reported so far and this is the first record of this race in Pakistan.

Acknowledgement. This research has been financed by a Grant No. FG-Pa-182 made by the USDA (PL-480) under P.A.R.C. Islamabad.

Table 1. Reaction of differential wheat varieties to physiologic races of *Tilletia foetida*.

Race	Hybrid 128	Ridit.	Oro.	Albit.	Hohenheimer.	Husar.	Martin.	White oddessa.	Ulka.	Marquis.	Cannus
L-2	S	R	R	R	R	I	R	R	S	S	R
L-8	S	R	S	R	R	R	R	R	S	S	S
L-9	S	S	R	S	R	I	S	S	S	I	S
L-13	S	R	R	S	R	R	R	R	S	S	R

R= Resistant (0-10 % infection), I= Intermediate (11-40 % infection) and S= Susceptible (41-100 % infection).

Regular surveys of physiologic races of bunt were started in 1966-67 and 18 collections of wheat bunt were tested during the period 1967 through 1970. Races L-8 and L-13 were isolated from Quetta and race L-9 from Rawalpindi and Swat areas [2, 3]. To keep abreast of this problem 45 collections representing 5 crop years, were made from Quetta, Kalat, Murree and Rawalpindi areas from different host varieties during 1970-1974. These collections were tested on a standard set of differential varieties. The methods and tester varieties that were used were the same as those used by other workers [1, 2, 3].

Races L-2, L-8, L-9 and L-13 were identified 4, 24, 14 and 3 times respectively. The 4 collections of Quetta from wheat varieties viz., Local White, Local Red, Pumbri and

REFERENCES

1. A.R. Choudhry, Studies on Stinking Smut of Wheat *Tilletia tritici* (Bjerk.) Wint. & *Tilletia Levis*. Final Report of the School of Research in Mycology at Lyallpur (1953), pp. 145.
2. H.A. Rodenhiser and C.S. Holton Phytopathology, 35, 955 (1945).
3. S.F. Hassan, N.A. Khan Zia, M.A. Khan, M. Anwar and S.J. Hamid, J. Agri. Pakistan, 20, 447 (1969).

*Director, Cereal Diseases Research Institute, P.A.R.C. Islamabad.