SHORT COMMUNICATION

SURVEY OF WHEAT CROP FOR THE PREVAILING BROW RUST (PUCCINIA RECODITA F.SP. TRITCI ROB. EX. DESM.) IN DIFFERENT REGION OF UTTAR PRADESH

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Received-03.02.2020, Revised-25.02.2020

Abstract: Uttar Pradesh is considered to be hot spot area for the development of leaf rust omplex. Thus, this study was carried out to investigate the distribution and intensity of wheat leaf rust, and to detect the virulence spectrum of Puccinia recondita f. sp. tritici Rob. ex. Desm during cropping season 2012-13. Survey programme were conducted in different wheat growing area of Utter Pradesh and covers four regions basically Eastern U.P., Central U.P., Bundelkhand region and Western U.P. region. The data was collected on the basis of Global Cereal Rust Monitoring Form provided by BGRI (borlauge global rust initiative). In East U.P. region, district Lakhimpurkhiri brown rust traces were observed in village Katania (8-10 plants, severity upto 20S) on the cv. Sonalika. However in Paliakalannon brown rust were observed on date. At Golagokharnath leaf rust were recorded on cv. Lalbahadur with severity 10S. In the village Akbarpur of Kanpur Dehat (Central U.P. region) brown rust were observed on variety C-306, LOK1 at the disease severity of 30S. the brown rust were observed in farmer field Uin village in district Lucknow on variety Agra local, HD 2189 , rust severity from 20S -80S were recorded. Area near Unnao at village Atarsa brown rust observed on variety HD 3095, and farmer local varieties, severity 20S- 40S were recorded. In Jhansi, the district of Bundelkhand region only trace of Brown rust were observed in Agra local , C-306 and lok1 at farmer field villages Badanpur , Babina and Amarpur. Survey at Lalitpur area, variety Agra local, Lalbhadur and Lok 1 shows 30S-40S severity. Area near Banda district shows 40S-60S severity at farmer local variety. Survey during West U.P.region in the district Meerut, Muzaffarnagar, and Bijnor brown rust found in very low severity with very low incidence. In district Meerut, village Mihiwa, Mator and Kashampur shows 10S-20S severity on variety PBW 343, PBW 550, W -75. In district Muzaffarnagar variety PBW343, PBW 550 and PBW 373 shows 20S- 40S severity in village Hashampur, Bhuma, Ghatayan. In district Bijnor, village Kasopur, Khaikheda, and Salimpur shows symptoms of brown rust of wheat with severity 10S -20S. Key words: Brown rust, Puccinia recondita f. sp. tritici, Uttar Pradesh, Disease severity, Disease incidence.

Keywords: Survey, Crop, Brown rust, Wheat

REFERENCES

Admassu, B., Lind, V., Friedt, W. and Ordon, F. (2009). Virulence analysis of *Pucciniagraminis*f.sp. *tritici* populations in Ethiopia with special consideration of Ug 99. Plant Pathol., 58:362-369.

Aquino, P., Hernández, V. and Rejesus, M. (1999). Selected wheat statistics. In CIMMYT 1995/1996 World Wheat Facts and Trends: Understanding Global Trends in the Use of Wheat Diversity and International Flows of Wheat Genetic Resources, Ed., Pingali, P.L., pp: 39-62.

Belayneh, A. and Emebet, F. (2005). Physiological races and virulence diversity of *P. graminis*f.sp. *tritici* on wheat in Ethiopia. Phytopathol. Mediterr., 44: 313-318.

Dereje, G. and Yaynu, H. (2000). Yield losses of crops due to disease in Ethiopia. Eth. J. Pest Mgt., 5:55-67.

Jin, Y., Szabo, L.J., Pretorius, Z.A., Singh, R.P., Ward, R. and Fetch, T.J. (2008). Detection of virulence to resistance gene *Sr24* within race TTKS of *Puccinia graminis* f. sp. *tritici*. Plant Dis., 92: 923-926.

Joshi, L.M., Saari, E.E. and Gera, S.D. (1972). Epidemiology of black rust of wheat in India. Proc. European and Mediterranean, Cereal Rust Conference, Czechoslovakia, pp. 151-154.

Lemma, A., Woldeab, G., Semahegn, Y. and Dilnesaw, Z. (2014). Survey and Virulence Distribution of Wheat Stem Rust (*Puccinia graminis f.sp. tritici*) in the Major Wheat Growing Areas of Central Ethiopia. *Sci-Afric Journal of Scientific Issues, Research and Essays* **2** (10): 474-478.

Mehta, K.C. (1940). Further studies on cereal rusts in India. *Sci. Monograph No. 14*, Imp. Counc. Agric. Res. India, 244pp.

Nagrajan, S. and Joshi, L.M. (1975). A historical account of wheat rust epidemics in India and their significance. *Cereal rust Bull.*,2:29-33.

Saari, E.E. and Wilcoxson, R.D. (1974). Plant disease situation of high yielding dwarf wheats in Asia and Africa. *Annu. Rev. Phytopathol.*,12:49-68.

Van Ginkel, MG., Getnet, G. and Tesfaye, T. (1989). Stripe, Stem and Leaf Rust races in Major Wheat producing Areas in Ethiopia, IAR Newsletter of Agricultural research 3(4): 6-8.

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