Role of weather factors in development of late leaf spot (*Phaeoisariopsis personata*) on groundnut (*Arachis hypogaea*)

UTPAL DEY, D. N. DHUTRAJ, DIGANGGANA TALUKDAR* and ANUP DAS*
Deptt. of Plant Pathology, Vasantrao Naik Marathwada Krishi Vidyaapeeth, Parbhani – 431 402, Maharashtra, India
* ICAR Research Complex for NEH Region, Umiam – 793 103, Meghalaya, India
(Received 10 July 2015, Accepted 22 August 2016)
e mail : utpaldey86@gmail.com

ABSTRACT. The field experiment was conducted during *Kharif* 2012 and 2013 to find out the influence of weather parameters viz., temperature, relative humidity, rainfall, rainy days and wind velocity on the intensity of late leaf spot disease and defoliation in four groundnut cultivars viz., JL-24, LGN-1, TAG-24 and TG-26. The prevailing weather condition viz., average temperatures of 30.92 °C (max.) and 22.31 °C (min.), average RH of 89.67 % (morning) and 64.25 % (evening), well distributed average rainfall of 50.33 mm, average rainy days of 2.67 and average wind velocity of 4.24 km/hr were found to be conducive for the initiation, development and spread of late leaf spot disease in susceptible groundnut Cv. JL-24, TAG-24 and tolerant Cv. LGN-1, TG-26. As a result, overall average maximum disease intensity of 33.97 (21.96 to 46.37 %) per cent and 29.06 (18.62 to 39.01 %) per cent, were recorded in JL-24 and TAG-24, respectively. Groundnut Cv. JL-24 and TAG-24 (susceptible) exhibited comparatively maximum average defoliation in the range of 6.65 to 14.05 (Av. 10.29 %) and 5.64 to 11.82 per cent (Av. 8.80 %), respectively. The correlation coefficient between weather variables and disease intensity in both the years indicated that maximum temperature had negative and non significant effect in all the groundnut cultivars; whereas, minimum temperature had positive and significant effect on the disease intensity in all the groundnut cultivars. Relative humidity (morning and evening) played significant positive role on the disease intensity in all the groundnut cultivars.

Key words – *Arachis hypogaea*, Defoliation, Late leaf spot, PDI, *Phaeoisariopsis personata*, Weather factors.