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Influence of weather parameter on flowering and fruiting spike of medicinal plant *Piper longum* L. in Assam, India

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ABSTRACT : The present investigation was carried out in the Experimental farm, Department of Horticulture, Assam Agriculture University (AAU), Jorhat to investigate the relationship between meteorological parameters and spike development of *Piper longum* L. in Assam, during 2013 and 2014. The present finding revealed that highest numbers of flowering spike (92.59) in *P. longum* could be obtained in the month of September which finally gave rise to maximum fruiting spike (80.73) per plant in the month of December. The result indicated that meteorological parameters have also a great influence on the number of flowering and fruiting spike per plant. As the numbers of flowering spike per plant showed significant negative correlation with maximum temperature ($r = -0.554$ and -0.566), rainfall ($r = -0.638$ and -0.623) for the years 2013 and 2014, respectively. However, the findings indicated that numbers of fruiting spike per plant showed significant negative correlation with maximum temperature ($r = -0.747$ and -0.677), minimum temperature ($r = -0.704$ and -0.708) and rainfall ($r = -0.738$ and -0.593) in 2013 and 2014, respectively. This present findings would be helpful for climate based crop cultivation to increase the production and productivity as the crop has a high demand in pharmaceutical market.

KEY WORDS : Medicinal plant, *Piper longum*, Spike characters, Meteorological parameters, Correlation

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