

RESEARCH ARTICLE

# Effect of weather parameters on incidence of leaf miner (*Lirimomyza trifolii* Burgess) on tomato

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## ABSTRACT

An experiment was conducted on effect of weather parameters on incidence of leaf miner, *Lirimomyza trifolii* Burgess at Main Vegetable Research Station, Anand Agricultural University, Anand during *Rabi* 2010-11. The number of mines/leaf ranged between 2.52 and 10.26 with an average of 5.95. The infestation based on mines/leaf attained the highest peak (10.26 mines/ leaf) during 3rd week of January. The number of larvae/leaf ranged between 0.24 and 2.24 with an average of 0.84. The larval population reached to the highest peak (2.24 per leaf) during 3rd week of January. Per cent damaged leaves were in the range of 9.44 to 29.40 with an average of 15.99. Per cent damaged leaves slightly increased as the crop became older and reached to the first peak (16.41%) during 4<sup>th</sup> week of November. Then after declined during next week and further increased up to the crop maturity. The infestation attained the highest peak (29.40%) during 1st week of January. Overall, the activity of leaf miner was higher during December-January. The correlation studies indicated that number of mines, larvae as well as per cent damaged leaves had significant negative correlation with maximum temperature (-0.68162\*\*, -0.71533\*\* and -0.71308\*\*), minimum temperature (-0.78761\*\*, -0.82541\*\* and -0.82630\*\*), mean temperature (-0.77091\*\*, -0.80886\*\* and -0.80795\*\*), morning vapour pressure (-0.73098\*\*, -0.77537\*\* and -0.77992\*\*), evening vapour pressure (-0.71101\*\*, -0.77414\*\* and -0.74275\*\*), mean vapour pressure (-0.73715\*\*, -0.79196\*\* and -0.77982\*\*) and mean vapour pressure deficit (-0.62057\*\*, -0.60331\*\* and -0.57694\*\*), respectively. Moreover, mines and larvae significantly and negatively correlated with morning vapour pressure deficit (-0.48046\*) and evening relative humidity (-0.43393\*).

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