

Population dynamics of mustard aphid *Lipaphis erysimi* Kalt. on different varieties of Indian mustard and their relationship with prevailing weather parameters

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ABSTRACT

An experiment was conducted during *Rabi* 2008-2009 and 2009-2010. Aphid appeared in first week of January when the maximum temperature was (15.8-16.1°C) and minimum temperature (5.3-8.0°C) along with relative humidity 93.0-95.3 per cent maximum, 66.0-82.9 per cent minimum and wind speed 2.6 km/h during 2008-09 and 2009-10, respectively. The peak intensity of aphids on different varieties of Indian mustard during 7th standard week (Feb., 12-18) in respective years, when the temperature was 23.1-25.1°C maximum and 9.4-12.5°C minimum along with relative humidity maximum 89.0-91.0 per cent and minimum 43.0-69.0 per cent during 2008-09 and 2009-10, respectively. The aphid population was completely wiped out from mustard crop in the last week of February and first week of March, when the crop age was 118 days. At this stage, temperature was 29.7-31.7°C maximum and 12.7-15.7°C minimum along with relative humidity maximum 73.0-78.0 per cent and minimum 34.0-36.0 per cent during 2008-09 and 2009-10, respectively. Simple correlation co-efficient of aphid with weather factors showed a positive relationship with temperature ($r=0.226-0.645$ and $0.900-0.961$) and wind speed ($r=0.434-0.651$ and $0.599-0.684$), while negative impact with relative humidity ($r=-0.579$ to -0.765 and -0.526 to -0.633) during both the years.

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