

## RESEARCH ARTICLE

# Effect of different inoculum levels of *P. arborescens* in disease development and yield losses of opium poppy

■ Roop Singh, Pokhar Rawal and Irfan Khan

### SUMMARY

Downy mildew (DM) caused by *Peronospora arborescens* is the most alarming disease of opium poppy which hampered the production of opium crop in major growing areas of India. The pooled data taken from *Rabi* 2016-17 and 2017-18 demonstrated that chemical protected un-inoculated plot had a minimum per cent disease severity (9.83) with maximum dry latex yield (31.25 kg ha<sup>-1</sup>), seed yield (801.31 kg ha<sup>-1</sup>) and husk yield (889.66 kg ha<sup>-1</sup>). However, plots inoculated with *Peronospora arborescens* at high inoculum density of 9×10<sup>5</sup> spores ml<sup>-1</sup> had considerably higher per cent disease severity (67.00) and minimum dry latex yield (6.94 kg ha<sup>-1</sup>), seed yield (548.42 kg ha<sup>-1</sup>) and husk yield (590.86 kg ha<sup>-1</sup>) with maximum 77.79, 31.56 and 33.58 per cent loss as compared to un-inoculated chemical protected plot, respectively. The severity of the downy mildew disease was found to rise in direct conflict with the level of inoculum concentration with significant reduction in dry latex yield, seed yield and husk yield.

**Key Words :** Opium poppy, Yield losses, *P. arborescens*

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