

Research Article

Identification and Confirmation of Powdery Mildew (*Erysiphe polygoni*) Resistance in Pea Germplasm

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Abstract

Erysiphe polygoni DC, the causative agent of powdery mildew, poses a significant threat to pea crop, resulting in substantial yield and economic losses. To address this menace, an exploration of intrinsic resistance within pea germplasm becomes imperative for effective disease management. In our study, phenotyping of 1095 pea accessions, sourced from both indigenous and exotic origins, under natural epiphytotic conditions during *Rabi* 2021-22, revealed a prevailing susceptibility, with over 60 per cent disease severity in majority of accessions. Remarkably, only 22 accessions, including IC208327, IC220109, IC220378, IC258401, IC262762, IC262849, IC267140, IC267174, IC267727, IC274039, IC274040, IC310074, IC311066, IC345548, IC424898, IC552779, IC613133, IC629544, IC629687, NC57793, IC220193 and EC598669, exhibited resistance with a disease score of <1. Subsequent, pot screening of these 22 resistant accessions under artificial epiphytotic conditions during *Rabi* 2022-23 confirmed their resistance showing disease severity ranging from 5.83 - 17.50 per cent. Recognizing the pivotal role of resistant varieties in disease management, these identified accessions hold immense potential as resistant donors in crop improvement programs.

Key words: Germplasm, pea, powdery mildew, resistance

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