Research Article

Triazoles and Strobilurins for Management of Early Blight Disease of Potato

Priyanka Kumari Meena[1] and DL Yadav[2]

[1,2]*Department of Plant Pathology, COA, Agriculture University, Kota; E-mail: pm484354@gmail.com*

Abstract

In present investigation, triazole and strobilurin fungicides were tested against early blight disease of potato in *in vitro* and *in vivo* conditions and revealed that among triazole group of fungicides *viz.,* Propiconazole 25 EC, Hexaconazole 5 EC and Defenconazole 25 EC @ 10, 20 and 50 ppm concentrations exhibited higher inhibitory in mycelial growth as compared to strobilurin fungicides *viz.,* Azoxystrobin 23 SC, Picoxystrobin 22.52 SC and Pyraclostrobin 20 WG @ 20, 50 and100 ppm against the *Alternaria alternata in vitro* condition. In field condition, minimum disease and maximum reduction (72.3%) was recorded in Dinfenconazole 5 EC @ 250 ml ha^{-1} which was at par with Propiconazole 25 EC @ 500 ml/ha (71.3%) and Azoxystrobin 23 SC @ 500 ml ha^{-1} 70.2 per cent after first and second spray. However, strobilurin group fungicides *i.e.* Azoxystrobin 23 SC @ 500 ml ha^{-1} gave significantly maximum dry matter (25.00 %), total tuber number per plot (269), tuber yield (224.54 q/ha), dry weight of dehalming cutting (1.9 kg $plot^{-1}$) with 34.6 per cent yield increase over control and maximum B:C ratio was 1.70, which was at par with Pyraclostrobin 20 WG @ 500g ha^{-1} and Picoxystrobin 22.52 SC @ 400ml ha^{-1} as compared to triazole fungicides. While, contact fungicide Mancozeb 75 WP showed maximum inhibition at higher dose 1000 and 1500 ppm, respectively.

Key word: Early blight, potato, strobilurin, triazole group of fungicides

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