

Comparative efficacy of different fungicides against late blight diseases of potato incited by *Phytophthora infestans* (Mont.) de Bary and standardized the doses for its Management

Siddique N.A

Rajshahi University, Bangladesh

Some plant diseases that can completely destroy Potato plot, late blight is one of these devastating fungal diseases that attacks the potato field and completely destroy the potato field. If any proper preventive measure cannot be taken from beginning of initiate the late blight, farmers as well as potato seed production companies can be faced into great hamper. Although this devastating diseases can be controlled by using traditional fungicides like Carbendazim or Metalaxyl. Plant growth and tuber formation are gradually inhibited. As a results the farmers and seed potato production companies cannot get sufficient production/expected yield. The objective of this present research is to standardize the protocol by which late blight diseases can be controlled easily without inhibition of the plants growth and its yield.

Efforts made in present investigation to evaluate the concentration of few commonly used fungicides for their comparative efficacy against *Phytophthora infestans* (Mont.) de Bary- the incited of late blight, for its. The highest (99.70) percentage of disease control and the highest yield (26.68 MT/ha) were recorded on fungicides containing 3.5 mg/L Sunoxanil 72 WP (Cymoxanil 8%+Mancozeb 64%) with 3.0 ml/L Contaf 5 EC (Hexaconazol 5%) during 2015-2016. The lowest (75.68) percentage of disease control and the lowest yield (15.67 ton/ha) were recorded on fungicides containing 2.0 mg/L Ridomil MZ 72 (Metalaxyl 8%+Mancozeb 64%) with 1.0 ml/L Autostin 50 WDG (Carbendazim 50%) during 2014-2015. It was concluded that Sunoxanil 72 WP (Cymoxanil 8%+ Mancozeb 64%) acted as the best fungicide when applied as prophylactic measures. Sunoxanil 72 WP (Cymoxanil 8%+ Mancozeb 64%) was combined with Contaf 5EC (Hexaconazol 5%) or Actiphose (Phosphorous acid) showed the best result when applied as curative measures. Plant growth as well as its yield gradually decreased due to the application of Carbendazim and Metalaxyl. It is new finding, although Metalaxyl and Carbendazim play on vital role to protect the late blight after appearance the disease, the plant growth, tuber formation along with the yield was gradually inhibited. Therefore, it is recommended that Metalaxyl and Carbendazim application should be avoided to protect the late blight after or before appearance the disease.

Biography

Siddique N. A has done Ph.D. in Plant Biotechnology especially tissue culture and has published quite number of scientific publications in highly reputed journals in home and abroad. His Ph.D. dissertation was published as a text book from LAP LAMBERT Academic Publishing, Germany and another book entitle "Comparative Efficacy of Different Fungicides against Late Blight Diseases of Potato incited by *Phytophthora infestans* (Mont.) de Bary and standardized the doses for its Management" was also published from LAP LAMBERT Academic Publishing, Germany. He has an experience in tissue culture laboratory as well as has an experience to ensure quality of potato seed production farm especially in mini-tuber and breeder seed of potato production within net house and foundation and certified seed of potato production in field.