Joint Event on

11th World Congress on Euro Neuropharmacology

International Conference on Plant Physiology & Biotechnology

May 06-07, 2019 | Prague, Czech Republic

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

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🔿 ome plant diseases can completely destroy potato plot, late blight is one of the devastating fungal diseases Uthat attacks the potato field and completely destroys the potato field. If any proper preventive measure cannot be taken from beginning of the late blight, farmers as well as potato seed production companies can be faced into great hamper. Although, this devastating disease can be controlled by using traditional fungicides like carbendazim or metalaxyl but plant growth and tuber formation are gradually inhibited. As a result, 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 plant 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 (Hexaconazole 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 (Carbondaxim 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 (Hexaconazole 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 f carbondaxim and matalaxyl. Although metalaxyl and carbondaxim play vital role to protect the late blight after appearance of the disease but the plant growth, tuber formation along with the yield was gradually inhibited. Therefore, it is recommended that metalaxyl and carbondaxim application should be avoided to protect the late blight after or before appearance of the disease.