

COGONGRASS ROOT EXTRACT FROM FIVE DIFFERENT SOILS TYPES FOR SUPPRESSING PURPLE BLOTCH AND INCREASING GROWTH AND YIELD OF SHALLOTS

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Abstract	<p>Cogongrass root extract from five different soils types for suppressing purple blotch and increasing growth and yield of shallots. The aim of this study was to examine the efficacy of cogongrass (<i>Imperata cylindrica</i> (L.) Beauv.) root extracts from five different soil types (Typic Udipsamments, Aeric Endoaqualfs (=Gleisal Eutrik), Typic Quartzipsamments (=Regosol Eutrik), Aquertic Chromic Hapludalfs, and Pachic Hapludolls) in suppressing purple blotch and increasing growth and yield of shallots. Split plot design was used with 13 treatments repeated three times, and 18 plants plot-1. The treatments consisted of control, fungicide propineb applied before and after inoculation, and five types of cogongrass root extract 50, 60, and 70% concentration applied before and after inoculation. Results showed that cogongrass root extract collected from Pachic Hapludolls which was applied before inoculation had significant effect on the highest pathosystem component indicated by delaying the incubation period, suppressing the intensity of the disease, slowing down the infection rate, and decreasing values of AUDPC as 41.85, 69.87, 75.13, and 67.63%, respectively, compared to control. The cogongrass root extract from Pachic Hapludolls applied before inoculation could increase plant fresh and dry weight plant-1, tuber weight plant-1, plant fresh and dry weight plot-1, and tuber dry weight plot-1 as 42.7, 49.6, 51.92, 66.75, 72.29, and 73.53%, respectively, compared to control.</p>
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