An investigation on the effectiveness of using different chemical combinations in the control of damping off disease in bupleurum flowers

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Damping off disease of seedlings is found world wild in agriculture soils under various weather conditions. This study was concerned on the effectiveness of using different chemical combinations in the control of damping off disease in Bupleurum flowers at Fairhill Bickford farm. This disease had caused a number of problems which included reduction of stem counts per hectare, high seed rate at each planting and high production cost with little turnover. This investigation sought to find the most cost effective treatment that can be used to control damping off disease with high turnover. This study also aimed at establishing the most effective combination that can control damping off disease out of these chemicals-Ridomil (unillax), dithane m45, previcurn and apron star. A randomized complete block design method was used to design the experiment, which was laid in three blocks covering 10 beds each measuring two meters long and one meter wide. The number of plots was 30 and these were randomized over each block with each treatment replicated three times. Scouting of the plots was done for disease incidence and recorded for each plot. A square quadrat was thrown twice per running meter to collect a representative sample of plants infected and also patches of plants infected were counted at each plot. Data was analysed using computer software Gen-stat version 14.2.2 in which analysis of variance for randomised complete block design was done. The major findings of the study were as following: a combination of Apron (sd)+Previcurn(ppd)+Unillax(ped) was the most cost effective of all combinations that gives high turnover. While Apron star (sd)+Dithane(ppd)+Previcurn(ped) was the most effective chemical combination that controlled the disease although its cost effectiveness is high than all other combinations. The use of chemical combinations proved to be of significant importance in controlling the disease although other combinations had negative impacts as found in this study. Therefore using a seed treatments and soil drench before emergency protect the seeds from preemergency damping off while post emergency drench protects the emerged seedlings from the disease. A seed treatment with apron is recommended as an initial seed dressing, while pre-planting drench with previcurn and post emergency drench with unillax recommended as the combination to be used to control damping off disease until further studies.