

## Evaluation of Different Management Practices Against Club Root Disease (*Plasmodiophora Brassicae* Woronin) of Cauliflower In Budhanilkantha, Kathmandu, Nepal.

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### Abstract

The experiment was carried out to evaluate the efficacy of various biological and chemical measures against club root and their effect in growth and yield of cauliflower from July to October, 2019, under plastic house at Budhanilkantha 8, Kathmandu, Nepal. Twenty-two days old seedlings of cauliflower variety "Silver Cup-60" were transplanted at 45 cm x 45 cm spacing in 21 plots of size 3.15 sq. m each. The seven treatments: Lime (CaCO<sub>3</sub>), Nebijin (Flusulphamide), Hatake (*Bacillus amyloliquefaciens*), Lime and Nebijin; Lime and Hatake; Lime and Aastha (*Trichoderma viridae*) and control were laid out in RCBD with three replications. The treatments varied significantly in disease and yield. The lowest disease incidence (7.49% and 16.67%) and lowest severity of disease (5.56% and 33.33%) were found in Lime and Nebijin whereas the highest disease incidence (39.68% and 74.07%) and highest severity of disease (63.89% and 79.63%) was observed in control at 30 and 60 DAT respectively. Lime and Nebijin also showed least gall index (0.22, 1.33) at 30 and 60 DAT and highest with control. Likewise, plant height (29.41 cm), curd diameter (20.28 cm) and marketable curd yield (36.83 mt/ha) were highest in Lime and Nebijin and least in control. Lime and Nebijin appeared most effective to control the disease and produce higher yield, followed by Nebijin. Lime and Trichoderma and Lime alone were also comparable. The results indicated that integrated approach (lime and chemical; and lime and biological method) is necessary for sustainable management of club root disease in Nepal.

**Keywords:** Cauliflower, Clubroot, Nebijin, Trichoderma, Lime