

## **Effect of different dilution of polluted water on germination and seedling growth of Marigold (*Tagetes erecta*)**

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**ABSTRACT :** In the present study effects of different dilutions of polluted water were investigated on the germination and seedling growth of Marigold. There were five different concentrations of municipal waste water, industrial waste water and Yamuna water (0%, 25%, 50%, 75% and 100%) which were labeled as T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub>, T<sub>4</sub> and T<sub>5</sub>, respectively. The industrial water was collected by effluent of Okhala industrial area, domestic water by effluent of sweeper colony and the simple water of river Yamuna of Delhi and were examined. The marigold was taken as test plant and its seeds were germinated in petridish in laboratory. Result showed that seed germination and seedling growth was significantly reduced at higher concentration of water. The best result was given by Yamuna water which gave maximum growth at 75%, 50% & 25%, respectively than 0% (control). Maximum reduction in growth was recorded in effluent of Okhala industries which gave maximum growth in 25% but below than control. This toxicity might be due to excess of nutrients, beyond the limits of tolerance. In sewage water maximum growth was recorded in 50% then 25% than the control. Therefore, the higher concentration of effluent and industrial water was not advisable for irrigation purpose, however, it could be used for irrigation purpose after proper treatment and dilution.

**Key Words :** Polluted water, germination, seedling growth.