AJES
ASIAN JOURNAL OF ENVIRONMENTAL SCIENCE
VOLUME 11 | ISSUE 2 | DECEMBER, 2016 | 164-170 ■ e ISSN-0976-8947 ■ Visit us : *www.researchjournal.co.in*
DOI: 10.15740/HAS/AJES/11.2/164-170
RESEARCH ARTICLE

Effect of treated tannery effluent and domestic waste water irrigation on *Tagetes erecta*

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Article Chronicle :
***Received* :**
19.09.2016;
***Revised* :**
18.11.2016;
***Accepted* :**
28.11.2016

ABSTRACT : Tanning industry is generating enormous quantities of effluent every day. The scientific ways and means of utilizing this liquid waste is of utmost important in reducing pollution load to the environment. Present study has been carried out to apply treated tannery effluent (TTE) diluted with domestic waste water (DWW) as irrigation sources at different concentration of 25 per cent, 50 per cent, 75 per cent and 100 per cent on a non food crop *Tagetes erecta.* Results reveal that application of diluted mixture of TTE along with DWW can be used efficiently for crop production. Germination percentage of 73.13 per cent was recorded with 25 per cent of TTE and 75 per cent of DWW dilution as compared with 71.17 per cent in control. Different growth parameters showed variation with different level of diluted tannery waste water application. Highest root and shoot length was observed in control (11.08 cm and 10.70 cm) followed by 25 per cent effluent irrigation (11.22 cm and 10.47 cm). Different concentrations of tannery effluent were found to influence the vigour index significantly. The highest vigour index was observed at control (1601.1) followed by 25 per cent effluent concentration (1585.59). The lowest vigour index was observed in case of treatment receiving 100 per cent effluent concentration (173.48). Red soil with different concentration of treated tannery effluent with domestic waste water recorded good results as compared to the black cotton soil.

HOW TO CITE THIS ARTICLE : Balasubramanian, G. and Dhevagi, P. (2016).Effect of treated tannery effluent and domestic waste water irrigation on *Tagetes erecta*. *Asian J. Environ. Sci.*, **11**(2): 164-170, **DOI: 10.15740/HAS/AJES/11.2/164-170.**

Key Words :
Tannery effluent, Domestic waste water, Growth , Yield of marigold

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