Vol. 9 (3): 431-436 (2019)

STUDY ON MANURE FROM SILKWORM AND ARBUSCULAR MYCORRHIZAL FUNGI TO PROMOTE GROWTH AND YIELD OF MARIGOLD (*TAGETES ERECTA*) IN ALKALINE SOILS UNDER FIELD CONDITION

Nidchaporn Nabhadalung[1*], Sudarat Tongtidram[1], Kannika Intachai[1]

[1]*Major of Agricultural Science, Faculty of Agriculture Technology, Buriram Rajabhat University 31000, Thailand;*

[*]Corresponding Author Nidchaporn Nabhadalung, e-mail: nidchaporn@gmail.com;

Received March 2019; Accepted April 2019; Published July 2019;

DOI: https://doi.org/10.31407/ijees9304

ABSTRACT

Manure from silkworm, an organic fertilizer, and arbuscular mycorrhizal fungi (AMF), a biofertilizer, was studied to promote growth and yield of marigold in alkaline soils under field condition. The experimental designed was done into randomized complete block design (RCB) consists of four treatments three replications namely 1) no fertilizer applied 2) manure from silkworm applied 3) AMF applied 4) combination of manure from silkworm with AMF applied. The experiment was conducted between August 9th to December 9th, 2017 at the Nong-Kwang Higher Education Academic Training Centre, Buriram Rajabhat University, Muang Buriram, Thailand. ANOVA and mean comparison were analyzed for plant height, number of pinnate leaves, number of shoot tip, number of flowers, days to first flower, flower diameter and percentage survival of marigold. The result showed that using of combination of manure from silkworms with AMF had significant increase plant height ($p<0.05$) number of pinnate leaves ($p<0.05$), number of shoot tip ($p<0.05$), flower diameter ($p<0.01$) and percentage survival of marigold ($p<0.01$). The result indicated that combination of manure from silkworms with AMF could be used to improve marigold growth and marigold flower yield under alkaline soil condition.

Keywords: Silkworm, AMF, Marigold, Fertilizer, Field condition