

**THE EFFECT OF LOCAL MICROORGANISM FROM
GOLDEN SNAIL AND DIFFERENT WATER LEVELS
WITH THE ADDITION OF MYCORIZES ON THE
ANATOMICAL AND MORPHOLOGICAL
RESPONSE OF RED CHILLI (*Capsicum annum* L.)**

UNDERGRADUATE THESIS



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FACULTY OF MATH AND NATURE SCIENCE
DEPARTMENT OF BIOLOGY
BIOLOGY STUDY PROGRAM
2019**

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Submitted to Universitas Negeri Surabaya
to fulfill requirements of
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By

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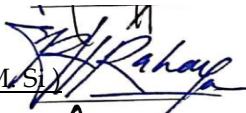
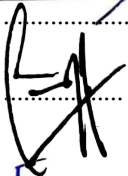

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FOREWORD

Praise and gratitude the author prays to Allah SWT who has gave His grace and guidance so that the thesis entitled " The Effect Of Local Microorganism From Golden Snail And Different Water Levels With The Addition Of Mycorizes On The Anatomical And Morphological Response Of Red Chilli (*Capsicum Anuum* L.)" can be completed as one of the requirements for obtaining the degree. Bachelor of Science (S.Si) in Biology at Universitas Negeri Surabaya.

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The writer realizes that the preparation of this thesis is still far from perfect. Therefore, constructive advice and suggestions from various part are expected to improve the research. The writer hopes that this thesis will be useful for the readers. That's all I can say, thank you.

Surabaya, 17 May 2019

Writer

ABSTRACT

THE EFFECT OF LOCAL MICRO ORGANISM FROM GOLDEN SNAIL AND DIFFERENT WATER LEVELS WITH ADDITION OF MYCORRHIZA ON ANATOMIC AND MORPHOLOGICAL RESPONSE OF RED CHILI PLANT (*Capsicum annum* L.)

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Red chili as vegetable commodity that much used by the people of Indonesia and in its cultivation business depends on the level of water availability. One effort that can be done in overcoming this problem was by utilizing the role of local micro organisms from golden snail supported by the administration of mycorrhiza. This research aim to know the interaction effect from local micro organisms of golden snail and water levels that were different with the addition of mycorrhiza on anatomic and morphological response of red chili plants. This research was an experimental study using Randomized Block Design (RBD) with two vectors, namely the concentration of local micro organisms from golden snail (0 ml / L, 25 ml / L, 50 ml / L and 75 ml / L) and different water levels based on measurements field capacity (100%, 75%, 50% and 25%). In this study there were 3 repetitions to obtain 48 treatment units. The parameters observed included anatomical parameters (stomata and trichome density) and morphological parameters (plant height, number of leaves, wet biomass, root length, percentage of mycorrhiza

*infection and relative water content of leaves). The data obtained were analyzed using two-way ANOVA and continued testing using the Duncan test. The results showed that there was an interaction effect between the administration of local micro organisms from golden snail and different water levels with the addition of mycorrhizae to plant height, wet biomass, relative leaf water content and stomata density. The concentration of local micro organisms from golden snail and water levels that have a significant effect on the parameters of plant height, wet biomass, relative water content of leaves was concentration of 75 ml / L with a water level of 25%. Whereas in the stomata density parameter the concentration of local micro organisms from golden snail and water levels that have a significant effect was the concentration of 25 ml / L with a water level of 25%. However, there was no significant effect of the interaction between the concentration of local micro organisms from golden snail and water levels that are different from the addition of mycorrhiza to the response of red chili (*Capsicum annuum* L.) in the parameters of leaf number, root length, percentage of infection and leaf trichome density.*

Keywords: *Red chili (*Capsicum annuum* L.), local micro organism of golden snail, water levels, mycorrhiza*

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