

APPLICATION OF AUXIN ON ADVENTITIOUS ROOT FORMATION
AND GROWTH OF TOMATO SUBJECTED TO FLOODED CONDITION

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BIOGRAPHICAL SKETCH

The author, Jhomas S. Manalili was born on the month of July 19th nineteen hundred and ninety three at Brgy. Liberty, Pantabangan, Nueva Ecija. He was the second older child of Mr. Reynaldo S. Manalili Sr. and Mrs. Rosalinda S. Manalili. He has one older brother named Jimmy while his four younger brothers and sister named Reynaldo Jr., Jaylord, Jericho and Jennilyn.

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ABSTRACT

MANALILI, JOMAR SORIANO, Department of Crop Science, College of Agriculture, Central Luzon State University, Science City of Muñoz, Nueva Ecija, Philippines, August 2019, **APPLICATION OF AUXIN ON ADVENTITIOUS ROOT FORMATION AND GROWTH OF TOMATO SUBJECTED TO FLOODED CONDITION**

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A pot experiment was conducted to evaluate the effects of Alpha Naphthalene Acetic Acid (ANAA) on growth and survival of tomato under flooded conditions. Specifically, it aimed to evaluate the effects of ANAA in adventitious root formation, to determine the contribution of AR in flooding tolerance of tomato, and to identify ANAA concentration that will give highest yield of tomato. The treatments were water regime as main plot (non-flooded, 5 days flooded) and concentration of ANAA (0%, 5%, 10%) as sub-plot. Treatments were arranged in RCBD with three replications.

A 35-day old tomato plants subjected to five days flooding was able to promote AR initiation but not elongation. Thus, to achieve the target length of adventitious roots plants were subjected again to flooding at 2 days flooding and 3 days flooding wherein plants showed sign of wilting after two days and three days; hence, plants were removed from flood one day after. Plants were then subjected to flooding but died within a day without adventitious root elongation.

Overall the result of the study showed that growth and survival of tomato plants were negatively affected by flood stress. Auxin, on the other hand, did not affect all parameters (growth, yield and survival) except number of adventitious roots. However, the

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