ON-FIELD INOCULATION FOR THE DECOMPOSITION OF CROP RESIDUE IN LOWLAND RICE PRODUCTION

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BIOGRAPHICAL SKETCH

Orlando N. Landingin Jr. was born on December 16, 1998 in Ilog Baliwag, Sto. Rosario Sto. Domingo Nueva Ecija. He is the first child of the two children of Mr. Orlando Landingin Sr. and Mrs. Meddie Landingin.

He finished his elementary education at the Curva Elementary School on 2011 and his secondary education at the Sto. Domingo National Trade School on 2015.

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LANDINGIN JR, ORLANDO, N., Department of Soil Science, College of Agriculture, Central Luzon State University, Science City of Munoz, Nueva Ecija, Philippines, **December 2019, ON-FIELD INOCULATION FOR THE DECOMPOSITION OF CROP RESIDUE IN LOWLAND RICE PRODUCTION.**

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Recycling of crop residues in agriculture through the use different decomposer can change microbial processes, which affect nutrient availability and hence crop yield. In depth studies on the characteristic of crop residue decomposition are of great importance for achieving sustainable agricultural development. The aim of the study was to determine the mass loss and chemical changes during the decomposition of crop residues in an open field; determine the effect of composted crop residue in soil properties; and quantify the rate of decomposition of crop residue by the different biological decomposers. Decomposition of crop residue was studied by using three different treatments, (T1) Control (T2) *Collembola*, (T3) *Trichoderma*, and (T4) Effective Microorganism. Low land rice production located at Brgy. Palusapis, Scince City of Munoz, Nueva Ecija was the experimental site used in the study.

Mass loss of crop residue decreased gradually as the decomposition rate increased over time. The parameters in mass loss showed that treatment with *Collembola*, Trichoderma, and EM have no significant difference from each other. However, control (T1) showed a significant difference from the other treatments, wherein treatment with *Collembola* (T2) had the lowest mass loss.

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