Abstract

Poteran Island, Sumenep, Madura has made from limestone soil and red mediterranean soil, causing tend to be alkaline, so the phosphorus element bound by Ca unsure. One group of microorganisms that are able to change it is mold. The aim of this research is to know the genera of phosphate solubilizing molds from Poteran Island and the potency to suppress of soil pathogenic mold without causing infection to tobacco under in vitro condition.

Isolation conducted in five different spot, then incubated in the laboratory of Biology ITS. Pure isolate tested by selective medium of Pikovskaya. Then, conducted with two potency tests, the antagonistic test toward pathogenic mold F. oxysporum, and pathogenicity test toward tobacco leaf Prancak 95 var.

The result shows, only four isolate (A, B, C, D) that appeared the halozone form, estimated to Aspergillus genera, with the mean of soluble phosphorus index (SPI) of each isolate: A=0.15; B=0.13; C=0.06; D=0.08. P-available concentration that resulted from each isolate: A=9.27; B=10.24; C=6.09; D=4.21 ppm. All isolates estimated have an antagonistic disposition with inhibitory (I) value for isolate A=0.5065; B=0.435; C=0.6305; D=0.5393. Isolate A and B are estimated pathogen, but isolate C and D are didn’t shows any causes on tobacco leaf.

Keywords: phosphate, mold, Poteran Island, antagonists, pathogenicity.