

***EFFECT OF *Metarhizium* sp. AND BIOPESTICIDE PALM OIL EMPTY  
FRUIT ON POPULATION AND MORTALITY SUGARCANE URETHRAL  
PEST IN FIELD A***

***(CASE STUDY AT PT PERKEBUNAN NUSANTARA XI JATIROTO)***

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***ABSTRACT***

*PTPN XI Jatiroto is a State-Owned Enterprise, where the main commodity at PTPN is sugarcane. Sugar production at PTPN XI Jatiroto from 2016 to 2020 tends to decrease. One of the causes of decreased sugar production is urethra pests, so it is necessary to control urethra pests. In this study, alternative pest control that is environmentally friendly can be done by utilizing *Metarhizium* sp. and as soon as liquid the empty palm fruit bunches. The purpose of this study was to change the effect of applying biopesticides as soon as possible to empty oil palm fruit bunches and *Metarhizium* sp. on population and mortality of sugarcane urethra in plantation A PTPN XI Jatiroto. The research method used in this study was a non-factorial randomized block design and continued with the smallest real difference 5% test with 3 treatments and 10 replications. Parameters in this study were urethra population, mortality, and physical changes. The results of this study are that *Metarhizium* sp. and liquid smoke biopesticides of empty oil palm fruit bunches have an effect on sugarcane pest populations. Application of *Metarhizium* sp. showed a higher proportion of mortality compared to the liquid smoke of empty palm fruit bunches of 77%, while the proportion in the application of biopesticide liquid smoke of empty palm fruit bunches was 71%. Physical changes of urethra after application of *Metarhizium* sp. namely the color changes to green with a hard and stiff texture, while the physical changes of urethral pests after the application of liquid smoke biopesticides of empty palm fruit bunches change to black with a soft/wet and shiny texture.*

***Keywords:*** *urethral pests, mortality, metarhizium sp, biopesticide*