THE SENSITIVITY TEST OF SEVERAL ANTIMICROBIAL AGENTS TO *Escherichia coli* THAT CAUSED MASTITIS IN DAIRY CATTLE AT AROUND OF SUKA MAKMUR DAIRY COOPERATIVE GRATI PASURUAN

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ABSTRACT

The aim of this study was to find out the sensitivity of several antimicrobial agents to *Escherichia coli* that caused mastitis in dairy cattle at around of Suka Makmur Dairy Cooperative Grati Pasuruan. Twenty five *Escherichia coli* isolates from milk samples of dairy cattle at around of Suka Makmur Dairy Cooperative which were showed the positive result of *California Mastitis Test* used in this study. The sensitivity test was carried out by *Kirby-Bauer* method. Antimicrobial agents to be tested were penicillin 10 IU, ampicillin 10 μg, oxytetracycline 30 μg, gentamicin 10 μg, ciprofloxacin 5 μg, carbenicillin 100 μg and sulfamethoxazol 25 μg. Disc of these antimicrobial agents were placed on the cultures of *Escherichia coli* at the surface of MHA media, incubated at 37^0 C for 24 hours. The diameter of inhibitor area around the disc, measured on mm and compared to the standart of NCCLS.

The sensitivity test result that *Escherichia coli* were 100% sensitive to gentamicin and resistant to penicillin. The resistance grade of *E.coli* to the other antimicrobial agents followed by carbenicillin (52%), ampicillin, oxytetracycline and sulfamethoxazol (48%), and ciprofloxacin (12%).

Key words : sensitivity test, antimicrobial agent, *Escherichia coli*, mastitis