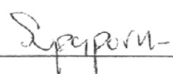
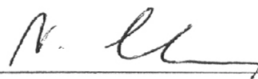


Supaporn DaDong 2006: Anatomy and Treatment of Dry Sludge from Kasetsart University Dairy Center by *Eudrilus eugeniae*. Master of Science (Zoology), Major Field: Zoology, Department of Zoology. Thesis Advisor: Associate Professor Nantaporn Charubhun, M.S. 98 pages.

Results of the anatomy study of *Eudrilus eugeniae* showed that there are eight setae on each segment, arranging in four pairs of ventrolateral form. The clitellum is on 14th to 18th segments, a pair of female pores on the 14th segment and a pair of male pores at the joint of the 17th and 18th segment. The alimentary canal is a straight from the mouth upto the anus. Four pairs of pseudoheart are found for vascular system. In the study of reproductive system, 2 pairs of testicles in the lobe form are found at the posterior faces of the 10th to 11th segment and 11th to 12th segment septa, 2 pairs of large seminal vesicles are on 11th and 12th segments and the prostate gland is in the form of euprostate which looks like finger. Two ovaries are found on the posterior face of the 12th and 13th segments and 2 pairs of seminal receptacles on the 10th and 11th segments. For the purpose of treatment of dry sludge, the five different ratios of carbon to nitrogen (C/N ratio) of mixed dry sludge and coconut fibre of 25:1,30:1,35:1,40:1 and 45:1 are experimentally compound. Results of the study showed that C/N ratios significantly affect the efficiency of media conversion, it was found that the 25:1 C/N ratio is significantly different from the other ratios ($p < 0.05$). It was also found that C/N ratios significantly affect the efficiency of the compost recovery, the 40:1 C/N ratio is significantly different from the other ratios ($p < 0.05$). After treatment by the worms, the C/N ratio decrease to 11.10:1,10.92:1, 8.66:1,10.55:1 and 10.82:1, respectively. The contents of nitrogen, phophorus and potassium after treatment are increased in every experimental units. It was found in this study that after vermicomposting, the contents of nitrogen increased from 1.40, 1.16, 1.04, 0.90 and 0.70 % to 1.70,1.78, 2.08, 2.14 and 2.21 %, respectively. The phophorus contents increased from 0.61,0.67, 0.63,0.53 and 0.50 % to 0.95,0.98,0.94,1.07 and 0.99 %, respectively and potassium contents increased from 0.75,1.00,1.15,1.34 and 1.59% to 0.99,1.35,1.20,1.69 and 1.65 %, respectively.



Student's signature



Thesis Advisor's signature

14 / Dec / 06