RATING OF BIOTHERMAL PROCESSING IN BIOMASS

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Summary. The aim of the research was to explore the effectiveness of anaerobic method, especially in microbiological interest for disinfection of the waste of animal husbandry and possibilities of its usage in the active biological gas reactor in Lithuania.

The research conducted through the year 2000 – 2002 is relevant and newsworthy, because in Lithuania it was carried out the first time. The impact of biological gas reactor on the microorganisms' disinfection in liquid dung and manure was studied.

S. enteritidis genus was determined when the biomass had been taken from manhole before processing and incubated at +43 0C temperature. After 45 days S. enteritidis genus was distinguished repeatedly.

Microbiological analysis under laboratorial conditions showed S. enteritidis in the biomass, processed with the biogas reactor at +50 oC temperature; however, Salmonella microbes were inactivated completely in +70 oC temperature. Because of favourable conditions for microfungi growing (humidity and proper temperature), 8 genuses of microfungi before and 10 – after the biothermal processing were found.

The performance of biogas reactor on the biomass enables to break the chain of zygotic diseases to some extent and to use the produced gas as an energy source for industrial needs.

Keywords: biological gas (biogas) reactor, bacteria, parasites, microfungi.