

Summary

The paper presents microbiological characteristics of sewage sludge derived from the mechanical-biological sewage treatment plant and farmyard manure as well as composts manufactured from them. In the performed experiment, four types of composts were analyzed. The first of them comprised the sewage sludge alone, the second one – was made up only of farmyard manure, while the remaining composts were prepared by mixing the above-mentioned bio-wastes in the following proportions: 75% sewage sludge + 25% farmyard manure and 50% sewage sludge + 50% farmyard manure. The next stage of experiments involved analyses of the composts incubated with soil. The following assays were carried out in the experimental composts and mixtures of soil and composts: counts of *Salmonella* sp., *E. coli*, *Clostridium perfringens*, total counts of bacteria, fungi and actinomycetes on selective media employing the plate method. The performed investigations revealed that the composting process resulted in complete riddance of the *Salmonella* sp. and reduction in the numbers of the remaining groups of microorganisms. Therefore, it can be said that the composted sewage sludge was suitable for the utilization for agricultural purposes in accordance with the Directive of the Minister of Agriculture and Rural Development of October 2004. Moreover, it was found that, as early as 60 days after the introduction of composts into the soil, counts of the majority of the analyzed groups of microorganisms (with the exception of actinomycetes and *E. coli*), including pathogenic bacteria from the *C. perfringens* genus, were found reduced. The obtained research results proved that the introduction of bio-wastes into the soil may decrease survivability in the natural environment of certain pathogens; hence it is a good method of utilization of this organic material.