

SEARCH TECHNOLOGIES FOR RESTORATION OF SOIL POLLUTED AGRICULTURE

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Abstract

Animal waste considered to be traditional organic fertilizers, but in the " open " form to make them acceptable to the fields due to the presence of pathogenic organisms, pathogens of parasitic diseases , toxic substances and other pollutants.

In this regard, relevant scientific and practical direction is the development of effective technologies disposal of organic waste. For economic and environmental safety parameters preferably biotechnological techniques are based in particular on the microbial degradation of organic substances and antagonistic effects on pathogenic microflora.

This paper presents the results of using the yeast family Saccharomycetaceae for recycling solid manure of cattle.

The results of these studies show the effectiveness of the use of yeasts for rapid recycling of organic waste. Within a few days after the treatment mentioned specific odor removal, due to the ability of these organisms to assimilate nitrogen from urea and render the substrate of the bacteria causing anaerobic putrefactive processes accompanied by emission of toxic gases (ammonia, hydrogen sulfide , etc.). The use of microorganisms significantly reducing microbial contamination of the substrate. Thus, the number of coliform bacteria was less than 1 lg CFU / g, against 6,3 lg CFU/g in the control and the initial substrate. Salmonella in processed substrate did not show up in the control of their content was 6,1 lg CFU/g.

The use of microorganisms for manure prevented the loss of nutrients. Nitrogen, phosphorus and potassium treated substrate was 3.7, 2.6 and 0.38 %, respectively, untreated - 2.2, 2.1 and 0.3%.

The content of toxic elements in the treated substrate was at the MPC, pesticide residues were not detected.

Keywords: Animal waste, treatment, pathogenic organisms, environmental protection, pesticide