

**Abstract:**

Biogas plants are installations for converting of biomass to produce biogas, which is a valuable energy source if a proper management of an anaerobic process is kept. In the Czech Republic are mainly agricultural biogas plant.

This work is focused on evaluation of data obtained from a specific biogas plant, which is located in the town Úpice. This plant processes biodegradable waste. The aim of this study was to determine which waste processed are beneficial for the production of biogas.

The Data were analyzed by statistical program R. The method used was cluster analysis. For comparsion of clusters was used ANOVA method (analysis of variance).

The results of data analysis showed a positive effect on the production of biogas by waste from industrial processing of potatoes, grass and corn silage, rumen contents and dairy waste.

**Key words:**

Biogas, plant, anaerobic, fermentation, biodegradable, waste, data analysis