

Paper 207-2010 Research in Agriculture

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Abstract

This paper will describe research without SAS in Agriculture and then everyone could feel its better when using SAS.

Introduction

The sewage sludge is becoming increasingly a major problem for municipalities around the world because the quantities produced are still growing with increasing population density of cities. An alternative to their disposal is the use in agriculture and forest areas as organic fertilizer. According to Rocha et al (2004), the sewage sludge is used in several countries in crops forest, especially in temperate regions. In tropical countries, its use is still limited and little studied.

The goal of this paper was determining the minimum number of soil samples to be collected in a fertilized area with sewage sludge which, after analyses, represent with high confidence, the chemical composition of the analyzed soil.

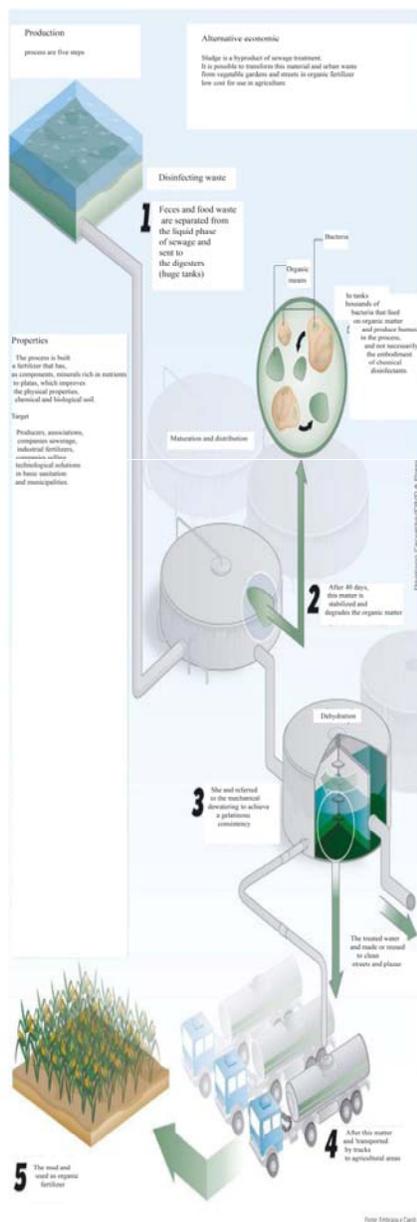
Methodology

The use of sewage sludge and its potential use of fertilizer and soil conditioner as well as its positive influence on plant growth, are possibilities of linking profit to the producer by increasing crop yields and reduced use of mineral fertilizers, with gains for the generators of mud, for the realization of appropriate methods and more economical to final disposal of this waste (Guedes et al., 2006).

Soil was classification with Type Quartzissamment. The experimental design followed the random block method with four repetitions, in an outline of subdivided parcels, where the parcels were made of sewage sludge doses (2,5; 5,0; 10,0; 15,0 e 20,0 Mg ha-1) and the sub parcels of number of samples collected (5, 10, 15, 20 e 25).

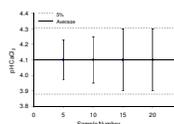


Figure 1. Graph, screen capture, or other figure.



Results

We can be concluded that, in order to determine pH and H+ Al+3 of the variables, after applying 20 Mg ha-1, it is necessary to collect, at least, 5 simple samples as a base for a reliable composed sample. To determine the values of K, Ca and Mg, with high confidence, 20 or more simple samples were needed to make such a composed sample.



Conclusions

A survey of the sewage sludge is possible in the long term, because such studies should be performed by at least ten years and involve all components of the agroecosystem, such as effects on the community of soil organisms, the physical and chemical properties of soil on survival of human pathogens in plant development and environmental contamination due to possible pollutants (heavy metals and others) that may exist in the mud, especially for those coming from highly industrialized cities. (Embrapa Environment, 2009)

The use of sewage sludge as an alternative input in the production areas is an important factor for a higher quality of environmental management and, simultaneously, has a lower cost in terms of agricultural economy, confirmed by Zapparoni et al (2007). Thus, one can infer that the Bissoli has shown advantages of both environmental and economic order.

By using SAS tools, studies and data analysis performed with sewage sludge could be better optimized, leading to a long-term planning, with designs faster and more accurate in this research area of great environmental and social relevance.



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