ABSTRACT

The research wants to contribute to propose methodologies for quality control of the treatment of organic solid waste, which are generated on a large scale in more than 50% of the total waste at the national level.

It is to identify the segregation components rich in carbon and nitrogen that are important for the generation of a very good quality compost, this should be achieved through a good homogeneous mixture and combining the residues identified to achieve such a relationship optimal C / N in a range of 30 to 40 (wet material) for the type of waste generated in each city. For the experiment, variants of 30 (CB), 35 (CR) and 40 (CA) were used, which indicate the variation of the C / N, Low Combination (CB), Regular or average combination (CR) and High combination (AC) to know the proportions of the treatment.

During the treatment process for all treatments undergoing monitoring of pH parameters that reaches values above 8 that produce precipitation in some elements of nutrients such as Potassium and Calcium (hydroxide formation) and Temperature in which it reaches a maximum average standard at 30 ° C in treatment week 10; The moisture content also behaves according to the comparative quality parameters of other countries that reach up to 40%, the amount of organic matter is maintained by an average of 20%, while for the dry matter components of Nitrogen reaches an average of 1.5% and Phosphorus calculated from the Phosphate has a value greater than 0.5% at the end of the composting process the q had better result was the CA treatment, compared to the others and with the conventional compost.

Taking the laboratory data, a germination test was performed with the Lepidium Sativum species, and an approximate 96% growth and plant development ratio was determined compared to the CA treatment. It was concluded that the dry basis C / N distribution in an average of 7, which is close to international quality standards composting.

Research is an initiative to improve the quality and process control composting and obtain parameters that allow the compost to be a product used in agriculture and agribusiness.