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DEVELOPMENT AND EVALUATION OF A PORTABLE
HOUSEHOLD COMPOSTER

RESEARCH STUDY

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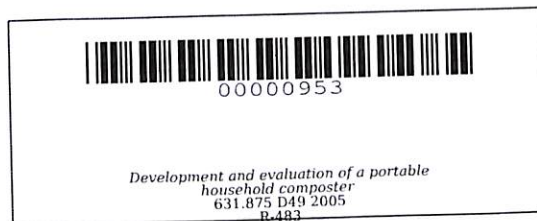
CAVITE STATE UNIVERSITY
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DEVELOPMENT AND EVALUATION OF A PORTABLE HOUSEHOLD COMPOSTER

**A Research Study Presented to the
Faculty of the Science High School
College of Education
Cavite State University
Indang, Cavite**

In Partial Fulfillment of the Requirements for Graduation



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ABSTRACT

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The study on “Development and Evaluation of a Portable Household Composter” was conducted at the Faculty Village, Cavite State University, Indang, Cavite from August 2004 to February 2005. It aimed to develop, fabricate and evaluate a composter that can be used for composting household garbage. The composter was evaluated in terms of retention time.

The shortest retention time recorded was 7 days with a stirring duration of 10 turns applied two times a day (8am and 5 pm). This indicates that the garbage loaded on Saturday which is market day can be harvested on the next market day (Saturday) which is also the schedule for the next loading.

The temperature of the compost materials is affected by the duration and frequency of stirring the substrate. The highest temperature recorded was 51.4 deg. C.

Generally, there was a decrease in the Carbon to Nitrogen (C/N) ratio of the final product. The range of 18.6 to 31.2 is within acceptable limit for compost and composting.

The Nitrogen-Phosphorus-Potassium (NPK) content of the compost product is sufficient for a good soil conditioner.

The recovery rate of the composter is 25.7 percent (air-dried compost).

The cost of the machine was P1,250.00

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A research study presented to the faculty of the Science High School, College of Education, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for graduation under the supervision of Dr. Camilo A. Polinga

INTRODUCTION

Garbage is undoubtedly the most pressing problem of the urban centers of the country today aside from the economy. This can be attributed to the increasing number of people living in the metropolis, the declining capacities of landfills and the extreme difficulty of finding new sites for dumpsites. An average Filipino generates ½ kilogram of garbage daily (Polinga, 2001). In Metro Manila alone, it is estimated that 5,800 metric tons or 2,800 cubic meters of garbage is generated everyday, and out of this volume, only 73% is actually collected with the rest ending up in rivers and drainage canals (Daily Inquirer, June 19, 2001 as cited by Polinga, 2001). This causes serious flooding during rainy days. Without collection, garbage quickly piles up in mountains along the street which become an eye sore and causes considerable traffic. This garbage also generates