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IZATION OF ACACIA BARK FIBER AND PINEAPPLE
LEAVES' FIBER IN THE PRODUCTION OF PAPER

RESEARCH STUDY

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**UTILIZATION OF ACACIA BARK FIBER AND PINEAPPLE
LEAVES' FIBER IN THE PRODUCTION
OF PAPER**

**A Research Study Submitted to the Faculty of the
Science Highschool,, College of Education,
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**In Partial Fulfillment of the Requirements
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ABSTRACT

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Adviser: Engr. Renato B. Cubilla

This study entitled "Utilization of Acacia Bark Fiber and Pineapple Leaves' Fiber in the Production of Paper" was conducted at Calumpang Cerca Indang Cavite from December 2005 to January 2006. Generally, it aimed to utilize acacia bark and pineapple leaves' fiber in the production of paper. Specifically, it aimed to determine the physical characteristics of the produced paper; to evaluate the general acceptability of the produced paper; and to determine the cost analysis of the produced paper.

The treatments used were T₁ (100% acacia bark fiber paper), T₂ (50% acacia bark fiber and 50% pineapple leaves' fiber paper), and T₃ (100% pineapple leaves' fiber paper). These treatments were replicated three times.

The study shows that the acacia bark fiber and the pineapple leaves' fiber are good combination in making paper. This proves to be one of the best treatments (with T₃- pineapple leaves' fiber paper) in terms of color, flatness, general appearance and general acceptability. However, in terms of cost per sheet, T₁ (acacia bark fiber paper) proved to be the best among the three.

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INTRODUCTION

Acacia (*genus Acacia*) is a fast growing tree that grows well in a poor soil (such as limestone and clay). (Tan, 2001) The leaves of acacia are pinnate in general. The small flowers have five small petals, which are almost hidden by the long stamens and are arranged in globular and cylindrical clusters. They are yellow or cream in color in most species. Acacia yields gum arabic, tannin, timber and catechu. (Acacia, 2005)

Pineapple (*Ananas comosus*) is a tropical plant. This is a bromeliad (*family Bromeliceae*), a short, herbaceous perennial with 30 (or more) long, spined, pointed leaves surrounding a thick stem. Pineapple yields fruit, which resembles a pinecone. (Pineapple, 2005)

Paper is a thin sheet of compressed vegetable cellulose fibers. Paper is used for writing and printing, for wrapping and packaging, and for a variety of special purposes ranging from the filtration of precipitates from solutions to the manufacture of certain types of building materials. Paper is a necessity in modern civilization, and the development of machinery for its high-speed production has been largely responsible for