



De La Salle University – Dasmariñas

**EASY DECOMPOSING THERMOSETTING PLASTIC PARTS FOR
VEHICLE USING MISCANTHUS PLANT**

Presented to the Faculty of College of Technology

De La Salle University – Dasmariñas

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Bachelor of Science in Industrial Technology

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**Abstract****Name of Institution: De La Salle University - Dasmariñas****Address: Dasmariñas, Cavite****Title: EASY DECOMPOSING THERMOSETTING PLASTIC PARTS FOR VEHICLE USING MISCANTHUS PLANT****Authors / Proponents: Lariosa, Brian L.****Navales, Andrean S.****Funding Source: Parents****Cost: Php 1864.75****Date Started: January 2001****Date Completed: March 2002****Objective of the Study:****General**

- To implement the application of Easy Decomposing Thermosetting Plastic Parts for Vehicles using Miscanthus Plant here in the Philippines instead of using expensive materials in manufacturing cars.

Specific

- To provide an alternative for car parts that is cheaper, stronger, stiffer and easy to adopt in manufacturing process.
- To give job and livelihood for local farmers here in the Philippines by planting Miscanthus plant.
- To reduce the use of fossil fuels plastic which is one of the causes of pollution.

**Scope and Coverage:**

It is focused in the discovery and application of the addition of mischantus plant in manufacturing biodegradable plastics. This new discovered technology would improve and broaden the industry of plastic production. The research also tapped the effects and changes that it will bring in the environment.

Here in the Philippines, biodegradable plastics are being used in limited ways like packaging and sealing items and foods. This study will introduce biodegradable plastic as an alternative material for car parts for car manufacturers. With the vast growing car production, this could be a good substitute for its material. Limited data are presented because documents are from the United Kingdom and not available here in the Philippines.

Methodology:

The proponents, search for related topics biodegradable plastics in the World Wide Web, since the topic is new in the Philippines. They visited websites of researchers regarding miscanthus plant and the discoverer of strengthening biodegradable plastic.

As the authors of this thesis searched the topic, they have reached the person whom discovered the easy-decomposing plastic parts for vehicles using miscanthus plant. The authors communicated **Dr. Nick Tucker, a professor in University of Warwick, in United Kingdom** through e-mail and



De La Salle University – Dasmariñas

seek for help about the topic. Dr. Nick Tucker replied for our request and forwarded the proponents to his colleague **Prof. Mark Johnson**.

The authors also consulted books regarding biodegradable plastics and conventional plastic, its components, kinds and characteristics.

Major Findings:

By adopting this new and advance technology here in the Philippines, It will bring many opportunities, to the plastic and car manufacturers, and also to the local farmers of our country.

Conclusions:

It is proven that biodegradable plastic can be used as an alternative material for vehicle parts instead of alloys and fiberglass that is by adding Miscanthus plant to increase its strength. It is cheaper, has high quality, environmentally friendly and can be easily fabricated.

Recommendations:

Base on the researchers birds eye view. The study proves that easy decomposing thermosetting plastic parts for vehicle using Miscanthus plant can be adopted here in the Philippines. Miscanthus plant can propagate here in the Philippines because it can adapt easily to any climate. It would bring livelihood for local farmers and opportunity for plastic manufacturers to build quality easy decomposing thermosetting plastic vehicle parts.