



RESEARCH DEVELOPMENT AND EXTENSION PROPOSAL

PANGASINAN STATE UNIVERSITY

BASIC INFORMATION

RESEARCH TITLE	<p>Program: Production and Utilization Technologies for <i>Nypa fruticans</i> <i>Projec1: Production Technologies for Nypa fruticans</i> 1. Germination and Growth Performance of Nipa Seeds as Influenced by Water and Watering Schemes Study 2. Growth and Development of Nipa Seedlings using Different Types of Substrate <i>Project 2: Utilization technologies for Nypa fruticans</i> 1. Eco-design, Construction and Testing of <i>Nypa frutican</i> Fruit Stalk Tapper 2. Eco-design. Construction and Testing of <i>Nypa frutican</i> Carbonizer 3. Development and Testing of <i>Nypa frutican</i> biochar 4. <i>Nypa frutican</i> nut seed as source of oil 5. Utilization of <i>Nypa frutican</i> in Household Salt-making 6. Development of <i>Nypa frutican</i> Shake</p>			
PROPOSERS	Irene A. De Vera	Lorena F. Aquino	Alvin Soriano	Larry Santos
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IMPLEMENTING AGENCY	Pangasinan State University			
PROJECT DURATION	January- December, 2021			
LOCATION	Coastal municipalities and cities of Pangasinan			
BUDGET REQUESTED	P 600,000.00			
RATIONALE	<p>The Covid 19 pandemic made affected everyone. I made people more conscious of their health and wealth. Some rely on vitamins offered in the pharmacies and others resort to natural remedies from plants. Some were terminated from their jobs and worried for their future. Majority of jobless people resorted to go back to their respective provinces to find resources which could benefit them economically and also make them healthy.</p> <p>One of the plants that are abundant especially in coastal areas and can be seen growing in brackish swamp waters are the <i>Nypa fruticans</i>. The palms grow fast with less supervision and maintenance. People with knowledge on nipa regard it as an important crop with many commercial and industrial uses [1].</p> <p>Every part of the shrub from the roots, trunk, bark, leaves, flowers, fruit flesh, seeds and pods can be utilized by humans. Appropriate technologies are sought after for the utilization and optimization of nipa. Hence, this research program is being proposed as a respond to the United Nations Sustainable Goal Nos 1, no poverty; 2, zero hunger; 3, good health and well being especially this covid 19 pandemic); 10, reduced inequality; and 11, sustainable cities and communities.</p> <p>Nipa Palm or <i>Nypa fruticans</i>, a native to the coastlines and estuarine habitats of the Indian and Pacific Oceans. The nipa palm is one of the most important economic Philippine crops. It differs from most palm in the lack of an upright stem, trunkless, developing inflorescences at 1 meter height. The leaves are commonly use for thatching. Leaflets are used for making hats, baskets, mats, raincoats, wrappings for suman. The midribs are used for making brooms; the petioles for fuel. (Philippine Medicinal Plants, 2020). Others are yet to explore, hence, these studies are being proposed.</p>			
OBJECTIVES	<p>General Objective: To explore production and utilization technologies for <i>Nypa frutican</i></p> <p>Specific Objectives:</p> <ol style="list-style-type: none"> To determine the germination percentage, growth performance and watering scheme best for <i>Nypa frutican</i> To measure growth performance of Nipa Seedlings on different types of substrates To eco-design, construct and test the <i>Nypa frutican</i> Fruit Stalk Tapper To eco-design, construct and test the <i>Nypa frutican</i> Carbonizer To develop and test the <i>Nypa frutican</i> Biochar To test <i>Nypa frutican</i> seed as source of oil To utilize <i>Nypa frutican</i> in household salt making To develop and test the <i>Nypa frutican</i> Shake 			
METHODOLOGY	<p>The studies are mostly experimental design on the production aspect and mostly developmental on the utilization aspect. Appropriate statistical treatment will be employed to specific study/ies.</p> <p>Standard process and procedures shall be noted and observed.</p>			

REFERENCES	Plants for a Future (2010-2020) <i>Nypa fruticans</i> - Wurmb. Retrieved: https://pfaf.org/user/Plant.aspx?LatinName=Nypa+fruticans Philippine Medical Plants Retrieved: http://www.stuartxchange.org/Nipa.html <i>Nypa fruticans</i> (<i>Nypa Palm</i>) Retrieved: https://www.cabi.org/isc/datasheet/36772 Prasad, N. (2013) https://www.hindawi.com/journals/ecam/2013/154606/	
EXPECTED OUTPUT	The following are the expected output: 1. Handbook or guidebook on the production and utilization technologies for <i>Nypa fruticans</i> 2. Utility models	
POTENTIAL IMPACT	Environmental sustainability and reduced inequity.	
MILESTONE	Target Date	Description
	January - February 2021	Planning and preparation
	March – July 2021	Data Gathering
	August - October 2021	Interpretation of Data
	October – November 2021	Preparation of report
	December 2021	Submission of report
USERS OR BENEFICIARIES	Nipa farmers, Fishing Community Scientific Community	
DETAILED BUDGET REQUIREMENT	Study 1	75,000
	Study 2	75,000
	Study 3	75,000
	Study 4	75,000
	Study 5	75,000
	Study 6	75,000
	Study 7	100,000
	Study 8	50,000
	total	600,000
BRIEF PROFILE OF PROPONENTS		
Environmental Science Faculty		Environmental Science Faculty
Fisheries and Aquatic Resources Faculty and Staff		Biological Science and Education Faculty
SUBMITTED BY:		
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others		

NOTED BY:

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