

**COLLEGE LEVEL STUDY PROJECT**

**STUDENT STUDY PROJECT  
VERMIWASH AS HYDROPONICS MEDIUM  
EXHIBITED IN BALOTSAV-( 29, 30, 31/08/2019)**

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HYDROPONICS WITH VERMIWASH IS an advanced eco-friendly technique to grow plants in a liquid medium. In this technique, we substituted the solid vermi-fertilizer with a liquid vermi-fertilizer called vermiwash. The nutrient medium for hydroponics using vermiwash is prepared naturally by the flow of water through a column containing layers of gravel, soil, decomposing organic material decomposed by earth worms by utilizing a setup called **Vermiwash maker**. The excretory products of earthworms are highly rich in nutrients and can be widely used to grow different varieties of plants. We have done the above technique and exhibited in Balotsav science fare and proposed further to analyze the components of the vermiwash mediums by using different decomposing materials.

As per the data available, Vermiwash is a purely organic solution containing nearly 17 types of essential nutritional elements; it is efficiently used as a hydroponics medium, as a foliar spray, and as an anti-fungal agent to protect the plants from fungal infections, and it contains growth hormones like Auxins and Gibberellins to help in the growth and development of plants. The vermiwash medium is freshly prepared and should not be exposed to light to prevent the growth of Algae. It's a process of continuous flow using the Nutrient Film Technique (NFT). The nutrient solution, i.e., VERMIWASH, is supplied continuously to the plant roots; in the NFT network, the root absorbs the nutrients directly from the flow in the presence of sunlight for the sustainable growth of outdoor plants. In the case of indoor plants, artificial light should be provided. Even though there are some disadvantages, the vermiwash as a nutrient medium gives high yield crop with more resistance and faster growth without using soil.



**LIVE STUDENT STUDY PROJECT  
COCONUT WATER BEST SOURCE OF NUTRIENTS  
EXHIBITED IN BALOTSAV-(29, 30, 31/08/2019)**

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India is one of the most religiously and ethnically diverse nations.

In India, the coconut is accepted for purity and gifted to god at all sacred places. Coconut water is a valuable and rich source of nutrients. In our daily life, we often observe that while gifting coconuts to god, the coconut water is wasted and flowed into the canals, which later gives putrefied smell by decomposition. We were disheartened by this activity and focused ourselves on finding a solution of preserving this nutrient-rich edible food material (coconut water) in the form of pudding by using preservative and solidifying agents so that it can be preserved and consumed for at least one week at low temperatures and can be served as an additional meal.

Nutrient of coconut water	Ingredients used to coconut pudding
1. Total fat -0.2gm	1. Coconut water
2. Sodium -105mg	2. China grass
3. Potassium -250mg	3. Glass of water
4. Total carbohydrates -3.7g	4. sugar
5. Iron -4%	
6. Calcium -4%	
7. Magnesium -6%	

