

# Investigatory project about rice water



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References Abstract This experiment intends to help the farmers, researchers, biologist and hobbyist. If proven effective, they can use this to grow more mongo plants faster and healthier with the help of rice wash. Also, it can benefit our economy about water consumption. Before the investigators did anything in the experiment, they studied what are the variables first. The constant variables are the amount of soil, type of soil, size of plastic cups, type of plant, and area.

The independent variable is the rice height of the plants, color of the leaves, and the length of the leaves. The investigators used four plastic cups in each group and labeled it. Group A will be the control set-up while group B will be the experiment set-up. Both groups were given h cup of soil, 2 mongo seeds and 15 ml. Of solution (Group As solution is water and group Bi's solution is rice water). Each group were watered, by their destined solution, five days. After five days, the investigators tabulated the results and collected the data in group A and group B. The investigators compared it afterwards.

The results were that the effect of the rice wash in the growth of the mongo plant is bad because some of the mongo plant didn't grow and some grows slow. Therefore, it is shown that the rice wash has no significant effect in the growth of mongo the plant. Chapter One- Introduction Background of the Study The investigators chose to use rice wash because they believe rice wash can give benefits to the plants. It doesn't undergo chemical process that is why rice wash give minerals. Instead of throwing the rice wash, people can use it to water the plants to reduce water consumption.

**Statement of the Problem** This investigation intends to determine the answers to the following questions: What is the effect of the rice wash in the growth of the mongo plant? \* What is the effect of the rice wash in the height of the mongo plant? \* What is the effect of the rice wash in the color of the leaves of the mongo plant? \* What is the effect of the rice wash in the length of the leaves of the mongo plant? **Formulation of the Hypothesis** There is a significant relationship between the growth of plants and the use of rice wash. **Significance of the Study** This experiment intends to help the farmers, researchers, and hobbyist.

If proven effective, they can use this to grow more mongo plants faster and healthier with the help of rice wash. **Scope and Limitations** The investigators used eight plastic cups as a container of the plants. They separate the eight plastic cups into two groups, group A and group B. There are four plastic cups in each group. The investigators put two seeds in each cup. They used fifteen millimeters of water for watering the group A, and another fifteen millimeters of rice wash for watering the group B. The investigators placed their experiment at the fourth of Dana Lee Hall building and they observed it for five days.

**Definition of Terms** Absorbed- to suck or take up a substance to a part of whole. Biennial- occurring every two years. C Calories- it is a unit equivalent to the large calorie expressing heat-producing or by a chemical process or producing a chemical effort. Cloudy- uneven in color or texture, having visible material in suspension: murky. Consume- is to engage fully.

**Decomposition-** is to separate into constituent parts or elements or into

simpler compounds. Deficiency- is an amount of lacking or inadequate.

Densities- it is the quantity per unit volume, unit area, or unit length.

Detoxification- s to free from an intoxicating substance in the body or plant.

F Fatigue- the temporary loss of power to respond that is induced in a sensory receptor or motor end organ by continued stimulation. Fortune

Plant- is also known as “ Lucky Bamboo”, rain-forest plants that must be in a well-drained soil or water and pebbles. Hauling- is to exert traction: pull.

Houseplants- are plants grown or kept indoors. Hypersonic- having a higher osmotic pressure than a surrounding medium or a fluid under comparison.

Imbibe- is to absorb or assimilate moisture, gas, light, or heat.

Infestation- is to breed or swarm in or over in a troublesome manner.

Ingested- is to take in for or as if for digestion. Intrigued- is to arouse the interest, desire, or curiosity. Irrigation- it is the supply of water by artificial

meaner. Larvae- it is the immature, wingless, and often wormhole feeding form that hatches from the egg of many insects. Nitrogen- is a colorless,

tasteless, odorless element that as a diatomic gas is relatively inert and

constitutes 78 percent of the atmosphere. O Opaque- is blocking the radiant of energy and especially light. Outstrip- is to go faster or further than.

Over- Fertilizing- the too much of usage of fertilizer to the plants.

Phosphorous- is an element that contains phosphoric compound. Potassium- is a movement metallic element of the metal group. S Starch- it is a white

odorless tasteless granular or powdery complex carbohydrate. Tilling- is to work by plowing, sowing, and raising crops. Vegetative- growing or having

the power to grow. W Weevil- is a kind of beetle that is known as pest to

plants. Xylem- is a complex tissue in the vascular system of higher plants.

## Chapter 2- Review of Related Literature Review of Related Literature

Rice water is organic fertilizers. The introduction of improved rice varieties into a traditional swamp farming system tends to create a situation here the nutrient demands of the crop outstrip the natural ability of the CEO-system to replenish its organic resources. (Sierra Leone, July 1980) The main reason I chose to use rice water to replace fertilizers is because rice water does give more benefits compare to the use of fertilizers. Rice water is a kind of naturally occurred fertilizers and it doesn't undergo chemical process. This can help to reduce the use of electric current and material of industry.

Rice water can act as a natural fertilizer to promote plant growth and replace chemically made fertilizers to save the environment. I continue to experiment for another two weeks. I observed the two plants that are watered by pipe water and rice water. It seems that the plant with the rice water is shorter than the plant with pipe water. This can be explained because as water provide nutrients (minerals) that will accumulate in soils to be concentrated with minerals and make it hypersonic to the plants. Since the soil is hypersonic, it is difficult for the plant to take water for their respiration process. It seems to have a good growth. Amok Hong Hen, May 6, 2011) Rice wash is basically water that is used to wash rice before cooking. It has a high nutrient content that came from the rice. When washed and all this nutrients will go to water if we simply throw it away. (EMMER, 2010) Rice water also contains valuable nutrients for houseplants, using it is also a wonderful way to conserve water and a great way to take less worry out of over fertilizing. The starches from the leftover rice water will help encourage

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beneficial soil bacteria, while the vitamins and minerals will add small amounts of WPAD trigger, phosphorus, and potassium to the soil. Mackey Debbie, July 4, 2013) using? You can conserve water and nourish your household plants at the same time by watering those plants with this rice wash instead of pouring it down the drain. (Ida Eking, February 15, 2011) Rice water is the cloudy water collected from the washing of rice grains before cooking. The particles in this suspension may be nutritious and given that they are so tiny. However this decomposition may reduce variable nitrogen in the soil, which can't be good in the long term. (Unknown Flogger, May 25, 2011) Throw away the rice eater after cooking, assuming that all the calories are thrown away.

To retain nutrients, cook rice in less water and see that the water imbibes into it. (Assassin Diction, October 30, 2009) In the rice water plant, there are three elements- nitrogen, phosphorus, and potassium are ingested by the rice plant is unusually large quantities and are therefore particularly important in producing a high yield in the growth of plant. Rice grown under high management requires large amounts of nitrogen. One crop consumes approximately 20-keg of nitrogen for every ton of yield, making nitrogen the single most important rice nutrients.

It increases and enhances the growth of the rice plant when absorbed during the vegetative phase. Phosphorus deficiency in rice can be recognized by small size of plants, short, underdeveloped root system, low number of tillers, blush green color of leaves and purple color of the lower part of the culms. (Peace Corps Sierra Leone, July 1998) Rice wash is cooked in water. When done, you're left with a bowl of foul-tasting white water called rice  
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wash. Instead of throwing it away, water your plants with it. Rice water contains valuable nutrients for houseplants.

Using it is also a wonderful way to onshore water and a great way to take some of the worry out of our fertilizing. Rice contains starch which gives the rice wash its opaque, white color. One thing to keep in mind, when using water from cooking, make sure the water has cooled to room temperatures before you use it, It's also best to avoid using water that you have added salt to. (Mark Keller, 2011) Rice wash is a fertilizer through the rice wash weevil is the most widely distributed and destructive early season insect pest of rice. Prior studies suggest that infestations of rice water weevil larvae are more severe at low plant densities.