

THE PLANT LAMP CREATED BY THE UTEC UNIVERSITY OF PERU

By Ivan Lawrence White

A lamp working only thanks to a plant and its photosynthesis. This is the innovative creation of a group of students and professors from the University of Engineering and Technology in Lima (UTEC).

Planta Lámpara, invented and developed by these ingenious and creative researchers, works without gas, oil, electric charge or current generators.

The concept of this innovation is born from a real problem occurred in the Amazon rain forest of Peru, when 173 inhabitants from Nuevo Saposoa community remained without electricity as a result of a hurricane which had left 42% of the population in darkness. From this problem, four professors and eight students from UTEC University developed this innovative "off-grid" device to enable the people of these rural areas of Peru to get back to normal life.

Planta Lámpara consists of a wooden box with an in-placed grid of electrodes. The box is then filled with earth and bacteria which creates the bed to host a single small plant. The grid is then connected to a battery that feeds an LED light inserted into an adjustable arm set on the outside of the box. Through this method a first prototype was created and soon followed by other 10 plant lamps, thanks to the support of FCB ad agency, which have been quickly distributed to the inhabitants of Nuevo Saposoa community.

The innovative aspect of this lamp is that to function it needs geo-bacterias, microorganisms living in the soil. The plant released nutrients in the soil meet the microorganisms which in consequence release electrons. This specific type of bacteria then conducts the electricity created from the electrons produced during the metabolism of the nutrients. The electricity produced is then collected by electrodes inserted into the ground.

The produced prototype allows to have a range of two hours of light per day helping the families, for example, to bring light to their children needed for their studies besides being a non-toxic system of producing energy, in opposition to the traditional fire.



For the families of some of the villages of Peru rainforest, likewise all those countries where the current electricity systems do not reach the isolated villages, sunset means darkness and having to suspend all production and social activities including the possibility for students to continue their studies.

If the production of plant lamps is to be successful, UTEC work will not only provide these tools to the forest communities. Plans are already ongoing for the future as this sustainable and low cost solution can be promoted to a larger scale, giving a great contribution to the global ecological development.

To know more

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[Planta Lámpara in Youtube](#)

[Article in RPP News](#)

[Article in elcomercio.pe](#)

[Article in Taringa.net](#)

[Article in BBC.com](#)

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