Modeling Functions in the Conversion of Solar Light to Electricity in the Evergreen Perennial, Musa acuminata, Using as a Base Source of Energy Its Adenosine Triphosphate

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The search for clean, abundant, cost-effective compounds, have led to experiment with green vegetative material to produce electric energy. The hypothesis established that voltage data obtained from Musa acuminate will be mathematically related to temperature changes and the time of the day to determine if it could be used to find a model function. The investigator perforated the trunk of each of three Musa Acuminata plants with copper and graphite and used a multimeter to measure DC electric current generated by them. The generated DC electric current was .28VDC. The great abundance, humidity, and easiness to perforate the trunk of Musa acuminata were a key part in measuring the conversion of solar light into electricity. The researcher measured voltage, temperature, and the hour of the day. The results were used to model functions. To use the properties of Musa acuminata in the production of DC electric energy through the modeling of functions is what drives the investigation. A correlation of data and a descriptive statistic was created to find a direct relationship between the hour of the day and the generated voltage. Mathematically it was proved that temperature does not influence voltage. The hour of the day and the voltage were modeled in three polynomial functions of grade six. This demonstrates that the plants have a function of voltage vs. time that consists of six grade a polynomial. Future investigations will be to develop a grade six mathematical polynomial function that can be applied to all plants to obtain energy.

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