

Application of Empirical Equation $E = mc^2$ in Seed Germination with Special Reference to Guava Seed, Methi Seed and Ocimum Seed: A Theoretical Perspective

Amit Rastogi¹

¹ Research Scientist-cum-Research Assistant Professor-cum-Chief Executive Officer-cum-Director Executive-cum-Senior Director Research
Biogeosciences, An Autonomous Non-Profit, Non-Employed, Non-Government, Non-Sharing Research & Development Organization Solely of Amit Rastogi

Abstract: *Bio-Eco-Bio BioSeeds Germination with specific reference to Guava Seed Methi Seed & Ocimum Seed is discussed by Equation $E(\text{Bio}) = m(\text{Bio}) c(\text{Velocity of Biolight})$ or $v(\text{Velocity of Biolight})$. Where Bio- Eco-Bio Bioenvironment of BioSeed $E(\text{Bio}) = \text{Bioenergy of Germinating Bioseed}$ $m(\text{Bio}) = \text{Biomass of Moist Bioseed}$ $c(\text{Velocity of Biolight})$ or $v(\text{Velocity of Biolight}) = \text{Velocity of Biolight}$ is discussed in terms of Photon or Quanta. Also Discussed by Equation $\text{Biomass BioEnergy in form of BioCell} = \text{Cell Division in Moist Seed \& Biomass Accumulation \& Acceleration upwards (Bioshoot) \& downwards (Bioroot) +Photosynthesis in the Research Review Paper.}$*

Keywords: $E=mc^2$, Seed Germination, Guava Seed, Methi Seed, Ocimum Seed

I. INTRODUCTION

Bio-Eco-Bio BioSeeds Germination Equation with specific reference to Guava Seed Methi Seed & Ocimum Seed is discussed in Research Review Paper here detailed is given below.

Advanced Discussion at Bio-Eco-Bio BioSeeds Germination with Equation $E=mc^2$ (Rudolf Klimek, 2024)

Bio-Eco-Bio BioSeeds Germination Equation with specific reference to Guava Seed Methi Seed & Ocimum Seed

$E(\text{Bio}) = m(\text{Bio}) c(\text{Velocity of Biolight})$ or $v(\text{Velocity of Biolight})$ Bio- Eco-Bio Bioenvironment of BioSeed

$E(\text{Bio}) = \text{Bioenergy of Germinating Bioseed}$

$m(\text{Bio}) = \text{Biomass of Moist Bioseed}$

$c(\text{Velocity of Biolight})$ or $v(\text{Velocity of Biolight}) = \text{Velocity of Biolight in terms of Photon or Quanta}$

In definition to Bio-Eco-Bio BioSeeds Germination Equation $E(\text{Bio})$ is germinating bioenergy in terms of germination whereas $m(\text{Bio})$ is biomass of moist bioseed with $c(\text{Velocity of Biolight})$ or $v(\text{Velocity of Biolight})$ is velocity of biolight in terms of Photon or Quanta. Such equation is derived from Empirical Equation $E = mc^2$. In the derived equation from Empirical Equation $E = mc^2$ where energy & mass are interchangeable or viceversa where velocity of light (c) is required to germinate which is explained in equation is as c^2 simply say as given in equation is $E = mc^2$ where Bioenergy is put equal to Biomass multiply with the square velocity of light. $E=mc^2$ can be explained by germination Guava Seed Methi Seed & Ocimum Seed at Moist soil in Glass Pot with Free Energy Change Equations where mass Bioseed Methi Guava & Ocimum Seed absorbs energy in both ways First Biolight from Bio-Eco-Bio BioEnvironment & Bioenergy from Soil via H-O-H & C H S N O within soil to develop free energy which change which is Free Energy Change tends to Germination.

In Explanation with Germination Equation $E(\text{Bio}) = m(\text{Bio}) c(\text{Velocity of Biolight})$ or $v(\text{Velocity of Biolight})$ Bio-Eco-Bio Bioenvironment of BioSeed c^2 is remains c because of Biolight comes at Unmoist & Moist Bioseed in Glass



Pot in Terms of Photon or Quanta in Single wavelength whereas Bio- Eco-Bio Bioenvironment of BioSeed is BioSoil BioEnvironment of Glass pot where BioSeed is Stayed & BioAir Bio Eco Bio BioEnvironment in which Glass Pot with BioSeed & BioSoil is Stayed. Further Biomass Bioenergy in form of BioCells which is called Biomass BioEnergy of Germination from Bioseed Guava Seed Methi Seed & Ocimum Seed is equivalent to Cell Division which accelerate Biomass accumulation upwards (Bioshoot) & downwards (Bioroot) with the help of Photosynthesis which is required for Cell Division & Biomass accumulation.

Biomass BioEnergy in form of BioCell = Cell Division in Moist Seed & Biomass Accumulation & Acceleration upwards (Bioshoot) & downwards (Bioroot) + Photosynthesis

Guava Seeds shows Dormancy where Ocimum seeds & Methi Seed Trigonella foenum- graecum Seed does not shows dormant condition in terms of Germination. Seed hardening is dormancy condition in Botanical Sciences towards Germination where Seed Dormancy can overcome by Soil Texture by to change it (Soil) by Providing it to Microbial or Enzymatical Biosolutions to overcome by Seed Dormancy. Where these Enzyme BioSolution & MicrobialSolutions does low down seed hardening by somehow Cell wall of Seed to do Soft such as Guava Seed where Enzyme BioSolution are Cellulase Possibly & Microbial Solution Possibly will be its Producing Microbes such as Bacteria Fungai. Also Micropropagation Biotechniques are does overcome Seed Dormancy within 10 to 15 days. Both Biotechniques made possible to Seed to Germinate. Where Empirical equation $E=mc^2$ also work here. Here Germinating Seed shows liberating Bioenergy which is made possible by Velocity of light at Guava Seed at Glass Pot. Here Bioenergy is put equal to Biomass multiply with the square velocity of light. $E=mc^2$ can be explained by germinating Guava seed at Moist soil in Glass Pot with Free Energy Change Equations where mass Bioseed Guava absorbes energy in both ways First Biolight from Bio-Eco-Bio BioEnvironment & Bioenergy from Soil via H-O-H & C H S N O within soil to develop free energy which change which is Free Energy Change tends to Germination.

II. CONCLUSION

Here in the Research Review Paper we are defining Seed germination with Equation $E=mc^2$ for the very first time in the world history. Seed germination is a main stage in the life cycle of plants which is called the beginning of their growth and development. Key factors that affect seed germination are water availability, temperature, light, soil quality, and genetics (Hamid Iqbal, 2023).

REFERENCES

1. <https://www.longdom.org/open-access-pdfs/seed-germination-an-overview.pdf>
2. <https://biomedgrid.com/pdf/AJBSR.MS.ID.002801.pdf>

