SGK GOVT DEGREE COLLEGE, VINUKONDA DEPARTMENT OF ZOOLOGY

BEST PRACTICE AND GREEN INITIATIVE

The Department of Zoology embarked on a **vermicomposting** project on **06-02-2023**, with the introduction of earthworms into specially designed vermicompost pits.
This report provides an overview of our journey, emphasizing key milestones and the positive impact on both the environment and the academic community

I. Vermicomposting Setup:

Two vermicompost pits were constructed within the college premises, each measuring 6 feet by 4 feet and 4 feet deep.
Eisenia fetida earthworms, known for their efficient composting capabilities, were introduced into the pits.
The pits were filled with a mixture of Cow dung and kitchen waste to serve as bedding material For the earthworms

Fig 1 Releasing earthworms into pits

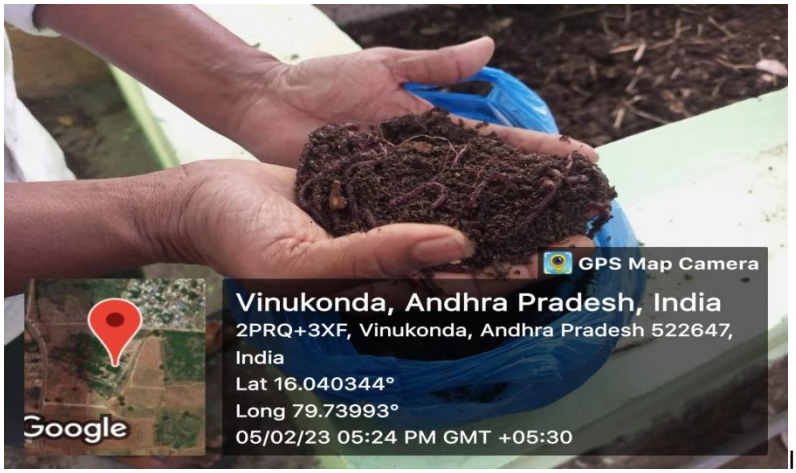
II. Growth and Development of Earthworms:

On **06-02-2023**, a total of 100 **Eisenia fetida** earthworms were distributed evenly among the two pits.
Over the initial 15 days, the earthworms adapted to their new environment, demonstrating increased activity and consumption of organic matter

III. First Vermicast Collection:

After the initial 15-day period, the first vermicastings were harvested from the pits, totaling 2 kilograms.

The vermicastings exhibited a rich dark color and a crumbly texture, indicating high nutrient content and microbial activity.



IV.

Fig 2 First vermicasting collection

Subsequent vermicast collections occurred every fortnight , averaging 4 kilograms per harvest.

Nutrient analysis showed a consistent increase in nitrogen, phosphorus, and potassium content over the year.

Photographic documentation captured the progressive transformation of the vermicompost pits

Fig 3 & 4 Introducing vermicompost to potted plants

Vermicomposting significantly reduced our department's organic waste sent to landfills by an estimated 70%.

Soil tests demonstrated improved nutrient levels and increased microbial diversity in the surrounding area.

VI. Educational Outreach:

Collaborations with nearby schools resulted in the installation of vermicompost systems in three local educational institutions.

Enthusiastic feedback from participants underscored the educational and practical value of vermicomposting.

VII. Future Plans and Sustainability:

The department is committed to expanding vermicomposting efforts by adding more pits and exploring vermicomposting in research projects.
Integration of vermicomposting into the curriculum is underway, ensuring that students actively participate in sustainable practices.
To sustain the project, plans include developing a dedicated vermicomposting team and addressing challenges such as pest control and pit maintenance.

Conclusion:

In summary, the one-year vermicomposting project has been a resounding success, benefiting both the environment and our academic community.
We reaffirm our dedication to environmental sustainability and look forward to continued growth and innovation in vermicomposting.

Acknowledgments:

The success of this project would not have been possible without the dedicated efforts of faculty members, students, and staff involved in vermicomposting.
We extend our heartfelt gratitude to our external partners and organizations that have supported and enriched this initiative.