A.S.D.GOVT. DEGREE COLLEGE FORWOMEN (A),
(Re-Accredited by NAAC with B Grade)
Jagannaickpur, Kakinada, Kakinada District, Andhra Pradesh- 533002,

DEPARTMENT OF BOTANY & HORTICULTURE

BEST PRACTICE

Sustainable Manure Production Using the NADEP Composting Technique

Title of the Practice : Sustainable Manure Production Using the NADEP Composting Technique.

Objectives of the Practice:

The primary objectives of 'Sustainable Manure Production Using the NADEP Composting Technique are

- To promote sustainable waste management practices by recycling dry leaves and other biodegradable waste.
- To enhance soil fertility on the college campus through the preparation of organic manure.
- To reduce the dependency on chemical fertilizers and encourage eco-friendly farming techniques.
- To raise awareness among students, staff, about the importance of organic waste recycling.
- To foster a sense of responsibility towards environmental conservation.

The Context :

The college campus generates a significant amount of dry leaves and other biodegradable waste (such as kitchen waste, plant cuttings, etc.). Rather than allowing this organic waste to be discarded or burned, the college adopted the NADEP pit method for composting and converting the waste into useful organic manure.

This practice aligns with the college commitment to sustainability, reducing carbon footprints, and educating the campus community about eco-friendly alternatives to conventional waste disposal and chemical fertilizers.

The NADEP pit method is chosen because it is simple, cost-effective, and efficient for producing high-quality organic manure. The composting process improves the quality of the soil, increases its water retention capacity, and promotes the growth of plants.

The Practice:

- A pit of size consisting of 5feet width,3feet depth, and 15 feet length is dug on the campus.
- Faculty & students of the Department involves in the collection of dry leaves and biodegradable waste from various parts of the college campus including the garden, cafeteria, and surrounding areas every year

- Dry leaves, vegetable peels, and other organic matter are carefully layered in the NADEP pit ensuring a balance between carbon-rich dry leaves and nitrogen-rich materials such as kitchen waste, plant residues
- Thick layer of organic matter like dry leaves are being spread in the NADEP pit and to this a layer of green waste like vegetable peels, fresh grass are added. Then a layer of Cattle dung is added . Lastly soil is sprinkled to promote microbial activity .The layering process is repeated until the heap reaches to a height of 1.5 meters. Watering is done periodically to maintain 50-60% moisture
- Over time, the materials undergo microbial decomposition within the pit. The pile is regularly turned, and moisture is added to maintain an optimal balance of heat, air, and moisture for decomposition.
- After 3-4 months, the composting process results in well- decomposed organic manure. The compost is then removed from the pit and used to enrich the soil around the campus.
- This process not only creates valuable organic manure but also significantly reduces the amount of waste sent to landfills, contributing to a cleaner and greener environment.

Problems Encountered:

- The success of the composting process can be affected by extreme weather conditions, particularly heavy rains or prolonged dry spells.
- Regular turning and moisture management of the pit require consistent monitoring and labor, especially during busy academic periods.
- Limited space on the campus can sometimes make it challenging to manage large quantities of waste efficiently.

Evidence of Success:

The organic manure produced through the NADEP pit has significantly improved the soil quality around the campus.

The fertility of garden beds and planted areas has increased, resulting in healthier plants with better growth.

The practice has contributed to the reduction in the volume of organic waste being sent to landfills. The recycling process has demonstrated an effective way to manage campus waste sustainably.

Students have actively participated in the practice by taking part in waste collection, composting, and even using the compost for gardening projects, fostering a sense of environmental responsibility.

Awareness about organic composting and waste recycling has grown among staff and students.

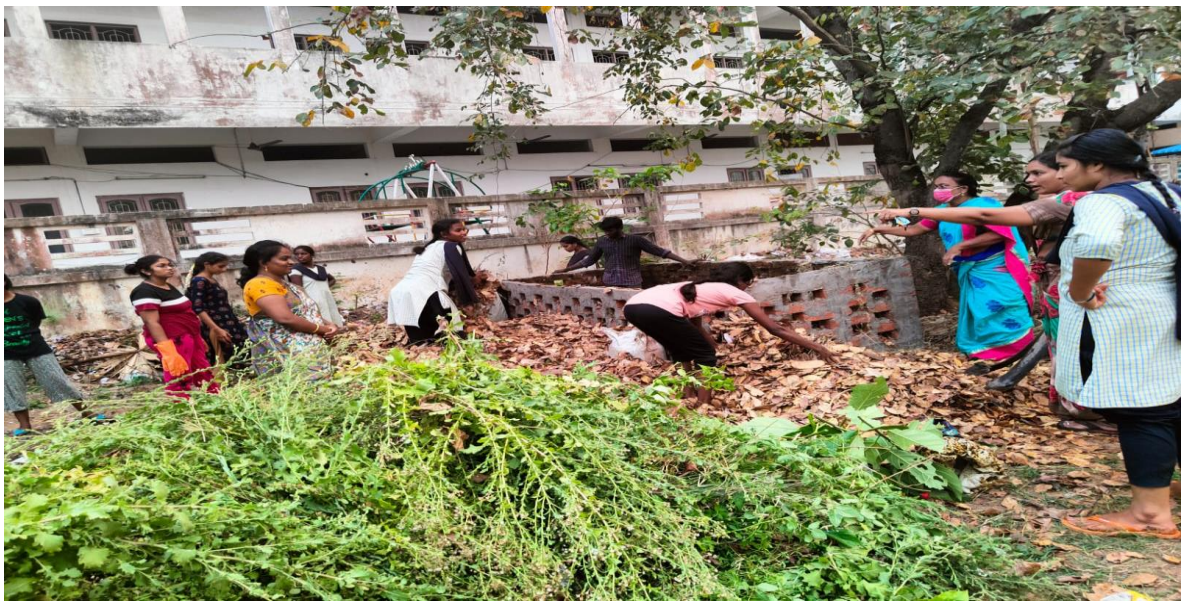
Conclusion:

The NADEP pit-based organic manure preparation practice has been highly successful in transforming organic waste into valuable manure, thereby reducing campus waste and improving soil health.

This sustainable practice has helped the college move towards a greener, more eco-friendly campus while educating students and staff about the importance of waste recycling and organic farming.

Despite some challenges, the practice has proven to be a cost-effective, environmentally beneficial solution that aligns with the broader goals of sustainable development.

Photographs showing the preparation of Sustainable manure through NADEP composting technique

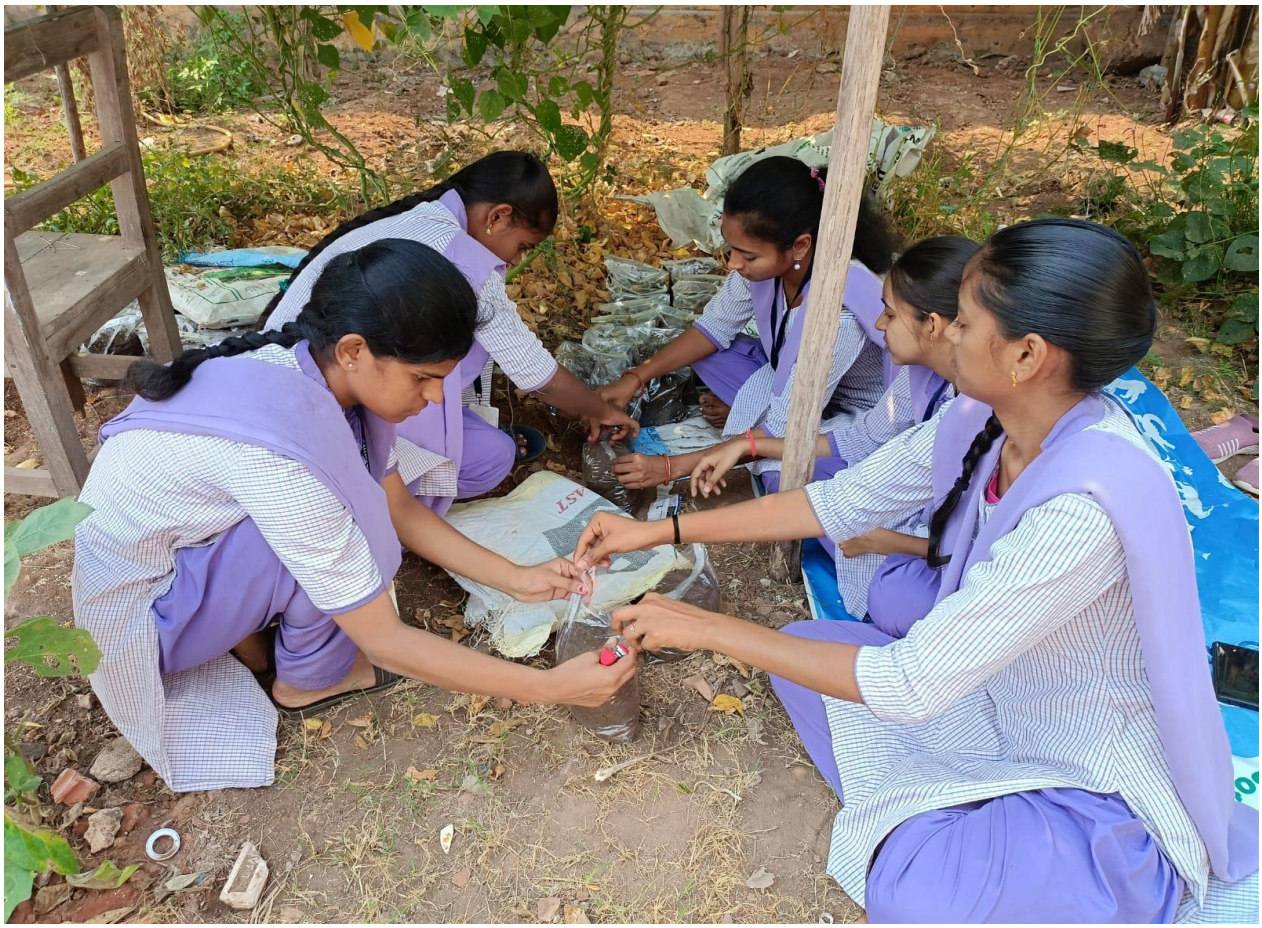


Preparation of sustainable manure in NADEP Compost pit by faculty and Students of the Department on 5.3.2022

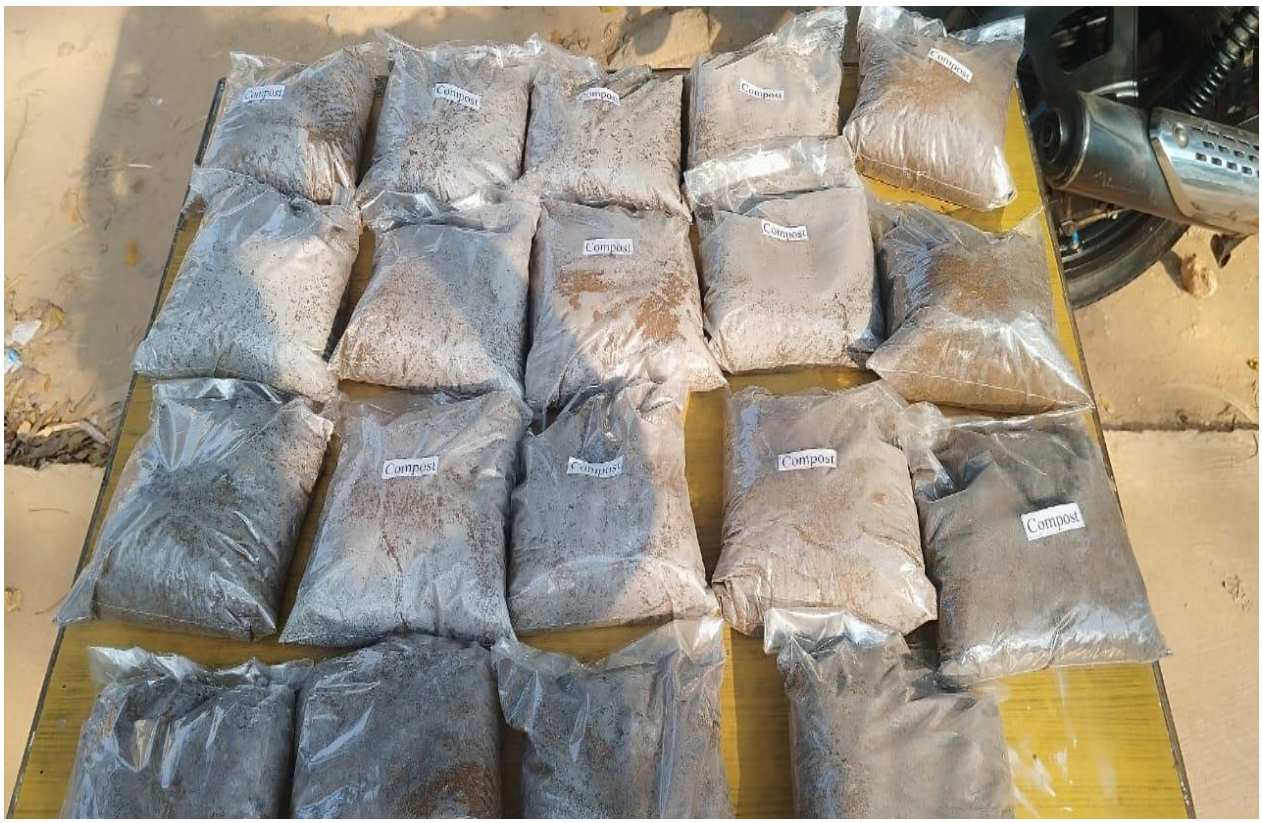
Preparation of sustainable manure in NADEP Compost pit by faculty and Students of the Department on 14.07.2023

Preparation of sustainable manure in NADEP Compost pit by faculty and Students of the Department on 19.08.2024

Packing of Compost by II Botany Honours Students



Compost Packets prepared for Sale



Photographs showing the purchase of sustainable manure by faculty & public


GPS Map Camera
Kakinada, Andhra Pradesh, India
1, Near Womens College, Jagannaickpur, Kakinada, Andhra Pradesh 533002, India
Lat 16.94009° Long 82.238318°
27/02/2025 04:42 PM GMT +05:30
Google
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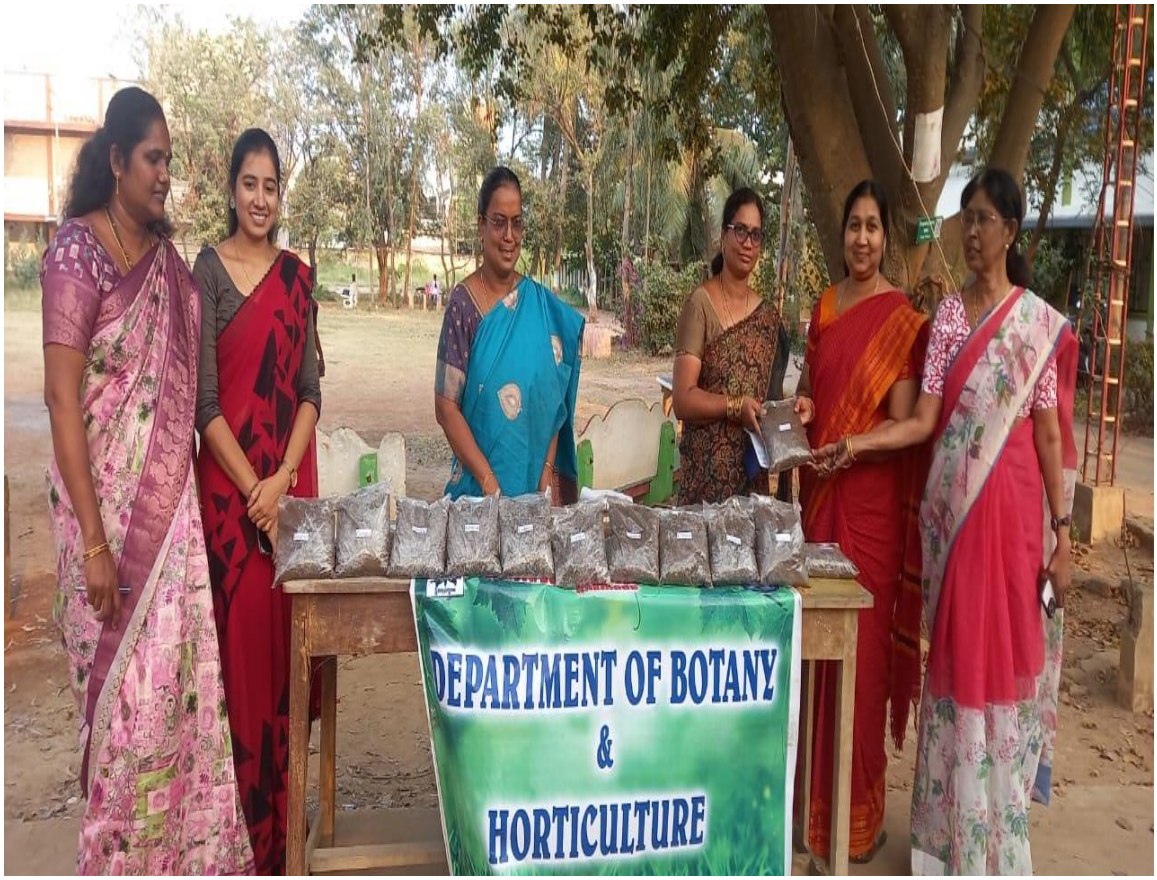
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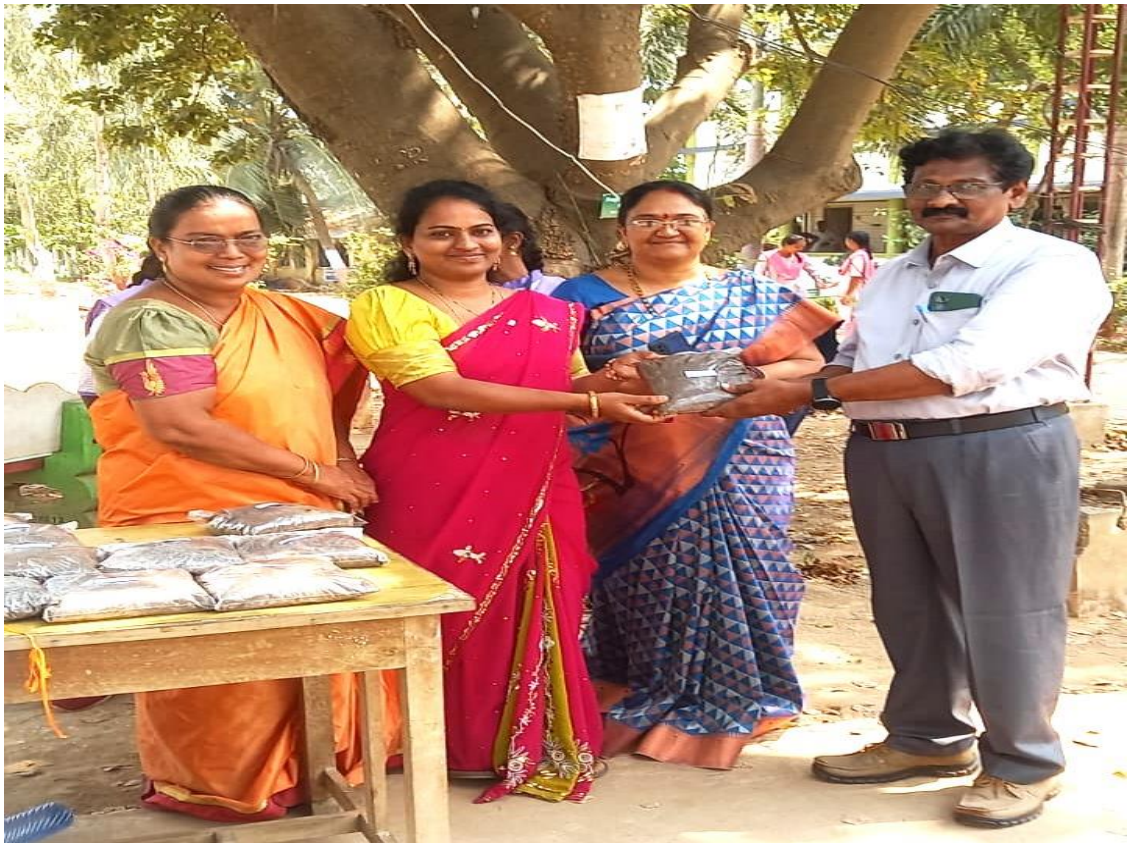
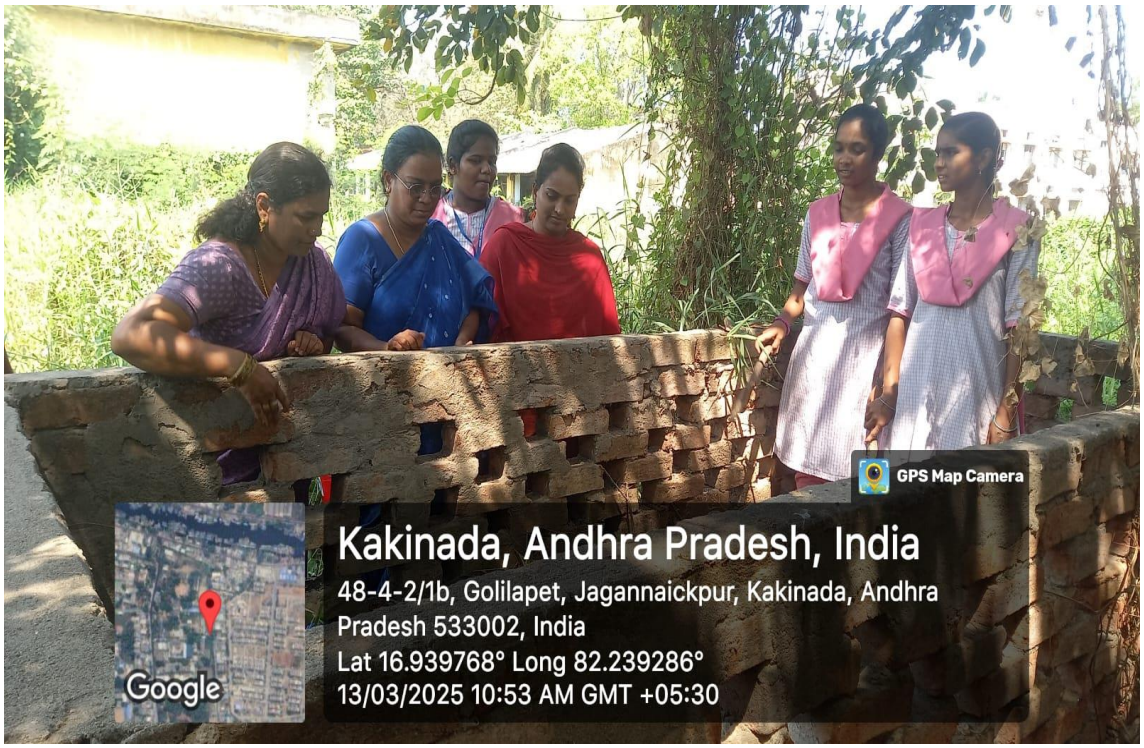
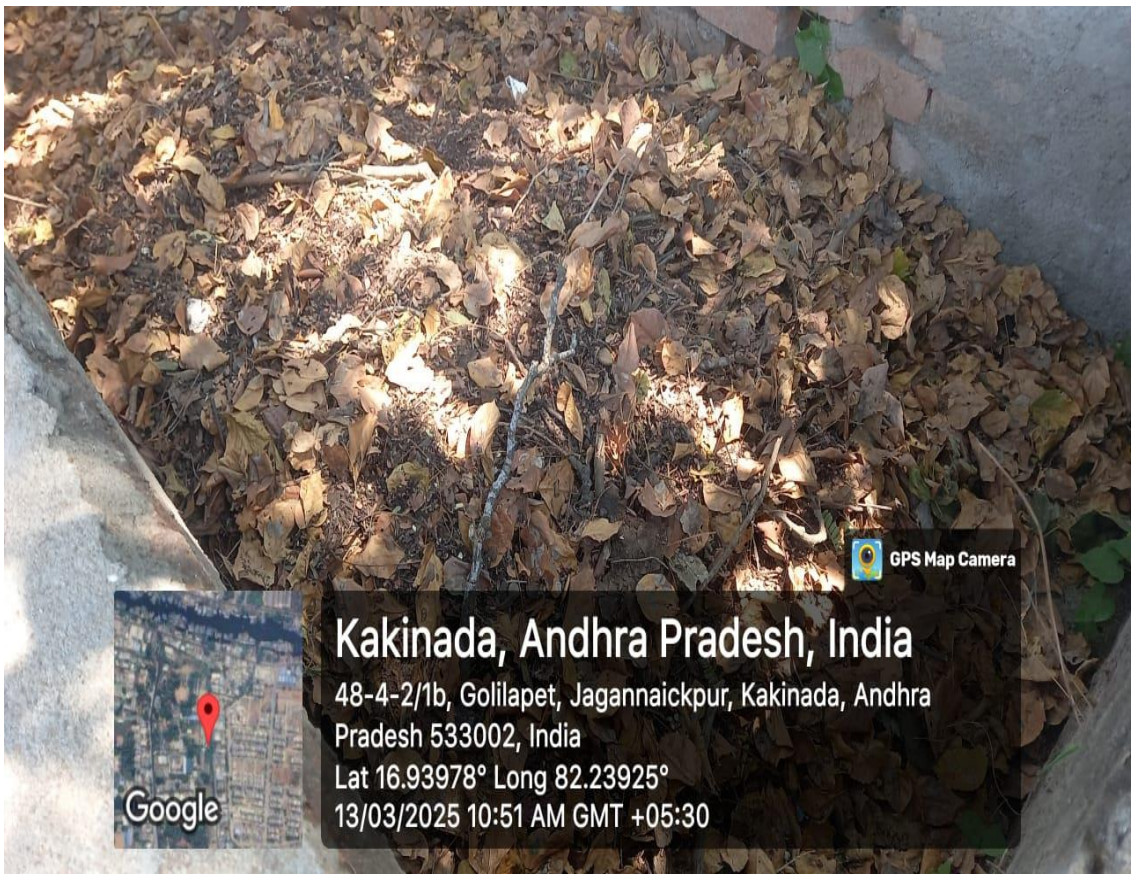




Faculty & Students of the Department preparing the sustainable manure on 13/03/2025



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