

To ensure that Sri Guru Tegh Bahadur Khalsa College leaves behind as little carbon footprint as possible and make the world a better place for those who are yet to come and live in it, there has been an institution of the Environment and Sustainability Committee.

Aims of the committee:

- To foster a sustainable and environmentally conscious campus through waste reduction and efficient waste management.
- To educate and engage the students on the importance of recycling, composting, and responsible waste disposal.
- To create and implement strategies that minimize waste generation and maximize the reuse and recycling of materials.
- To promote sustainability in all aspects of campus life, with a particular emphasis on waste management practices.

Objectives:

- To establish clearly marked recycling bins across the campus for different types of materials (paper, plastic, glass, metal, e-waste).
- To develop a comprehensive waste management system in college campus
- To set up composting units in key areas (e.g., cafeteria, canteen, hostels and gardens) to process organic waste, such as food scraps and yard trimmings.
- To promote the benefits of composting and its role in reducing landfill waste and improving soil quality on campus.
- To conduct workshops, sensitization programs, seminars and awareness campaigns on waste segregation, recycling techniques, and composting.
- To regularly conduct waste audits to track the volume and types of waste produced on campus and identify areas for improvement.
- To work with local waste management services, NGOs, and other institutions to improve waste management practices and explore new solutions for recycling and composting.

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The following practices are followed at SGTB Khalsa College to manage the solid waste generated in the college campus:

- **Waste segregation at source**

Waste is segregated at source into biodegradable waste (green bins) and non biodegradable waste (blue bins). These bins have been placed in pairs with labelling at all prominent positions in the college campus and awareness programs and cleanliness drives are conducted from time to time to sensitize the students regarding the significance of waste segregation.



- **Aerobin composting of the kitchen waste**

The segregated kitchen waste (fruit and vegetable peels, egg shells, left over tea leaves etc.) prominently generated in the girl's hostel and the canteen and elsewhere in the college are directed to aerobin composting to generate compost out of this waste. Two aerobin compost units were installed in the college campus for this purpose on December 19th 2023.





- **Leaf bin composting of horticultural waste**

To manage biodegradable organic solid waste (leaf litter generated in the college gardens, lawns and corridors) in an environment-friendly manner, leaf composting is practiced through which compost is generated. Leaf Compost bins are large cylindrical containers (diameter 91 cm x height 126 cm; capacity 259 L) made up of iron mesh with mesh dimensions of 3.5 x 3.5 cm). The leaf litter is routinely collected from the botanical garden, lawns and corridors and crushed manually to increase the surface area. Then it is filled in the leaf mesh bins in layers. Water is sprinkled over the layered material only just to moisten the leaf litter. A consortium of several important micro-organisms involved in composting is added over the layered material. It is procured from Division of Microbiology, ICAR-IARI, Pusa, New Delhi. All leaf compost bins have a small door near the base so that the composted material is regularly withdrawn. This composting process takes about 90 days. The composted material is sieved through a coarse mesh to remove large segments of partially or undecomposed material which are again put back in the bin. The final compost is the packed in small bags made of newspaper. Another environment-friendly practice adopted to store the compost. This practice is carried by student members of the ***Green Fingers Club*** of the college under supervision of faculty members of the club.



Garden Waste - Composting



- **Pit composting of dry leaves**

This is also called trench composting. Two pits have been constructed for decomposing the leaf litter collected from the college campus to decompose the organic content. The organic waste decomposes gradually over a period of six months or more to generate compost. The leaf litter is set into the pits and water is sprinkled just to moisten the leaves and the culture procured from Division of Microbiology, ICAR-IARI, Pusa, New Delhi is added to accelerate the decomposition process.



- **Mushroom cultivation for sustainable utilization of Agro wastes**

India generates huge amounts of agricultural plant residues which has potential to be recycled. An eco-friendly approach to recycle rice/wheat straw and other agro wastes can be mushroom farming, which is an emerging market because of its nutritional value and health benefits. Mushroom cultivation is a profitable proposal in agrowaste based industries. The mushrooms like *Pleurotus* and *Agaricus* are commercially well established systems. Mushrooms have the ability to biodegrade various agro-based wastes and grow efficiently on them. Its serves the dual purpose of agro-waste management as well as cultivation of mushrooms for economic purpose.

The mushrooms chosen for cultivation are *Pleurotus*, *Agaricus*, *Calocybe* which are edible, are easy to cultivate and don't need huge investment. The other reason of selecting them is their booming demand in India and related culinary, nutritional and health benefits.



- **Paper recycling**

The waste paper generated in bulk in the college campus e.g. practical files from Science block, magazines, etc. are collected and sent for recycling at Jaagruti Waste Paper Recycling Services, Mansarover Garden, New Delhi.

Activities conducted by the committee



Awareness workshop regarding waste segregation and disposal



Plastic waste collection cage manufactured from plastic waste being installed in the college campus



Bench made from plastic waste being installed in the college campus



Active participation by students in poster making competition on “waste management”