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## COMMUNITY TRAINING TO PERFORM HOME COMPOSTING

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**Abstract:** The article presents the training experience in home composting carried out with residents of the Vila Izidora community in partnership with IFMG – Santa Luzia Campus and Belo Horizonte City Hall – Sustainable Territories Project. The course was an opportunity to pass on technical composting knowledge to ordinary citizens, enabling access to a form of organic waste treatment that allows the retention of waste at the generating source and directly impacts the final destination of organic waste in the city of Belo Horizonte. The experience proved to be fully replicable in any city and can be carried out with little investment, which makes it possible to apply it as a public policy.

**Keywords:** organic waste, composting, waste management.

## INTRODUCTION

The National Solid Waste Policy (Law number: 12305/2010) clearly establishes the rules for the management of organic waste, determining that its environmentally appropriate final destination is “composting”, being the responsibility of the holder of public urban cleaning and waste disposal services. solid waste management, “implement the composting system for organic solid waste and coordinate with economic and social ways of using the compost produced”.

The Federal Law also introduces concepts such as “Shared Responsibility”, placing the obligation of the entire society to manage waste and the “Product Life Cycle”, as opposed to the linear model of production-consumption-disposal. With the inclusion of these concepts, the Federal Law highlights its consonance with global concerns, where the need to change the way we use natural resources and, consequently, the model of production and consumption is discussed. For legal principles to be complied with, there is a need to train the population regarding their responsibility and

the recycling methods available for this waste. Domestic and decentralized composting can significantly contribute to reducing the socio-environmental impacts of waste management.

On the other hand, the university, whose social function is to pass on scientific and technological knowledge to society, in an easily assimilable way, makes use of university extension for this purpose. Extension practices promote considerable changes in the student environment and in society, favoring the emergence of new research methods, new perceptions through the rapprochement of theory and practice, in addition to the understanding of social, economic and political problems (SANTOS et al., 2016).

## GOAL

Provide theoretical and practical training for those interested in learning the technique of home composting.

## METHODOLOGY

An extension course called “Master Composters” was held - an introductory course, offered by the Federal Center for Technological Education of Minas Gerais, in partnership with the Federal Institute of Minas Gerais and SUSAN/Belo Horizonte City Hall, between the months of October and November 2023. The target audience were two urban squatter communities in the troubled area of Belo Horizonte-MG and Santa Luzia-MG. Classes were held at IFMG, Santa Luzia campus, for four Saturday mornings, lasting 4 hours.

The programmatic content was previously defined by the composting course organizing team, interspersing theoretical and practical activities. The following contents were covered: Conceptual bases of recycling and composting. Recognition of waste to be composted. Selection of location for composting. Composting methods and

compost bin assembly. Conducting and monitoring composting and application of the compost and commercialization.

The teaching methodologies used were: Oral presentation with slide projection (30 minutes), Group dynamics, Practical activity in the laboratory, assembly of the windrow in the field and Technical visit (Figure 1). The classes were taught by different members of the organizing team, belonging to the project's partner institutions.

To evaluate the activities, a booklet with questions to be filled out by them was distributed to the participants. The booklets were collected at the end of the course and the content analysis of the responses was carried out.



Figure 1: Laboratory activity to recognize waste at different stages of decomposition

## RESULTS

The number of participants who completed the course was 17 people, the majority of whom were in the 30-50 age group, with a predominance of women. It was noticed that the majority of participants had at least primary education.

Participatory activities, such as group dynamics, laboratory practice and practice assembling a compost bin, were those in which more involvement and interest from participants could be seen (Figure 2).



Figure 2: Practical activity during the "assembly of the compost bin" course

Dynamics are characterized by elements that define them: short-term actions that, when using a specific, specific technique, induce motivation and involvement. The objectives of the dynamics can vary over a wide range: they can range from "warm-up" activities, in which participants are induced to engage in integrative behavior and mutual approximation, to learning a skill through moments of reflection and attitudinal change. (DA SILVA, 2021).

From the analysis of the responses in the booklets collected by the course organizers, it can be seen that the association of different methodologies was able to enable participants to assimilate most of the knowledge presented (Figure 3).

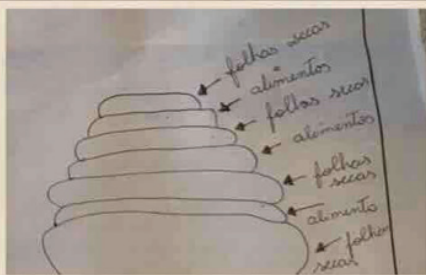
The collaborative construction of the booklet was a pedagogical experience that proved to be very successful, it was possible both to record the knowledge passed on and to analyze the level of apprehension of the contents passed on, but above all to value the dialogical construction of knowledge proposed by teachers during classes. It is important to highlight that this conception is based on the perspective of constructing knowledge based on the student's reality proposed by Paulo Freire.

"In this context, the knowledge involved in reflecting on different existential thinking stands out, such that it is necessary to promote

both the appreciation of scientific knowledge and the knowledge arising from the experiences of the subjects involved in the relationship, in order to consider the knowledge originating from reality. Knowledge that, at no time, can be seen as inferior or of lesser value, but, on the contrary, the knowledge that comes from culture, from everyday life, from human beings is fundamental for action in the Freirean context. Reflection happens at the moment when these subjects, empowered by intellectual, scientific knowledge, critically reflect on reality (FREITAS; DE ARAÚJO FREITAS, 2018).”

### HOW DO I START ASSEMBLING MY COMPOST BIN?

Outline the first steps to start building a compost bin.



- Assemble a structure of sticks to make a “bed”, this maintains aeration
- Alternate layers, maintaining the proportion of 2 to 3 buckets of dry leaves (brown) for 1 bucket of green food.
- Raise the compost bin to 1 to 12 m.
- Cover the last layer with plenty of brown material to avoid bad smells or attract insects or animals.
- In 10/15 days, return waste to the compost bin.

Figure 3: Booklet sheet with a compilation of answers and a drawing by one of the students

However, most citizens are unaware of composting technology and that it can be

adopted on a domestic scale. Dos Santos et al. (2022) emphasize that citizens need to understand much more about the importance and functioning of domestic composting, and are encouraged to put it into practice.

The National Solid Waste Policy determines that municipal integrated solid waste management plans contain “Environmental Education programs and actions that promote the non-generation, reduction, reuse and recycling of solid waste” (BRASIL, 2010). According to Hofmann (2019), developing local solutions, which maintain resources and materials in smaller and shorter circuits, through the regionalization of value creation, is a gradual strategy to reduce the complexity of waste flows.

### CONCLUSIONS

The extension course “Master Composters”, in its set of activities, which alternated passive assimilation techniques with active ones and practical development of composting, covering everything from the selection of waste to the monitoring of technical parameters, enabled training in this area. Such knowledge can be replicated in the community, based on the initiative of the participants, which can already be seen with composting in a school, with elementary school children.

It is important that the community recognizes that organics must be collected separately and recycled through composting, enabling the circular economy of this relevant fraction of waste.

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