



# WASTE REUSE/RECYCLING DRIVE BY CIVIL ENGINEERING DEPARTMENT GOVERNMENT POLYTECHNIC VALSAD

-2024-



REPORT :  
COMPOST FROM  
GARDEN WASTE



FACULTY MEMBERS :

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STUDENT GROUP



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## **THE BEGINNING OF WASTE REUSE/RECYCLING DRIVE**

**IN THE LAST WEEK OF MARCH, THE HEAD OF THE DEPARTMENT DR N.C.PANDYA AND THE STAFF PRESENTED AN IDEA TO START A SPECIAL WASTE REUSE/RECYCLING DRIVE IN THE CAMPUS OF THE INSTITUTION. IT GOT A GREAT RESPONSE AFTER PRESENTING IT TO THE STUDENTS AND THIS IDEA WAS IMMEDIATELY IMPLEMENTED FROM APRIL 1 ,2024**

### **DIVISION OF WORK**

**FOR THE EASE OF OPERATION, THE WORK HAS BEEN DIVIDED, IN WHICH A SPECIFIC TEAM OF FACULTY AND STUDENTS HAS BEEN FORMED.**

#### **CORDINATORS**

**CONSTRUCTION WASTE : A.J.PATEL ,G.K.PATEL**

**GLASS WASTE : K.P.BILLIMORIA,H.P.OZA**

**PLASTIC WASTE : P.V.MEHTA, H.A.MISTRY**

**WASTE WATER : N.C PANDYA , D.R.SANIAWALA**

**KITCHEN WASTE : A .K. GAMIT, A.K.SHAH**

**GARDEN WASTE : K.C.PATEL,B.P.PATEL**

**IN THIS REPORT, INFORMATION HAS BEEN PRESENTED ABOUT HOW WE MADE COMPOST USING THE GARDEN WASTE OF THE CAMPUS WITH THE GUIDANCE OF OUR FACULTY, MR.KIRAN C. PATEL AND MRS.BHAVINI P. PATEL**

# COMPOST FROM GARDEN WASTE

## KEY WORDS

### COMPOST

Composting is the natural process of recycling organic matter, such as leaves and food scraps, into a valuable fertilizer that can enrich soil and plants.

Anything that grows decomposes eventually; composting simply speeds up the process by providing an ideal environment for bacteria, fungi, and other decomposing organisms to do their work.

The resulting decomposed matter, which often ends up looking like fertile garden soil, is called compost.

Fondly referred to by farmers as “black gold,” compost is rich in nutrients and can be used for gardening, horticulture, and agriculture.

### GARDEN WASTE

Garden waste is the accumulated plant matter from gardening activities which involve cutting or removing vegetation, i.e. cutting the lawn, weed removal, hedge trimming or pruning consisting of lawn clippings, leaf matter, wood and soil.





# PROJECT REPORT



We understood the process of making compost under the guidance of the faculty and decided to collect the necessary materials. Our campus is very big, from which we could get garden waste very easily. We contacted the cleaning ladies of our institute. They used to collect dry and green waste during cleaning. We talked to them about making compost from garden waste. They gave us great cooperation. With the help of Nayanaben and Gitaben, we were able to collect the campus waste easily. So we could easily do the composting process



Written By  
Garden Waste Student Group

# 7 STEPS TO COMPOSTING AT CAMPUS

## Step 1 - Select your container

Think about the space you have and where is the best place to keep your compost heap. This will influence your container. In some instances, a cylinder or coiled wire mesh will do the job. Alternatively, you can use a compost bin. Another idea is a raised bed or open pile. The size of your container will also depend on the volume of soil you want to use the compost in. The key step in a container is to ensure good airflow. So make sure there are small gaps or holes all around it to ensure your heap receives sufficient airflow. This is vital in turning the piled up trash into an earthy treasure.



we used 4ft \* 4ft \* 4ft size green plastic compost bag for composting work.

## Step 2 - Gather your tools

You'll need more than your green thumbs and gardening gloves for managing your compost heap. Choose your preferred tools for working through your compost heap as it develops. A spade or digging fork in a size that suits your compost size is advised.

We leveled the selected area with the help of spades and shovels

## Step 3 - Use the best materials

The quality of your compost will depend on the quality of your materials, so get your heap off on the right foot with the best quality materials. Use a mixture of wet and dry ones for the most favourable results. Organic materials contain an abundance of nitrogen - a contributing factor to the efficiency of decomposition.

We have used a mixture of both dry and green waste from campus garden waste for composting.



## Step 4 - Start layering your gathered materials

Begin with a layer of browns such as twigs and wood chips, followed by a layer of your nitrogen-rich materials. Make a lasagne of the carbon-rich and nitrogen-rich materials. If needed, add a little water to dampen the pile. Make sure your food scraps are covered by a good layer of dry leaves or other browns.



We made a first layer of dry mud, on top of that a rotating layer of wet litter, sprinkled with water and placed a layer of soil on top of that to prevent fly or mosquito infestation.

## Step 5 - Water your heap

The key to top-notch compost lies in the materials selected, making sure it receives enough air and maintaining its moisture.

You should water your heap every couple of days. In dry, hot regions you should water it twice a week. In a humid or wet region, you can water it once a week. This process, along with the airflow, will kick off the decomposition of all the star materials. A good compost heap stays moist.

Bad odour may arise from a heap that is too wet or that needs more air circulation.

If it is too wet, add more browns and if it's too dry, add more greens to up the moisture.

## Step 6 - Maintain your heap

Compost heaps require attention. Over the weeks of decomposition you'll have to check on it. Use your chosen tool to turn your compost heap occasionally. This will aid in aerating your pile and speeding up the decomposition process.

As the materials decompose, a bacterial action takes place that forms the ultimate organic matter. One that is filled with nutrients that will certainly turn your soil from drab to fab, producing an abundant harvest and happier plants.

## Step 7 - Begin using your own compost

In 8 - 10 weeks, when your compost is brown and crumbly, it will be ready to start using. It should smell like a dewy forest floor. It shouldn't have a rotting odour or intact food scraps. As you prepare garden beds or repot plants, work some of your treasured compost into your soil. The multitudinous benefits are well worth each and every step. The best part is it's simple and easy, considering the materials are always at your disposal.

## THE BENEFITS OF COMPOST

1. Compost brings life to your soil, by making it extremely fertile and conducive to cultivating happy and healthy plants.
2. By using your waste for the useful purpose of composting, you are being sustainable and participating in a circular economy.
3. Compost makes soil friable - so that air, moisture, nutrients and roots can move freely through it.
4. Another fantastic benefit of using compost is that the nutrients that are in the soil put the plant in a better position to ward off plant diseases.