



# Techniques in Compost Production

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# Composting

- Taking local organic materials and decomposing them in a controlled setting to produce natural fertilizer.
- Composting is a low tech practice that can convert waste into a useful soil addition for crop production.



# Composting materials on Pohnpei.

- To make compost you can use almost any organic material.
- Common materials available on Pohnpei are leaves, grass, wood, pig manure, and fish by catch.



# Things to consider when making compost

- Moisture of composting materials
- Providing aeration for your compost
  - Aeration with chimney
  - Pile structure
  - Right size of compost materials for air space
- How to prevent your pile from rotting
  - Protection from rain or additional moisture to ensure effective compost activity
    - Too much water in compost can make it rot and smell bad
    - The harmful bacteria in the materials are not killed

# To start a compost pile

- You should use a pile that will be at least 3x3x3 feet
- Some kind of enclosure to keep the pile together (fence, corrugated tin roofing, fish nets ,etc.)
- A mix of composting materials
  - Not just one material such as manure or only grass
- For a wet place like Pohnpei you should use shelter to protect your compost from the rain.



# Construction of a compost pile example

- Compost materials: hibiscus leaves, hibiscus wood chips, pig manure or fish
- In this pile all materials were added in equal volume amounts by layer
- Mixing all materials together before making the pile can also work for composting



# Options during compost production

- Extra aeration with an air chimney
- Turning frequency
  - Turning speeds up the compost process.
  - Every few days, weeks or even once a month
  - More frequent turning speeds up the composting process.



# Things to look for during composting process

- Drop in compost pile height
- Increase in compost pile temperatures
- Change in color of composting materials as they decompose over time





# Compost Pile Example



# How much material was added for compost example?

- Green (6 buckets) + Brown(6 buckets)+ Manure (2 buckets)
- Green(6 buckets) + Brown(6 buckets)+ Fish(1 bucket)
- Brown (12 buckets)+ Manure (2 buckets)
- Each compost pile had 6 layers and the top and bottom layers were wood chips for insulation
  - Each recipe described is for 1 layer of compost in a compost pile
  - Buckets are 5 gallon buckets

# When is your compost done?

- Finished compost should have a dark and earthy look.
  - Original materials do not resemble their original form.
- Finished compost does not smell bad.
- The finished compost is no longer hot.
- If you plant seedlings in finished compost they should survive and grow.



# Benefits of composting in Pohnpei

- Use of local materials to create fertilizer
- Reduce dependence on imported fertilizer
- Management of potentially harmful pig manure entering water bodies
- Soil benefits
  - Reduce the need of watering
  - Improve soil fertility
  - Increase plant yields

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