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Passive Control Composing

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Technical Support Skills	· Composting, Eco-sanitation · Irrigation Pond Management · Measuring odor		

Research Contents   Passive Control Composting

The non-electric power composting tank which makes environment for the aerobic high-temperature bacillus with 5% Oxygen concentration or more and temperature at 40-65℃ which can be decomposed kitchen garbage at high speed.   Manual is shown in Fig. 1.

By insulating composting tank, the inner surface temperature of the composting tank is kept high, and dew condensation is prevented.

Kitchen garbage, return compost and rice bran were dumped in the cartridge, which is received heat from the hot cartridge dumped at yesterday,   and temperature goes up quickly to   60 ℃ in about 12 hours.

When temperature rises with heat of decomposition, gravity ventilation will be performed as shown in Fig. 2.

It is a mechanism in which oxygen is supplied, so you do not need to mix compost for aeration, there is less order. The moisture is dewed the back of the lid serves which is discharged outside automatically. Since a power supply is not needed, it can be installed anywhere and compost kitchen garbage.

The composting tank of the medium size for community using this principle is also developed.

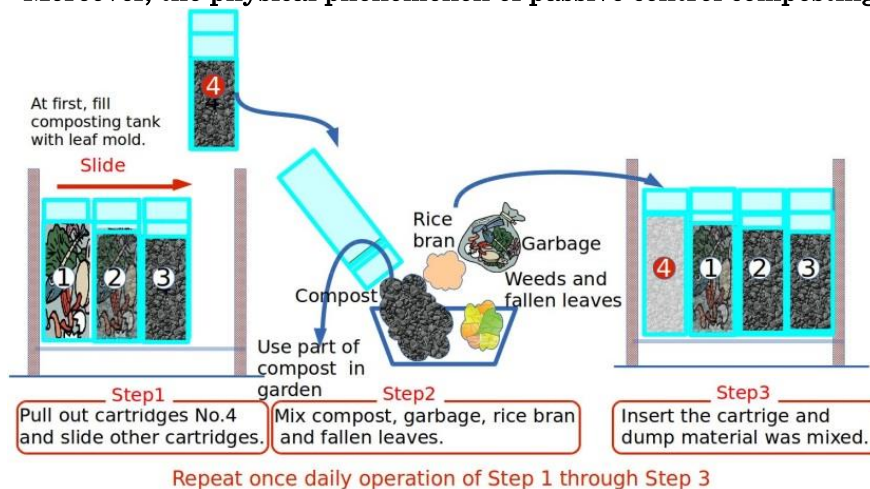Moreover, the physical phenomenon of passive control composting is analyzed.
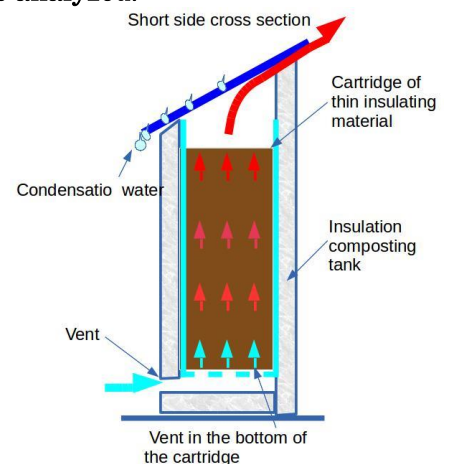

Figure 1   Manual of Passive Control Compostig

Figure 2   Air and Moisture Control

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Available Facilities and Equipment

Thermography （FLIR i3）	64point Data Logger（Keyence）
Monitor of Carbon dioxide Concentration（KANOMAX）	Pyranometer（Huksflux）
Monitor of Oxygen Concentration（NEW COSMOS）	Turbidimeter（HACH）
Sound Level Meter（RION）	Rainfall Observer（T&D）
Radiant Thermometer （HORIBA）	GPS（GARMINT）