

# The Current State and Future Developments of “Bio-Lux” Bio-Toilets and New Septic Tanks

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Theme

New Treatment Methods for “Toilet” and “Household Wastewater”!

A Combination of the “Bio-Lux” Bio-Toilet and New  
Septic Tank Makes Sewerage Works Unnecessary

- **New toilets can process waste matter themselves**  
(Toilets that do not pollute water, are kind to the environment, and still operate after disasters)

- **New septic tanks use charcoal to clean all other wastewater**

(Processed water that is finally discharged  
is as clean as rain water)

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# ★ Proposing a System to Separately Treat Toilet Waste and Other Household Wastewater

- ① Vault Toilet ~ Household wastewater is released as-is
- ② Toilet Septic Tank ~ Less than BOD90mg, household wastewater is released as-is
- ③ Combined Septic Tank ~ Less than BOD20mg, "toilet waste" and "household wastewater" are mixed and processed together
- ④ High Spec Combined Septic Tank ~ Less than BOD10mg, T-N・ T-P less than 10mg
- ⑤ (New Septic Tank + bio-toilet) ~ Less than BOD10mg, T-N・ T-P less than 10mg

← Currently

← New Proposal

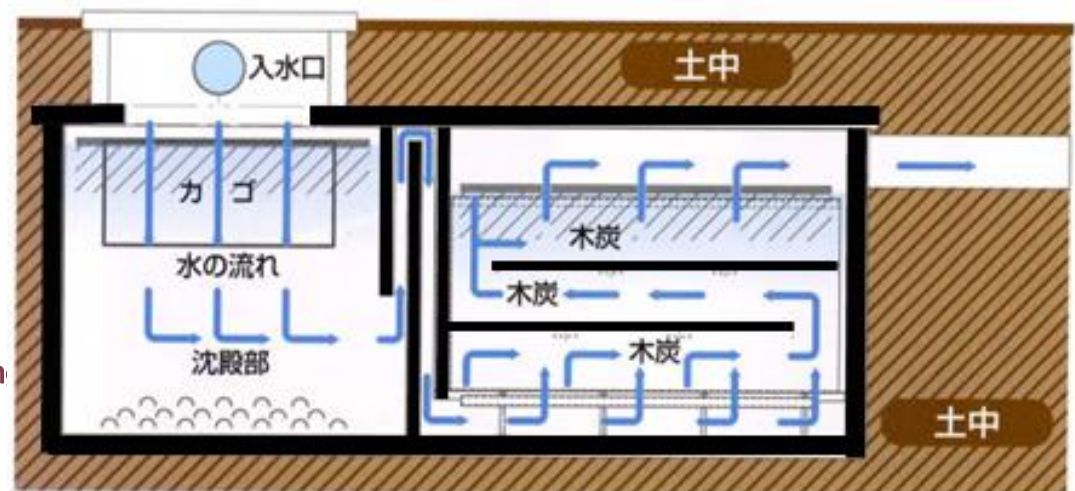
## Wastewater System Diagram



- A bio-toilet is used as the toilet
- A new septic tank is used for the kitchen, washin machine and bath wastewater

## Advantages of New Septic Tank!

Toilet wastewater does not enter the septic tank, meaning it contains very little sediment and does not require measures for escherichia coli. In addition, maintenance is very simple, and when finally discharged from the system the wastewater is as clean as rain water.



New septic tank internal composition ↑

農業高校ならではの  
実証実験

バイオトイレの  
肥料効果



## Practical Trials Held at Agricultural High School to Confirm Effects of Bio-toilet Fertilizer, Then Results Made Public

What are the effects of bio-toilet fertilizer?

### NHK News Program

その効果は?

	発芽率	根の成長の良さ
1位	バイオトイレの肥料	バイオトイレの肥料
2位	たい肥	たい肥
3位	牛ふん	ボカシ
4位	鶏ふん	鶏ふん
5位	ボカシ	牛ふん

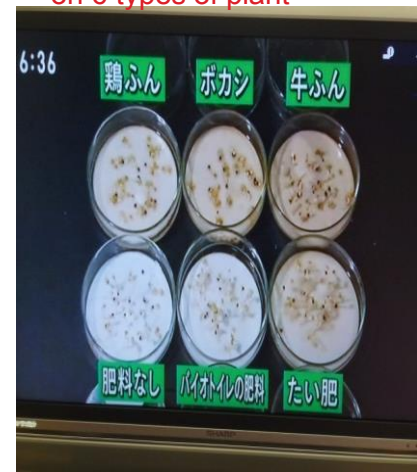
No. 1 for “germination rate” and  
“quality of growth”



They keep cows at the agricultural high school



Germination experiment  
on 6 types of plant



Germination  
Experiment



Germination Experiment  
bio-toilet is the best

その効果は?

鶏ふん & ボカシ





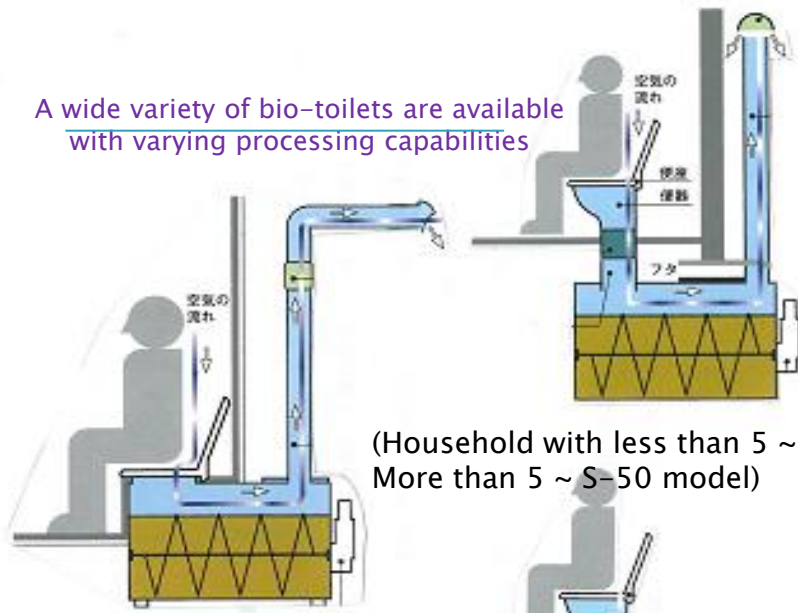
# Placement of a Bio-Toilet

Sit directly on unit

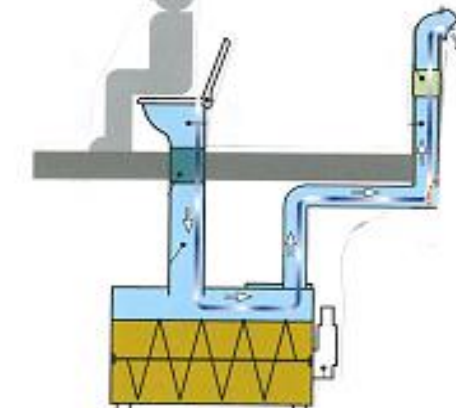


Placement is easy and simple!

A wide variety of bio-toilets are available with varying processing capabilities



(Household with less than 5 ~ S-25 Model  
More than 5 ~ S-50 model)



Placement of Unit

Placement directly below toilet



Keeps the toilet odorless



Place bio-toilet below toilet  
Standard Type



Attach toilet to unit  
Direct attachment type

Bio-toilets as placed in general places of work. They look just like a normal toilet. The bio-toilet unit is placed beneath the toilet itself, which is a conventional plumbed-in toilet. All are on-site photos of toilets that have been in place for 14 years.

Urinal is connected to bio-toilet by a PVC pipe.



Interior



Interior

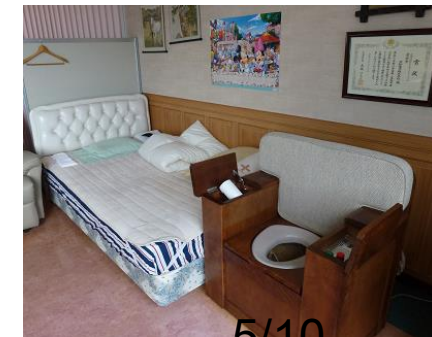


Practical Examples

The inside of a log-house style outside toilet that has been in place for 14 years, from 1998 to 2012. ↓ ↓ The interior is clean and attractive.

Can be placed next to bed.

(Nursing KBT-10 Model)





# Operation of Bio-Toilets

Placement



Preparing to Ship



## Examples of Placement

Inside Self Defense Forces compounds



At the entrance to event venues



Placed at the entrance to event venues



Placed in Parks



Placed in Aganogawa Riverbed Park, Niigata



Simply placed on top of a concrete foundation. Easy to move around.



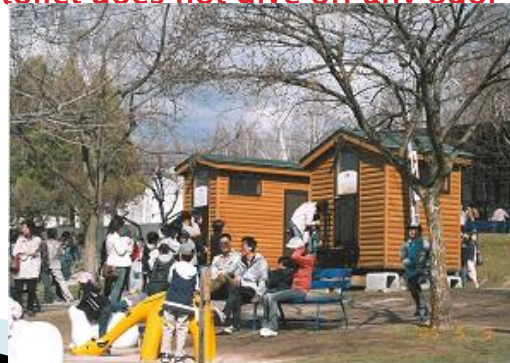
# Placement of Temporary Toilets Housing Bio-toilets



Placement at event venues ↓



Can be placed close by because toilet does not give off any odor ↓



Placement on Shiretoko mountain path  
use style that matches surroundings

← Placement next to baseball ground

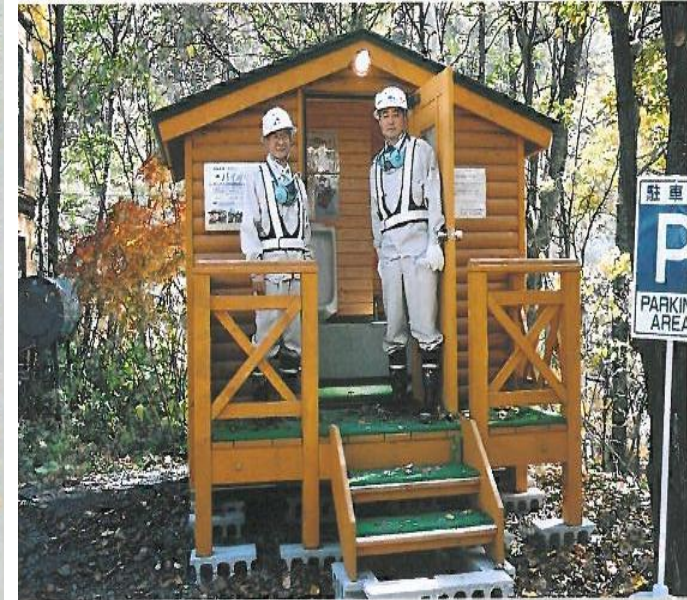
Placement outside event venue ↓





## Placement next to construction site office

### Toilet placed close to a shop



← Temporary toilet placed at an event venue. The toilet can be placed nearby because it gives off no odor.

### Island sightseeing spots



### Bio-toilets at sightseeing spots







Placement  
Examples

Placement site in Papua New Guinea ↑



Bio-toilet being placed ↑

## Overseas Examples

Placement site in Sakhalin-II ↓



← Placed at side of mountain path

Placement at Shiretoko camp ground ↓







Eliminates waste matter from cows, pigs, humans, and raw garbage too.

Giant screw turning

OK in winter too!



Operation is easy!



Sawdust being changed

Sawdust is easy to handle

