

## Points of techniques

### What's "Biochar" ?

"Biochar is a solid material obtained from the carbonization thermochemical conversion of biomass in an oxygen-limited environments. (International Biochar Initiative online: FAQs)".

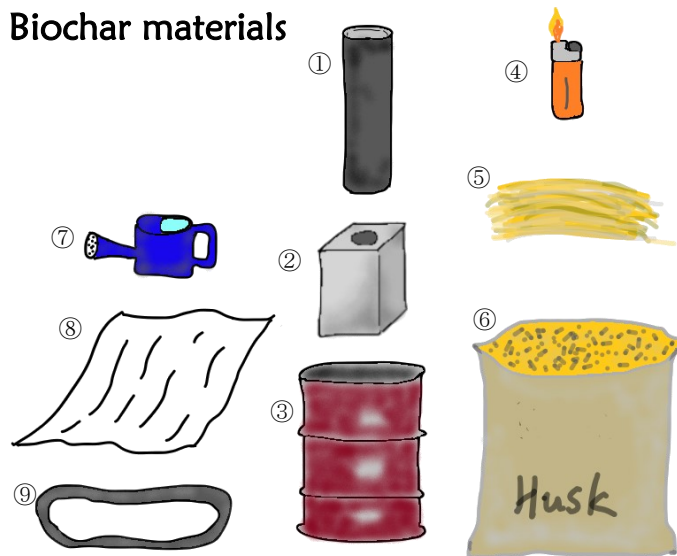


### Effectiveness of "Biochar"

1. Improvement of soil structure.
2. Soil pH adjustment.
3. Colonization of effective microbes.
4. Temperature keeping effect.
5. Strengthen cell walls and support plant growth by silicon (Si) of biochar.
6. Reduction of risk from soil borne diseases.
7. Pot weight saving by mixing with nursery soil.
8. For deodorant. (e.g. cattle shed)

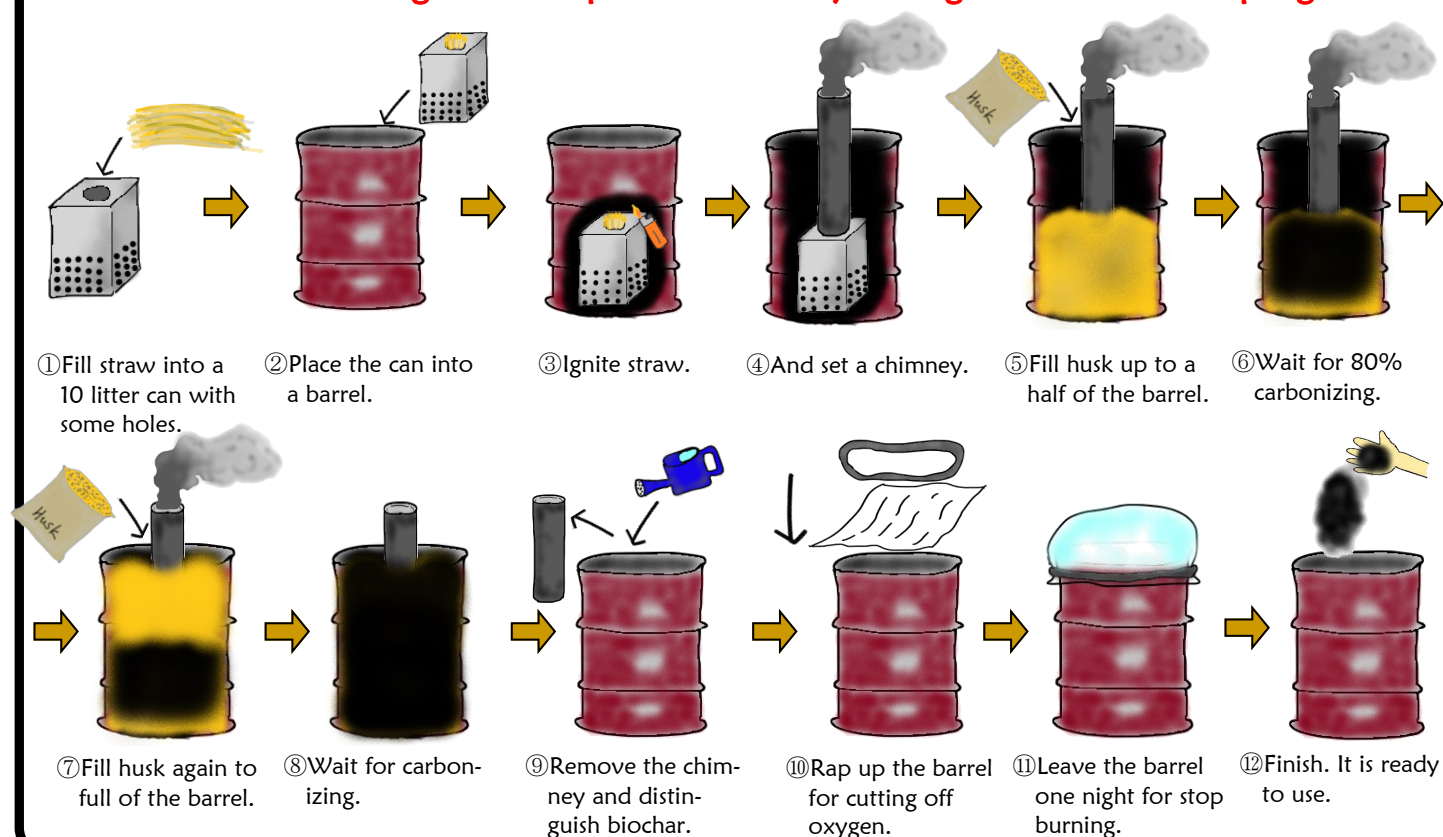


### Biochar materials



	Items	Remarks	Reference price
①	Chimney	Bukhari use	Nu. 550-600
②	Ignition chamber	10 litter can	Nu. 15
③	Barrel	200 litter barrel	Nu. 1300-1500
④	Lighter/matches	Not specified	Nu. 35
⑤	Dry material (straw)	For ignition use	-
⑥	Biomass	Rice/wheat husk...	-
⑦	Water 4litter	For distinguishing	-
⑧	Plastic sheet	Size: 2m × 2m	-
⑨	Rope	For sealing barrel	-

**Be careful of handling fire. Keep children away during the fire-work in progress.**



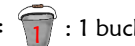
## How to use biochar

### 1. Nursery soil mixture

Soil recipe

Soil & Sand =  Soil + Sand

Biochar =  : 3 buckets

Compost =  : 1 bucket

Bokashi =  : half of a bucket

SUPHALA =  : 1 grab

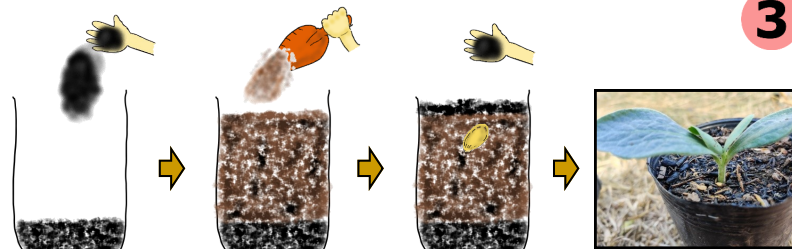
①: Fill biochar.  
(10 - 15% of total)

②: Fill nursery soil.

③: Overlay surface  
by biochar.

And sow a seed/  
transplant seedling.

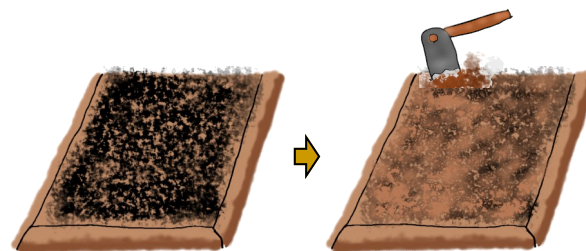
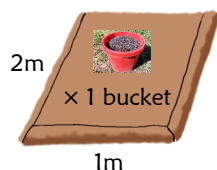
④: It is done.  
It looks like this.



### 2. Soil structure improvement



Standard of the use



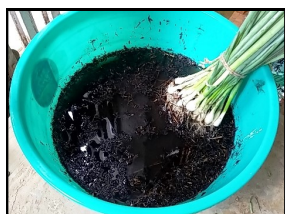
①: Scatter biochar on  
planting bed or place.

②: The better is Mixing  
with soil.



③: Sample of use.  
It looks like this.

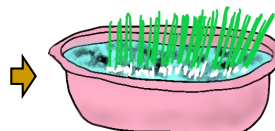
### 3. Uprooted seedling treatment



①: Put a grab of biochar  
into a watered wash tub.



②: Stir up.



③: Soak seedling roots into the  
water. It is keepable for 2 days.

### 4. Deodorant



Deodorant effect is one  
of biochar feature. Scatter-  
ing on cattle shed  
should be expecting sup-  
press the smell (not  
100%).

### 5. If biochar becomes ash, it is useful as well.



- >Minerals supplements
- >pH control to Alkaline
- >Aphid, fungi control



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Agriculture Research and Development Center  
Bajo Wangdue Phodrang  
Department of Agriculture, Ministry of Agriculture and Forests



Organic material  
- Biochar -

Starter Guide

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