

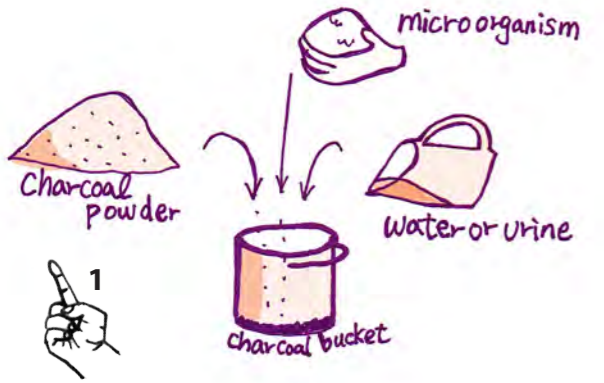
黑土壤厨厨废物木炭肥料

# terra Preta

## Composting Kitchen Waste with Charcoal

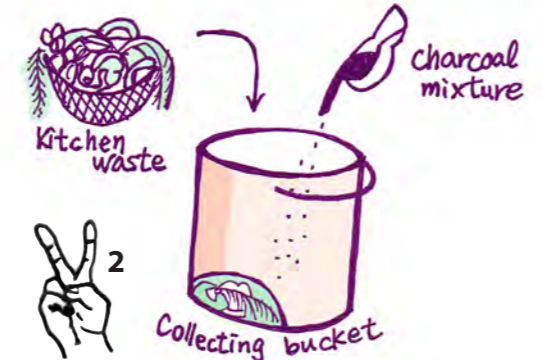
Ayumi Matsuzaka

\* 微生物的联系地址:  
 小毛驴市民农园 Little Donkey Farm  
 北京市海淀区苏家坨镇后沙涧村西  
 Tel: 010-62460686 / www.littledonkeyfarm.com  
 Ratio // 木炭粉 1L + IMO handful  
 株式会社EM菌研究机构南京代表处  
 江苏省南京市石鼓路42号建华大厦1405室  
 Tel: 025-84471138 / www.emrochina.com  
 Ratio // 木炭粉 1L + EMactive 150ml



制造木炭混合物的方法。把木炭粉、微生物和水或尿液放入木炭桶。拌和后密封，以免材料干涸。另外，亦可随意添加一点木灰。

make charcoal mixture. Put charcoal powder, microorganism and water (or urine) into the charcoal bucket. Mix them well and close lid, so that it will not dry out. Optionally, a little bit of wood ash could be added too.



把厨厨废物投入木炭桶，把木炭混合物放在厨厨废物上面，盖好。你可以添加煮熟的食物，柑橘类水果等。亦可以添加弃用的肉、骨或鱼，但请注意堆肥需要时间，熟食可能会吸引鼠虫，要把盖子盖好！

Put kitchen waste into the collecting bucket and cover it with charcoal mixture. You could add cooked material, also citrus fruits. You could add meat, bone or fish but composting takes time and may attract vermin! close lid.



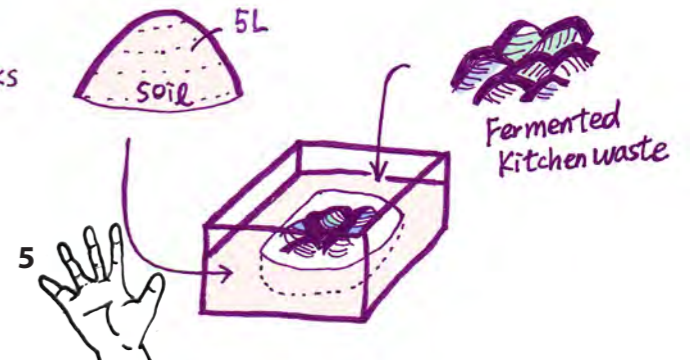
把厨厨废物和木炭混合物交替放入。亦可加放鸡粪或其他动物的粪便。

Each time you throw kitchen waste away, cover it with charcoal mixture. Make layers of kitchen waste and charcoal alternately. If you like, chicken manure or other animal manure could be added too.



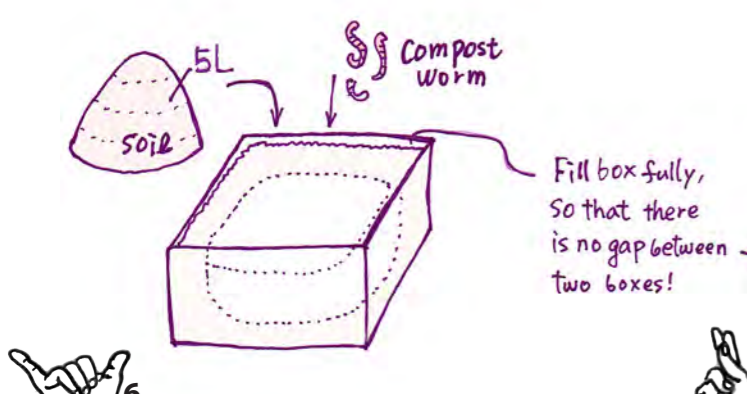
当收集桶盛满后，把木炭混合物放在最上面。紧盖木炭桶。然后等待4周。在此期间，微生物会开始发酵。

When the bucket becomes full, cover the surface with charcoal mixture and close lid tightly. Wait for 4 weeks. During this period, microorganisms start fermentation.



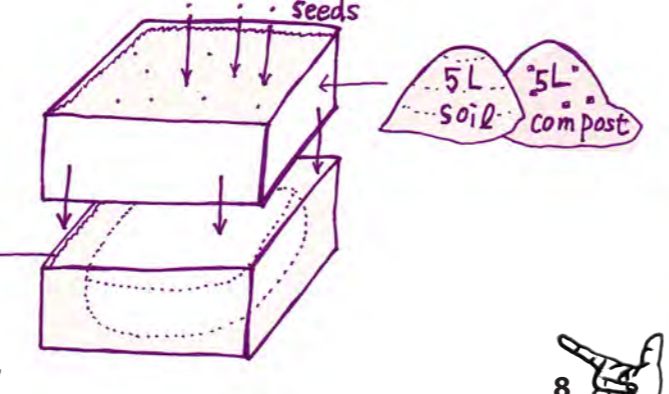
四周后，把5公升土壤放在塑料盒底部，再把已发酵的厨厨废物放在盒正中间。

After 4 weeks, put 5L of soil in bottom of the plastic box and add fermented kitchen waste in middle of the box.



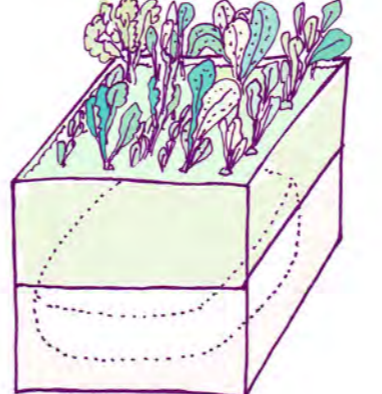
再加5公升的土壤，填满有孔的塑料盒。后加蚯蚓。此塑料盒要放在另外一个安排好的有孔塑料盒的下面，二个有孔塑料盒要放贴在一起。中间不要有隙。

Cover the box fully with other 5L of soil. Add compost worms. This box will be lower box of the two-tier box system.



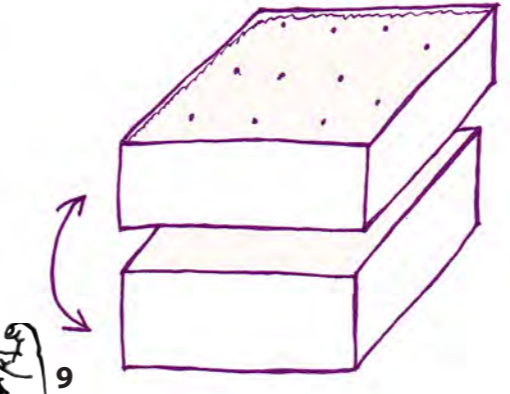
在放上面的有孔塑料盒，加土壤和堆肥(比例为1:1)然后就可以开始种植！

Install another box on the lower box and add normal soil and compost (ratio is 1:1). Then you can start planting!



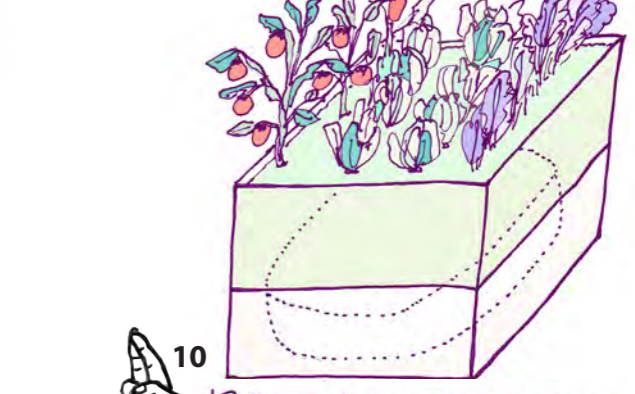
当放在下面有孔塑料盒的黑土壤发酵后，所种的植物会在该处吸取养分。

Roots know where they should grow. When the Terra Preta Compost in lower box is ready, they start to use the nutrient from there too.



一年之后，你可以对调二个有孔塑料盒。放在下面的有孔塑料盒的黑土壤会同样发酵，你就可以为再对下一年作好准备。过程中还可添加发酵的厨厨废物(程序跟以上1至6相同)。

The next year, you can swap the boxes around. In lower box, you can prepare Terra Preta Compost for next year: Add fermented kitchen waste (same process of 1 to 6)



提示：二个有孔塑料盒要放贴在一起。中间不要有隙。你可以再开始种植了！

Take care that there is no gap between the two boxes and start planting again!

OPTION if you have a garden, you can make a raised bed directly on the ground!  
 The idea was advised by Dr. Haiiko Pieplow in Germany