



# Fukuoka Technique

## Seed Ball Planting



Empowered lives.  
Resilient nations.



Seed ball planting method was developed by a Japanese farmer and philosopher Masanobu Fukuoka in southern Japan. The technique is considered as a natural method of farming that requires no machines, no chemicals and very little weeding. By using seed balls, lands are cultivated without any preparation of soil. This kind of cultivation is highly useful for re-vegetation of decertified lands, and protects soil from erosion and climate risks such as landslides.

Fukuoka technique uses minimal human interventions allowing ecosystems to determine the yield of the land for nurturing more resilient trees, healthier soil, plant diversity and a smaller work load for farmers.

### Materials required for making seed balls

#### 1. 1 bucket Clay

Search for red clay or white clay. A good clay sticks well together with other soil types when it gets wet, but becomes firm and air tight when it dries.



#### 2. 1 bucket Organic Dark Soil / Compost

It is decomposed animals' manure, leaves, straws or other mixtures of organic materials. It should be slightly moist, soft and consist of a dark black colour.

3. 1 bucket Water (amount of water may vary depending on the soil type). For example, if the soil is wet, you may require less amount of water and vice versa.



4. ¼ bucket Seeds of vegetables or trees enough for two buckets of clay and organic soil

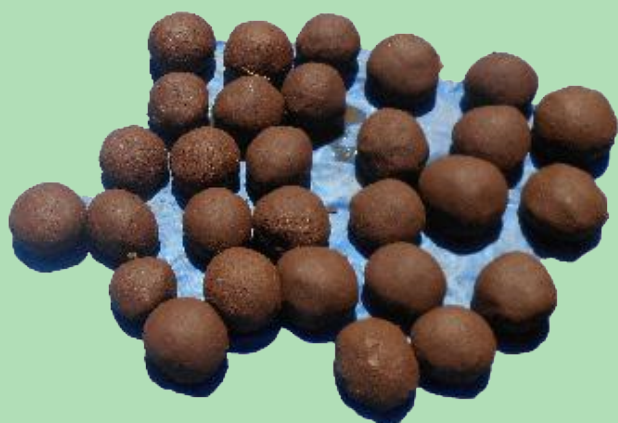
## Steps for making seed balls



1. Collect same quantity of both clay and organic soil. For example, if you use one bucket of clay, then you should mix with one bucket of organic soil.



2. Sieve the clay and organic soil to get fine particles. The natural clay and organic soil come with thicker particles. Therefore, they need to be sieved thoroughly to become fine particles.



6. Dry the seed balls for one to two days in a shaded area, if properly dry, the seed balls will be protected from external predators such as chickens, birds, rats...



5. Insert seeds (1 to 2 seeds per seed ball for permanent trees such as mahogany, sandalwood, orange, moringa...) ( $\pm$  5 seeds per seed ball for vegetables, flowers, grasses, clovers...)



3. Mix the clay and organic soil by adding appropriate amount of water slowly until the mixture begins to stick firmly. The process requires pouring water little by little to mix with soil for better bonding.



4. Take a bit of mixture and roll it into balls. Test the ball by throwing it on a flat surface. If the ball doesn't break easily, it means it has got good bonding.



Place or throw them into mountains / hills / slopes / farms / bare land / climate risk areas during rainy season



Seed balls will sprout and grow into trees and forest.



### Advantages of seed balls

- It is simple and easier to make seed balls without machines
- Easier for reforestation and plantation in difficult terrains
- Contribute to protect soil, environment and livelihood
- It is an organic technique and doesn't use any chemicals
- It is a low-cost method compared to traditional afforestation/reforestation techniques
- It requires low maintenance

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