THE SEED-BALLING TECHNIQUE:
How to do it

Naturskyddsföreningen

PELUM ASSOCIATION

Seed-balling is one of the low cost forest regeneration approaches preferably for large to medium degraded areas. Seed-balling supplements conventional reforestation approaches such as tree planting. The seed-balling technique is more closely linked to the natural process of seed dispersal, except that the seed is enclosed in layer of soil mixed with materials such as charcoal dust, clay, sand and compost to prevent the seed from being eaten by animals or pests while at the same time preserving it in the natural ecosystem until there are right conditions for germination. The nutritionally rich and water absorbent encasing also provides the necessary nutrients to give the seed a good start after germination.

Some of the Frequently Asked Questions about seedballs;

What are seed balls?

A Seed ball is a seed inside of a ball of nutritious mixture comprised of compost, charcoal dust, clay and sand among others. The charcoal dust helps repel pests' increases, aeration and also provides nutrients. The compost is for providing nutrients and as a medium for germination while the clay improves binding. Sand may be added to the mix to improve porosity depending on the nature of soils in a place.

What if the seedball dispersed falls on a rocky ground will it germinate?

When the mixture is right, the seed or seeds in a seed ball are given the perfect conditions to help the seeds germinate. It is therefore likely the seed will germinate when there are rains, but its root development may be prohibited when they meet a rocky surface causing its death. Some trees are more tolerant to such conditions than others, however, it is always not recommended to target rocky areas for seed bombing.

When is the best time to disperse the Seed balls?

Anytime is fine, the seeds in the balls keep the seed in good conditions until the rains start. However, the onset of the rainy season may be more suitable especially for direr areas.

How many seed balls should be in an acre?

Usually seed-balling is mixed with the Farmer Managed Natural regeneration, the number may depend on the nature of the regenerating area. A farmer can determine the number of seed balls and the species of trees to add by planting seedlings. However, since the germination rate for viable trees under seedballs is about 30 to 50% 1,000 seedballs may give you about 400 trees.

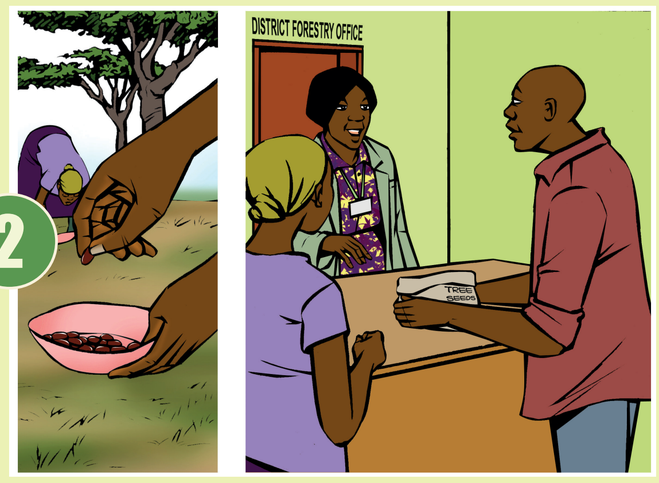
What can cause the seed balls not to germinate?

If the seed balls have viable seed and are mixed right they should be able to germinate at a rate of 40% and above. The causes of poor germination may be that the seed loses viability, if the seed ball is not well dried it may stimulate the seed germination before time or if the materials were not well mixed to balance the nutrients and give the right porosity for the seed to penetrate the materials.

Steps on how to make seed balls



STEP 1: Identify land for regeneration (this can be a site around your home or farm that you want to enrich with tree species that will help you)



STEP 2: Collect seed locally or buy local trees from a trusted source. Contact your District Forest Officer, National Forestry Authority staff or local experienced NGO staff for support.



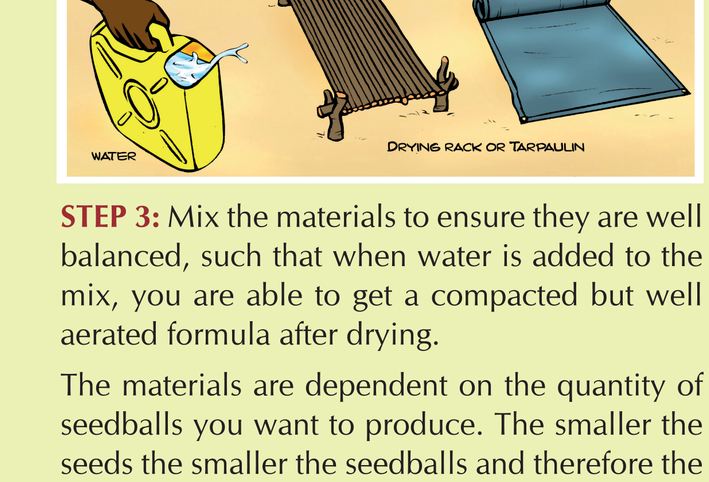
STEP 3: Mix the materials to ensure they are well balanced, such that when water is added to the mix, you are able to get a compacted but well aerated formula after drying.

The materials are dependent on the quantity of seedballs you want to produce. The smaller the seeds the smaller the seedballs and therefore the quantity required to produce seedballs for small seeds will be low.

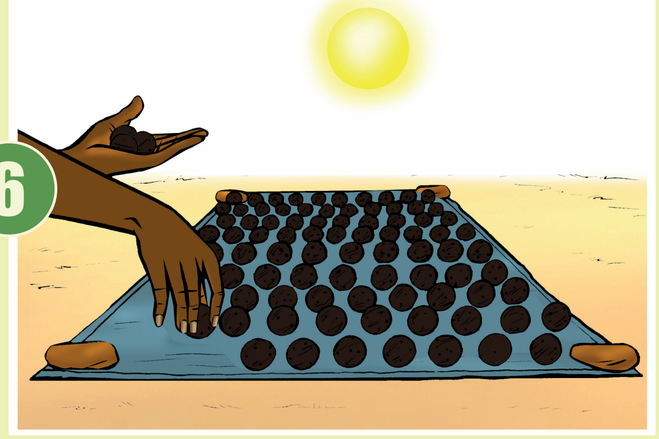
Note: *Its advisable to collect locally available materials that can be used to balance soil bulk density and porosity. For example, clay can help compact relatively lose soil and charcoal dust can act as a proliferation material to enable the water to easily penetrate the seed balls to facilitate germination.*



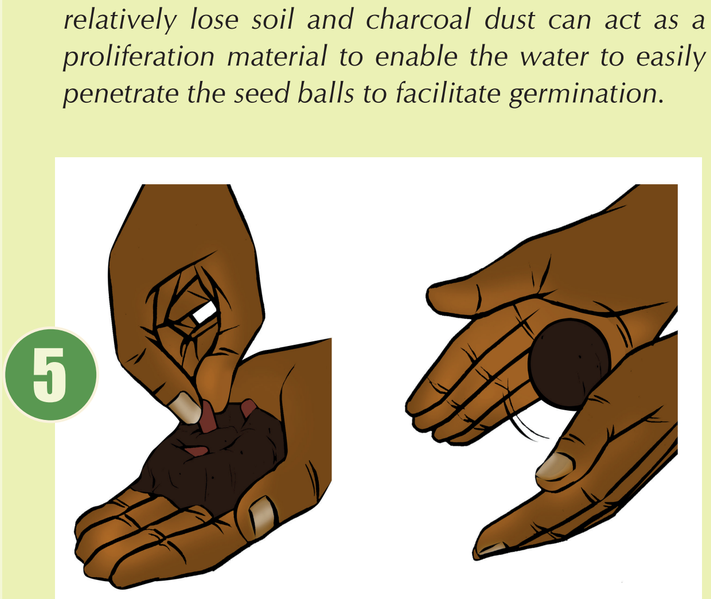
STEP 4: Slowly add water to your mix until it becomes sticky like dough



STEP 5: Pick small portion of the mixture (paste) with your hand, compress it and flatten it using your hands (to look like a chapatti) and place the seed or seeds (for the case of very small seeds) in the middle and roll to form an even round ball.



STEP 6: Dry the balls for 1 to 2 days



STEP 7: Store the seedballs in a dry container



STEP 8: Disperse the seedballs by throwing or for wide patches, use a catapult or any other mechanical means to disperse.

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