



*Lady Bird Johnson*

# Wildflowercenter

## How To Make Seed Balls

by Jim Bones

### What Are They?

Seed balls are one-half inch diameter models of the living world containing all the seeds for a complete habitat, wild or domestic garden, or both in one. Hundreds of kinds of seeds, soil humus, dry powdered red clay, and sand, form the solid components of seed balls. When mixed with water and rolled into balls, they become little Adobe Gardens. They are cost effective, hundreds of times faster to apply, and can be made by anyone anywhere in the world where there is clay, soil and seed.



### How To Make Them

1 Part: Dry Humus, from compost with live mycorrhizal fungi soil inoculates

2 to 3 Parts: Dry Mixed Seeds, assortment (hundreds of kinds) of all desired plants

5 Parts: Dry Red Clay, finely powdered and sifted, not grey or white clay

1 to 2 Parts: Dry Fine Sand, cleaned and sifted (if clay does not have a little sand)

\* Mix ingredients DRY, turning and sifting to coat seeds with soil, clay, then add:

1 to 2 Parts: Water added a little at a time until the clay mix is easily workable

After thoroughly stirring the seeds in a large flat container, cover with dry soil humus from compost, then add dry clay and mix well. If local clay does not have a little sand in it, you may want to add some aggregate strength. Water is then gradually added until a firm suitable consistency is reached for rolling the clay into half- inch diameter balls. Wet clay is pinched off the main mass and rolled between the palms of the hands until smooth and round. After a few seconds the clay can be felt to set up or organize, as the tiny clay platelets align themselves to each other, and the seeds they enclose. It is important to roll the clay until this polymerization is felt, for then the ball will dry with structural integrity. Finished seed balls must dry undisturbed for approximately 24 hours.

### How To Apply Them

Once they are dry, seed balls may be stored in a cool dry place, where they may breathe until they are spread abroad. Or they may be broadcast immediately after drying and allowed to lay dormant in place until released by rains. THEY DO NOT NEED TO BE BURIED OR WATERED. Seed balls are perfectly content to simply lay about "sleeping" until the right amount of rain falls. When rains come, no matter where a seed ball has landed, something from the mix inside will be at home on the spot, so all possible habitat bases are covered in one broadcast application. A minimum application seeks a scatter density of at least 10 seed balls per square meter. Adequate coverage requires at least .20 grams of seeds per seed ball, or 2 grams of seeds per square meter-minimum! Restoration requires at least 3 grams of seeds per square meter. Between 8 and 12 kilograms, or 20 to 30 pounds of mixed seeds are required per acre. Protected from predatory insects, rodents, birds and other animals, seed balls lie dormant until sufficient rains fall to start their germination. Then hundreds of sprouts explode from each ball as they eagerly reach for the sun. There is absolutely no one way to make seed balls. Be like a child and try them. It's fun! The more you put out the faster Nature re-grows.

### Collecting your own components

- **Clay.** Gather local red or brown clay, like you might use for terra-cotta pots. Not white or bentonitic gray clay. Red clay contains a broad diversity of minerals, especially the iron and manganese minerals. Some gray clays were deposited in anaerobic environments, and may contain sulfides and salts. Local clay is desirable if available, as it may have the local compliment of mineral nutrients to which the native plants have already adapted. Do not quarry clay in a way that will cause damage or lead to erosion. The finest clay sources are found by streams that flood and leave pools of still water to evaporate. The mud at the bottom often shrinks as it dries, and cracks into large pieces. Gather them when they are dry. Brush off coarse sand

and powder the pieces by grinding between concrete blocks, bricks or stones. The clay needs to be dry and loose. Sift it through a screen to remove large chunks. If there is no local source of clay nearby, you may order terra-cotta clay from ceramic supply companies.

- **Seeds.** Collect native seeds (grasses, wildflowers, shrubs, trees, etc., everything available from your local ecosystem, and whatever you want to re-introduce into your watershed.) It is best to USE SEEDS FROM YOUR AREA as they are at home and you will not set loose invasive plants that could damage the native ecosystems. The best source is from the vicinity of the plant site itself.
- **Humus or compost.** Begin by growing a guild of micro-organisms in a compost pile. Gather a little leaf litter from the bottom of the leaf floor, under all the native trees and shrubs within your entire watershed. Look for the white mycelium filaments, often found at the interface between the decaying matter and the upper, organically rich soil layer. Also gather a little duff from beneath the oldest grasses found by stream banks. DO NOT TAKE ALL of the material from one place. That would tear a large hole in the local biosystem. Add your own clippings and kitchen scraps. A few weeks to several months later, depending upon location and climate, you will be able to harvest a little of the essence as needed for inclusion in seed balls. Living soil humus is critical to success, especially in arid regions.

### **A Word Of Caution!**

You roll all the forces of Nature into Seed Balls when you make them. They have tremendous regenerative powers and they can be of great benefit. But used carelessly or wantonly, Seed Balls can cause irreparable biological disruption by effectively introducing alien species into a habitat with no means of coping with rampant invaders. The world is already host to numerous incidents of introduced exotic species that have radically altered Native Landscapes everywhere. Be careful of which seeds you choose and where you scatter them. The Native Plant Society strongly requests that you only use native species. Making seed balls is easy, but choosing the right seed is the real problem. What must be intuitively understood and deeply respected before meddling in the forces and processes of Nature is the spiritual essence of a place. This requires reverence and humility and a willingness to be taught by Nature.