

SOIL BLOCKING

Soil blocking is a container-less technique for growing seedlings indoors. A simple soil block tool is used to press a custom soil mix into cubes in which we can grow beautiful seedlings that are healthy, will not be root bound, and are easy to transplant into the garden.

HISTORY – Soil Blocking methods were developed in Holland, and are used throughout Europe. An English engineer, Michael Ladbrooke, designed and manufactured the original hand blocking device. Eliot Coleman, an American farmer, researcher and author, worked off of Ladbrooke's discoveries and made many of his own.

BENEFITS -

- Homemade soil mix gives proper nutrients for stable and strong growth of early seedlings. Mixes are customizable and can be experimented with.
- **Cheaper & Sustainable** – Raising your own seedlings is significantly cheaper than purchasing them from stores. No need to buy peat pots, or plastic containers, which deteriorate and need replacing. The soil blocking tool will pay for itself and can be shared amongst friends!
- **Fast & Efficient** – Soil blocks take up less space in plant trays. Time is saved because plastic pots don't need to be cleaned and stored each year. Seeding is faster because the soil blocker creates a depression for seeds. You can create a few or many blocks at a time. Potting on can be done by using different size soil block moulds. Transplanting into the garden is faster since you don't need to remove pots first.
- **No Root Shock** – Roots are “air pruned” and root ball is in centre of block, as opposed to circling around the sides of a container. Transplants adjust to their new outdoor environment a lot easier as roots can gradually expand outward.
- **More Varieties** – Crops that are normally prone to root shock and are difficult to start inside do well in soil blocks including plants in the squash family (melons, cucumbers, winter squash), root crops (beets), and corn.
- **Pre-moistened** – The soil mix is pre-moistened uniformly so blocks don't require water for first 2 or 3 days. Coir and peat retain moisture very well.
- They're cute and fun!

BLOCKING MIX RECIPE *

A standard 10-quart bucket (5 US Gal) is the unit of measurement for the bulk ingredients. A standard cup measure is used for the supplementary ingredients. This recipe makes approximately 2 bushels of mix. Follow the steps in the order given.

- 3 buckets brown peat (standard peat moss, use a premium grade) (**OR use coconut coir**)
- ½ cup lime. Mix ingredients together thoroughly. (**Coir is neutral pH so do not need lime**)
- 2 buckets coarse sand or perlite (**1/8 – 1/16” diameter coarse sand or fine gravel**)
- 3 cups base fertilizer (equal part mix blood meal, colloidal phosphate, and greensand) (**OR equal parts blood meal, kelp meal, lime**) → **You are aiming for a balance of Nitrogen (N) – Potassium (K) – Phosphorus (P)**
- **Mix**
- 1 bucket garden soil (**or Black Earth**)
- 2 buckets well-decomposed compost. Mix ingredients together thoroughly.

* *From The New Organic Grower, by Eliot Coleman*

UNIT RECIPE:
30 units brown peat or coir
1/8 unit lime (if using peat)
20 units coarse sand or perlite
3/4 unit base fertilizer
10 units soil
20 units compost

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1. Mix your ingredients in a sturdy plastic tub. Unused mix may be left in the tub, perhaps covered with damp burlap to keep moist.
2. Moisten the mix thoroughly using one part warm water for every three parts blocking mix. Successful soil block making depends on the mix being wet enough. The mix should have the consistency of soft putty or wet cement, so that **a small amount of water oozes through small openings in the blocker as the blocks are made**, and that the individual soil blocks cling to the blocker without falling out prematurely. Trial and error is necessary here.
3. “Charge” the blocker by thrusting it into the soil mix a couple times so each chamber is packed tightly. Scrape off excess at bottom of blocker.
4. Place the charged blocker over the tray and push down on the “T” handle while lifting the blocker up and away. You’ve made your first blocks!
5. Dip the blocker into a bucket of water to avoid it getting gummed up between chargings. Thoroughly clean the soil blocker after use for the day.
6. Seed your blocks with desired seeds. Blocks will not require water for first several days, but after that keep them moist through fine misting. Water little but often.

Material	Purpose	Pros	Cons	Where to Find
Peat	Organic matter, structure/body, fiber, moisture retention	Cheap	Non-renewable resource	Local hardware stores, Garden centres
Coir	Same as peat, use as environmentally friendly alternative	Renewable Resource	More expensive	Home Hardware
Lime (dolomitic)	Balances out acidic pH of peat. Source of magnesium.			Hardware stores, garden centres
Course Sand or Fine Gravel	Aeration – pores for air/water. Want 1/8 – 1/16” diameter	Natural and inexpensive		Hardware stores, garden centres
Perlite	Alternative to sand for aeration		Expensive, too Large, & releases Toxic amounts of Na, K, Al, B, Fluoride	Hardware stores, garden centres
Blood Meal	Source of nitrogen			Hardware stores, garden centres
Greensand (Colloidal Phosphate)	Source of potassium & micronutrients			
Kelp Meal	Alternative source of potassium & micronutrients	Organic		Home hardware, garden centres
Rock Phosphate	Source of phosphorous		Expensive	Garden centres
Bone Meal	Alternative source of phosphorous	Inexpensive		Hardware stores, garden centres
Garden Soil	Stable, sustained source of nutrients			Your garden in the fall
Compost	Stable, sustained source of nutrients			Well-rotted heaps, or buy bagged from garden store

-You may need to screen your garden soil and compost to ensure there are no clumps. Screening creates a fine consistency, which will make for a better soil blocking mix.

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RESOURCES -

http://soilblockers.ca/soilblockers/Resources_files/SoilBlockingEbook.pdf

<http://www.betterhensandgardens.com/2011/03/20/soil-blocks-for-starting-transplants/>

http://www.pottingblocks.com/eliot_coleman_soil_blocks/

<http://edibleschoolyard.org/resource/soil-block-recipe>