



**Seed Starting Tricks: How to Start Seedlings
That Thrive**

OVERVIEW:

1. Direct Seeding
2. Transplanting
3. What are soil blocks?
4. Our potting mix recipe
5. Transplanting successfully



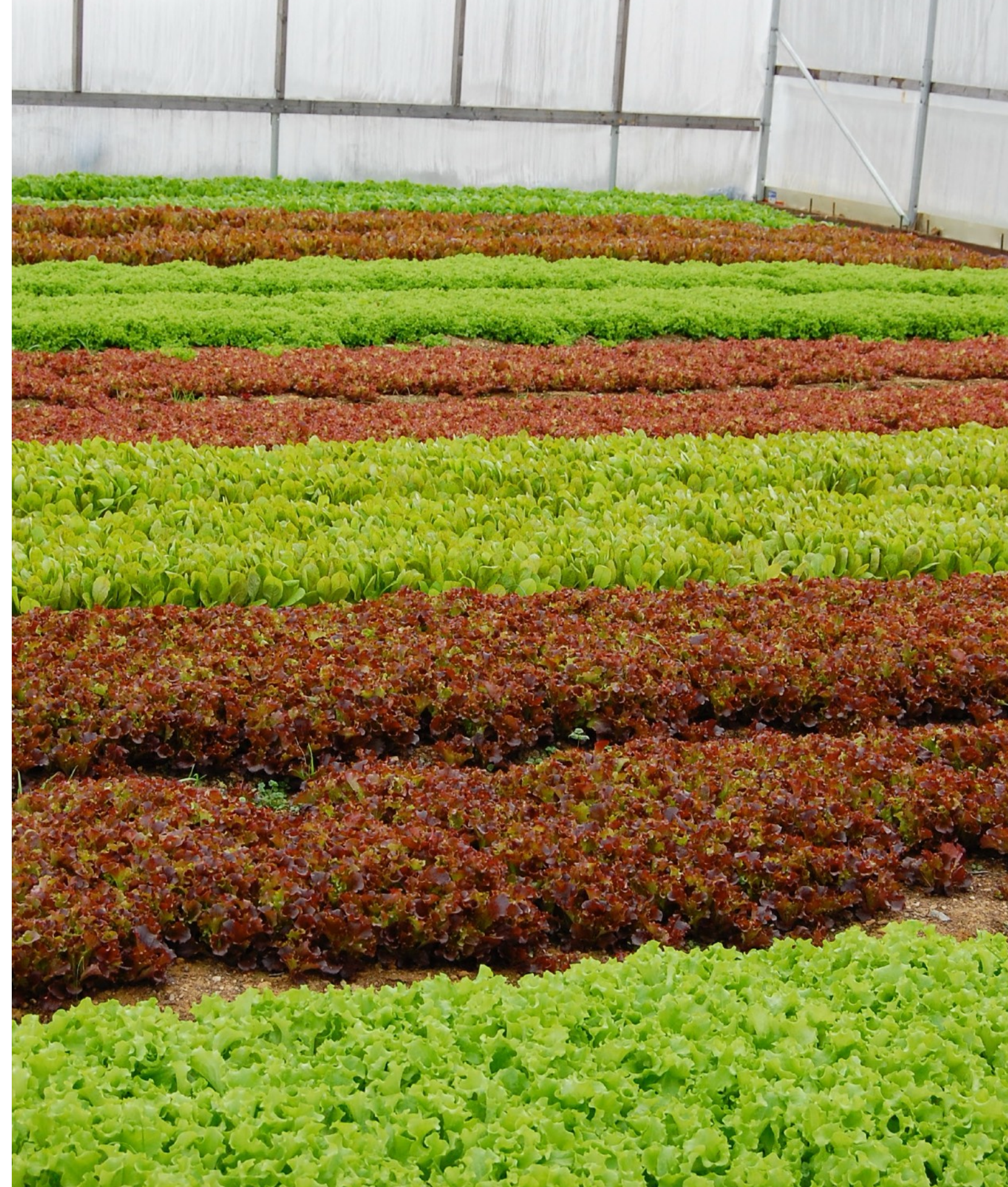
DIRECT SEEDING

WHY DIRECT SEED?

1. It is not practical or economical to transplant some plants
 1. Examples of these plants are:
 1. Tap-rooted crops (carrots, parsnips)
 2. Legumes (peas, beans)
 3. Fast-growing crops (radish, spinach)
 4. Herbs (can go either way)

DIRECT SEEDING

1. Germination percentages for direct seeding are lower than the percentage on the seed packet.





DIRECT SEEDING

- Allow for a “fudge factor” of 50 to 100 percent germination
- Example: If you want a plant every 4 inches then set the seed spacing at every 2 inches for the seeder



DIRECT SEEDING

- As a general planting rule, cover seeds to three or four times their diameter - i.e. plant a $\frac{1}{4}$ " (0.5 cm) diameter pea 1 inch (2.5 cm) deep
- In cool or heavy soils, plant a little shallower
- In warm or dry soils, plant slightly deeper
- Keep soil moist until germination

DIRECT SEEDING WITH A SEEDER

1. Mark the row before seeding:
 1. Stretch a string tightly along the side of your first row
 2. The row-marker arm on the seeder will mark the following rows for you
 3. Aim your seeder straight for each pass
 4. For larger areas you can use an adjustable rolling marker or marker rake to mark your rows

DIRECT SEEDING BY HAND

1. Hand-seeding is often used for larger seeds like legumes and corn:

1. Beans
2. Peas
3. Corn



Q15

TRANSPLANTING



TRANSPLANTING ADVANTAGES

- Transplanting is more reliable
- Better plant care and cost efficiency
- An almost sure harvest
- Cover crop productivity
- It is easier to deal with weeds
- It increases the effectiveness of succession planting
- Shelter gives a head start

INDOOR SEEDING

1. Seeds are sown in some sort of bed or container which usually holds a special soil mix or potting soil
2. The soil mix is different from garden soil in that it has extra organic matter and drainage material in it. This helps seedlings thrive despite their confined conditions
3. A controlled environment (in your home, greenhouse, cold frame, etc) is used to enhance the growing conditions for the young seedlings

INDOOR SEEDING

1. Types of starting containers

1. Cell trays
2. Windstrip
3. Seeding in flats
4. Soil blocking





WHAT ARE SOIL BLOCKS?

SOIL BLOCKS

1. A block made out of lightly compressed potting soil
2. Serves as both the “container” and growing medium
3. Blocks are pressed out by a form and the air space between the blocks serve as “walls”

~ Elliot Coleman



SOIL BLOCK ADVANTAGES

1. When the seedling's roots reach the air they stop growing thus preventing root circling as would happen in a container
2. Seedling roots become well established in a soil block and quickly take root when transplanted in the field
3. The roots of seedlings quickly fill the soil block holding it together quite firmly so that it is not fragile when handling
4. There are no plastic pots or plug trays to deal with
5. Blocks can be made in various sizes to meet your potting needs



SOIL BLOCK MAKERS

- Have forms to make:
 - 3/4-inch blocks (mini-blocks)
 - 1 1/2-inch blocks
 - 2-inch blocks
 - 3-inch blocks
 - 4-inch blocks (maxi-blocker)

SOIL BLOCKING

1. Moisten the mix by adding water at an approximate ratio of 1 part water to 3 parts mix
2. It is better for the soil block mix to be more wet than dry
3. Should be like a wrung out sponge



SOIL BLOCKING

1. Using the soil-blocker:
2. Push down quickly with a twisting motion into blocking mix
3. Scrape off excess mix
4. Eject blocks onto a tray/flat
5. Rinse in water between each use



A close-up photograph of numerous small, bright green seedlings with two leaves each, growing out of dark, rich soil. The seedlings are arranged in a grid-like pattern, and the background is softly blurred, emphasizing the foreground plants.

OUR POTTING MIX RECIPE

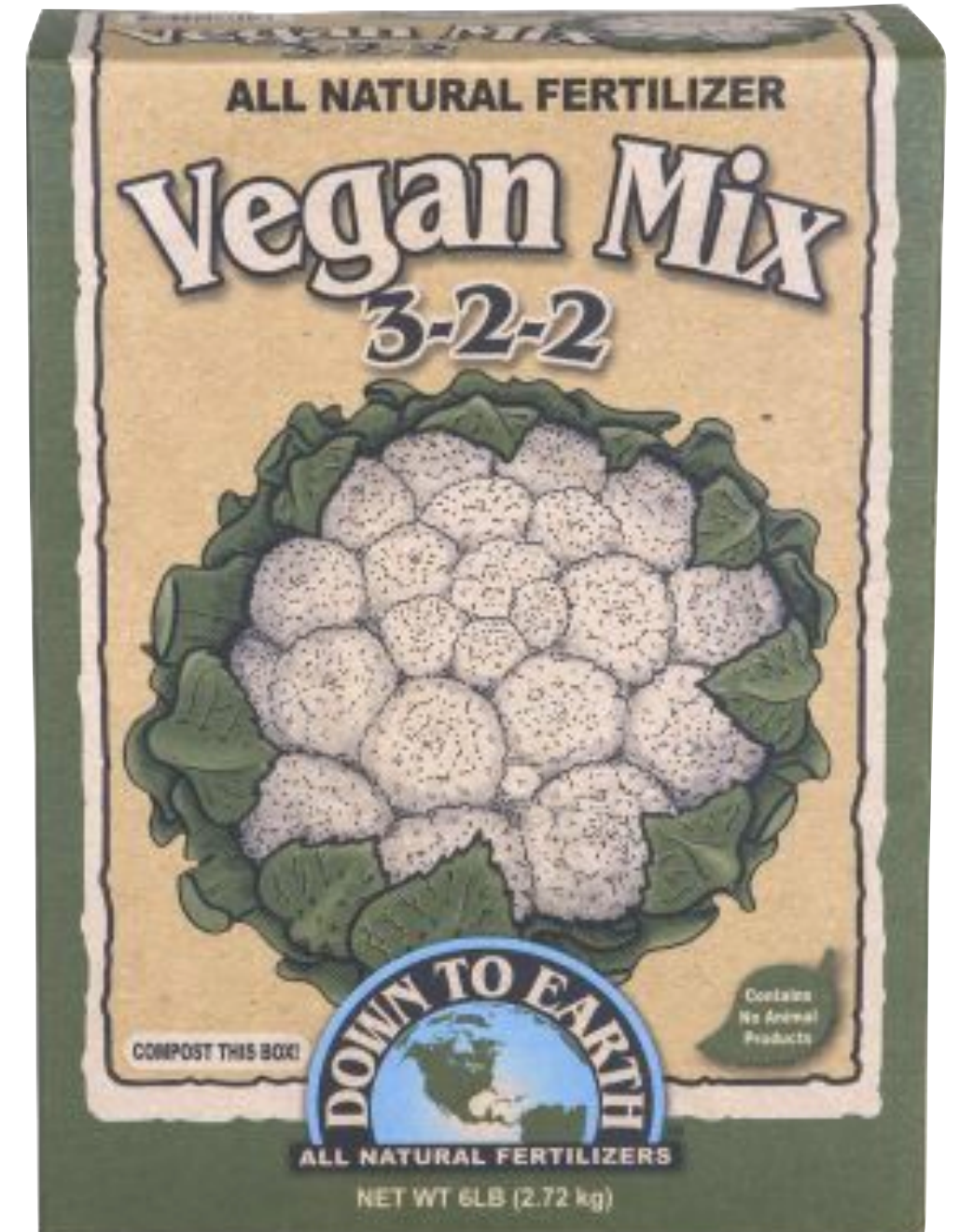
POTTING MIX RECIPE

1. Potting Mix Recipe:	Full	Half	Quarter
2. Peat Moss	6 gallons	3 gallons	1.5 gallons
3. Compost	6 gallons	3 gallons	1.5 gallons
4. Course Perlite	2 gallons	1 gallon	1/2 gallon
5. Fertilizer Mix	2 cups	1 cup	1/2 cup

6. **Note:** 2 gallon buckets work well for measuring. You can find them at your local hardware store.

FERTILIZER MIX

1. Down to Earth Vegan Mix
 1. OMRI Listed
 2. 100% Plant Based
 3. Excellent balance of nutrients
 4. Soy bean meal, canola meal, alfalfa meal, rock phosphate, langbeinite, greensand, kelp meal and humic acids



GERMINATION REQUIREMENTS

1. Germination temperatures
 1. Ideal temperature for most crops: 70-75° F (21-24° C)
 2. Ideal temperature for asparagus, cucumber, eggplant, melon, pepper, and squash: 75-80° F (24-27° C)
2. Use a heat mat and/or start seeds inside



GERMINATION REQUIREMENTS

1. Light requirements

1. Most seeds do better covered
2. Some do better uncovered (lettuce, spinach, some herbs like summer and winter savory)



SEEDLING CARE

1. Light for seedling care
 1. Ideally outside in a protected space
 2. 8-16 hours of light
 3. Keep lights close to plants when inside
2. Temperature & air flow
3. Watering plant starts
4. Hardening off





TRANSPLANTING SUCCESSFULLY



TRANSPLANTING SUCCESSFULLY

- Hardening Off
 - This is the process of gradually exposing sheltered seedlings (started in your home or green-house) to the outside elements
- **DAY 1:** Place outside in mid-afternoon and leave until mid-morning the next day
- **DAY 2:** Bring inside over the middle of the day and then transplant in the evening

TRANSPLANTING SUCCESSFULLY

1. Watering Well

1. It is important that seedlings be well watered before transplanting
2. It is also important to water immediately after transplanting. The moist ground helps the transplant take root faster and become established in its new environment.



TRANSPLANTING SUCCESSFULLY

1. Avoid Disturbing Roots

1. Be careful to preserve the fragile root systems of the seedlings while transplanting
2. You are less likely to disturb the roots of a seedling grown in a soil block because the roots are air pruned



TRANSPLANTING SUCCESSFULLY

1. Soil Contact

1. Dig a hole with a trowel
2. Place soil block lightly but firmly in the ground
3. Avoid air pockets and uncovered edges
4. If even a corner of the block is above the soil it can easily dry out the whole block



TRANSPLANTING SUCCESSFULLY

1. Proper Spacing

1. By properly spacing transplants you are making optimum use of the land area
2. Weeding/cultivating is more efficient when plants are properly spaced
3. A marker rake is one of the easiest ways to space correctly



AT THE SEEDTIME BOOTH

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