



Advanced Gardening

1. In Ground Regenerative No Till Method

- a. Reduces soil erosion
- b. Increases microbes - bacteria and fungi
- c. Increases organic matter
- d. Larger healthier plants
- e. 5 Principles of Soil Health
 - i. Minimal Soil Disturbance - no tillage, no chemical fertilizers, no herbicides, no pesticides, no herbicides.
 - ii. Armor the soil with mulch and/or cover crops.
 - iii. Plant Diversity - food crops with herbs and flowers, crop rotation, cover crops. Practice poly-culture vs. monoculture.
 - iv. Keep living roots in the ground - all year, even in the height of summer.
 - v. Incorporate livestock or at least use their manure - goats, chickens, cows, etc.
- f. Build up healthy soil, no need to till hard, compacted soil. Aerate with a broad fork, then layer organic matter.
 - i. Use plants with deep tap roots to break up hard compacted soil - sunflowers, daikon radishes, and sweet potatoes.
 - ii. Put a foot or two of mulch over a planned garden 6 months to a year before your first planting. Mulch will start to improve soil structure.
 - iii. The first year is the worst year of gardening, every year of no till increases organic matter, microbial health, and soil structure.

2. Companion Planting

- a. Attract pollinators
- b. Deters pests
- c. Habitat for predatory insects - ladybugs, lacewings, and praying mantis.
- d. Nitrogen fixers - leguminous trees, beans, peas, clovers.

3. Pruning techniques

- a. Brussel sprouts - trim bottom foliage to allow brussels to develop and get air circulation.
- b. Cucumbers - trellis like tomatoes, trim from bottom up, pinch off premature flowers.
- c. Tomatoes - trim from bottom up, to the fruiting branches. Just needs the top crown of foliage, pushes energy into the fruit.
- d. Pinching peppers - pinch off after the second set of leaves to double the blooms and thicken the stalk.

4. Growing vertically saves space, eliminates pests, and increases yield

5. Save seeds and let 5% of plants go to flower and seed.

- a. Saving seeds means those seeds are well suited to your environment.
- b. Saving seeds saves a lot of money.

6. Direct Sow vs. Transplant

- a. Most plants do better as transplants, except...
- b. Root vegetables - carrots, radish, beets.
- c. The planting calendar from Growing in the Garden by Angela Judd has a good guide for what needs to be planted by seed (direct sow) and what should be transplanted.

7. Heirloom - Native 100 hundred years or longer, not cross pollinate

8. Hybrid - Cross pollinated to make disease resistant varieties

9. Indeterminate - vine grows and grows 10 - 18 feet tall, perpetual harvest.

10. Determinate - shorter bushy, one large harvest- great for canning

11. After the season is over, cut the plant at the base. (Yes, some plants can be overwintered or survive the summer, but the stress lowers production and affects fruit quality. Better to plant something else, recondition the soil, and wait for the next season, either fall or spring.)

12. No Till Harvesting

- a. Cut stem at or just below soil.
- b. Leave roots in the ground to decompose, create channels for water, and feed bacteria and fungi.
- c. Cover the harvested area with two inches of compost, wait a week (this starts nutrient cycling), and plant the next crop.

13. Mycelium - white fungus in soil. It is a sign of really healthy soil, connects all of the plants, and helps plants in arid environments.

14. Companion plant dill with cucumbers to control powdery mildew.

15. Squash Bugs & other harmful insects

- a. Attracted to excess moisture on foliage. Water the soil, not the foliage. (The exception to this is foliar feeding with worm tea.)
- b. Spacing matters- plants that are too close will become stressed from reduced circulation and air flow & then become susceptible to insect damage.
- c. Companion planting helps with spacing and pest control.
- d. Healthy soil grows healthy plants

16. Soil Temp vs. Outside Temp

- a. Soil temp will always be cooler in the winter months
- b. Seeds germinate based on soil temp.
- c. Use a turkey thermometer to measure soil temp.