

Bio-Dynamic French Intensive Gardening

By Gordon Peabody

The basic concepts of Bio-Dynamic French Intensive Gardening combine a number of advanced modern technologies with age-old techniques dating from pre-renaissance times. The results are stunning; with up to 400% increases in overall yield reported. Up until the Renaissance period, flowers, herbs and vegetables grew together in a basic harmony in the same gardens. The Renaissance moved flowers out into separate gardens for the sake of art, and their other values were all but forgotten. Bio-dynamic French Intensive Gardening goes back in time, re-introducing flowers and their natural abilities to repel insects and stimulate the growth of certain vegetables and herbs. In addition, this system integrates the concepts of composting, double digging, raised bed planting, mulching, companion planting and crop rotation as well as considering lunar phases in germination and transplanting times.

Composting

The preparation, maintenance and utilization of a composting system are probably the best jumping off spot for your garden. The idea behind composting is to utilize naturally available materials to provide nutrients for your garden instead of having to revert to commercially produced fertilizers. Properly prepared compost consists of a living community of microscopic organisms, which provide an enriching balance of easily utilized vitamins and nutrients for your garden on a continuing and long-term basis. Commercially available fertilizers may not only tend to upset the delicate balance of these microorganisms but also tend to produce crops having less protein and more carbohydrates, a factor, which makes vegetables more attractive and vulnerable to insects.

The basics necessary for creating your own composting system are: first gathering any local organic material available. This could consist of manures, hay, seaweed, grass clippings and leaves as well as household garbage and wood ashes; secondly, these materials need to be layered and not mixed, with a thin layer of soil in between layers to

introduce necessary micro-organism; thirdly, your compost pile must be at least five feet high, which is the minimum size for producing the heat necessary to obtain rapid decomposition; finally, the pile should be wet down with water and then covered with dark plastic to absorb heat from the sun.

Within ten days to two weeks, your pile will have lost half of its original size. That is the right time to turn the pile over, or if you have more than one pile working, mixing them together will give you more size and heat for a faster turnover time from raw waste to useful compost. Once again soak your pile down and then cover it with dark plastic. After an additional ten days your pile should be half size, and ready to dig into your garden soil.

Double Digging

Here is where the work really begins for the serious gardener. While the end product is going to be almost maintenance free and tremendously productive, one of the trade offs begin with double digging. Starting at one end of the garden area, dig up a layer of earth and turn it over, but instead of shoveling it back where it came from, pile it alongside the area it came from. This will give you a trench with a pile right next to it. Then go back to the trench you created and dig down even further, this time turning the soil over in place. Once that is done you will still have a trench with the original pile next to it. Then begin to remove the top layer of soil on the side of the trench you haven't used yet. This layer will get shoveled over into the trench you just turned over.

The overall effect of this operation, when completed over the whole garden area, produced porous, aerated earth capable of accommodating root growth far better and deeper than conventionally dug gardens. When you realize that plants have equal growth both above and below ground, the importance of this stem becomes obvious. While this step will need to be repeated each year, the first time will be the most difficult.

Raised Beds

Raised Beds instead of rows are far more productive in growing and nurturing produce. By digging in your compost and digging out pathways, you will be able to create raised beds where plants can thrive in a mini-climate favorable to their own growth instead of the isolated existence in rows. The roots will have more favorable conditions for growth as well, without being compressed each time someone walks along the space wasting paths.

Beds should be planned with forethought to your limitations. The width of your beds should be at least three or four feet, but check first to be sure you can reach to the center of the beds from each side. Since plants will be grown without rows, the soil in these beds will be totally utilized.

Mulching

Mulching deals quite effectively with most of your gardening maintenance worries. Weeds, moisture retention and temperature stabilization are all controlled to some degree by mulching. Much can be either hay or grass clippings piled about three inches deep around your plants in their raised beds. Of course any weeds should be yanked up by the roots before offering them the protection of mulch! In addition to weed free ground cover and tremendous reduction in your maintenance time, the mulch will hold moisture in the soil, stabilize day and night time temperature extremes and provide additional fresh nutrients for your garden.

Companion Planting

Companion planting provides maximum sharing of the usable space in your garden, both above and belowground, while grouping plants together in a way that enables them to enhance each other's growth. Just why this happens is still very much a mystery, but it's a proven fact that the growth and taste of many plants can be affected by neighboring plants.

Crop rotation allows different plants to share the same space at different times, but companion planting allows different plants to share the same space at the same time. The key to this technique however, is compatibility. Consult the compatibility chart in the appendix to this article for references on your favorite plants. Utilizing both lettuce and onions for instance, maximizes space above and below ground. If they were planted between young tomato plants, they would mature by the time the tomatoes needed the extra space.

Lunar Cycles

Biodynamic Gardening takes into consideration the growing or shrinking phases of the moon when planting seeds or transplanting. Seeds, which have longer germination times, such as celery, parsnips and many flowers, should be soaked overnight, and then planted in the earth a few days before the full moon. The theory behind this is that the lunar water tide in the Earth will aid in the bursting of the seed coat.

The recommended time for transplanting seedlings is just after the full moon, when it is in a shrinking phase. At this point, the Earth's gravity will act to encourage the growth of roots.

Transplanting

When transplanting from seedpots, always use a somewhat richer mix of compost to encourage root growth at a time when the roots would normally be experiencing shock. This can cut down on lost time during root regeneration. Many seeds will not need transplanting and may be sown directly into the soil such as beans, peas, carrots and lettuce. Some seedlings, such as tomatoes must be transplanted right up to their first set of leaves, and the soil should never be pressed too firmly around any transplanted stems.

With some of the larger crops, the "X" method of transplanting can be effective. For instance, tomato plants can be transplanted at each corner of the "X" as well as the center. This allows maximum use of the space and enables plants with shorter maturing times such as lettuce to be planted between the tomatoes, for even more efficient production.

Crop Rotation and Succession Planting

Succession plantings and crop rotation can contribute to phenomenally high yields as the gardener comes to understand what each type of crop will take from the soil and what it is capable of giving. Additionally, the previous crop will be an important consideration in selecting the next crop. All crops will either end up contributing to your soil nutrients or depleting them. There is always some of each going on, but we are considering the overall effects.

Some of our favorite above ground crops, such as corn, tomatoes and squash, are heavy feeders on our soil's nutrients. Beans and peas are two crops that give nutrients back into the soil and make a good rotation team. If two successive crops are both going to be "feeders", then be sure to dig in some additional compost. Root crops such as carrots or turnips are considered light feeders and would make good compromises. After the growing season, alfalfa or clover would make a good cover crop to winter over before being dug back into the soil.

Garden Protection

Bio Dynamic French Intensive Gardening is not anti-bug, but simply recognizes that the garden isn't all yours. You are sharing it with countless microorganisms of every shape and description as well as the numerous insects that are easily visible to the eye. Grow an extra ten percent of each crop as a cushion against insects. Just consider it your taxes to mother nature. Besides pollinating many crops, insects often can produce healthier plants by stimulating them to strengthen after being attacked. Plants with up to sixty percent of their leaves eaten will still recover, they are alive, resilient and they usually respond to attack.

If the insect problem seems to be getting out of hand, here are a few things to try. Birdhouses for wrens, when placed around the garden early in the season can be really effective. The organic garden also should realize that some plants may be genetically or nutritionally weak, and the insects far prefer the weaker to the stronger plants. Many plants will offer insect protection to their neighbors. Marigolds and the

African daisy, as well as garlic are three of the most popular and can be grown right in with other crops after checking the compatibility chart. Nasturtiums will attract aphids off of your tomatoes, but remember to pull the nasturtiums up before the aphids mature and grow wings. Wood ashes are known to deter cabbage worms and when mint or garlic are ground up in water, they can be sprayed directly on plant leaves to discourage bugs.

Some species of plants are insect resistant but healthy beds are the best insurance for healthy crops, so avoid commercial pesticides and fertilizers. Commercial fertilizers give you plenty of large plants, but only set you up for needing pesticides. The fertilizer produces plants full of carbohydrates instead of protein, which raises a flag for insects. Then you end up resorting to pesticides to cope with major insect infestations and there goes your community of microorganisms in the soil, there goes your nutrient bank and then you need more fertilizer. If you are intent on buying something to get at those darn bugs, then buy lady bugs or parasitic wasps, The lady bugs will eat aphids and the wasps will lay their eggs directly on many types of leaf eating worms. The larvae hatch and goodbye worm.

Bio Dynamic French Intensive Technique

Beds must be laid out with a reasonable consideration for maximum sunlight, but where the taller plants won't be unnecessarily shading the smaller ones. Generally, the taller plants go on the north end of the gardens and the raised beds all run north south. A small garden may require six hours of initial digging and at least one five foot high pile of beginning compost. Following the paperwork on what to plant where, and the seeding and transplanting and mulching, only then minutes a day should be needed to maintain your garden. Remember when watering your garden to avoid the middle of the day when cold water might temperature shock the plants and much of the water could be lost to evaporation. Late afternoon is a favored watering time, because the water won't be lying on the plants at nightfall, which could encourage mold. The herbs, flowers and vegetables should find a pleasant harmony together, enhancing each other's taste and health, protecting each other and generally enjoying the neighborhood.

What you will be attempting as a Bio -Dynamic Intensive gardener will span the gap between pre-Renaissance gardens and the garden of the future. You will be doing more than just digging up a plot of ground, sowing seeds, watering, weeding and harvesting. You have the potential to utilize the harmony between growth and decay in a garden that will be a part of the Earth itself, and not just growing out of it. Your rewards may well be far beyond your expectations.

Companion Planting

Asparagus	Tomatoes	
Beets	Cabbage, broccoli, onions	Pole beans
Bush beans	Celery, corn, cucumbers, peas, potatoes, eggplant	Onions
Broccoli-Cabbage	Beets, celery, lettuce, onions, peas, turnips	Pole beans, tomatoes
Carrots	Lettuce, onions, peas, tomatoes	
Celery	Beans, tomatoes, cabbage family	
Corn	Bush beans, cucumbers, pole beans, peas, potatoes, squash	
Cucumbers	Bush beans, corn, lettuce, pole bean, peas, radishes	Potatoes
Eggplant	Bush beans, pole	

	beans, potatoes	
Lettuce	Carrots, cucumbers, onions, radishes	
Onions	Beets, carrots, cabbage family, lettuce, tomatoes	Pole beans, bush beans, peas
Pole beans	Corn, cucumbers, eggplant, peas, potatoes	Beets, onions, cabbage family
Peas	Bush beans, carrots, corns, eggplant, pole beans, radishes, turnips	Onions, potatoes
Potatoes	Pole beans, corn, cabbage family, bush beans, eggplant	Cucumbers, squash, peas, tomatoes
Radishes	Cucumbers, lettuce, peas	
Squash	Corn	Potatoes
Tomatoes	Asparagus, carrots, celery, onions	Potatoes, cabbage family
Turnips	Peas	

References

John Jeavons, [How To Grow More Vegetables.](#)

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