

Gardening for People with more Time than Money

Robert Bradford

Forward

Are there not enough gardening books? Yes, but none of them give you the information and conclusions that you will find here.

While this book was still in outline form I discovered that it contained a lot of my opinion and very little fact that you could use to form your own opinion. I have tried to correct this and in most cases have given you opposing views and information that is used to support those views. I do not expect you to agree with everything I say. I cannot even get my wife to give up tradition and accept my theories. I will give you a lot of food for thought and suggestions for experiments with your soil and plants.

I am indebted to my brother for his editing help. He am kin read an he am kin write.

The first paragraph of this forward is no longer true. I found a book, Weedless Gardening by Lee Reich (<http://www.workman.com/catalog/pagemaker.cgi?0761116966>), published by Workman Publishing of New York (www.workman.com), ISBN 0-7611-1696-6. He has published many of my ideas but he is coming from what is the best possible way to treat a plant and I was writing for those of us with more time than money. I am reading his book for the fourth time.

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1 Copy nature

Before you buy or plant anything take a long hard look at the ways nature plants, nourishes, protects and propagates flora. She does not till the soil except for the work done by earthworms. They can do a much better job than you can and do not cause problems like promoting weeds, depleting the organic content, compaction and hardpan. They take organic material from the surface and distribute it throughout the root zone. They loosen the soil and let water and air into the subsoil repository.

Our land is covered with native Northern Red Oak with a native Dogwood and native Redbud understory. The Redbud are concentrated along the streambeds. The northern exposures are all in wildflowers and ferns. It would be foolish to try to get the ferns to grow on southern exposures and the Redbud in the meadows. It would be just as silly to plant yucca and Ajuga in the same bed.

Years ago I worked for a County Extension Agent and I tried to learn everything he knew about plants. He told me that tests had shown that water migrates from soil of larger particle size to soil of smaller particles. Large course mulch collects dew and capillary action transfers it to the protected topsoil and the root zone. The excess not used by the plants is stored in the clay subsoil. This is another reason to surface mulch like nature does, and to use your compost before decomposition to humus is complete.

Plants need minerals and trace elements to thrive. These are found in rock. The smaller the size of the rock the greater the ratio of surface area to mass. Clay is composed of rocks of microscopic size. I believe that some clay is very beneficial to plant health.

2 Improve soil

In nature when a leaf falls from a tree it is left there to decompose and feed the soil. Wind or water may move it but it is left to become food for the soil. When a leaf falls on your lawn you should not rake it up and burn it but use your mulching mower to cut it into smaller pieces that will fall between the blades of grass and feed the soil. Leaves in your flowerbeds can be left there unless there are so many that they will smother the flowers. The excess can be composted and returned to the place they fell.

No matter how good your soil is there is always room for improvement. The addition of organic material will enhance almost any soil. Some things can be added in their natural state or raw. Peat moss, coffee grounds, wood or bark chips can be used as surface mulch. Other materials like grass clippings, most manure, leaves, sawdust and kitchen scrap should be composted or at least ground first. There are as many ways to compost as there are people doing it. You can make composting as simple and cheap or as complicated and expensive as you want. I have heard that it takes God 100 years to make an inch of topsoil but we do not have that much time left. Our product is inferior but it works.

My composting theories are simple. Feed your soil, not the plants. Pile it up, wait for it to heat and, use it as mulch as soon as it cools. If it is too coarse run it through a shredder before or after composting. If it is too dry water it. If it does not heat add more grass clippings or you are wasting time. If it smells add more leaves or you are wasting nitrogen. If there is not enough of it mow and bag the treelines to get a mix of leaves and grass. Use a bagging mower to gather the leaves. Mow away from the pile until the bag is full and then mulch your way back. This has three major advantages. It chops the leaves to some extent and it mixes them with whatever grass or weeds are cut at the same time and it is the easiest way I know of to gather compostables.

I have made several compost bins over the years and each one has been easier to use and produced a better product. I want a container that is easy to load, easy to turn and easy to harvest. The large bin I used last year was made from 8 foot landscape timbers with a 5/8 inch through hole drilled near each end so the box can be held together with 1/4 inch steel rods. It was set on concrete blocks which allowed limited harvesting from the bottom. If you decide to turn a pile that is larger than four foot square, rebuild the bin next to the pile and fork the contents into its new home. I now have five smaller bins, made of 42" 3 x 4 untreated dunnage, some located below a pond and above a garden. There are more centrally located in the area that gets mown. I am also planning one made from 2 x 3 x 48" dunnage. A pile less than four foot square can be turned by removing

material from the bottom and putting it on top. Pressure treated lumber is good but free untreated is better.

Converting rocky clay soil to humus

Our farm is 80 acres of rocky clay that has shallow topsoil and a lot of grade that was caused by and has led to more erosion. About 67 acres are covered in native northern red oak so we have an abundance of leaves. Another ten acres is in mowable grass so we have plenty of grass clippings. Having more time than money and liking to work with compost, soil and plants, we combine three of the five major ingredients of compost: time, brown stuff, and green stuff. The other requirements are air and water that take care of themselves. There is an old sawmill on the property so we have a small mountain of hardwood sawdust that is of limited use in the compost and as mulch. Most of our mulch is from leaves, small deadfall in the woods and tops from trees harvested for lumber or firewood that has been processed in a chipper/shredder.

I know that some authorities disagree with me about using compost that is not completely finished. Their objections are based on weeds, temporary nitrogen deprivation and pathogens. If you don't put diseased material into the bin the end product will not be diseased. I like using compost before it has decayed to the final state because it better feeds the microorganisms in the soil. Weeds and low nitrogen will not be a problem if you use it on the surface and apply it thick enough. How much is enough? Keep piling it on until it does the job you expect of it. How much is too much? If your desirable plants cannot get air, water and sunshine it is too deep and or too close to them.

How does nature improve soil? She deposits fresh organic material on the surface and relies on fungi and earthworms to process and distribute it in the best possible manner. All we have to do to employ worms and propagate them is to feed the soil and stop poisoning it with chemical fertilizers, herbicides and pesticides. Due to the volume of raw materials on hand and attempting to copy nature more closely I am moving away from bin composting toward making leaf mold in large (2' X 8' X 32') beds. Our Ozark land is very hilly so building some retaining walls is the best way to get the maximum use of the acreage. Leaf mold is made in the beds created above these retaining walls by filling them with clippings, grass and leaves. There are no formulas or ratios to follow. Add whatever the bagging mower eats. Time will do the rest. The process can be speeded up by shredding, turning, watering and adding more green stuff but the end product is the same. Another advantage of this method is that the end

product is produced where it will be used. The brown areas can be planted while the bed is still working.

3 Use native plants

Those plants that were growing in your area before your grandparents were born have learned to thrive in your soil and weather. They had no one to feed, prune, or propagate them and they are still thriving. Non-natives can be grown but they will require a lot more tending, keeping them alive or cutting back the invasives. In the years we have been here we have not had to water an oak of any size.

Importing exotics can be dangerous because they may multiply too rapidly and harm your more desirable native plants. Do I have to tell you about kudzu? Do not introduce anything invasive unless you first have a means of controlling it. I do not want to steer you away from aggressive plants. You just need to be aware of how fast and far they are likely to spread. In some situations a plant that will spread quickly is just what is needed. To control erosion on a steep bare bank you want something that will spread quickly and become dense. I have read that crown vetch is bad because it can take over your lawn and garden. I encourage it for several reasons. It is a legume and feeds the soil. It is mowable and feeds the compost pile. It is great at erosion control. It grows densely and shades the soil. It will shade out most weeds. It is beautiful in flower and good looking the rest of the time. I permit several plants in my lawn or garden that many people consider weeds: red clover, crimson clover, Dutch clover, lespedeza, and moss. My weeds are other people's crops: blackberries, red oak and Bermuda grass.

4 Why irrigate?

Most people water too much and do it the wrong way. Native transplants and seedlings require watering only until they are established.

Plant natives that can thrive without your help. In most cases you weaken your plants by watering because if not done properly it will cause their feeder roots to concentrate very near the surface instead of going deep to find water. If you start watering you will have to continue whenever rainfall supplies less than one inch per week or whenever the surface dries. You may have to work to establish your landscape but it should be able to manage on its own after that. Water transplants slowly and deeply (3 to 6") until they are established and water only during extended droughts thereafter. Mulch. Mulch. Mulch.

5 Prevent weeds

Nature will not tolerate bare soil. She will plant something, most often plants that we consider weeds. If she cannot get weeds to grow she will move the soil through wind and or water erosion.

A weed is anything growing where we do not want it. A rose is a weed in a cornfield. Cover the soil with something. Almost anything is better than nothing. The best materials are already there but most people rake and bag them and send them to the landfill. Leaves and grass clippings make wonderful mulch, compost, fertilizer and worm feed.

The easiest way to kill Canadian thistle is to invert a five-gallon bucket over it and hold the bucket in place with a rock. Within three weeks the heat and shade will have made it history except for the dead taproot which will decay and enrich the soil. I have put drain holes near the bottom of each of my metal buckets to slowly water transplants and to prevent them from collecting rainwater and misquotes. Those buckets are not as good at killing weeds because the hole acts like a chimney to relieve the heat. Mulch all bare areas with leaves or plant a cover crop.

Any weeds that do make it through your mulch can easily be pulled by hand or buried under thicker mulch.

Weeds have survived for centuries for four main reasons. First and foremost they set thousands of seeds. Those seeds germinate easily and are not too particular about the soil they find themselves in. The seeds have the ability to remain viable in a dormant state under ground for years until they encounter all of the conditions necessary for germination. In some cases they can remain dormant and viable for decades and some even for centuries. Now you see why I do not like to turn the soil and accidentally move those seeds to the ideal planting depth in my new flower or vegetable bed. Over the years their ancestors became acclimated to your real estate and loaded your soil with seeds that are there just waiting for their day in the sun.

6 Prevent erosion

The best erosion control is covering the soil with organic material and healthy plants. Terracing is only second best and it can involve a lot of time, effort and money. There is not a slope too steep for some kind of ground cover and mulch to hold. We have a rocky slope behind the house that we are converting by dumping a mix of grass clippings and leaves when we mow.

7 Make it easy

If a leaf falls in your flowerbed leave it there. If they build up enough to smother the flowers remove some of them. A better solution would be to plant something there that would appreciate them, like a taller flower that can rise above the leaves and thrive in the deep mulch.

There are only four reasons I mow. It is the easiest way to chop and gather compostable material. Annual burning keeps the meadow from being taken over by hardwood but mowing is safer. It hurts weeds more than it does the grass. My wife wants some traditional lawn.

Install a soaker hose in each planting bed. Water slowly for an extended time. This eliminates runoff, minimizes evaporation and gets the water down to the root zone. It also avoids wetting the foliage that can promote fungal disease. If the bed is distant from the hose bib, use a regular garden hose to supply the soaker. The soaker can be buried under the mulch and left in place year round. Water only when your plants are very young or show signs of thirst. If they are properly mulched you can expect to need to water once for every five times you neighbors do.

When making a new planting bed, border it and over fill it with compostable material if time permits. If there are plants waiting for the bed, fill the bed with compost, plants and then mulch. You notice I did not say anything about killing the weeds with herbicide, Tilling, double digging or chemical fertilizers. They are not only unnecessary; they can be harmful to your soil long term.

Put a ring of mulch around every tree, starting with the most valuable. This will save you time and money. Trees and turf grass are competitors for sun and water. The grass gets first shot at the available water and decaying vegetation on the surface and the trees get most of the sunshine and try to smother the grass with fallen leaves. The ring prevents lawnmower disease that can be fatal. The mulch will trap dew, wick it to the roots and minimize evaporation and runoff. It will also summon and feed earthworms, which do wonders for the soil and therefor all trees. Mulching will save you the time and labor of trimming each time you mow. It will feed your trees. How big of a ring do you need? If you ask the tree it should be just past the dripline. It should be at least one mower width and anything up to the dripline that the landscape design permits. How thick? Mulch at least thick enough to prevent weeds and grass. The faster a mulch decays the faster it feeds the soil and the sooner it needs to be replenished. Every mulching material has its own decomposition rate. I always use whatever is most available, cheapest, most effective and easiest, in that order. Yes, all of

our 67 acres of oak are mulched but we did not have to do most of it. Oak leaves make ideal mulch for oak. Pine straw is ideal for pine. There are very few plants that are not good self mulchers and those are not only because diseases can over winter in their dead leaves.

Design your planting beds so they are easy to mow around. Install stepping stones or make them narrow enough so you do not ever step on the soil in the bed and cause compaction.

When you can build something that accomplishes several goals it is well worth the time and effort. We have an area of almost an acre on a fair slope that is in grass and weeds. It is one of the few areas that get enough sun for a vegetable garden. I am building 4 foot wide 18 inch high raised beds. The beds are built across the grade, which minimizes erosion and the need to walk up and down hill as much. During the mowing season there are plenty of grass clippings available to compost in the new beds right on top of the existing grass and weeds. Leaves for the compost are always available except in wet weather or during snow cover. Running the bagging mower through the woods will easily collect them. I do not plant a new area until the heating cycle has ended. The soil level will fall as the compost decays but that is no problem if the bed is to be used for annual crops. Right after harvest the bed can be refilled with compostables. The 4-foot width makes it unnecessary to ever step in the bed and cause soil compaction and the elevation minimizes bending. The elevation also promotes drainage and warms the soil earlier in the spring.

8 Do not make more work for yourself

Do not feed your plants, feed the soil. DO NOT TILL the soil. Cover it with something. Plants and organic material are best but rocks are better than nothing. Unlike some “experts” I do not believe in plastic mulch. Tilling exposes buried weed seeds, over aerates the soil thus depleting the organic content, and causes compaction and in extreme cases, hardpan.

Do not put your compost pile in a far corner where you will have to haul the raw materials to it and then haul the finished product to the beds. Do not put it on the low ground where the rain will leach the nutrients away from the places they are needed.

If you mow and do not bag the clippings for compost, at least mulch them in place.

If you have moss growing in your lawn do not fight it. It is there because the soil is acidic, high in clay, damp and in at least part shade. Encourage the moss. It makes a beautiful, low maintenance lawn. The only help it needs from you is mowing with the mulching or bagging mower whenever fallen leaves accumulate.

Tomatoes can be planted on the three sunny sides of a double walled wire compost bin. The inner wall should be at least 3 feet in diameter and the same height, minimum heating mass. The outer wall is the cage for the tomatoes to grow on. Make sure the holes are big enough to make harvest easy. Whenever you irrigate water the compost, not the tomatoes. They are heavy feeders and this will put their fertilizer within arm (or root) reach. You can trust the tomatoes to utilize all of the nutrients that leach from the compost. Next year move the cage and use the compost on other than potatoes and tomatoes to minimize disease problems.

9 Make it permanent

If you have the choice choose planting a perennial over an annual and a self-seeding annual over one that you have to take inside every winter or buy a new one each spring. I am not anti-annual, they can provide season long color, but the bones of your landscape should be trees, evergreens, hardy shrubs and perennials, in that order. Put barriers between plants that you do not want to mingle.

A flush mowable edging between the lawn and the flowers can save you hours of time weeding and trimming.

If you are going to terrace your land, do it with something that will last longer than you will. Wood is good but rock is better.

Waste not, want not

Most people throw away natural fertilizer and buy inferior chemicals. Keep a tub near the kitchen sink for coffee grounds and food scraps that should be destined for the compost bin (no fat or bones). Keep an extra wastebasket for paper newspapers, cardboard and junk mail (without plastic windows) that also need to be composted. Use a mower that will mulch and bag. Your fruit and vegetables will be bigger and taste better. Your billfold will be fatter too.

If you cut your families or pets hair at home save the trimmings for mulching your vegetables. It will discourage rabbits.

If you use woodworking equipment, use the chips and sawdust for mulch.

If you change the oil in your vehicles, put the burnt lube in a bucket of sand in your tool shed to clean and lubricate your garden tools.

If you feed the birds they will help control insects and leave you the seed hulls mixed with guano for mulch and a fertilizer that is inferior to only worm castings.

If you have a pond or water feature stock it with fish to eat misquote larvae.

Instead of fighting insects with chemicals, plant something they do not like or something prefer over your crops.

If you do not have synthetic carpets empty the vacuum into the compost.

MULCH, MULCH, MULCH!

Work smart, not hard

I am not lazy but I do not believe in doing things the hard way unless the hard way produces a superior end result.

I refuse to pick up anything until I know where I can put it down.

When I take something some place I look around for something that needs to be moved on the return trip.

I know that the operator's manual that came with your mower says to mow up and down hill. I mow across the grade unless the mower feels the least bit tippy. Then I lean up hill and steer down hill. The exception to this: sometimes mowing across a slope the drive wheels will skid slightly downgrade. This will necessitate a crab, steering slightly uphill to compensate like a pilot or boater has to steer slightly in to the current or wind. The crabbing is not the problem. It is the skid marks it leaves in the turf.

I try to mow before the weeds can set seed. I remove mower killer rocks before they kill. I protect trees from lawnmower disease with iron stakes and or mulch rings.

The driveway runs up hill for 1/8 mile and heavy rains tend to make the surface uneven. I made a scraper to pull behind the truck or the mower to repair the grade. I could spend several hours pulling it up and down the hill but like to pull it up when I have to go some where, leave it at the top and pull it down on the way home.

When I am mowing with the rider and not bagging I pull the trailer to haul rocks or deadfall without a special trip.

12 Timber management

Left alone timberland will take care of itself beautifully. We never let it do so. We try to shape it to our version of perfection. Removing the deadfall, harvesting timber and firewood and cutting the underbrush may make it more to our pleasing but it robs the woods of nutrients for future generations. We heat with a wood fired furnace and the area within 150 yards of the house produces more than enough deadfall to supply all of our heat. My main efforts are in controlling erosion. In the fall and winter there is a six to ten inch carpet of leaves that do a wonderful job except in the valleys.

Standing timber can be converted to cash but many of our neighbors clear cut to provide forage for livestock. I believe in harvesting only those trees that are past their prime and then only those that are worth more today than they will be in five years. It is hard to find a professional logger that does not want to cut everything that is marketable. They will cut any tree big enough to make a 7 X 9 crosstie. If you limit your take the forest will renew itself. Cutting only one percent of your live standing timber per year will insure that you and your children will always have one hundred year old trees to harvest.

Every locale has a goal for vegetation. Here it is old growth hardwood. If left alone, a pasture will go through several stages on the way toward that goal. Invasive plants can disrupt this schedule. Given enough time an acorn will produce a forest. Do not ask how many seeds there are in an apple. Ask how many apples there are in a seed. We cause ourselves more work and expense whenever we try to alter this master plan. If my land had not been raped by loggers 70 years ago there would be no erosion problem today.