

**FREE**

# DR. EARTH<sup>®</sup>



**Gardening Tips For The Organic Lifestyle**



**How To Grow The  
Best Vegetables**  
Tips for Gardeners

## **Healthy Garden Healthy You**

The Simple Connection!

**Healthy and  
Beautiful Gardens**  
The Pure & Natural Way!

**Global Recycling**  
Our Daily Choices Matter



**Milo Shammas™**  
Founder & Formulator

# Healthy Garden, Healthy You

## why we are what we eat!

At Dr. Earth our mission has been clear since day one in 1988 when I conceived this radical idea of *"we are what we eat, so we must grow our own food to make sure we know what we are eating."* Living the organic lifestyle is not a fad. It's not a phase we go through, rather a conscious decision we hopefully make at a young age so our body can have a longer lasting, positive influence from the choices we start to make at a young age.

Our connection to our food is critical whether we grow it all, which is almost impossible in modern day America, or if we simply know where it is coming from and the people behind it. This is a concept we can practice every day, slowly, as life happens naturally, with every step and action we take.

If you buy a food product, know where it is coming from. Ask the butcher at the local supermarket a few questions like where does this chicken come from? What's the farm's name? Is it certified organic by a non-profit agency? Or, the hard questions you have to ask to get full transparency and the truth about what you are about to buy and put inside of your body! Is this chicken from a factory farm? Pumped full of GMO grains, raised in inhumane conditions, forced to live its full life in 6 to 8 weeks? If the butcher does not know, it means he does not care, and that's no place to gamble with your health.















Talk to the produce manager and ask him where the produce comes from? What's the farm's name? Are they using OMRI listed fertilizers, soils, insect killers, practice recycling on their farm so their footprint is small, and core purpose is to be profitable as well as sustainable? If he doesn't know, he doesn't care. Don't support his store until he has an answer!

The obvious is to stay away from packaged foods as often as possible. None of us are perfect, but if we choose a raw apple more often than a bag of chips, it will add up through the course of our life and it will make a huge impact in our older years. Getting old is hard enough, getting old and in bad health means you are trapped in your body, and that's no way for anyone to live.

Best of health to you,

Milo Shammas  
Founder & Formulator

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HEALTHY LIVING  
YOU ARE WHAT YOU EAT

IF YOU HAVE  
YOUR HEALTH  
YOU HAVE WEALTH

FOOD FOR  
THOUGHT

The national diet has been declining in nutrition for decades. Our food is produced in soils of dwindling fertility and processed to the last degree, laced with food additives and a residue of crop pesticides, growth hormones, and antibiotics. If "we are what we eat," our soaring incidence of degenerative disease should come as no surprise.



## The simple connection!



*Everything in every cell of your body was once a biological or elemental part of your environment, originating in the soil, air, and water. You came from the earth. Like all living things, your life is supported by the earth, and one day your physical body will return to the earth. While you are alive, the food you eat is inextricably linked to soil particles that existed millions of years ago, part of a food chain that was here before mankind even appeared on the scene.*

*We must eat to live, but for some, eating amounts to nothing more than an arbitrary act, simply a way to fill their stomachs and avoid the sensation of hunger. The best way to live, however, is to eat consciously, with awareness, and with the intention that everything you allow into your body must be healthy and pure. That isn't always easy. The food available in most grocery stores and restaurants might not be as healthy as you think it is.*

## Making your own wise choices about the source of your food

The only way you can have ultimate control over the quality of the food you consume is to acquire it from an organic farm, a farmers market, or grow it yourself in soil you know to be untainted and healthy. Yes, "healthy." Soil is alive! It has vitality, a word defined as "of, or manifesting life." Every cubic inch of healthy soil is a miniature world of beneficial living organisms carrying out nature's amazing processes to break down organic matter, making it available to plants' roots. Those roots take up these life-giving elements to nourish the plant that nourishes you. Soil innovation is what Dr. Earth® is all about. Our patented ingredients, like PreBiotic® and TruBiotic®, all came about as a result of our company's thorough understanding of the nature of healthy soil and how to nurture and preserve its life-giving properties.



## Applying the concept of "organic" to your home garden

Commercial agriculture supplies our grocery stores with all the produce we can imagine, certified organic or not. Some is grown locally, some on the other side of the nation or even the other side of the world. Although certification programs exist for organic farmers, your home garden has no policies or rules. We have no manual to follow. Instead, we must have some common sense. If you use your neighbor's leaf litter as compost and are positive they don't apply any chemicals to their soil or plants, you don't need to worry about the quality of the leaf litter. Certification is more important to commercial growers who must prove they are growing by accepted public

standards or a set of rules in order to truthfully label their produce organic. For the home gardener, certified is a useless term, but you can make the choice to set your own high standards and use products and practices that will give you peace of mind and the assurance that your food is wholesome. If you are not 100% certain that the soil in the location where you have, or plan to have a garden is completely safe, don't take chances. Consider a new site or create a garden of raised beds and add good soil. Dr. Earth® bagged soils will give you complete peace of mind and allow you to grow the delicious, nutritious produce you will never find in a store.

## Grow as much of your own food as you can

The rest buy from local farmers markets or a good local produce market that stocks organic produce, where organic certification actually matters. At home, trust your own good judgment and the excellent products made by Dr. Earth®, made with the intelligence of nature. Look deeply into your particular situation to understand how and why the practices you choose meet your needs while protecting yourself and your soil. In any agricultural endeavor, whether a small home garden or a massive corporate farm, we humans need to focus our energy on nurturing the soil which serves as the basis for healthy sustainable growth of our bodies, economies, nations, and planet. By practicing organic gardening on a personal level and supporting others who do, we can hope to someday change practices on a global level and make a real dent in the universe. Healthy soil is the cornerstone of the prosperity of nations.





HEALTHY LIVING  
YOU ARE WHAT YOU EAT

IF YOU HAVE  
YOUR HEALTH  
YOU HAVE WEALTH

## Nutrient density is very important

All over the planet, human health relates directly to soil health. Healthy, living soil gives life to everything that grows in it and is the main source supplying our plants with the sustenance they need to properly develop into naturally thriving, insect-resistant, nutrient-packed produce. When we eat a piece of a living plant that came out of living soil, our body draws out the nutrients we need to stay alive and be healthy. Looking at this life process in reverse, we stay alive by extracting the life from living plants that depend on living soil. When you think about these facts, you can realize what an important resource our soil is and why we should all be concerned about the way it is being polluted and destroyed through mankind's carelessness and abuse.



## Local, backyard & home grown

Your home garden is a better source of produce than commercial agriculture. When it comes to the large corporations that control most of our food supply and farmland, the concern is profit, not human health. Chemical fertilizers and pesticides might give quick results but they do nothing to maintain the balance of nature, actually killing the life in the soil over time. Likewise, fertilizing with sewage

sludge – or “bio-solids,” the concentrated end product of wastewater treatment plants – has the potential to pollute soils with pathogens, heavy metals, thousands of chemicals, and other impurities that survive so-called “treatment” of waste that merely concentrates what heat cannot destroy. Rest assured that Dr. Earth® soils and fertilizers have never and will never contain any bio-solids or cheap fillers like chicken manure.

# DR. EARTH® NATURAL & ORGANIC SOIL

## Small Batch Hand Crafted Blends

*A soil for every need:*



**MOTHER LAND®**  
**ALL PURPOSE PLANTING MIX**  
To use as an all-purpose planting mix for vegetables, flowers, trees, shrubs, and more.



**POT OF GOLD®**  
**ALL PURPOSE POTTING SOIL**  
To provide a premium potting soil for a wide spectrum of plants in containers.



**HOME GROWN®**  
**VEGETABLE GARDEN PLANTING MIX**  
Use as an amendment in existing soil, or in raised beds, to promote large, healthy vegetables.



**NATURAL WONDER®**  
**FRUIT TREE PLANTING MIX**  
Use combined with native soil at planting time to nurture & establish fruit trees.



**ACID LOVERS®**  
**ACIDIC PLANTING MIX**  
To provide the perfect growing medium for all plants requiring acid soil. Target pH 5.5.



**TOTAL ADVANTAGE®**  
**ROSE AND FLOWER PLANTING MIX**  
To provide the ideal growing medium for all roses and flowers.



**ROOT ZONE®**  
**SEED STARTER PLANTING MIX**  
To help seeds sprout, increase success of transplants, establish plants quickly.



**NATURAL CHOICE®**  
**ALL PURPOSE COMPOST**  
Mulch, seed cover, amendment at planting time, break up clay & improve texture.



**HOME GROWN®**  
**POTTING SOIL**  
To meet the exacting requirements of organic growers of medicinal plants.



KEEPING THE INTELLIGENCE ALIVE



# Healthy and beautiful gardens the pure and natural way!

We all dream about the things we would like to have, including healthy and beautiful gardens. Growing a bountiful organic vegetable garden that nourishes a healthy lifestyle, or a gorgeous flower garden that nourishes the soul; are goals almost anyone can reach with some basic education in what is required.

## 1 Know your own local environment

To succeed at gardening, you must understand your natural surroundings. Learn the usual dates of the first hard frost and the springtime thaw in your area. What you can plant and harvest depends on when your specific planting and growing season begins and ends and how long it lasts. Also, you must know where the sun rises and sets in relation to your planting beds. For example, you need to know how many hours of direct sunlight your plants can receive and where the shadows, if any, fall in the afternoon.

Next, you must attune yourself to the annual and seasonal weather patterns in your area. Gardeners love a comprehensive weather report (rain, wind, high and low pressure and temperature extremes) because it helps them plan their activities. Note when seeds germinate and when insects (and which ones) begin to appear. Invest in good quality soil and air thermometers to give yourself an edge in living with the elements.



## 2



### Microclimates

Your garden is likely to have small yet important microclimates. Shadows can cause a cold pocket, and a hard surface facing the sun can reflect too much heat. These areas will not only change daily but also with the seasons. Summer might be too hot for lettuce but great for tomatoes. Anticipate these changes when you decide where to grow your garden.

**You may have at least four different microclimates around your home:**

1. A hot side facing south
2. A shadowed, cool side on the north
3. A warm western side with afternoon sun
4. An ever-changing eastern side that may be warm or cool depending on trees, high fencing or the time of year

Carefully observe heat and light to know where to create your garden. Position your raised beds, rows or plots to run north and south so plants will receive more sunlight in winter and not shade each other. In winter, keep tall trellised plants against the north wall and the shorter plants to the south. In the summer, do the opposite. These are the basics of microclimates.

## 3 Plant Zones – What To Grow Where



Temp (F)	Zone	Temp (C)
-60 to -55	1a	-51.1 to -48.3
-55 to -50	1b	-48.3 to -45.6
-50 to -45	2a	-45.6 to -42.8
-45 to -40	2b	-42.8 to -40
-40 to -35	3a	-40 to -37.2
-35 to -30	3b	-37.2 to -34.4
-30 to -25	4a	-34.4 to -31.7
-25 to -20	4b	-31.7 to -28.9
-20 to -15	5a	-28.9 to -26.1
-15 to -10	5b	-26.1 to -23.3
-10 to -5	6a	-23.3 to -20.6
-5 to 0	6b	-20.6 to -17.8
0 to 5	7a	-17.8 to -15
5 to 10	7b	-15 to -12.2
10 to 15	8a	-12.2 to -9.4
15 to 20	8b	-9.4 to -6.7
20 to 25	9a	-6.7 to -3.9
25 to 30	9b	-3.9 to -1.1
30 to 35	10a	-1.1 to 1.7
35 to 40	10b	1.7 to 4.4
40 to 45	11a	4.4 to 7.2
45 to 50	11b	7.2 to 10
50 to 55	12a	10 to 12.8
55 to 60	12b	12.8 to 15.6
60 to 65	13a	15.6 to 18.3
65 to 70	13b	18.3 to 21.1

Your geographic climate zone will determine which plants can thrive in your garden. The USDA publishes the most commonly used hardiness zone map, which divides the continental U.S. into 11 zones derived from the average annual minimum temperatures. You can find a copy of this map online, at a local library or university, or in gardening books.

Another good zone map comes from the editors of Sunset Magazine. They divided the United

States and southern Canada into 45 climate zones, considering many variables such as area temperature extremes, humidity, rainfall, local topography, elevation, and even proximity to large bodies of water.

You can also just visit your neighborhood nursery. Nurseries want to offer plants that will thrive for their customers, not those that might fail. Your success is also their success, so they are unlikely to even carry plants that won't do well in your zone.

## 4 Sun and Shade – a defining factor

Plants that produce fruits require plenty of sun. Allow at least six hours daily for tomatoes, cucumbers, zucchini, peppers, beans, corn, eggplant, summer squash and cabbage. In general, the bigger the fruit, the more sunlight it must have.

On the other hand, many vegetables and herbs do well in shaded areas, needing only about four hours of sun per day. Try carrots, beets, chard, cauliflower, chives, lettuce, chicories, radicchio, arugula, basil, mint, parsley, spinach or winter squash in these shadier areas. For leafy green vegetables, less sunlight is fine.





## 6 Advantages of growing in raised beds

Raised beds make it easier to plant and harvest crops and can be attractive. They also give you control over the composition of the soil. Your home's previous owners might have contaminated the soil without you knowing it. Adding new soil to a raised bed assures you of its safety.

Growing in raised beds makes projects seem more manageable, since tackling your weeding or other chores one bed at a time feels doable and satisfying. There is less back strain and better air circulation, because you don't walk on the soil and compact it. Also, that loose, fluffy soil is easier to weed. Raised beds have also been shown to increase crop yields.

Raised beds can be constructed from brick, stones, or even hay bales, which are the perfect height. If you use wood, make sure it is redwood, cedar, or some other hardwood that has not been dipped in chemical wood preservatives. Pressure treated wood is full of heavy metals and painted wood will eventually decompose and contaminate the soil. Cheap plastic materials will also work but are not very esthetically pleasing.



*Raised beds give you total control of soil composition*

## 5 Drainage getting the wet out

Sandy soils drain too quickly and clay soils too slowly. Adding organic materials helps to correct and balance both types of soil. If you have a good balance between sand, silt, clay and organic materials, you have a solid foundation for good drainage as well as moisture retention in the space between soil particles. When you improve your soil's drainage, you reduce the level of fungal pathogens. You also improve root development and nutrient availability in a healthy aerobic environment.

Do a simple test to see how your soil drains and whether you need to make changes to correct your drainage. Dig a hole about 1 foot deep and 6 inches wide. Fill the hole with water and let it drain completely. When the hole is empty, fill it again with water to the very top. If it takes more than 10 hours to empty again, you have a drainage problem. The good news is that this problem can easily be solved by adding organic materials or drainage pipes. You can also grow plants in raised beds.

# Purity and Visibility run deep in our Commitment to our Customers.



**CDFA OIM Organic:** This is a very prestigious and rigorous admission to achieve. It serves the organic farming community perfectly to further ensure the foods in our supermarkets are "organic" as promised. We have worked very hard with Dr. Dale Woods, Nick Young and the rest of the committed staff to meet their needs to earn our OIM organic standings.



**OMRI Organic:** A gold standard for organic products since 1997. OMRI serves both product manufacturers as well as the organic farming community and we are proud to develop a synergetic working relationship with CEO Peggy Miars and her talented and devoted OMRI staff.



**Non-GMO Products:** We are committed to making a change through our actions by providing non-GMO products for our customers who are concerned about the potential health risks of products made using this relatively new technology of genetic engineering.



**MycApply® Certified:** The gold standard of mycorrhizal certification, assuring the overall integrity of mycorrhizal ingredients for consumers and end-users throughout numerous markets and industries. All Certified Products meet the following guidelines in relation to proper "mycorrhizae" use and incorporation: (not harmful to the mycorrhizae) Finished product must demonstrate superior efficacy and high performance. We have worked with Dr. Mike Amaranthus since 1998 in product development and advanced research. Dr. Amaranthus has changed this field with his commitment to purity and the best available species of mycorrhizae, and we are proud to share our NEW innovative and proprietary blend of Dr. Earth® TruBiotic® mycorrhizae, unmatched by any imitator or competitor.

# ADVANCED ORGANICS®



## 7 Container gardening

Perhaps you live in an apartment, have limited space in your yard, or just don't want to have a full-scale garden. By growing in containers, you can have an abundance of fresh vegetables and herbs just steps from the kitchen. These plants can be attractive and will enhance your patio, deck, or balcony. Nothing tastes better or is more nutritious or flavorful than fruits, vegetables, or herbs harvested minutes before eating. Paying attention to a few important rules and investing only a little time will assure you of a container garden that will be easy to set up and maintain and one that will offer a bountiful harvest. Here are the aspects you must consider:

**Sunlight** is the most important factor. Track the sun and shade patterns in your immediate area to get a good sense of the space where you intend to garden and what plants will do well there.

Fruit trees and vegetables that set flowers (such as oranges, plums, tomatoes, cucumbers, eggplants, peppers, or squash) need a lot of sunlight. Photosynthesis produces sugars that directly feed flowers and help grow fruits of appealing size, taste, and nutritional value. A good local nursery staff member can tell you how much sun is needed in your area for any plants you want to grow.

**Container size** is the second most important variable for container gardening. The more soil volume your plants have, the more extensive the root system to draw on a larger pool of nutrients and water. Available container space directly influences the nutritional value, size and quality of the fruits, vegetables and herbs you will harvest. More is definitely better. For example, tomatoes require a minimum of 15 gallons of soil in order to develop into full size plants that will produce tomatoes with rewarding taste and nutrition. Other vegetable crops can survive in smaller containers with less soil volume but would benefit from more.

Terra-cotta, redwood, or cedar containers give the best results because they "breathe" and their temperature doesn't fluctuate as quickly as other material. They also retain water better. Plastic containers can work well if you mulch to retain moisture and be sure to water more frequently. It is a good idea to mulch all container plants.

**Potting medium** matters. The quality of the soil has a major impact on plant health and crop quality. In bagged potting soils, watch out for chemicals, such as synthetic plant nutrients. For peace of mind, choose Dr. Earth® bagged soils, knowing they are made from only the best natural ingredients and are never contaminated. We know



how to formulate the most well-balanced mixture, one that drains quickly but also retains moisture to support a healthy transfer of nutrients to the roots.

You can use some of your own compost from kitchen and yard waste, mixing at the rate of about 1/3 compost to 2/3 potting soil. In the limited space of a container, a plant has access only to what you provide, so invest in the best soil available – Dr. Earth®.

**Fertilizer** feeds the living soil that feeds your plants' root systems. Chemically fertilized soils lack organic matter and are more vulnerable to drought and extreme temperature changes. Organic gardening is based on soil health and the natural relationship between soil microbes and roots.

Fruit trees, tomatoes and most other vegetables, especially in containers, need a lot of fertilizer to reach full potential. Feed the roots in your container plants slowly with the best, Dr. Earth® organic fertilizer for maximum nutrition from your plants. Sea-based organic fertilizers are superior and contain the most multi-minerals, from which you will benefit when you consume them. Feed container plants often throughout the year.

**Trellising Support** provides form and structure for better plant health. Exposing as many leaves to sunlight as possible helps to increase your harvest. Not all vegetables will require support, but cucumbers, tomatoes and other vine plants do. Trellises also create air space between plants to minimize fungal diseases and make flowers more accessible to insects that help to pollinate.

Some plants may need a stake in the center of the container, while a tomato wants a sturdy cage, and a cucumber needs a grid-like trellis. You can build many of these support systems from scraps around the house.

## 8 Watering

Most plants are 90 percent water, 60 percent of which is delivered from the soil to the plant through plant root hairs. To keep your plants healthy and thriving you must have a good soil with plenty of organic matter to act like a sponge and allow the almost microscopic roots to travel through porous, well-draining soil.

The best way to tell when and how much water your plant needs (whether in the ground or a container) is to feel the soil. Probe your finger about an inch or two and feel if it is dry or moist to the touch. The soil type makes a huge difference. Also, the more organic material in a soil, the less you have to water. The hotter the day and the shallower the root system, the more you have to water. Gardeners should pay attention to soil, weather, dryness and humidity.

Your sprinkler system timers will likely need to be adjusted once a month, depending on weather conditions. Plants do best when they receive just the amount of water they need, right when they need it. Inspect your soil. Look at it and feel it. If it looks and feels dry, you may need to alter your watering schedule. Likewise, you could be over watering and wasting water.

Watering in the morning gives your plants the entire day to draw the water from the soil as needed, especially on hot days. Water slowly, to insure proper absorption. Water deeply, so that it does not run off the surface, never making it down into the root zone. Shady spots need less water, while the sunny areas dry out more quickly and need more water.



## 9 Making A Plan

Before a contractor can build a home, the architect must provide a plan, a blueprint that clearly shows how the house looks and functions. The same is true when creating and designing a garden of any size. You must know how to put it together.

Some questions to consider are:

- Will you start from seeds or transplants?
- In-ground or raised beds?
- Sprinkler system or hand irrigation?
- Fruits, vegetables, or both?
- How will the elements of your garden work together?
- What are the sun requirements for your plants?
- Where will the same plant go next year? (Rotate crops each year to avoid plant diseases.)
- What plants are you going to grow in summer, winter or fall?
- What is the best soil mixture for you?
- When will the transplants go in the ground?
- How hardy are the plants you want to grow?
- When should you start them?
- What is the nutrient value of a desired plant?

Remember, you are growing a nutrition garden. You will have a health food store right in your backyard. Make sure to invest time in a solid plan that brings you that much closer to your dream garden. There are thousands of books on planning your garden. Pick one up and get more ideas. You can never have too much knowledge about your garden and your health.





## Why an Organic Garden is Safer for Pets

Organic gardening materials (fertilizers, composts and insecticides) pose little health risk to your pets, because they are plant-based or animal-based. Because many of us want to harvest the most produce we can, we may try to completely control all insects, especially when we see pest damage to our crops. Think about the consequences of your actions. Is it worth harvesting all of a crop if you run the risk of poisoning your pets?

Get peace of mind, knowing that not everything you apply to your garden will harm your pets or your family. If you must apply an insect control, choose the least toxic, environmentally friendly option. For example, diatomaceous earth or citrus sprays are excellent for controlling fleas and ticks in the garden where pets may play or run. These sprays are effective, have minimal side effects and are the least toxic pest control option for organic gardeners. (Do not confuse the diatomaceous earth used in swimming pools with the one you need to control insects in your garden.) Botanical sprays are effective as biological controls.

Remember: Never over apply. Even safe alternatives to chemical pesticides are broad-spectrum killers that can affect beneficial insects. Spare all the non-destructive life you can, because biodiversity is the most important principle in growing a healthy garden.



## Common Sense Pet Safety

Lawn and garden chemicals pose the biggest threat to your pets, so avoid them. Reach for safe alternatives. Always store chemicals out of reach of pets and kids. A locked garage or storage shed is best for storing potentially harmful substances.

If you must kill or control insects, here are some alternatives to chemical spraying. Try to wash off the leaves and vegetables with a strong blast of water. If the problem persists, try soap and water or other organic methods. Soap and water are safe for getting rid of soft-bodied insects such as aphids. Add a teaspoon of dish soap to a gallon of water and use it in a garden sprayer. The soap is an irritant to many insects and can help break down the protective barrier of their external skeleton.

Mowing the lawn can also pose a threat to

pets. Pebbles or sticks can fly in the air as the mower cuts the grass and strike a pet. This could cause your pet great pain and discomfort not to mention an expensive visit to the veterinarian.

Always read product labels for anything you use. (This practice goes beyond pet safety and garden materials. You should adopt this philosophy with everything you buy.) Keep your pets inside or at a safe distance when you apply any treatments, even organic ones, to your lawn or garden.

Before you plan your garden, visit the "hard goods" section of your nursery for treatments that address potential hazards to pets. With a little planning, you and your pets can have a safe, beautiful and nutritious garden that will be a joy to everyone.



Meet our little girl, Mini

# ETHICAL

*We are a trusted brand with a clean track record in the organic community. Don't be misled by large corporations who buy small, wholesome organic companies to conceal their dirty track record.*

We do not have two divisions in our company: we do not sell chemicals out of one hand and organics out of the other just to increase the bottom line.

Our founder, Milo Shammas, created every product through a labor of love. His attention to detail and craftsmanship is truly old-world. Our pursuit of high-quality, small-batch style motivates us to craft organic products for all the right reasons - products that we are proud to use ourselves.

We believe that these tenets are what separate a great company - one with the highest ethical standards, like Dr. Earth® - from a large corporation. These corporations are everywhere and are easy to spot by their unwavering focus on profits, and only profits - with no regard for the health risks the products they offer might deliver.

**Dr. Earth® is proud to say "Organic products are all we have ever made." How many other companies can say the same thing?**







**PURE & NATURAL**  
FREE OF CHICKEN MANURE

**PREMIUM  
GARDEN  
INGREDIENTS**



E. coli



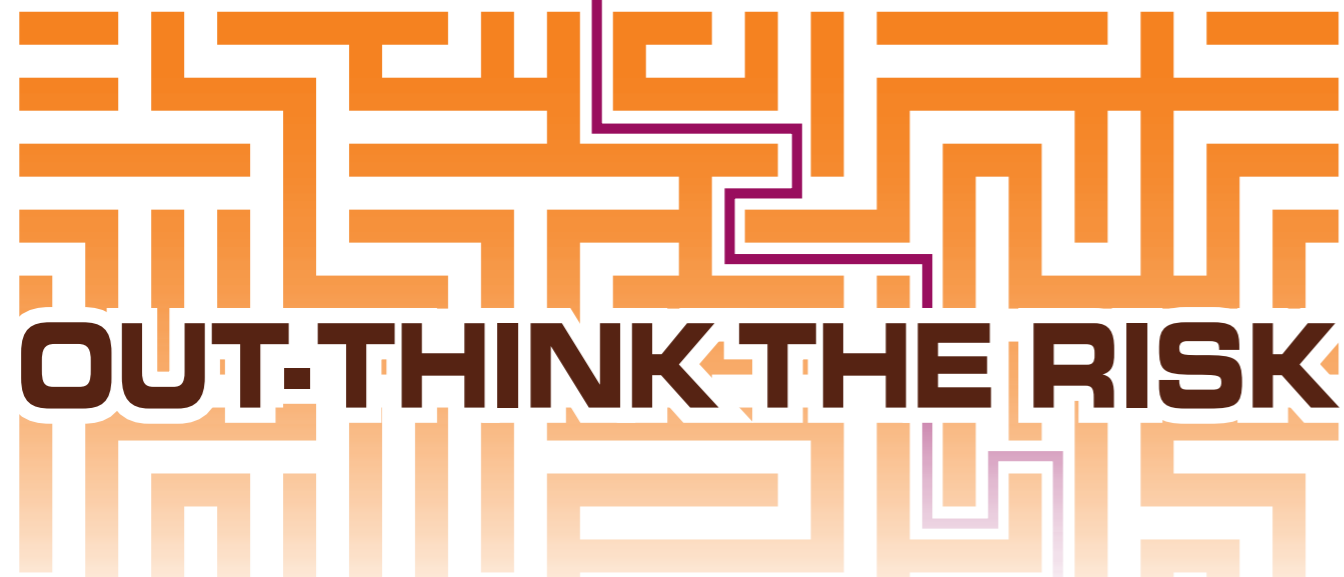
CHICKEN MANURE  
FREE



salmonella



antibiotics  
& hormones



From the dark ages of organic gardening and up to this very day, chicken manure has been a mainstay nutrient source for plants. A quick-acting source of nitrogen, it provides fast results but dissipates quickly – requiring frequent applications to support optimal plant growth.

Valued by manufacturers of fertilizers and soils because of its low cost and easy availability, it is the main nutrient source in most organic fertilizers on the market today.

Because of the prevalence of chicken manure in organic fertilizers and soils - coupled with the common perception of the very definition of the word “organic” - many gardeners have long believed that chicken manure-based products are clean, safe and healthy.

Many people assume that the word “organic” on a bag of fertilizer or soil means that any manure contained in those products has been harvested from poultry raised in a completely clean, healthy environment; picturing flocks of free-range birds never subjected to any drugs or potentially hazardous compounds. Unfortunately, nothing could be further from the truth.

The practice of treating factory-raised chickens (a source of chicken manure used in organic fertilizers and soils) with antibiotics, steroids and hormones calls into question the safety of using these products in the home garden. The recent outbreaks of chicken-borne diseases – sickening thousands of people - in the food industry only adds to those concerns.

Increased media attention regarding the way chickens are

raised, along with serious health concerns related to the transmission of chicken-borne diseases such as salmonella and E. coli, have triggered significant concerns among well informed organic gardeners about their gardening practices and the products they use in their gardens. As public awareness grows, more and more people are reading product labels – a practice that we wholeheartedly support.

Gardening products containing fish bone meal – a far superior and much longer-lasting source of nutrition – are vulnerable to none of these health concerns. Using wild-caught ocean fish from cold waters (versus farmed fish or warm-water fish) as a source of fish bone meal, further alleviates any worries about bacteria or pathogens being present in the products.

The fact that fish bone meal-based fertilizers last three to four times longer than their chicken manure-based counterparts provides another compelling reason to use them. Another benefit is the calcium – vital to aid in plant cell development and nutrient uptake - that fish bone meal delivers.

Providing gardening products – soils, fertilizers and controls – of the highest-quality, consisting of 100% pure and natural ingredients has long been a passion of Dr. Earth. Using the wisdom of Mother Nature as our guide, our products are specially handcrafted to exceed the expectations of the organic gardening community.

We care about the health of people, their pets and the planet as a whole, and we know that you do, too.

Be safe, be smart and garden responsibly with Dr. Earth. Handcrafted by Nature!





# How To Grow A Great Tomato

## Human Health

A great supporter of overall health. Tomatoes have a lot of vitamins C and A, plus beta-carotene and the pigment lycopene, all super antioxidants that help prevent cell damage by free radical oxygen molecules. These phytonutrients work in synergy with other vitamins and minerals in tomatoes to promote heart and bone health and protect against inflammation and a number of cancers. Regularly eating tomatoes can lower cholesterol levels, promote proper fetal development and regulate blood sugar.

## How to Grow:

Plant in full sun. Amend the soil well with a good compost or planting mix. They prefer a pH of 6. Tomatoes grow and produce best outdoors. They can also grow in containers (minimum 15 gallons of potting soil) but not to their full potential. More soil volume is best. Start from seed indoors 6 weeks before the last frost, or buy transplants from a local nursery. Plant seedlings or transplants in space at least 2 feet square. Keep the fruit from drooping onto the ground by growing the upright varieties against canes or wire cages. Pinch out the tops after they make 3-4 groups of fruits. For bush varieties, cover the soil underneath the plants (using bark or similar) so fruits develop off the ground. They are heavy feeders and can take copious amounts of fertilizer. Keep plants moist but not sopping wet to avoid fungal diseases.

## Insect Control:

Tomatoes are susceptible to tomato hornworm. Spray foliage with Bt (Bacillus thuringiensis) for natural control. You can also remove worms by hand early in the morning. Worms are usually on top of the foliage and are easy to remove and discard. As a general measure, you can spray with a botanical insecticide-fungicide for natural control of most insect pests and diseases, such as early blight, gray leaf spot, late blight, Septoria leaf spot, southern blight and verticillium wilt.

## Tips:

Pick or buy tomatoes fully ripe, the redder the better. Ripe tomatoes may have four times more beta-carotene than green, immature ones. This makes backyard tomatoes the best. You know they were not picked green and shipped to ripen weeks later.



# Recipe for Success

## ORGANIC VEGETABLES



## 3 EASY STEPS FOR A HEALTHY HARVEST

### STEP 1 PLANT SOIL MIX

One bag of soil mix will amend approximately 35-50 square feet of garden for healthy plants. One 1.5 cu ft bag fills up 3 five gallon containers.

### STEP 2 PROVIDE FERTILIZE

Feed your vegetables at time of planting and every 6 weeks, nourishing them so they can better nourish you with delicious "homegrown health."

### STEP 3 PROTECT SAFEGUARD

Bring ALL of your abundant harvest to the table in a wholesome & appetizing state. Our super-safe spray easily controls pests and diseases.



## How To Grow Healthy Kale



### Human Health

Kale is highly nutritious, with large variety of vitamins, minerals and phytonutrients. An ideal, all-in-one vegetable to add to your regular diet. Phytonutrients containing sulfur help activate detoxifying enzymes, which act synergistically to remove potentially toxic/carcinogenic chemicals. Other phytochemicals in crucifers, like glucosinolates, metabolize to isothiocyanates, which inhibit development of many cancer cells. Great for vision and an excellent source of fiber, which promotes healthy digestion and regulates cholesterol and blood sugar levels.

### How to Grow:

A nutritious, hardy leaf vegetable that can grow in tough winters. Ask local nursery which varieties are best for your area. Choose semi-shady, moderately sheltered site. Soil pH should be near 6.8. Add lime, if needed. Amend soil by mixing in plenty of well-aged compost, manure or a planting mix rich in organic matter. Kale likes cooler weather but still grows in warmer climates during cooler months. In cooler areas, sow seeds outdoors in late spring for fall and winter harvesting. In warmer areas, sow seeds outdoors through early fall for late winter and spring harvests. Create shallow drills as long as desired, spacing each drill out by about 2.5 feet. Plant seeds half inch deep and 2 feet apart within rows. Cover with a thin layer of soil and water regularly. During growth, handpick or hoe out weeds out as they appear. Mulching helps deter weeds and holds in moisture. Harvest young and softer leaves from the center of the plant as needed, not all at once. Larger, tougher leaves are great for cooking.

### Insect Control:

Kale is generally less susceptible to pests than other crucifers. See Broccoli, Brussels Sprouts and Cauliflower for general pest control. Others include cabbage root maggot, cabbage butterfly and club root. Cabbage root maggots can be stopped by applying small plastic or foam ground covers that tightly wrap around the base of seedlings. Butterfly can be stopped by hand picking caterpillar and rubbing eggs off leaves. Club root is an incurable soil disease that can last 10 years. The only way around it is to transplant well-developed, resistant seedlings.

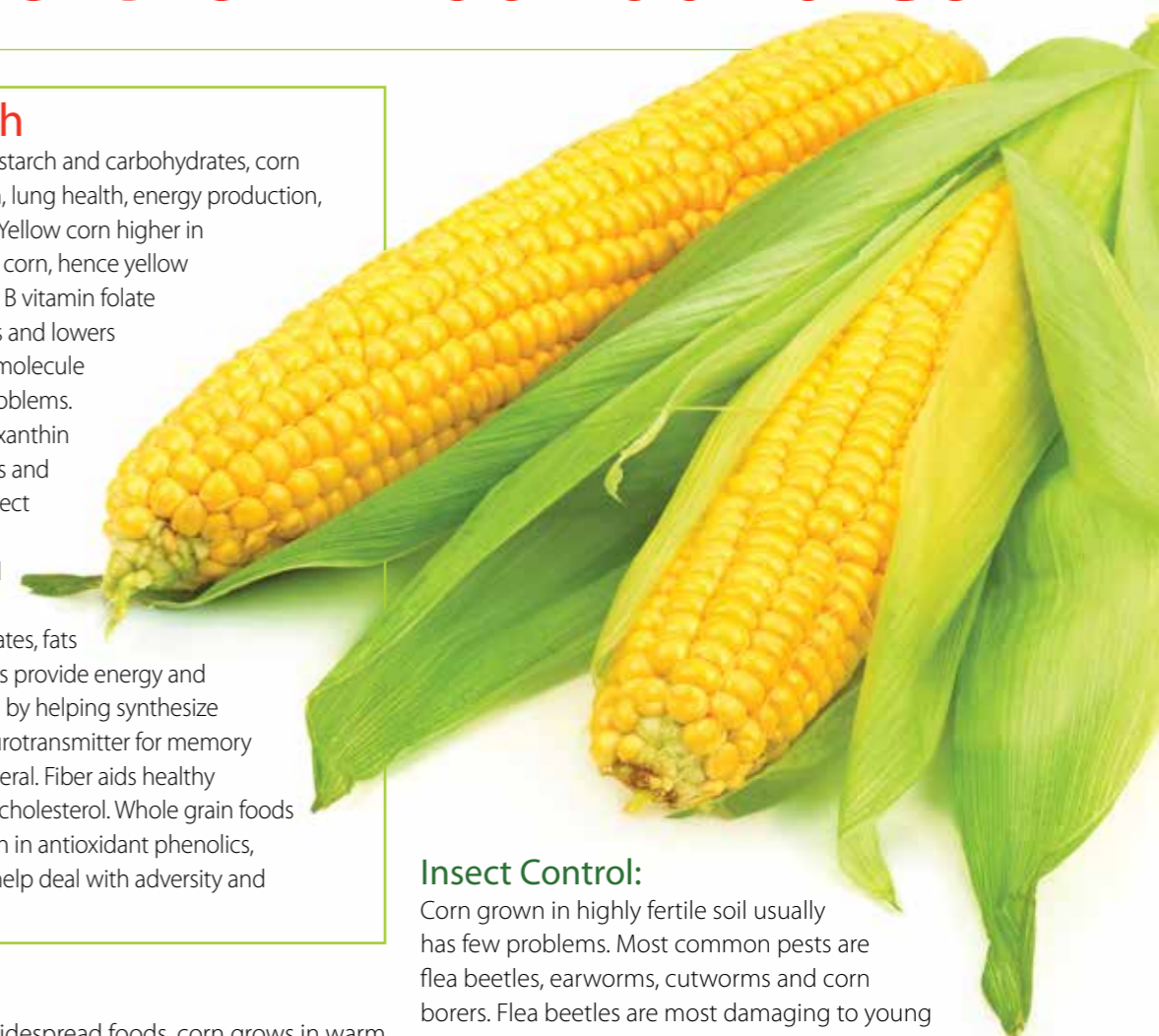
### Tips:

For continuous harvest, make successive sowings through start of growing seasons.

## How To Grow Abundant Corn

### Human Health

More than just a source of starch and carbohydrates, corn contributes to heart health, lung health, energy production, metabolism and memory. Yellow corn higher in carotene lutein than white corn, hence yellow color. Lutein great for eyes. B vitamin folate helps prevent birth defects and lowers homocysteine in blood, a molecule linked to cardiovascular problems. Phytonutrient beta-cryptoxanthin found in corn (also oranges and red bell peppers) may protect lungs from carcinogens. B vitamin pantothenic acid helps maintain energy by breaking down carbohydrates, fats and proteins. Thiamin helps provide energy and contributes to brain health by helping synthesize acetylcholine, a crucial neurotransmitter for memory and neural function in general. Fiber aids healthy digestion and lowers total cholesterol. Whole grain foods like corn and wheat are rich in antioxidant phenolics, which work in synergy to help deal with adversity and prevent many diseases.



### How to Grow:

Among the oldest, most widespread foods, corn grows in warm weather. Young corn is very sensitive to frost and transplants. Start outdoors after the soil warms up. To start earlier, use peat pots so roots are undisturbed when transplanting. Choose plot with full sun in area where they will not shade other crops that need sun. Amend the soil well with aged compost or very fertile plant mix. Corn prefers slightly acidic pH. If below 5.5, add lime or dolomite to raise. Pollinated by wind, so plant in rectangles with rows close together. To ensure good pollination, plant 6 or more rows together in a group. Plant seeds outdoors (two in every one-inch deep hole) when temperature rises above 70°F. Space holes 8-12 inches. Cover holes with soil and compress a bit. Water thoroughly. Seeds will start showing after week one of watering. Keep weeds away, especially while plants are young. Cover surrounding area with mulch. Water regularly, especially on hot days. Corn is fully-grown and ready to harvest in about 3 months, when the top hairs turn brownish and kernels are plump.

### Insect Control:

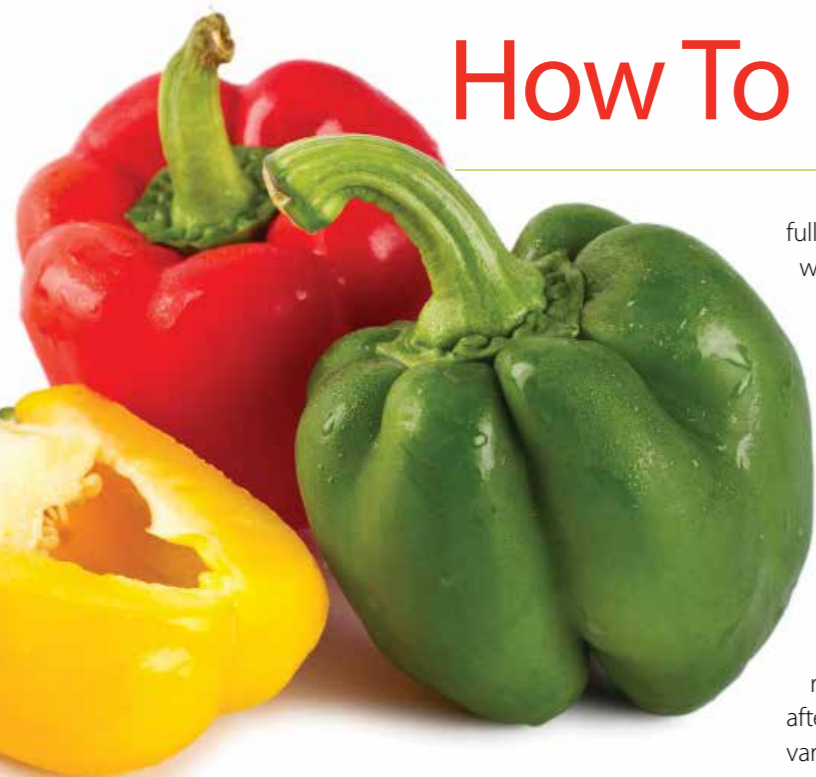
Corn grown in highly fertile soil usually has few problems. Most common pests are flea beetles, earworms, cutworms and corn borers. Flea beetles are most damaging to young crops by chewing many small holes in leaves. Apply parasitic nematodes to soil. In extreme cases, spray with insecticide like rotenone. Corn borers enter the stalk below the tassel. Look for sawdust-like material next to small holes. Squeeze stalk to kill pest. Earworms feed on ear tips when little hairs emerge from the tips forming tassels. Look for them then and dispose. Cutworms chew on the plant base just under the surface. Attract ground beetles to eat them by growing ground cover nearby. Dig up area surrounding plant and hand pick or use cutworm collars on transplants.

### Tips:

Birds and raccoons can also be a problem during seed sowing and harvest. Aside from installing row covers, deter birds by getting rid of standing water, planting mulberry trees to distract them, removing trash and introducing an owl/scarecrow. A barrier (like taping ears to the stalk), night lighting or electric fencing will deter raccoons.



## How To Grow Peppers



fully exposed day and night. You need a cold frame to do this, which is a shallow box outdoors with an air-tight framed glass/plastic lid that can be lifted up to expose plants. Or you can get acclimatized transplants from a trusted local nursery. Amend the soil with nutrient-rich planting mix, aged compost or manure. In warm climates with no late spring frosts, plant outdoors 2 feet apart. In cooler climates, cover plants with a frost-proof perforated plastic, called a cloche. Pinch the growing end when the plants reach roughly 6 inches and attach them to a skinny rod for support. Tie side shoots for when they grow out to help support the weight of peppers. Water as regularly as it takes to keep the soil moist as they grow. Apply a liquid fertilizer rich in micronutrients every other week. Harvest the peppers after they plump up. Red and green peppers are of the same variety. You can pick them when they are green or wait a little for them to turn red. With others, harvest when plump and hold a nice deep color. Hot peppers can be refrigerated, frozen or dried in the sun to store for winter usage.

### Human Health

All peppers are a great source of vitamins A and C, which eliminate cell-damaging free radicals. Vitamin A also counters the effects of cigarette smoke, which may help prevent lung conditions such as emphysema. Bell peppers have the B vitamins folate and pyridoxine. Both decrease homocysteine in the blood, blocking the start of a process linked with higher cholesterol and risk of heart attack or stroke. Fiber in bell peppers helps maintain healthy heart function by lowering harmful cholesterol. Bell peppers also have a carotenoid lycopene and beta-cryptoxanthin, all linked to lower risk of many cancers when eaten regularly.

### How to Grow:

Peppers are easier to grow than eggplant in cooler climates, but are not frost hardy and do best in warmer areas. They have two main subdivisions, sweet (bell) and spicy (chili). Hundreds of varieties to choose from. The best for your area depends on climate and soil conditions. All peppers prefer warmer climates with lengthy summers. Some are specially bred to handle cooler climates with a cover. Choose a spot with full sunlight. The soil pH needs to be just above 6. In cooler areas, warm up the soil a couple of weeks before sowing by covering the plot with plastic. If starting from seed, sow in a greenhouse or under a fluorescent light. Get them ready for planting outside by gradually exposing them to outside air, starting with just daytime, until they are

### Insect Control:

Most damaging are aphids, spider mites, slugs and the white fly. See Artichokes for slug and aphid control. See Strawberries for red spider mite control. The white fly sucks the sap off many plants. Like other flies, they are attracted to the color yellow. To get rid of them, hang a thick piece of yellow paper or plastic with a thin coating of grease, or use old-style flypaper. Make sure to prevent it from attaching to the plants.

### Tips:

If you are de-seeding many hot peppers to save seeds or to cook, protect your hands with gloves and make sure not to touch your eyes until after thorough washing. Capsaicin is the powerful molecule that causes the burning sensation of pepper. It is insoluble in water and stays bound to the tongue no matter how much water is used to wash it down. Milk and cheese can break capsaicin's bond with tongue receptors if it gets too hot. These varieties will grow in cooler climates: Bell (sweet) pepper: Corona, Canape, Golden Summit, Sweet Banana, Yolo Wonder, Perma Green and Merrimack Wonder. Chile (hot) pepper: Hungarian Wax (hot banana peppers) and Czechoslovakian Black. For warmer climates: Bell (sweet) peppers: Cubanelle, Pimento, Aconcagua and World Beater. Chile (hot) pepper: Cayenne, Anaheim, Jalapeno, Pablano, Serrano, Black Cuban, Holiday Cheer and the very hot Chiltepin.

## How To Grow Cucumbers

### Human Health

Cucumbers contain silica, a trace mineral, which we need for healthy connective tissue (bone, ligaments, tendons, cartilage and muscle). Silica also encourages healthy skin. Some use it topically for swelling under the eyes, dermatitis and soothing sunburn. Cucumbers are 95 percent water by weight, so eating is a good way to hydrate. Cucumber adds some fiber to the diet, aiding digestion. With vitamins A and C, cucumber helps the immune system and the liver disarm free radicals that cause cellular damage.

### How to Grow:

Cucumbers grow best in a sunny spot with rich soil. Amend the site with lots of compost or planting mix to achieve a pH close to 6. Sow seeds twice in the year for two harvests. The first one is in small pots indoors in early spring. Place two seeds to a pot at least 3 inches in diameter. Thin down to the strongest seedling if crowding occurs. Keep in a sunny location with moist soil. They should be ready to plant in late spring. Place about 2 feet apart. Make another sowing outdoors about 2 feet apart. If still cold in your area, put cutoff plastic bottles over the sowings to protect from night cold. You can grow cucumbers on the ground or up along sticks. Making a thin tepee with strong sticks looks cool, and it also keeps cucumbers off the ground and reduces their risk for disease, rot or slug infestation. If you plant them in the ground, space them out a little more than 2 feet, as they will grow out like vines. To keep them attached to the sticks as they grow, regularly tie them to the sticks with thick string. When the seedlings are about a foot tall, mulch with some organic matter. Also, trim back the side shoots to encourage growth upward. Pinch the tops of cucumber plants when they reach the top of the tepee. Keep soil moist. Starting roughly half way through growing season, begin fertilizing every few weeks. To produce more cucumbers, harvest cucumbers when young and plant still contains blooms. Failing this, entire plant stops producing.

### Insect Control:

Popular pests of the cucumber bush include slugs, aphids, and cucumber beetles. To deter slugs, embed a cup of beer in the soil. Slugs and snails fall in and drown. If the plant is big enough and aphids are infesting, spray them off with a strong stream of water. Otherwise, plant French marigolds to attract their predators (hover flies, ladybugs). Inspect all plants and



handpick any cucumber beetles when you notice them. You can also wait until later in the season to plant when beetles are on the wane. If they are especially prevalent, you can place row covers over them or, as a last resort, spray with insecticide.

### Tips:

Cucumbers are mostly water, so letting the plant dry out is not an option. During dry weather, water deep into the soil.



# How To Grow Strawberries

## Human Health

Loaded with Vitamin C. (A single berry can have up to 20 percent of the RDA.) This antioxidant combined with ellagic acid and anthocyanin helps heal wounds faster, strengthens the immune system and helps delay age-related memory loss. The folate in one serving helps reduce neural tube birth defects and damage to arteries. The fiber helps prevent constipation.

## How to Grow:

Strawberries are a great addition to the garden, easy on the eyes and taste buds with great health benefits. Four different types of strawberries bear fruit at different times: June bearers, Ever-bearers, Day-Neutrals and Alpine. June bearers yield all fruit within a month, depending on climate variation. Ever-bearers offer a good amount at the beginning of summer, scattered in the middle and a small spread in late summer. Day-Neutrals bear fruit throughout the season between frostings. They are sensitive to extremes and require babysitting. Buy at your local nursery, but ensure they are certified disease-free. Strawberries do well in both pots and garden rows. They like a soil pH just below neutral (7). They also need good drainage and moisture-retentive soil. Pick a site with plenty of sun and good airflow. If drainage is poor, you can increase it by tilling and raising your bed. Work in a couple handfuls of planting mix per square yard or a few inches of compost. Plant them 2 feet apart in rows separated by 1.5 feet. You can also lay down polypropylene and plant them in slits. This warms the soil and protects from weeds, but is not a requirement. Dig holes deep enough that the soil will come up to where the leaves begin on the shoots. In the bottom of the hole, form a small cone and set the plant over it, arranging the roots around it. Fill in with the amended soil. If you trim back most of the runners sent out during the growing season, the plant will dedicate more energy to growing large fruits. Water them thoroughly with about one inch of water a week (more in warmer climates). Avoid water logging, as strawberries can mildew. Harvest berries when they are a nice red. Freeze if necessary.

## Insect Control:

Pests include birds, slugs, snails, aphids and red spider mite. Stop slugs and snails with a beer trap implanted in soil. A scarecrow might work for some birds but not many. Only row covers effectively stop birds. Stop aphids by planting marigolds

to attract their predators (ladybugs and hover flies). Spider mites, most active on dry days, cause leaves to mottle yellow and fall off. Spray regularly with water. If the attack is bad, use rotenone as a last resort.

## Tips:

Weeding is a must to produce healthy strawberries. Lay down a layer of straw mulch around plants during growing season to separate the strawberries from soil and help keep them weed free. Harvest ripe berries as soon as they are ready. Immediately discard any that are malformed or mildewing. Rotate crops every three seasons to maintain healthy soil and good yields. Create new plants for the next season by collecting runners in pots. Choose disease-resistant cultivars adapted to your temperatures and day length. To avoid mildew and viruses, do not over water, and keep air circulating well.



# How To Grow Peas

## Human Health

Green peas promote overall health with seven vitamins, eight minerals and other phytonutrients. Vitamin K, crucial for bone health, is most abundant in peas. Some of it converts to vitamin K2 and is part of bone mineralization. Deficiency in K2 hinders mineralization and makes osteoporosis more likely. Incompletely researched, folate and vitamin B6 may contribute to bone health by blocking the buildup of homocysteine, a molecule that interrupts proper bone matrix formation. Vitamin K and folate also help the cardiovascular system. Vitamin K is essential for blood clotting, while folate and vitamin B6 lower homocysteine, which may reduce damage to arterial walls and reduce the risk of cardiovascular disease. Green peas also contain B vitamins that help break down carbohydrates, fats and proteins for energy. Iron is crucial for blood cell formation and oxygen delivery to muscles. Vitamins C and A protect many types of cells in the eye, liver, immune system, adrenal glands, connective tissue and the circulatory system.

## How to Grow:

Peas are one of the oldest cultivated vegetables. Eating them fresh, right after picking, makes a big difference in flavor. Peas do not need much done to the soil for healthy growth. They produce their own nitrogen and need very little fertilizer. Peas are frost hardy, but do not deal well with heat. They slow down when temperatures go above 70°F and stop growing above 75°F. Early varieties will do well in sandier loam that warms up quickly. Later varieties may benefit from heavier soil to keep them cool. Pick a sunny spot for early varieties and part shade for later varieties. Make sure soil is well drained. Sow seeds outdoors in early spring and also in fall for mild climates. Make successive sowings to get a continuous yield. Seeds should be planted in drills 2 inches deep and roughly 2 inches apart. If planting a vine type, plant in double rows spaced 6-8 inches apart with roughly 3 feet between each double row. Support each plant with a stick roughly 4-5 feet long. Keep soil moist, but make sure not to over water. Harvest (2-3 weeks after blossoming) as close to cooking as possible.

## Insect Control:

Common pea pests are birds, pea moths, mice, pea and bean weevils and aphids. To deter birds, install netting around the crop. (If you don't mind, sacrifice a little bit of the yield.) Pea



moths lay larvae (maggots) on plants during flowering. If attack is severe, dust with rotenone. Use this as a last resort, as rotenone kills beneficial insects. See your local nursery for pheromone traps. Mice are not usually a big problem, but cats are great to have around if they are. Pea and bean weevils are not a problem unless they attack seedlings. Dust sparingly with rotenone. Spray aphids with strong stream of water or plant marigolds to attract ladybugs.

## Tips:

Mulching between rows with well-aged compost or manure helps hold moisture, deter weeds and nourish the plant, especially if soil is depleted. Pea vines are very sensitive, so handpick weeds if needed.



# The Essence of Healthy Plants FERTILE SOIL



If the soil is healthy, common sense tells us, so is the plant that grows in it. If you take multivitamins, exercise and sleep well, you are most likely to be healthy. Soil is similar to people. Fertilizers are the vitamins, wind and rain are the exercise, and sun and shade are the rest. Organic fertilizers take a strategic approach aimed at feeding the microorganisms in the soil rather than the plants directly, which is how synthetic fertilizers work. You might

ask, "What's the difference, if my plants grow?" By fertilizing or feeding the soil, you enable it to build nutrient reserves that plant roots can tap into any time as needed. Feeding builds good soil structure, creates pores for roots to extend their reach, helps suppress disease and supports biological diversity. Feeding also helps maintain a neutral pH to support humus formation that adds minerals and micronutrients to a living soil.

## Compost and Manure

A well-made compost functions similarly to a well-made organic fertilizer, except it is not nearly as potent in nutrients. Compost is simply the remains of once living organisms that have been degraded by microorganisms. Compost usually consists of organic materials such as yard wastes, plant trimmings, leaves, grass trimmings, soil with microbes and various wet kitchen scraps, other than meat. Applying this composted substance to your soil will help provide great tilth, microorganisms, nutrients and nutrient stores.

With compost, the nutrients found in the organic matter it contains are released slowly. Compost is so nutrient rich it often meets the needs of a plant for one year or more, although you do not reach the maximum growth and health potential if you apply compost only once a year. Plants grown with healthy and diverse compost will absorb a slower, steadier and more diverse set of nutrients than if they receive synthetic nutrients. Natural compost leads to healthier, disease-resistant plants packed full of nutrients. Caution: Avoid compost made from bio-solids or sewage sludge. Many organic experts warn against them, because they are linked to heavy metals and human pathogens.

Adding compost to your soil is an excellent way to build it up, especially if the soil was nutrient deprived in the past. In certain urban areas, some asphalt lots and industrial yards have been redeveloped for residential use, because land values increased. The soil beneath would have been deprived of organic matter and nutrients for many years. If you live in a similar area, amending the soil with compost is one effective way to prepare your area to support healthy growth. Applying a premium homemade or commercial



compost benefits a soil in any stage of maturity and helps to establish any edible garden. To get safe, effective compost for your garden, look for a trusted nursery or professional grower who can advise you on how to boost your soil's fertility.

Manure, or animal waste, is another effective but risky way to spread nutrients into your soil. Fresh manure has a substantial effect on soil fertility for agriculture. However, I do not recommend using it in a home garden. Raw manure may release ammonia, which is detrimental to plant health. For this and other reasons, manure needs to be composted for a long time before you use it in your garden. Once composted, though, manure is a nutrient-rich material to mix with your soil. Never use the waste of a carnivore (meat eater) such as a cat or dog, as it can carry harmful pathogens. If you raise rabbits, sheep, chickens, horses or cows, these manures are great. Just remember to compost them before you apply them to the garden.



**Remember - healthy soils equal healthy plants that equal healthy people**  
It is that simple.



## Organic Fertilizers and Soil Amendments

These materials consist of natural ingredients that the beneficial microbes in a living soil digest as food. Popular ingredients include fish meals, feather meal, alfalfa meal, cottonseed meal, bone meals, kelp meal, seaweed extracts, blood meal and liquid animal manures. The meals and extracts contain organic matter and nutrients, while the bacteria and the symbiotic mycorrhizal fungi convert the nutrient sources into usable forms plants can absorb as needed. Also, fungi extend the reach of plant roots to acquire more nutrients.

Organic fertilizers have a much lower chance of leaching through the soil and contaminating the water table. With organic fertilizers, nutrients are physically bound into larger pieces of organic matter lodged in the soil and available so that microbes can free them up for plant use. There is nothing mysterious or magical about organic fertilizers. They simply give you a way of working with nature rather than against it. The objective in using them is to recycle organic matter back into the soil rather than discarding it and relying on chemicals. In fact, the organic process is much less mysterious than the methods of the chemical grower.

A program of organic fertilizers involves far more than just growing plants without chemical fertilizers and artificial sprays. Using organics is a life choice and commitment that recognizes the complex, successful workings of nature in maintaining life for hundreds of millions of years. Sound organic cultivating principles closely follow processes found in the natural world. Also, do not think that using these

principles leads to lower yields or quality. In fact, with organics you are likely to increase both. Organic methods also support habitat for wildlife while insuring the fruits and vegetables you produce in your garden are safe, nutritious and free of chemicals. You also reduce the possibility of the harmful effects of chemicals on infants and children.

The soil teems with millions of microorganisms that release nutrients required for healthy plant growth from organic matter. Rather than feeding plants directly, organic fertilizers feed the soil with natural materials that allow your plants to draw on a humus reservoir of nutrients as they need. Plants grown this way are stronger and more resistant to pests and disease. Organic fertilizers work and persist for many months (unlike the short-term affects of chemical fertilizers) because they become a part of the living soil.

You can find a number of different organic fertilizers and amendments at your local nursery. Some are formulated to support the nutritional needs of particular plant categories such as vegetables, while others take an all-purpose approach good for a variety of plants. Fertilizers are generally tested and proven for a specific application. Choose a selection specific to your types of plants: vegetable fertilizer for vegetables; fruit fertilizer for your fruit trees. In any case, organic fertilizers and amendments are geared for the slow, controlled release of plant food. They are perfect for preparing the soil for upcoming seasons without having to worry about nutrients being wasted or washed away.

## Chemical Fertilizers

Chemical fertilizers feed plants directly and do not address the soil, because they are in a form that plants can absorb immediately. While direct plant feeding sounds attractive, it adds no beneficial attributes to the soil. In fact, over time chemical fertilizers can deplete the soil of nutrients. The gardener treating plants only with chemicals uses the soil simply as an anchor to hold plants in place. While this approach appears to have good short-term results, in the long run it has disastrous consequences. When organic matter is not replaced in the soil, beneficial organisms die out, the soil structure breaks down, and the soil becomes hard, airless and unproductive. Attempts at “force-feeding” plants result in soft, sappy growth, which is prone to attack by a host of pests and diseases.

When plants are forced to grow with chemical fertilizers, they become weak. As plant cell walls develop, they do not have enough time to produce two important compounds, cellulose and lignins. These substances strengthen protective cell walls. As cells are forced to duplicate and grow quickly, the amount of cellulose and lignin decreases, making the plant tissues much softer and more attractive for pests to attack. If you were an insect, would you rather bite into a soft head of butter lettuce or chew on a piece of wood? Insects prefer tender, soft growth.

Chemical pesticides are also often used for short-term pest control. Unfortunately, these pesticides also kill the natural predators of the pests that attack plants. Eventually, the problem gets worse as nothing is left to kill the “bad bugs.” Stronger, more toxic pesticides then have to be used, setting in motion a hard-to-break, vicious cycle: Plants and soil weakened by chemicals need more chemicals to protect them from pests they resist naturally when well nourished.





### Problem: Chemical Fertilizers only feed the plant

Chemical fertilizers feed plants with nutrients directly. This inhibits, and in some cases, kills off microbes within the soil. In addition to wiping out organisms, nutrients added as soluble fertilizers can be lost through leaching away or conversion to an unusable form such as nitrogen gas. Chemicals washed away during rain or irrigation can pollute ground water, streams, lakes and oceans. In addition, commercially synthesized chemical fertilizers do not have the beneficial soil microbes that feed the plants certain bio-chemicals such as vitamins and antibiotics.

When soil becomes unbalanced through chemical alteration, certain micronutrients and heavy metals, such as iron, magnesium and aluminum, become more soluble in the soil and can be toxic to plant tissues. Unbalanced soils also reduce the productivity of bacteria (nitrogen fixers) making nutrients less available. Chemical fertilizers also decrease a soil's ability to hold onto positively charged nutrients, which allows water to more easily wash away nutrients. An imbalance of soils locks up other micronutrients and makes them unavailable to plants while concentrating harmful molecules in the soil. All this can lead to further deterioration of the soil by chemically deteriorating humus and organic matter reserves.

Adding petrochemical synthetic fertilizers drives up the salt concentration in the soil and changes the pH, which can adversely affect plants. More importantly, chemical fertilizers only feed for a short time. Organic fertilizers feed continuously, because the microbes do not digest all of the organic fertilizer immediately. Chemical fertilizers reduce the soil aggregation properties of microbes and sacrifice good tilth. Conversely, organic fertilizers support water retention, reduce runoff



and support long-term soil health.

Neglecting living organisms in the soil by treating plants with chemically synthesized fertilizers and pest sprays may eventually lead to the extinction of all living matter in commercial soil. In the future, we may become

completely dependent on synthetics to get any yield at all. Many gardeners and consumers regard this cycle as unsustainable over time. They have devoted their lives, farming practices and backyards to restoring and preserving biological diversity in soil.



### The Answer: Feed the Soil Not the Plants

Feed the soil, not the plants! When we feed our plants and not our soil, we lose all the benefits from microbes. When we feed the soil, we actually feed the microbes in the soil. Microbes make nutrients available for plants. You feed microbes by adding organic material. If you give plants a synthetic chemical fertilizer, you feed only the plant, not the soil nor the microbes. Soil has supported plants and given them nutrients since long before we invented other fertilizers, so why not feed the soil and preserve the natural biological interactions that support plant survival and growth?

Why are people generally indifferent to the tiny life all around us? Perhaps we modern people ignore microorganisms, because we have a strong bias against all microscopic life. Now that we understand the germ theory of disease, and appreciate the many health improvements that came from it, we have become "biophobic." Are we prejudiced against anything alive but so small we cannot see it? Do we think anything microscopic and alive must be bad for our health? Do we take for granted what we cannot see? This is a dangerous bit of blindness.

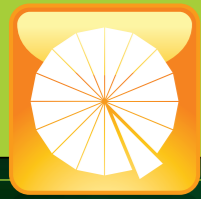
True, some bacteria and viruses threaten our health. But the vast majority of tiny life is either neutral or helpful. Much of it is even essential. Our lives would be impossible without

the essential bacteria and fungi in our guts and in our soil. Without microorganisms we could not have penicillin or yogurt (to name just two).

The large-scale, corporate food industry sees organic gardening as a major enemy and touts the benefits of genetically enhanced crops instead of first enhancing the soil organically to make crops more healthy and nutritious. If everyone grew their own food, and consequently enjoyed good health, we would not need giant monoculture and commercial farming. Pharmaceutical companies would generate much less revenue. You would need a medical doctor only if you had a broken bone. It all comes down to corporate manipulation, control and money.

Buy heirloom seeds and transplants. Grow everything you can. What you cannot grow, buy from someone you trust. If you're an attorney, CPA, architect, nurse or have a 9-to-5 job in the middle of the city with no time or space to garden, barter your services with an organic produce farmer, chicken farmer, cattle rancher or neighbor who grows the healthiest organic tomatoes. A few words from you could be worth a fresh basket of healthy fruit or vegetables. Please consider these ideas to ensure your health and the health of your loved ones.





# 16 NUTRIENTS PLANTS MUST HAVE

Sixteen basic nutrients are required for crop development (plus hundreds more we know are needed in minute amounts). Commercial agriculture tends not to address these trace nutrients. The oversimplified commercial approach is like taking a multivitamin with only an emphasis on vitamin C or calcium. Conventional agriculture tells us that 16 basic nutrients are all that is needed for plant growth.

It is best to use well-rounded organic fertilizers, soil amendments, aged manures and composts for healthy plants and soil on a regular basis. You never know how much of any one nutrient is needed at a certain time of year, or time of day, for that matter. For example, nitrogen requirements can vary hourly depending on the time of day, soil temperature or the amount of photosynthesis a leaf is producing at the height of the solar index, which is from 10 A.M. to 4 P.M.

Long-lasting organic materials are great sources of nutrients and are a safe way to ensure that all nutrients are available anytime a plant needs them. We favor ocean-based fertilizers, because they are loaded with nutrients, well beyond the basic sixteen needed for crop development. All the nutrients plants use are equally important, yet each is required in vastly different amounts. These differences have led to the grouping of essential nutrients by the relative quantities in which plants require them, namely, primary or macronutrients, secondary nutrients, and micronutrients.

## Macronutrients

The macronutrients, required in the largest amounts, are nitrogen, phosphorus and potassium (referred to by the chemical shorthand N-P-K). Many of these nutrients may never make it to your plants if the pH is out of balance.

### NITROGEN (N)

Needed to produce amino acids. Essential for plant cell division, vital for plant growth, directly involved in photosynthesis, necessary component of vitamins, aids in production and use of carbohydrates and affects energy reactions in the plant. Helps trap energy from sunlight.

*Deficiency causes thin stems, yellow leaves, slowed growth and yellowing where plants should be green.*

N

### PHOSPHORUS (P)

Needed for genetic material, cell membranes, root development, seed number and size. Facilitates the use of energy, involved in photosynthesis, respiration, energy storage and transfer, cell division and enlargement. Promotes early root formation. Improves quality of fruits, vegetables and grains.

*Deficiency causes purple leaves beginning underneath, halted roots, slow growth, poor fruit and vegetable production.*

P

### POTASSIUM (K)

Needed for carbohydrate metabolism. Influences the uptake of calcium, sodium and nitrogen. Increases photosynthesis. Essential to protein synthesis. Important in fruit formation. Activates enzymes and controls their reaction rates. Improves quality of seeds and fruit, improves winter hardiness, increases disease resistance.

*Deficiency leads to flabby stems, halted growth, burnt leaf edges and vulnerability to disease.*

K

## Secondary Nutrients

The secondary nutrients are calcium, magnesium and sulphur. Most crops need these three secondary nutrients in lesser amounts than the primary nutrients. People are giving them more prominence in crop fertilization programs as they learn that N-P-K fertilizers alone cannot fulfill plant requirements.

### CALCIUM (Ca)

Helps regulate access to plant cells. Used for continuous cell division and formation. Involved in nitrogen metabolism. Required for enzyme activation and cell reproduction. Reduces plant respiration, aids translocation of photosynthesis. Increases fruit set and stimulates microbial activity.

*Deficiency halts growing tips, curls leaves, and causes cell membranes to disintegrate, producing thin cell walls and blossom end rot.*

Ca

### MAGNESIUM (Mg)

Needed for the chlorophyll molecules that put the green in plants. Also used for enzyme activation. Improves utilization and mobility of phosphorus. Increases iron utilization in plants and influences earliness and uniformity of maturity.

*Deficiency causes yellowing of lower leaves and, in some cases, lower crop yield.*

Mg

### SULPHUR (S)

An integral part of amino acids needed to build proteins. Contributes to the development of several enzymes and vitamins. Aids in seed production and promotes nodule formation on legumes. Needed in chlorophyll formation.

*Deficiency causes younger leaves to yellow.*

S

## Micronutrients or Trace Elements

### IRON (Fe)

Important for nitrogen fixation, chlorophyll synthesis and used in other enzymes and proteins.

*Deficiency more likely in alkaline soil. Causes yellowing between enlarged veins and short, skinny stems.*

Fe

### CHLORIDE (Cl)

Most soils have enough chloride for adequate plant nutrition. However, chloride deficiencies are reported.

*Deficiency in sandy soils in high rainfall areas or those derived from low-chloride parent materials. There are few areas of chloride-deficiency, so this micronutrient is not considered in fertilizer programs.*

Cl

### ZINC (Z)

Essential component of various enzyme systems for energy production, protein synthesis and growth regulation. Needed to produce plant growth hormones. Greatly benefits seed and grain production and maturation.

*Deficiency displays yellowing and mottling of leaves. Plants also show delayed maturity.*

Z

### COPPER (Cu)

Important for reproductive growth. A catalyst for enzyme and chlorophyll synthesis. Aids root metabolism and helps in using proteins.

*Deficiency symptoms generally appear on young plants. First symptoms are yellowing of youngest leaves with slightly stunted growth. In extreme cases, leaves die after becoming shriveled, twisted, broken and ragged.*

Cu

### BORON (B)

Important for all growing tissues. Exists in cell membranes. Needed for nitrogen fixation, protein synthesis, starch and sugar transport, root growth, water uptake and transport.

*Deficiency more likely in alkaline soils. May lead to growing points dying and cells being disrupted.*

B

### MOLYBDENUM (Mo)

Important for nitrogen metabolism and protein synthesis. Needed to convert inorganic phosphates to organic forms.

*Deficiency occurs mainly in acid soils. Can cause pale, deformed, thin leaves.*

Mo

### MANGANESE (Mn)

Needed for synthesis of chlorophyll, assists in vitamin, carbohydrate and nitrogen metabolism.

*Deficiency more likely in alkaline soil. Stops new leaf growth and pale color, mostly between veins.*

Mn

### CARBON (C)

C

### HYDROGEN (H)

H

### OXYGEN (O)

O

In addition to the 13 nutrients above, plants also require carbon, hydrogen and oxygen. Plants extract these elements from air and water to make up the bulk of their weight.



The soil is alive! Below our feet and invisible to the naked eye, tiny microbes—the great digesters of the earth—constantly break down organic material into a more usable form that plant roots can identify, absorb, and ultimately incorporate for new growth. This material includes complex organic compounds, such as tannins, lignins, proteins, carbohydrate, cellulose, pectin, etc.

Healthy soil should contain no less than 10,000,000 bacteria per gram. The presence of microbes ensures that nutrients are made available to plants at a steady rate. While the plants are actively growing—and requiring more nutrients—so do the microbes in the soil. As the weather warms, both the plant and microbes respond at a similar rate. The microbes become increasingly active in their role of breaking down organic materials into forms more readily absorbed by the growing plants that need extra nutrition. As the weather cools—and plants require less nutrition—so do the microbes. The reduction in their activity means fewer nutrients in the soil are being released to the plants. In this way, the soil can rebuild food reserves. This self-regulating cycle has occurred for millions of years as part of the wisdom of nature.

Microbes also help to stabilize the soil by physically binding soil particles together; they release a by-product called glomalin that acts as a glue, binding mineral particles and organisms to each other. This contributes greatly to soil aggregation. All of these processes happen naturally in a healthy, productive soil.

**FEED THE SOIL**

When we feed our plants instead of our soil, we lose all the benefits that microbes contribute. When we say “feed the soil,” it means feed the microbes in the soil, because it is the microbes that make nutrients available for the plants. The way you feed microbes is through the addition of organic material. If you feed with a synthetic chemical fertilizer, you are feeding the plant, not the soil,

or the microbes. Adding petrochemical synthetic fertilizer also drives up the salt index in the soil and changes the pH, which can have adverse effects on plants.

More importantly, chemical fertilizers only feed for a short period of time; organic fertilizers offer continual feeding because the microbes cannot digest all of the organic fertilizer at once. With chemical fertilizers, we also lose the microbes’ contribution to soil aggregation. Good soil aggregation leads to improvements in tilth, water retention, the rates at which water penetrates the soil, the amount of oxygen in the soil, and the reduction of runoff. All of these desirable soil conditions can be achieved by adding organic material. As you can see, microbes are immeasurably important and essential to the health of all productive soils.

To elevate the microbial colonies in your garden, use Dr. Earth® organic fertilizers and soils. They contain TruBiotic®, a broad-spectrum soil and seed inoculant, already mixed into the products. Two things will happen when you use Dr. Earth®:

- The organic fertilizer and soil will become the food source for the microbes, providing almost immediate nutrition for your plants, which means fast results.
- Your soil will contain the proper number of microbes to truly benefit your plants because – unlike most organic fertilizers and soils – Dr. Earth® products have various species of beneficial microbes already included as components.

Increased biological activity in the soil, and the buildup of existing bacterial populations, will help make your plants and garden resistant to diseases, frost, and insects, while maximizing the potential for growth and health. Remember: your soil is alive. **DO NOT TREAT IT LIKE DIRT!** Learn to work with, and nurture, the natural bio-system of your soil.

# PREMIUM DRY FERTILIZER

## Infused With TruBiotic® Soil Microbes

*A fertilizer for every need:*

-  **SPECTACULAR® BULB FOOD FERTILIZER**  
Loosens and improves soil structure so bulbs can reach maturity more quickly.
-  **ROOT ZONE® STARTER FERTILIZER**  
Provides balanced and fast nutrition for transplants and plants in early stages of growth.
-  **TOTAL ADVANTAGE® ROSE AND FLOWER FERTILIZER**  
Provides bigger, more abundant blooms naturally for all roses and flowers.
-  **ACID LOVERS® ACIDIC FERTILIZER**  
A nutritional boost to maximize plant health for all plants requiring acidic soil. Target pH 5.5.
-  **HOME GROWN® TOMATO & VEGETABLE FERTILIZER**  
Promotes large, healthy vegetables for a nutritional boost to maximize your harvest.
-  **ANNUAL BLOOM® FLOWER GARDEN FERTILIZER**  
Ideal for annuals, bedding plants, impatiens, begonias, and every flower in the garden.
-  **PREMIUM GOLD® ALL PURPOSE FERTILIZER**  
All purpose fertilizer provides balanced and fast nutrition for all plants.
-  **FLOWER GIRL® BUD AND BLOOM BOOSTER**  
Ideal for roses, vegetables, fruit trees, vines and every flowering plant in your garden.
-  **NATURAL WONDER® FRUIT TREE FERTILIZER**  
Formulated to promote hearty roots and fruit growth for all fruit trees and berries.
-  **EXOTIC BLEND® PALM, TROPICAL & HIBISCUS**  
Designed to meet the exacting requirements of tropical and subtropical plants.



### BENEFICIAL MICROBES AND MYCORRHIZAE

The Dr. Earth invention of Probiotics signaled a major breakthrough in gardening science, the first time fertilizers were infused with living organisms. Products that imitate—some of which include chicken manure—cannot even come close. The word Probiotics always signifies the first, the original, and the absolute supreme microbe-infused fertilizer on the market.

**NATURE'S INTELLIGENCE PURE & SIMPLE**



# What is vital for life? Your Health



What is vital for life? Your health. To live a long life full of joy and vitality, your lifestyle choices today determine the state of your health tomorrow. This is true, whether we think about those choices or let ignorance and apathy make them for us.

The great news is you control your own destiny, because you control every decision in your life. Healthy eating and living are personal life choices. In your own backyard, you can find the potential to create a future of good health for yourself, your family and the entire planet. This is the start of your journey to a better life.

To create an environment that nurtures you and provides you with enjoyment and health, you need a detailed plan similar to a road map. Our mission is to help you plan and take this wondrous journey.

Being healthy is simple if you understand how to garden in your own backyard. Growing your own healthy food right outside your door will make you look at your home in a new, wonderful way. With so much excitement running through your veins, your enthusiasm may push you to act too soon. Before you grab a piece of paper, scribble many ideas, run down to your local plant nursery, and buy as many seeds, plants, soils and fertilizers as you can load up, let us guide you from our 20 years of experience and leadership in gardening. We want to teach you what we know that is true and effective.

## Let's Get Dirty First!

Some people think of soil as nothing more than an anchor that holds plants in the ground, a dark, dusty place that critters crawl in that makes our hands dirty. Soil is not just "dirt" but the basis of all life. Healthy soil is alive with billions of microbes that feed all living things on our planet. Your body needs it to be healthy. It provides you with the sustenance you need to generate the energy for everything you do. Everyone who is alive today, and everyone who ever lived, needed the benefits of soil to survive and prosper.



Soil health is the fundamental basis for the health of all plants, animals and people. This guide shows you the link between soil and human health. The connection is simple; healthy soil creates a healthy garden, which produces healthy plants to provide nutrients for us as well as for the animals we love and care for as pets.

Why should you grow a vegetable garden? Food is so cheap and easily accessible if you live in a modernized country. Much of what we can buy is more convenient to prepare than cooking garden produce from scratch. You can run down to a fast food drive-through and grab a value meal (for about \$5) that is 2,500 calories of deep fried, grease-laden, processed food. You can get your fill of genetically modified, processed meat and potatoes for far less than one-tenth of a penny per calorie.

Maybe you do not care if that hamburger came from a cow fed with genetically modified grains and was shipped 2,500 miles to get to you. Maybe you believe it makes no difference if your fries are processed and grown with genetically modified potatoes. Your 32-ounce soda was full of simple sugars that went down smoothly with those salty fries.

### *Is a bargain meal a bargain if you pay for it with your health?*

Why you should garden, it's good for your health, besides giving you the best nutrients you can get, gardening is healthy work. You have to cultivate the soil, amend it, plant seeds or cuttings, fertilize, water, weed and mulch. Finally, you must

harvest and preserve your crop for future use. Is eating healthy from your own garden worth all that effort? Yes!

If you read this guide with an open mind and the attitude of caring about your health, the health of others and the well-being of our only home—the good earth itself—it will open your eyes to the importance of creating your healthy backyard garden. You will learn why eating food you nurture and harvest yourself is one of the most rewarding things you can do. This guide is also unique in taking the approach of starting from the ground up, explaining how human health begins in the soil, then providing clear examples of what to grow, how to grow it, and the nutritional benefits to you and your family, your friends and your community.

We know thousands of gardeners and have interviewed hundreds of them over the past 20 years. We have also met with many medical doctors, soil scientists, plant biologists, nutritionists and master gardeners. All this involvement and research has more than convinced us that a healthy garden will give you joy and bounty.

We live the organic lifestyle, and it all starts in our backyard. Even the smallest thing you do will make a huge difference toward living a long and healthy life and raising a healthy family. A garden can help you to achieve these goals.

Americans are on a new journey, seeking natural and organic solutions to their health problems. People from all backgrounds are on a personal quest to be healthy while making the right environmental decisions in the process.

We hope this guide will inspire and benefit you in the same way.



# ORGANIC INSECT KILLERS & FUNGUS CONTROL DESIGNED TO KILL!

*In many instances, physical and biological controls won't be enough to remedy a pest problem. In these cases you will face the choice of losing your harvest, flowers, and valuable plants or using organic insect sprays.*

- Organically acceptable pesticides and fungicides have 3 characteristics:
- They are derived from natural substances
  - Generally less toxic to humans than synthetic pesticides
  - They break-down in the environment to harmless substances

### KILL, REPEL, AND CONTROL NATURALLY

Final Stop® products provide the home gardener with an effective alternative to chemical sprays. Dr. Earth® is unique in its formulation with components that quickly kill and control the target naturally.

### FAST AND EFFECTIVE RESULTS

These products are formulated with essential oils and garlic, to knock down and kill insects and fungus quickly. Results can be seen immediately or up to several minutes later. Octopamine is a chemical neurotransmitter that controls body movement and metabolism in insects and mites. The ingredients in Dr. Earth® interfere with the transmission of octopamine signals throughout an insect's body. The interference of these signals leads to metabolic toxicity, immobilization and ultimately death.

### LONG LASTING

Garlic extract has been proven to repel insects for several weeks or even longer. We also include several oils and molasses that will naturally stick to plant foliage. This "gummy" carrier causes the insecticide to adhere to plant foliage for a long period of time, creating effective control.

### DYNAMIC COMBINATION

We designed the dynamics of our essential oil blend, garlic extract, and specialized inert ingredients to work synergistically, killing insects and fungus within minutes. They also have the ability to repel insects for weeks. Dr. Earth® Final Stop® effectively controls a broad spectrum of insects and fungi through several active killing agents.

### UNIQUE FINAL STOP® BONUS

Dr. Earth® insecticides and fungicides are environmentally safe, yet contain the most dynamic combination of active and inert ingredients designed to kill and control plant-destroying insects. Our sprays have the ability to not only control insects and fungus but to also rejuvenate plant growth! We have added natural, biological growth enhancers, providing gardeners with multiple benefits. The Dr. Earth® formula offers a new concept – a single product that combines quick, safe control with fast acting plant growth and healing capabilities.

# PROFESSIONAL KILLER SPRAYS

*an effective alternative to chemical sprays*

## FINAL STOP® KILLER SPRAYS



DESIGNED TO KILL  
PURELY AND NATURALLY  
USING ADVANCED ORGANICS®

-  **YARD & GARDEN INSECT KILLER**  
Ideal for killing and controlling insects in every part of the yard and garden.
-  **VEGETABLE INSECT KILLER**  
Use to kill and control insects on vegetables, both indoors and outdoors.
-  **WEED & GRASS HERBICIDE**  
Kills and controls a broad spectrum of weeds and grasses. Wherever you want weeds dead.
-  **DISEASE CONTROL FUNGICIDE**  
Kills and controls diseases, molds and fungi in every part of the yard and garden.
-  **ROSE & FLOWER INSECT KILLER**  
Kills and controls insects on roses, flowers, flowering shrubs, and ornamentals.
-  **PEST CONTROL KILLER SPRAY**  
Kills and controls insects under sinks, walkways, driveways, basements, etc.
-  **FRUIT TREE INSECT KILLER**  
Kills and controls insects on all fruit trees, citrus, avocados, and deciduous trees.



**EFFECTIVE RESULTS** – Solve your pest, weed, and disease problems, instead of just diminishing them. These products are serious science and are easy to use.

**RESPONSIBILITY** – Dr. Earth® will never compromise on safety. Through carefully formulated combinations of essential oils, garlic extract, and organic acids, our organic products let NATURE do the KILLING, but you get to pull the trigger.

**REWARDS** – End the frustration and bring back the joy of gardening.





# GLOBAL RECYCLING



## Our Daily Choices Matter

Over the past several decades, there has been a huge paradigm shift in the way most people view trash: both in the ways it is disposed of and in the ways it can be reused and recycled. The now commonplace daily practice of recycling a plastic water bottle makes a huge difference when viewed on a global level. Every action each of us takes quickly adds up exponentially, resulting in a massive positive impact on the planet.

Despite our advances, we still have a long way to go – in America alone, each one of us generates an average of 4.4 lbs. of trash each day; of this, only about 1.5 lbs. is composted or recycled.

## Waste in the Industrial Sector

A much bigger problem – one that will touch each of our lives and the lives of generations to come – is industrial waste.

In the 1980's it was estimated that American industrial facilities alone generated and disposed of about 7.6 billion tons of industrial solid waste each year.

Industrial activities require a wide variety of inputs such as energy, water, metals, plastics, wood, textiles, glass, etc. The production, and eventual consumption, of the final goods generate a huge amount of waste; up until recently, industrialization has been a terribly wasteful process.

China's rapid growth in the industrial arena is a prime example of the scope of the challenge. From 2003 to 2006, China's industrial production grew at an annual rate of about 12%. By 2006, the added value of industrial activities accounted for about 43% of the national economy. As a result, China now tops the world in the production of steel, coal, cement, TV sets and cotton fabric. It ranks second in power generation, third in sugar output and fifth in crude oil output. But these advancements have also been accompanied by waste – in 2005, China surpassed the U.S. as the world's largest generator of solid waste. Indeed, no other country in history has generated as much waste in such a short period as China.

## Problems Create Opportunities

Although the creation of industrial waste has given rise to serious problems and challenges, unexpected opportunities for environmentally sustainable industrialization have also arisen. No country is self-sufficient in the production of raw materials needed in industry – materials such as crude oil, coal, paper, metals and plastics. In China, the fact that large amounts of these materials need to be imported has led to one of the world's largest recycling efforts. A growing proportion of China's industrial inputs are now constituted of recyclable materials that have been recovered from waste from all over the world. As an example, in 2001, China became the world's largest importer of scrap metal. A case can be made that Chinese industrialization has been fueled by waste from many countries.

The growing demand for recyclable materials has created the world's largest recycling effort ever seen in history – bringing forth a new phenomenon of global supply chains to satisfy these demands. These supply chains are constituted of several million waste pickers worldwide who supply industry's ever-growing appetite for recycled materials. This model has exciting implications for industrialization, for the control of greenhouse gas emissions and for the reduction of poverty.

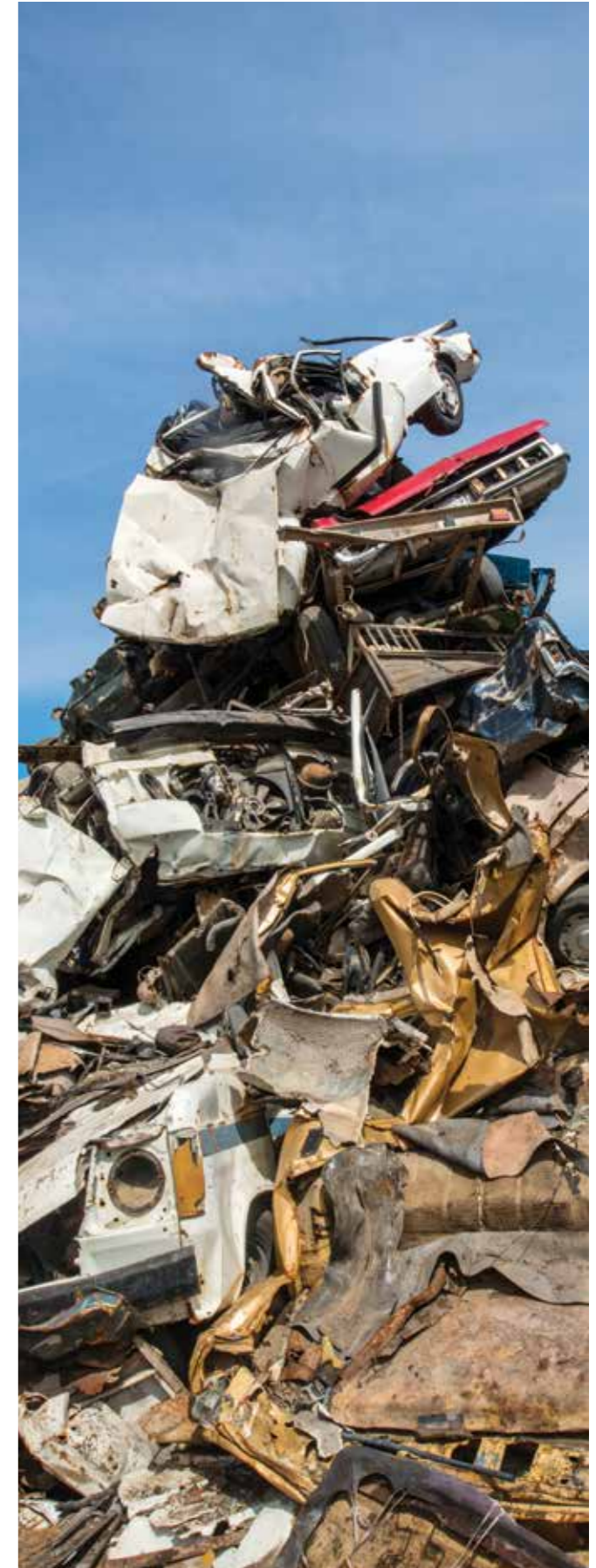
Waste pickers – as yet, a loosely-organized group of at least 15 million scavengers worldwide – make a living by recovering materials from waste for recycling. The global economic impact of scavenging activities is estimated to generate several billion U.S. dollars annually.

## The Evolution of Industrial Recycling

The practice of industrial recycling is becoming widespread throughout the world and is expected to increase greatly as manufacturing concerns grapple with tighter resource constraints. In an era of rising commodity prices, recyclable materials are in high demand, due to their low costs. The main factors that account for the lower prices of secondary materials are due to the facts that:

- Material recovered from waste often includes impurities such as tags, traces of glue and moisture.
- Most developed countries have created recycling programs that produce large amounts of secondary materials, but supply of these materials usually exceeds domestic demand, so a large percentage of these materials must be exported and sold in international markets.
- Recycling requires less energy and water than processing virgin materials.
- The recovery of material in developing countries relies on large numbers of scavengers, who lack the organization and power to have an impact on prices.

These factors translate into lower prices for recyclable materials. An example of the price differential between imported goods is Mexico: the price per ton of wood pulp imported from the U.S. is seven times more expensive than recovered waste paper.





### The Contribution of Scavenging

Central to the recycling efforts in China and other emerging countries such as India and Brazil – as well as countries in the West – is the use of scavengers or waste pickers. Worldwide, millions of scavengers or waste pickers form the basis of this supply chain.

Scavengers from many developing countries are realizing the benefits of the strong demand for recyclables – translating into higher prices paid for these materials and higher incomes, giving this sector a real means of escaping poverty.

Waste-picking constitutes a common income-generating activity for low-income individuals in developing countries. It has been estimated that in African, Asian and Latin American cities, about 1% of the urban population (15 million people) survive by scavenging. They recover materials to sell for reuse or recycling, as well as for their own consumption.

Despite the lack of reliable data at the national level, various studies have highlighted the economic importance of scavenging activities. In Mumbai, India, the economic impact of scavenging has been estimated at nearly \$1 billion U.S. dollars per year in the recovery of materials and the manufacture of products from them. The global economic impact of scavenging is likely to be of several billion U.S. dollars annually.

### A New Industry is on the Horizon

A growing number of experiences in Africa, Asia and Latin America demonstrate that formalization of scavenging can promote grassroots development, empowerment and poverty reduction while protecting the environment and improving industrial competitiveness. The most common models are:

**Scavenger Cooperatives** – By getting organized, waste pickers become empowered. They can strengthen their bargaining position with industry and government, become participants in the development process and overcome poverty through grassroots development. Working together, they can gain stability, higher incomes and legalization of their activities. They can enter into contracts with industry or into grant agreements with donors. In South America alone, there are about 1,000 scavenger cooperatives.

**Micro-Enterprises** – Scavengers can also create their own micro-enterprises to perform waste collection, recycling and various manufacturing activities that use waste as raw materials. There are thousands of them in the developing world.

**Public-Private Partnerships (PPP's)** – PPP's can combine the energy, creativity and low operating costs of scavengers in the waste management sector. Public-Private Partnerships for collecting waste and recyclables can be beneficial to waste

picker groups as well as to society at large. In partnerships in several Colombian cities, the municipality provides infrastructure and equipment, while waste pickers provide labor. In Bogota, a partnership has been formed to operate a recycling plant, managed by the Bogota Association of Waste Pickers, to which the municipality takes recyclables separated at source.

### Contributions to the Health of the Planet

As this new alliance of scavengers and waste pickers continues to grow, the benefits they contribute to the health of our planet are immeasurable.

In addition to its impact on the reduction of household poverty, scavenging renders many environmental benefits. Recycling has a lower environmental impact compared to the use of virgin resources and extends the life of disposal facilities, which save municipalities' money. Recycling can result in a more competitive economy and a cleaner environment and can contribute to a more sustainable development.

Scavenging activities can reduce emissions of greenhouse gases by recycling inorganic and organic materials. The recycling of inorganic materials by scavengers saves energy. Power generation is one of the largest sources of greenhouse gases. Assuming that everything else remains the same, recycling reduces the emissions of greenhouse gases. When organic waste – mostly food leftovers, kitchen waste and garden waste – is sent to open dumps and landfills, it gets buried under layers of waste. Eventually, all oxygen is consumed and organic matter decomposes in anaerobic conditions. Anaerobic decomposition generates methane, a greenhouse gas that is 20 times more potent than CO<sup>2</sup> in trapping the sun's heat. Garbage dumps and landfills generate about 11% of anthropogenic emissions of greenhouse gases. Diverting organic waste from dumps and landfills can prevent the generation of methane and reduce greenhouse emissions.

### More Work to be Done

Global recycling chains can benefit millions of low-income and vulnerable individuals world-wide, as well as contributing to a more competitive economy and environmental protection in the fight against climate change.

But there are several important issues that need to be addressed. Scavengers face multiple hazards and problems. Due to their daily contact with garbage, scavengers are usually associated with dirt, disease, squalor and perceived as a nuisance – a symbol of backwardness – and even as criminals. They survive in a hostile physical and social environment. Recent migrants, children, women, the unemployed and the elderly account for most of the scavenger population. They also face serious risks to their health that result in high morbidity rates and shorter life expectancy than the rest of society. But



a growing number of experiences demonstrate that once scavengers are organized and public policy supports them, these problems can be greatly diminished or eliminated.

Further, the existence of middlemen allows the possibility of exploitation and/or political control of scavengers. Because industry demands large volumes of materials that are processed – sorted, baled, crushed or granulated – it does not buy directly from individual waste pickers. Instead, middlemen purchase recyclables recovered by waste pickers, then sell the materials – after some sorting, cleaning and processing – to scrap dealers who, in turn, sell to industry. In such circumstances, middlemen often earn large profits, while waste pickers are paid much too little to escape poverty. This exploitation accounts for scavengers' low incomes.

Unfortunately, scavenging is currently ignored by most multilateral, bilateral, and international non-governmental agencies that work in international development and environmental protection. Scavenger Cooperatives, Micro-Enterprises, and Public-Private partnerships can be successful models that formalize and incorporate scavengers into domestic and global supply chains. But external support is necessary in order to unlock the development potential of scavenging and to recognize its contribution in the climate change challenge.

When scavengers are supported, it can constitute a perfect example of sustainable development: jobs are created, poverty is reduced, industry is supplied with inexpensive raw materials, natural resources are conserved and the environment can be protected.



# ETHICAL & FAIR TRADE ORGANICS



Organic gardening gives me the comfort of knowing I have adopted a healthy lifestyle on a journey towards a long and healthy life. The true organic gardener becomes familiar with the soil, plants and animals, getting close to the environment. He is also inquisitive and pays attention to detail. Nothing gets by him, as he has a keen eye for health.

Adopting organic methods has become confusing, because we lack a true definition of organic gardening. What do we mean when we say something is organic?

## Stipulations on the Term Organic

There are a few stipulations to make in defining organic. To chemists, organic refers to the presence of a carbon molecule. Most gardeners get confused by the terms natural and organic.

Technically, all natural materials containing carbon are organic, but not all natural materials are organic. Sand particles are completely natural but are not derived from a living source. Sand never contained carbon as an element, so it is not organic. All things derived from a living source that contained carbon meet the definition of organic. You and I are organic by definition, because our every living cell contains carbon.

Organic gardening refers to a smaller plot grown for personal use. With this in mind, you may do anything you want to your plants without breaking any laws or policies. You can freely apply synthetic pesticides to your strawberries and say you grow organically without any legal repercussions. You might fool your neighbors, but you can't fool your body.



Organic growing is gardening or cultivating intended to bring food to the market place. All organic produce grown and distributed throughout the U.S. must follow strict guidelines set by the USDA (U.S. Department of Agriculture) or private certifying agencies like the C.C.O.F. (California Certified Organic Farmers) and OMRI (Organic Materials Review Institute). These groups make sure farmers are not using anything that would be considered unsafe for human exposure. Each farm must be certified organic through a process that lasts for a defined period. Growers who misrepresent and sell their produce to others may face prosecution for fraud.

To qualify as organic, produce must not have received or been exposed to synthetic (non-organic or non-natural) herbicides, pesticides or fertilizers as well as any ingredients from genetically modified organisms (GMOs). Organic versions of these treatments do exist and must be compounds extracted from plants or other natural resources. These compounds do not have to be naturally produced in the local environment but may come from distant locations. (Some exceptions to these rules allow the use of synthetic chemicals. Where extreme environmental conditions make it difficult to get a significant yield, the USDA has allowed organic certification in the presence of some synthetic chemicals, saying the chemicals it allows do not affect the health of humans, animals or the environment.)

## Organic From a Distance

With refrigeration and efficient transportation networks, commercial agriculture supplies our grocery stores with all the produce we can imagine, whether organic or not. Some is grown locally; some across the nation; some imported from other continents. (The National Sustainable Agriculture Coalition says much of our produce travels 1,500 to 2,500 miles to get to the table.) Thus, we can buy many produce items all year round. You may ask, "What enables a farming operation to say it is organic? How does that change the treatment of our food?"

Organic gardeners generally agree on avoiding synthetic pesticides, fertilizers and genetically modified organisms. Outside of those general conventions, you can find a variety of gardening strategies. Some organic gardeners are quite strict, believing that an organic plant cannot receive any type of nutrient treatment other than what naturally exists in the local area. Others take a more liberal approach by treating the soil, feeding the foliage, and even introducing treatments that control temperature and light availability.

Unless you know organic practices and techniques, you cannot know the effects, positive or negative, the plants you grow will have on people or the surrounding environment. It helps to understand how and why "organic is good" before you assume it. Otherwise, it is easy to fall into a trap of uncritically trusting everything that someone somewhere says is organic.

## My View on Organic Practices

I see organic gardening, growing and farming as a beneficial cause that generates more good results than bad. A conventional farm that adopts even some organic methods for the sake of marketing its produce is better than one that adopts none at all and continues to farm with artificial chemicals. Truly, every little bit helps.

Many progressive people who follow organic practices want to conserve the beautiful biological diversity of our planet that allows humans and animals to enjoy a comfortable and healthy existence. However, some organic practices are not necessarily beneficial to humans, animals or the environment. Saying "Natural is good" is an oversimplification similar to saying a synthetic pesticide that gets rid of bugs or weeds is good or that genetically modified organisms are good because they give the farmer a better crop. When we understand the effects of our treatments, we can properly apply them to yield benefits while avoiding the adverse effects. Most important is to educate yourself on what goes into your body. We are what we eat, and what we eat has consequences for our health.



# WHAT IS ORGANIC? DEFINING WHAT IT MEANS

## DISCUSSING ORGANIC CERTIFICATION

## ORGANIC PRODUCE

The 4-digit price look-up (PLUs) codes on produce indicate the type of produce sold. For example, #4011 is code for a standard banana. The number "9" prefix on a PLU indicates an item is organic. For example, #94011 is an organic banana. The number "8" indicates the produce is genetically engineered. For example, #84011 is a genetically engineered banana.



### What Does Organic Growing Mean to Me?

By now my approach should be clear: To build soil naturally, I rely on supporting beneficial soil organisms. I feed the living soil organic materials using compost, planting mix and organic fertilizers. These provide my plants nutritive sustenance for strong and steady growth. Nutrient-dense plants are full of flavor and have positive effects on the environment and human health.

I allow no synthetic chemicals of any kind in my garden. Government agencies allow many synthetic chemicals on a "certified organic" farm that I would not let within 100 feet of my home. No synthetic pesticides, fungicides or herbicides allowed! My goal is to maintain a safe environment for my family and pets to enjoy.

Here is the rule I live by: If I can't quickly identify the ingredient on the label, I don't use it. (Years ago I heard a health advocate say, "If you can't pronounce it, don't use it. If you can't spell it, don't eat it.")

I attempt to recreate the indigenous conditions plants grew in naturally before human involvement. (After all, if it grew and reproduced, it had all it needed.) If I grow something not native to my area that requires treatment, I use the safest possible organic methods with ingredients I can easily identify.

I avoid harmful organic practices and urge you to educate yourself on any ingredient you wish to use. I have said taking one multivitamin is good, but swallowing the whole jar is bad. This rule (more than the right dose is too much) applies to organic gardening as well. Too much of a good thing can

be dangerous. Growth in nature is based on a balance in soil organisms and nutrient cycles. Shoveling a bunch of organic matter, microbes and treatments into dirt may harm the environment. Also, if the balance is off, (a lack of some nutrients and an excess of others) plants will not grow well.

For example, too many applied microbes in an organic fertilizer make it act like a synthetic fertilizer. The excess microbes digest the organic fertilizer too quickly. Infusing too many microbes with an organic fertilizer makes the soil lose nutrients well before the plant roots can absorb them. Similarly, if you use inferior base ingredients, such as chicken manure or dehydrated manure, (which naturally break down very fast) this combination creates a fertilizer that works destructively too fast, similar to a chemical fertilizer.

Inadequate and unwise products such as these come to market from the drive to make profits off people's ignorance and misplaced trust. Many unethical companies try to outdo each other by asserting they have more microbes in their fertilizer blends, making them better for your garden. This is deceitful marketing at its most cynical.

Organic growing follows nature's perfection and beauty. While people are clever and inventive, Mother Nature outwits us with her experience and perfection. I love life and seek to work within the guidelines nature has provided. In trying to push nature to its limits, more is not necessarily better. I want organic farms and my garden to promote human and animal health by producing nutrient rich foods while doing no harm.

### Why Choose to Grow or Eat Organically?

Growing everything organically benefits your health by minimizing your exposure to unnatural chemicals. Your minimal to zero use of synthetic chemicals and pesticides also helps reduce the level of toxicity all around us. You also help protect vulnerable species that are not the target of pesticides. (Pesticides and other synthetics intended to exterminate certain pests do not affect only their target species. They also can injure or kill others in the process, including livestock, pets and humans, further reducing the essential biodiversity in our environment.)

Of the tens of thousands of chemicals agriculture and industry use in the U.S. each year, only a few hundred are tested for safety. For example, the pesticide DDT was banned in the U.S. in 1972 only after considerable damage had already been done. DDT is still produced and exported for use in foreign agriculture, and we are vulnerable to exposure since it infiltrates some foods we import. Therefore, buying organics from overseas may also bring health benefits.

I advocate leaving our food pure and simple as the most important choice we make several times a day. Avoid additives such as preservatives and colorings. Food processors use tons of synthesized chemicals to fabricate the taste and appearance of what we eat. Read the label and buy from a trusted source or grow it yourself.

Organic methods also support animal health. We can raise animals without synthetic hormones and antibiotics and feed them nutrient-dense organic food. Besides the nutritive qualities of organic meats, this is the most humane way to raise animals. They can enjoy their time under our watch playing in nature rather than being confined to inhumane cages for the sake of fattening them up.

Whether you eat produce that is commercially grown organic or homegrown, you can better support environmental conservation if you understand which practices create and maintain soil health and fertility. Feeding the soil feeds everything that comes out of it, plants, animals and, ultimately, humans. Organic gardening is all about creating and maintaining the natural circle of life existing between growing plants, soil and living organisms. By applying nutrient packed organic matter (compost, organic fertilizers, soil amendments and seaweeds) and eliminating synthetic chemicals, you enable microorganisms to do what they do best: break down organic matter to enrich the soil that surrounds the roots of our food plants.

The heart of organic practice is feeding the soil without using artificial fertilizers or pesticides. It is also the first step in preventing the loss of microbes and minerals, crop contamination and water pollution.



We can grow plants that are highly resistant to diseases and pests without using modern chemical treatments. While organic control is more labor-intensive, the long-term health of the environment and people is worth it.

My ideal is to stimulate the desire for everyone to develop a "green thumb" and grow organic produce at home. Not having to travel to the grocery store only to face a choice among inferior veggies is terrific. Yet, I understand this may not be practical for people living in small rented spaces or those who work 50-plus hours per week just to make ends meet. And shopping at the grocery store is more practical for people who have many other interests.

Even if you shop regularly at a supermarket, you can still support the values and ideals that organic stands for. Converting to organic farming from less sustainable, less healthy commercial practices requires an enormous investment risk in both money and time. You can support and motivate more of the people making these conversions by purchasing as much organic food as you can afford from local markets. While organic food costs a bit more than non-organic, the short-term cost is more than balanced out by the long-term gain of conserving our soil and providing pesticide free produce to support our overall good health. As we demand and support more organic foods and products, even large-scale companies will have to respond and make changes to serve the market demand. They will adopt healthier practices provided we vote with our wallets. By the sources you choose to obtain your food, you are voting for how you want your food produced.





# Sustainably Grown Cannabis



*Whether you are a home grower or a consumer, or do not care to ever see it or talk about it, it's important to know why **sustainably grown** cannabis is simply the right thing to do. We are all impacted by how cannabis is grown commercially. It's a big industry that has a large carbon footprint. We can choose to look down and walk away, or we can choose to care, and take steps to assist those companies who care as much as we do. We want to support all*

*growers, in every field, to grow with a small carbon foot-print with no pollution.*

*Our connection to cannabis, just like our food, is important. If you use cannabis, for any number of reasons, then "our connection to cannabis" becomes equally as important. Whether we grow it all with our home grown and organic methods, or we buy it from a convenience store, which is just around the corner, I suspect, the company you support matters.*

If we are putting something into our body; where it comes from really matters. As more and larger corporations get involved in the legalization of cannabis, and profit from it, the basic fact remains, what we put into our bodies has not changed. The companies that make fertilizer or soil products, or even, the packaged cannabis elixirs we buy to soothe our aching joints really matter. If you are already a sustainably conscious person you will typically know if you are buying a product with a Fortune 500 company footprint on it, it matters deeply to you, and to me as well.

I know what companies make my paper towels, and I know the company that I do not support who makes paper towels too, because they are making billions of dollars fracking, and are not the best stewards to the environment, which is very important to me. Even though I do not get involved with fracking directly, if I buy their paper towels, I am supporting fracking, because I have decided to make the parent company more profits with that simple decision of what paper towel I buy.

It's small but it's big.

I was having a hard time writing this article at first, then I concluded, it's my obligation as the founder of Dr. Earth to put this together, because we are all impacted, as citizens, by what our neighbors do, and I am very much for businesses being profitable and very successful. I truly believe that both can happen. I sincerely believe cannabis can naturally grow outdoors, in soil, fed organic materials, using as much recyclable material on site, with good pest management skills, these old-school growers up in the hills know what they're doing, they don't want to haul too much stuff back in the woods, its costly and arduous. Please do not forget, these folks live on this land and treat it like home. They do not pollute their own backyards where their families farm.

How large corporations grow cannabis, on a mass commercial level will impact you, your children and the environment. This is a very big business and closing your eyes is not the best approach. Cannabis has now become very mainstream and large Fortune 500 companies have entered into this age of "The Legalization of Cannabis" and many would like to know what tomorrow holds.



My job and responsibilities are very different.

I come from another perspective to this subject. I care about the environment and about the sustainability of any and all crops. If you use cannabis to heal yourself or want to grow a few plants in your backyard, closet, or go to a dispensary to buy cannabis for recreational purposes, then it should really matter to you too, because you are putting something inside of your body and you have the right to spend your money any way you choose.

If you are putting something inside of your body to heal aches and pains then it definitely matters. It's common sense that medical cannabis should be grown with strict organic methods.

Why grow a low grade plant using synthetic nutrients and mediums when you intend to grow medicine? It doesn't make any sense! If it's medicine, it must be grown in the soil and it must be organic.

Best of health to you,

Milo Shammass  
Founder & Formulator



## FEEDING SCHEDULE INDOOR & OUTDOOR ORGANIC GARDENS

### Organic Potting Soils & Nutrients Old World Crafted for Maximum health and nutrition

*This schedule is deigned to grow and feed one plant in a 5 gallon size container. If you are growing more, simply multiply by whatever amount you are growing.*

#### the design

An easy to follow schedule that takes all of the guesswork out of what to do and when to do it. This recipe has been used for over 20 years all over the United States with unbeatable and proven results. The focus is to allow your plants to reach their full biological potential. Every variety has a full potential, and we focused on maximum health to write our feeding schedule. Our intentions are to allow your plants to produce top quality fruits, vegetables and flowers. If fruits and flowers are dense with little air porosity, they will have a longer shelf life with more nutrition naturally.

#### the checklist

- One bag of any of our 1.5 cu ft. potting soils. (One 1.5 cu ft. will fill three 5 gallon containers)
- One 4-lb bag of Home Grown® organic fertilizer 4-6-3 (Vegetative stage)
- One 4-lb bag of Premium Gold® organic fertilizer. 4-4-4 (Maintenance period)
- One 4-lb bag of Flower Girl® organic fertilizer. 3-9-4 (Flowering Cycle)
- One 24oz Final Stop® Yard & Garden insect killer. (Aphids, Mites, Whiteflies, Caterpillars, & More)
- One 24oz Final Stop® disease control fungicide. (Year-round disease control)

#### directions to get started

Using the contents of the potting soil, fill the container until the soil level is within 1 inch from the top of the container. Blend a ¼ cup of Home Grown® fertilizer into the top 4 inches of the potting soil. Dig a small hole to plant your seeds, or transplant your cuttings. The hole should be slightly larger than the size of the transplant. Make sure you do not bury your transplant too deeply. The soil level of the transplant should be slightly higher than the soil level in the container to avoid "damping off" and other fungal diseases. Water the container well. Wait a week to start your feeding schedule on the right hand page.

#### important notes

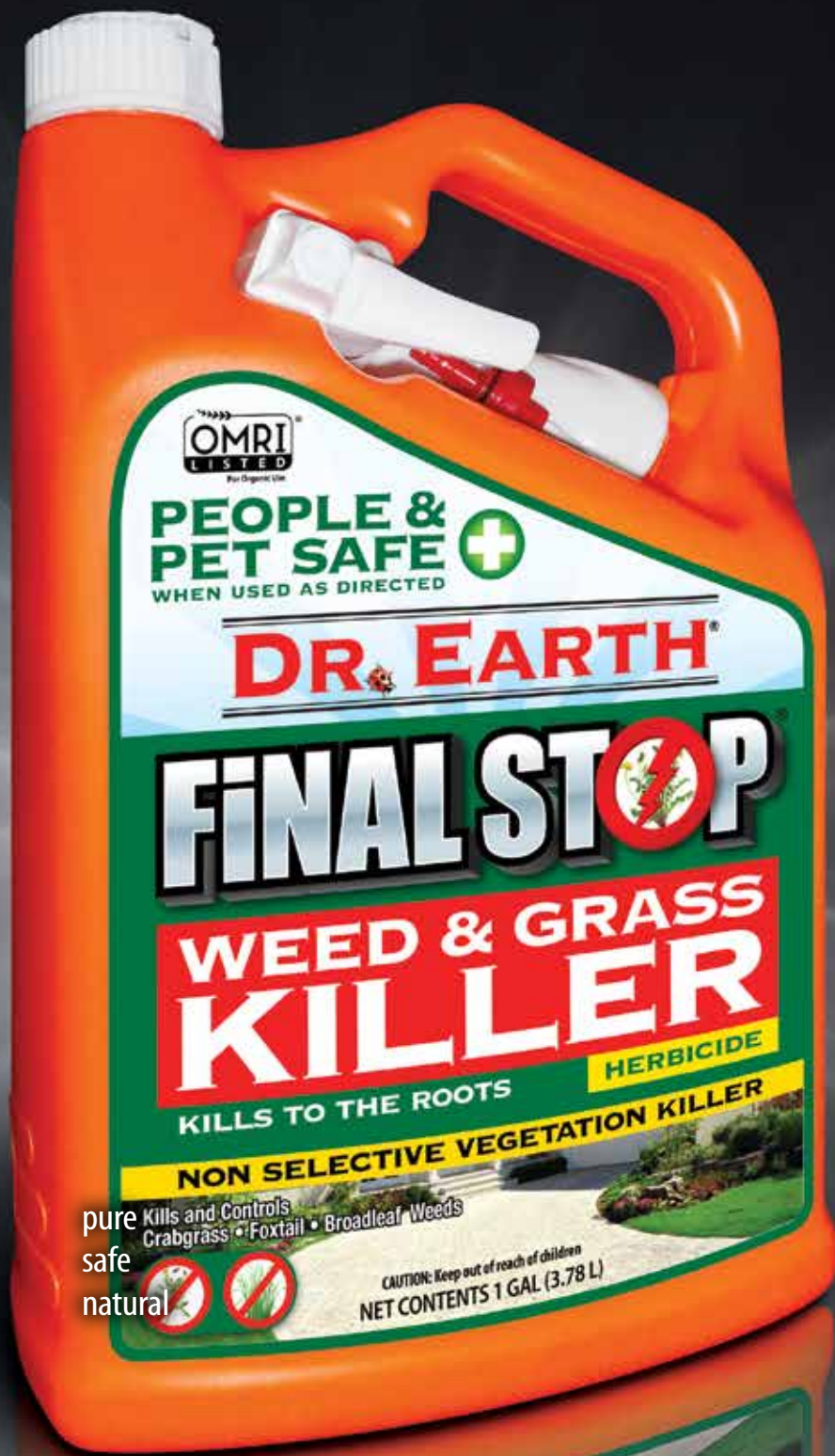
- For the healthiest crops, start each new crop by discarding the used soil and refilling containers with fresh potting soil as called for above.
- Apply minimum amounts of water, only enough to keep the soil moist, allowing it to dry between watering. This will help your roots to go further down and resist diseases caused by constant moisture.
- Always let the soil dry before you harvest, this will allow the maximum amount of nutrient density from your harvest with the best taste and the majority of the water will be removed naturally.

## FEEDING SCHEDULE

<b>Week 1</b>	Keep container moist and look for signs of natural growth.
<b>Week 2</b>	Mix ¼ cup of Home Grown® Fertilizer into the top few inches of soil and water well.
<b>Week 3</b>	Keep container moist and look for signs of natural growth
<b>Week 4</b>	Mix ¼ cup of Home Grown® Fertilizer into the top few inches of soil and water well.
<b>Week 5</b>	Keep container moist and look for signs of natural growth
<b>Week 6</b>	Mix ¼ cup of Home Grown® Fertilizer into the top few inches of soil and water well.
<b>Week 7</b>	Keep container moist and look for signs of natural growth
<b>Week 8</b>	Mix ¼ cup of Home Grown® Fertilizer into the top few inches of soil and water well.
<b>Week 9</b>	Keep container moist and look for signs of natural growth
<b>Week 10</b>	Mix ¼ cup of Premium Gold® All-Purpose Fertilizer into the top few inches of soil and water well.
<b>Week 11</b>	Keep container moist and look for signs of natural growth
<b>Week 12</b>	Mix ¼ cup of Premium Gold® All-Purpose Fertilizer into the top few inches of soil and water well.
<b>Week 13</b>	Keep container moist and look for signs of natural growth
<b>Week 14</b>	Mix ¼ cup of Flower Girl® Bud & Bloom Booster into the top few inches of soil and water well.
<b>Week 15</b>	Keep container moist and look for signs of natural growth
<b>Week 16</b>	Mix ¼ cup of Flower Girl® Bud & Bloom Booster into the top few inches of soil and water well.
<b>Week 17</b>	Keep container moist and look for signs of natural growth
<b>Week 18</b>	Mix ¼ cup of Flower Girl® Bud & Bloom Booster into the top few inches of soil and water well.
<b>Week 19</b>	Keep container moist and look for signs of natural growth
<b>Week 20</b>	Wait 3 weeks between feedings, from this point on until you harvest. Keep feeding with Flower Girl® every few weeks until you harvest.

# THIS CHANGES EVERYTHING!

Dr. Earth Weed Killer Is OMRI Listed Organic



For Organic Use

*Fresh Air and Clean soils welcome us*

Our new Weed & Grass Herbicide Killer Spray produces remarkable results, because all the ingredients are combined to perform different tasks and functions synergistically in a controlled fashion. Our unique blend of organic ingredients goes to work immediately.

## **NEW FOR 2017**

Final Stop® Weed & Grass Killer is now available in a popular one-gallon spray bottle.

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