# DR EARTH GARDENING GUIDE

A chance to change the world We believe we can offer you that chance



Organic Gardening
Made Super Easy
The Liquid Solution!

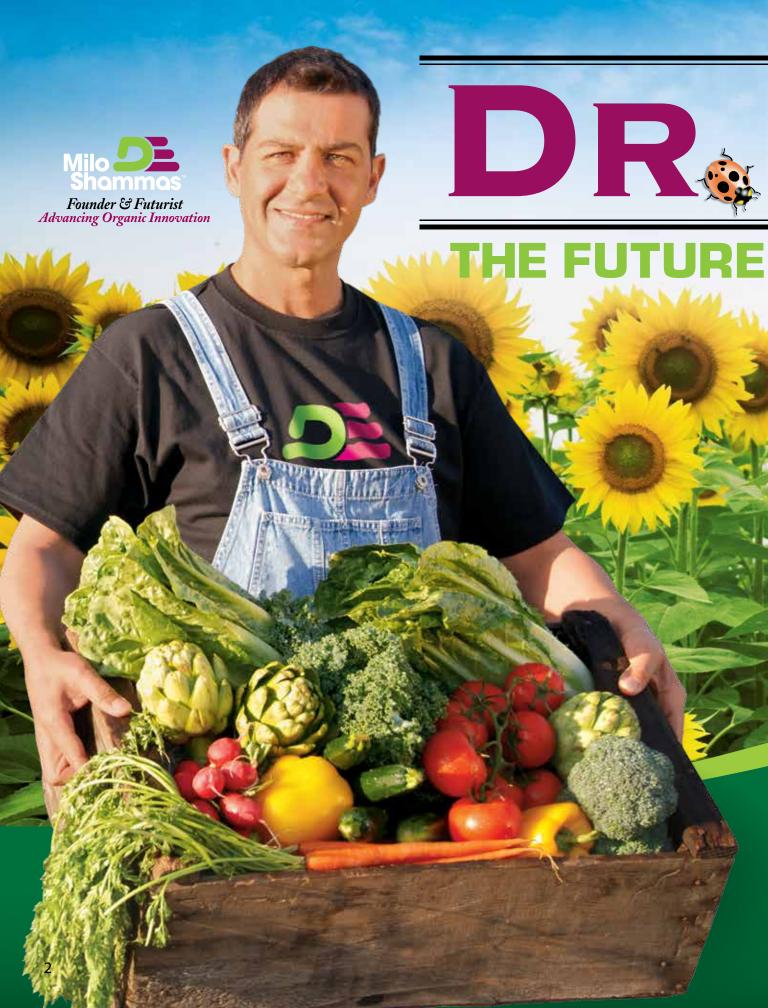
Healthy & Beautiful Gardens
The Pure & Natural Way!

Healthy Soil
Healthy Plants
Healthy You
The Simple Connection!



**ORGANICS** 

SOILS • FERTILIZERS • PESTS



# EARTH

of ORGANIC HAS ARRIVED



A REVOLUTIONARY INNOVATION FOR HEALTHY GROWTH

OUR NEW FAMILY OF LIQUID FERTILIZERS - THE MOST ADVANCED TECHNOLOGIES IN SIMPLE, EASY, READY-TO-SPRAY BOTTLES

ALL THE FORMULAS YOUR GARDEN NEEDS



## A chance to change the world We believe we can offer you that chance

There's a reason Dr. Earth® feels like Dr. Earth®

Sure, it has to do with quality ingredients and true organic products, but what brings people back time and time again goes well beyond our fertilizers, soils and pest controls. It goes way beyond our products to a total gardening experience that can only be delivered by Dr. Earth®. It's about honor, integrity, innovation, knowledge, wisdom and a love affair with the organic lifestyle. That includes simply having a great gardening day. These have been our guiding lights throughout the years, and they are what makes Dr. Earth® feel like Dr. Earth®. Growing a garden nurtured by

Dr. Earth® is life changing.

- Milo



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## RECYCLE

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## 9 GARDEN BASICS GETTING STARTED

## 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.

#### 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.





#### **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.

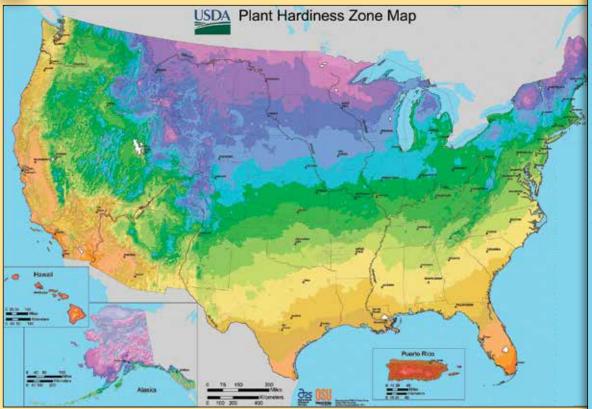
## THE KEY TO SUCCESS

The key to a healthy garden lies in the soil. The more you can do to keep your soil healthy, the more productive your garden will be and the higher the quality of your crops. Only Dr. Earth Premium Soils are infused with ProMoisture Hydrate®. To learn more about this patented technology, see page 28.



AVERAGE ANNUAL EXTREME MINIMUM TEMPERATURE





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.

#### 1976-2005 Temp (C) Temp (F) -51.1 to -48.3 -60 to -55 -55 to -50 -48.3 to -45.6 -50 to -45 -45.6 to -42.8 -45 to -40 -42.8 to -40 -40 to -37 2 -40 to -35 -37.2 to -34.4 -35 to -30 -34 4 to -31 7 -30 to -25 -25 to -20 -31 7 to -28 9 -20 to -15 -28.9 to -26.1 -15 to -10 -26.1 to -23.3 -10 to -5 -23.3 to -20.6 6a -5 to 0 -20.6 to -17.8 0 to 5 -17.8 to -15 -15 to -12.2 5 to 10 10 to 15 -12.2 to -9.4 15 to 20 -9.4 to -6.7 -6.7 to -3.9 20 to 25 25 to 30 -3.9 to -1.1 30 to 35 -1.1 to 1.7 35 to 40 1.7 to 4.4 40 to 45 4.4 to 7.2 45 to 50 7.2 to 10 50 to 55 10 to 12 8 55 to 60 12.8 to 15.6 60 to 65 15.6 to 18.3 65 to 70 18.3 to 21.1

#### 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.





## 9 GARDEN BASICS GETTING STARTED



### 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.

#### 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.





#### Just Throw and Go!

#### CREATED FOR LIFE®

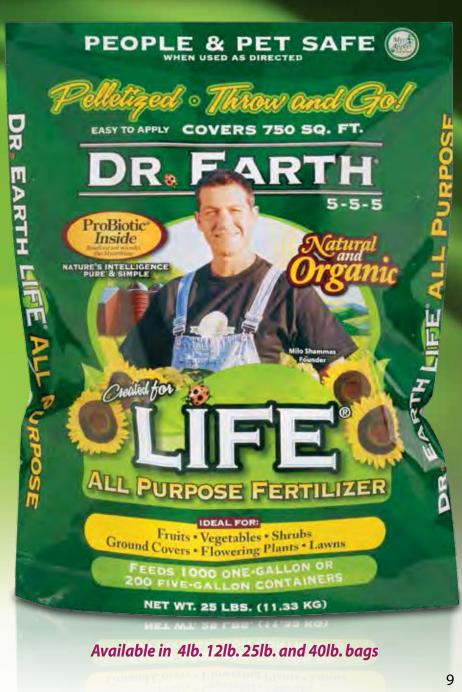
Life® is a true pelletized and homogenous organic all-purpose fertilizer that produces remarkable results, because nutrients are released quickly yet continue to feed for several months. Ultra-premium scientific formula provides optimum levels of primary essential plant nutrients, including micronutrients and multi-minerals.ProBiotic™ ensures organic nutrients are thoroughly broken down then released in the soil for plant roots to absorb them as they are needed. Feeds for several months. Great for every plant in the garden. This is our easiest to use dry fertilizer and can be applied to the soil without having to be worked in.

#### THE POWER OF PROBIOTIC™

Only Dr. Earth® has ProBiotic<sup>™</sup>, the most complete "broad-spectrum" bio-active blend of Seven Champion Strains of beneficial soil microbes and eight select strains of ecto and endo mycorrhizae. Designed to work synergistically with the raw organic nutrients that make up the LIFE® formula, this spectacular blend builds soil health, promotes resistance to drought and disease, and assists growth, for remarkable plants every time.

#### 100% NATURAL AND ORGANIC

No Sewage Sludge ("Biosolids") to taint the cleanliness of our handcrafted blend. Ideal for providing balanced and fast nutrition for all vegetables, flowers, bedding plants, potted plants, all trees, shrubs, annuals, perennials and even spot treating lawns.





## 9 GARDEN BASICS

## TIPS, BASICS & ALL AROUND INFORMATION

#### 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.

Terracotta, 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.

#### **ENERGIZED WATERING**

Dr. Earth®'s latest innovation is our liquid spray line. Simply attach the hose end spray bottle to your hose when watering to add PreBiotics to your soil. PreBiotics stimulate living soil microbes to break down organic matter in the soil ensuring healthy, bountiful plant growth. See page 18 for detail

#### 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 overwatering 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.



#### 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.





## LAWN BASICS SUPER NATURAL LAWN FERTILIZER

## LET THEM PLAY

## **Natural** Lawn Care

#### Promoting lush & green turf

The way to a lush green lawn begins with an understanding of how lawns grow and a respect for the needs of the grass plants. Misunderstanding and mistakes abound, especially in the areas of mowing, watering, and fertilizing. Let's take a look at these aspects of lawn care.



#### MOWING

How high or low you set the mower blade is based on the needs of the grass plants at the time, and that can change with the seasons. But one of the biggest mistakes people make is setting the blades too low. Their theory is that by cutting the grass very short they won't have to mow as often. What actually happens is that they are putting the health, and maybe even the life, of their lawn in jeopardy.

For one thing, photosynthesis takes places in the blades of the grass, creating sugar as a food source for the roots. When the blades are cut too short, the plants are stressed in their attempt to make an adequate supply of sugar and must work harder. The result is actually faster growth. The way to thicken the turf is to be sure the plants are allowed to make not only enough, but more than enough, sugar. That excess goes into the production of new plants, called rhizomes.

Another factor to consider is the competition between the grass and the weeds. Whichever one gets the most sun will shade the other. Without enough sun, plants can't carry on photosynthesis and they die. You want to give the grass the advantage. Longer blades mean better health, and their length and density will allow the grass to outcompete with weeds. With too much shade, weed seedlings, especially, won't stand a chance. Therefore, during the growing season, set your mower as high as it will go. (That is probably 3 to 4 inches.) As temperatures cool and winter rains begin, it's a good idea to then lower the blades a little. The lower lawn height will allow the grass blades to "dry off" faster, helping to prevent fungus and disease.

When you do mow, leave the clippings right on the lawn. As they break down, they add nutritious organic material that helps prevent thatch and feeds the plants.

#### WATERING AND SOIL pH

As counter intuitive as it may seem, you should water your lawn LESS often for better results, BUT WHEN YOU DO, WATER DEEPLY. That helps to develop grass roots that go farther down into the soil. Grass watered frequently and shallowly develops shallow roots and the many horizontal runners that make up a mat of thatch. If the grass doesn't show any signs of drought stress, it may not need watering. If the lawn has become quite dry, it works better to give it only ½ inch, wait for about 90 minutes, and then give it another ½ inch. Add organic mulch in late spring to help reduce heat stress in the summer. Dr. Earth® Natural Choice® Compost makes an excellent top dressing or mulch.

You can check to see how much water your lawn really receives, by putting a cup in the zone of the sprinkler and running it for the normal length of time. You should see at least an inch of water in the cup. Have the pH of your soil professionally tested because the inexpensive kits you can buy are often inaccurate. Your local county extension will sometimes test samples for free or for a minimal charge. Add lime if pH is below 6.0, and add soil sulfur if above 7.0. A higher number is more favorable to weeds, like dandelions. Grass prefers a pH of about 6.5, so accuracy matters.

#### **FERTILIZING**

Grass consumes high levels of nitrogen. Weeds like clover, which are legumes, can draw nitrogen from the air. Grass cannot, so the presence of those weeds could mean your soil needs more nitrogen. If your lawn needs fertilizer, apply Dr. Earth® Super Natural® Lawn Fertilizer as recommended on the package. This will feed it and supply organic material to the soil for up to three months. Dr. Earth® contains ProBiotic™, beneficial soil microbes and three species of endo mycorrhizae. These living organisms develop a symbiotic relationship with your lawn, helping it to better absorb nutrients from the soil. They also aid in relieving drought stress by absorbing water from a much greater volume of soil.

Beneficial microbes in Dr. Earth® Super Natural® Lawn Fertilizer not only help to digest the organic fertilizer, but also aid in the consumption of thatch. Some of the microbes even produce antibiotic compounds that suppress disease-bearing fungal pathogens, preventing them from becoming established in your lawn. The end result is a healthy, productive, weed, drought and disease resistant lawn that will give you years of enjoyment.

# Super Platural LAWN FERTILIZER

ORGANIC & NATURAL
Hand Crafted Blend

## Feed Lawn in the Spring

Super Natural® dry lawn fertilizer is a true pelletized and homogenous organic all-purpose lawn fertilizer that produces remarkable results, because nutrients are released quickly, yet continue to feed for several months. Apply to the lawn in the Spring.

#### Fertilize Monthly Year-Round

Super Natural<sup>®</sup> liquid lawn fertilizer promotes lush green turf throughout the year. Simply attach to your hose and spray on a monthly basis.



Scan To Learn More



PEOPLE AND PET SAFE!





# 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.

#### **HEALTHY COMPOST**

Thinking of starting a compost pile? Be sure to enrich it with a compost starter. Most of the compost starters sold commercially do not contain microorganisms in the blend. Our formula contains alfalfa meal and seaweed extract as base ingredients, but most importantly, we have infused it with several species of ProBiotic™ microorganisms, which are the heart and soul of composting.

#### **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.



## SCIENCE OF THE SOIL HAPPY AND HEALTHY GARDENING



#### **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.



Try making a fertilizer or compost tea. It's made by adding finished compost or organic fertilizer to water, letting it steep and then using it to feed your plants. Check out our "How to make fertilizer & compost tea" video by visiting us online and clicking on "videos" or scan the code on the right to go directly to the video.



#### 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.



## STICKING TO THE PLAN INNOVATIVE GARDENING

## FERTILIZING MADE EASY THE FUTURE of ORGANIC HAS ARRIVED

On the first sunny weekend in spring, aspiring organic gardeners around the world crowd their local independent garden centers. Everyone feels the annual springtime excitement brought on by the sight of all those fresh and healthy plants. We load up on young trees and shrubs, annuals and perennials for our flower beds, vegetable starts, and more.



#### The story goes like this

Full of good intentions and visions of a beautiful yard and garden, we all share that same "start-of-the season" enthusiasm and conviction, just like those people who buy gym memberships in January, promising themselves they will lose weight and get in shape. In either case, success comes only to those who create a workable plan and stick to it. That can sometimes feel like the hardest thing in the world! Who wants to think about being so organized? We just want the instant gratification of transplanting a few small plants with color and some vegetables in our back yard.

Most of us already have many lovely, well-established trees, shrubs, and perennials, but we can't resist the urge to buy more flowers and vegetables, planning to grow everything in a natural, organic way. We go home with a car full of plants, plus a selection of the appropriate dry fertilizers to work into the soil while we transplant. Enjoying the warmth of the spring sun, we roll up our shirt sleeves and get busy digging.

Organic gardeners understand that plant health, like our own health, begins with soil health, nature in perfect balance. That means the soil is alive with beneficial microorganisms that break down organic matter and make it available to plants' roots to absorb. Dr. Earth® soils and fertilizers come infused with such microbes, as well as prebiotic sugars and raw super foods to feed those tiny organisms that are so essential to the soil/plant/human triangle. The addition of aloe vera concentrate, keeps them moist and alive in the soil.

Most organic gardeners have read and heard enough about Dr. Earth® products to realize our formulas are based on advanced soil science, so they are confident. They don't mind all that spading or digging with a hand trowel, because it's a labor of love—at least in the beginning, while their enthusiasm remains. By the end of the weekend, their place looks great, and they feel pride and excitement. By May, everything still looks pretty good.

## SYNTHETIC PROBLEMS

Synthetic chemical fertilizers feed only the plant, giving it a temporary boost, but doing nothing to nurture a healthy soil environment with lasting benefits. Adding petrochemical synthetic fertilizer also drives up the salt index in the soil and changes the pH, which can have adverse effects on plants. If the damage has already been done, **you can undo it**. Just go organic!

#### Then, gradually, the story begins to change

Summer arrives and we find ourselves busier than we ever imagined we would be. With family activities, entertaining, and uncomfortably hot weather, it becomes easier and easier to procrastinate about working in the garden. We look at the calendar and know we ought to use more fertilizer, but we don't have time to change into our gardening clothes and dedicate a whole afternoon. We guiltily consider buying a common non-organic synthetic fertilizer we could mix with water or use in a hose-end sprayer, but we know that type of product provides nothing more than a quick fix with no lasting benefits. We want to garden organically, not with chemicals, so what happens is that we—in spite of our good intentions to do things in the traditional organic gardening way—end up doing nothing. We somehow manage a viable level of watering, but soon the lack of feeding begins to show.

Plants, just like people, need proper nutrition and plenty of water to enjoy good health and a strong immune system. The lack of those necessities results in stress, for all living things. Stressed plants become more vulnerable to disease and insect infestation, and they don't flower and produce like they could with better care. By June, our garden doesn't look so great anymore. We feel a little sad and ashamed. By July, our plants are bedraggled and undersized, flowers have slowed their blooming, and disease has taken hold. The same thing that happened the year before has happened again.

Can you relate to this situation? Have you ever felt this way? If so, you are not alone. Without adequate knowledge, we can set ourselves up to fail instead of taking advantage of available methods to help us reach our goals. Don't let that happen in your garden. Success is now easier than you think, in spite of our human nature.

#### We did our homework

We conducted extensive research on the habits of organic gardeners, revealing two important facts:

- Organic fertilizer use drops after spring. Most organic conscious gardeners make one large application of fertilizer per year—most often in early spring without follow-up after their initial planting. After that, they are less willing to take on larger gardening projects, but they still want to care for their garden.
- Organic gardeners would fertilize more often if it was easy. We know people want to grow healthy gardens and nurture their plants on a regular basis. However, they don't always want to mix dry fertilizer into the soil, by far the more labor intensive method traditionally required for those who wanted to garden organically.



## This is what we learned

The study showed a likelihood of organic gardeners slipping into two potential situations:

- Not feeding at all because of the required hard work.
- Having to consider a synthetic fertilizer in a hose end sprayer because it's easy.



## STICKING TO THE PLAN INNOVATIVE GARDENING

#### Organic gardeners have lives too

Organic gardeners lead busy lives, like everyone else these days. For some reason, the idea that we're all at home working in the garden all day seems to persist. Consequently, organic gardeners don't always get the latest advancements or attention in the marketplace. What was good 100 years ago doesn't necessarily work in today's fast paced world. We don't all live on a farm. Many of us have a daily commute to a job and work 40 to 70 hours a week. When we do have a little time, our garden is not necessarily on the top of our list. But we still want to do the right thing. Organic gardeners, just like all busy people, deserve a wide selection of organic products that are easy to use and highly effective.

Synthetic fertilizer products using hose—end sprayers have existed for decades and have been very successful because of their convenience. Finally—through another Dr. Earth® innovation—organic gardeners can enjoy that same convenience in a complete selection of organic products, designed to meet the nutrient requirements of every plant we grow. If every organic gardener knew that feeding their garden organically could be as fun and easy as connecting one of our bottles to a hose every couple of weeks, they would fertilize more often, resulting in the kind of garden they envisioned back in early spring.



#### It took research, ingenuity and inspiration to produce our liquid concentrates

Like their dry counterparts, Dr.Earth® liquid fertilizers contain the most advanced gardening technologies available today:

Raw Full-spectrum super foods for microbes and mycorrhizae

**Prebiotic®** (soluble sugars) and other micronized exotic super foods—full of life-giving energy—stimulate the living soil microbes to digest and breakdown the maximum amount of organic matter in the soil. This action releases essential plant nutrients in a directly available soluble form, which actively growing roots can absorb to produce incredible growth. The more energy the living soil has available, the more rapidly the microorganisms will multiply. This means even more life in the soil, which directly influences the soil's ability to stimulate vigorous and healthy plant growth.

**ProMoisture Hydrate®** Aloe vera concentrate infused directly into the fertilizer This cutting edge technology—the science of keeping soil organisms alive—is available only in Dr. Earth® fertilizers and soils. Our food grade aloe vera coats and protects the living microbes and mycorrhizae in the soil. It also coats plant foliage when sprayed directly on the leaves with a hose end sprayer bottle. It provides this protection by coating them with a "slimy layer" that allows both the microbes and plant foliage to stay hydrated and protected against temperature extremes. It soothes the outermost layer of microbes and mycorrhizae as well as plant foliage, very much like it protects and moisturizes human skin from harsh environmental conditions.



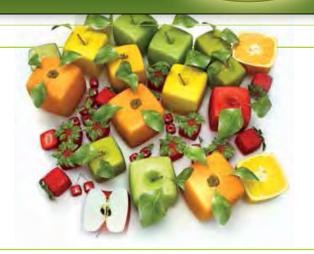
## PREBIOTIC PUNCH

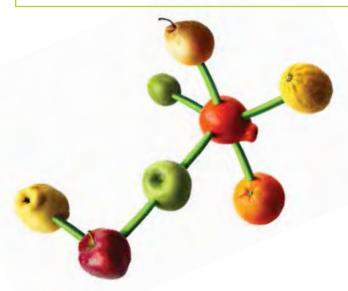
Prebiotics are full-spectrum green super foods for probiotics. They work as a food for the probiotics, kicking them into high gear for better performance & maximum results immediately and can only be found in Dr. Earth® products. To learn more see page 42.



#### Everything counts in large amounts

Dr. Earth® only uses premium whole foods to craft prebiotic fertilizer formulas because they deliver nutrients the way nature intended, giving the full benefit of fresh whole food concentrates. Just as this principle applies to human health, it also applies to providing the best support for microbial and mycorrhizal life in every type of soil. Raw foods are always the best source, because they have not been adulterated by any human synthetic processes. We pay attention to every detail because perfection is critical to success.





### Why both types of fertilizers are needed

You will still want to use Dr. Earth® dry organic fertilizers at the time of each planting or at the beginning of each season. These dry fertilizers were scientifically formulated to feed for about six weeks. They should be scratched in into the soil. They work best when used during transplanting, because they can be applied directly under a plant's root system. For the record, this is the best time and place to apply a dry fertilizer with ProBiotic™ inside.

Our liquid fertilizers should never replace our dry fertilizers. They were created to make it easy to feed organically more often, because they are super easy to use. They were designed to apply after plants have been growing for several weeks and need their second, third, fourth or final feeding for the growing season. The result will be the kind of lush, productive, and beautiful gardens you imagine each spring.



## It's really easy but remember the basics

Get new plantings off to a good start by making the best soil environment you can create, but then don't forget about them. They need your continued care. Give extra consideration to plants grown in containers. Unlike those grown in the open ground, their ability to send out roots to seek water and nourishment is limited to the confines of their pot or planter. They depend on your attentiveness to their needs. The fruits and vegetables you grow to feed yourself must themselves be fed if they are to be healthy and nutritious by harvest time. Even the plants you grow just for their beauty—the flowers, trees, shrubs, and lush green lawns—cannot do well without your care.

You became a gardener because you love to grow plants. The organic lifestyle brings you closer to the purity of nature.



## STICKING TO THE PLAN INNOVATIVE GARDENING



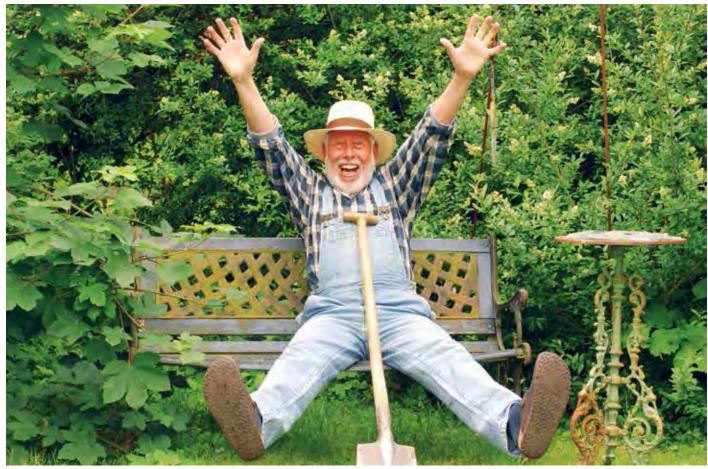
#### Just 2 things

- Make a simple list of the types of plants in your garden—vegetables, annuals, perennials, shrubs, trees, container plants, lawns etc. We hand craft a liquid fertilizer, custom formulated for every type of plant you grow. It takes about 10 minutes to apply our hose end bottle to 1200. sq. feet.
- Look at your calendar and jot down reminders of when you need to fertilize. Remember, you won't need a big block of time because it's so quick and easy. There's nothing to mix or measure. All you have to do is connect it to the end of your garden hose.

#### In the end, we all win

Feed your soul as you feed your plants. This is why a gardener is born every minute. When fertilizing is this easy, you'll actually look forward to it. Wandering through the garden with a hose gives you a chance to observe the changes while you hear the refreshing sound of the water, knowing that you are nourishing and nurturing your plants at the same time. Now that organic gardeners have discovered the latest innovation from Dr.Earth®— liquid organic fertilizers with the convenience of a hose-end sprayer — the next spring that comes along really will symbolize a new beginning, not just the beginning of a season, but a whole new world of gardening enjoyment and rewards.





## PROGRESSIVE INNOVATION

Perfection is in the genes. Nature's intelligence is in the bottle®.

It took research, ingenuity, and inspiration to produce our liquid concentrates. The initial challenge was how to best capture the vital essences of PreBiotic® and ProMoisture Hydrate® at peak freshness and deliver them in a bottle. We have succeeded!

#### PREBIOTIC®

#### SUPER FOODS FOR MICROBES AND MYCORRHIZAE

Stimulates the living soil microbes to digest and break down the maximum amount of organic matter in the soil. The more energy the living soil has available, the more rapidly the microorganisms will multiply.

#### PROMOISTURE HYDRATE® ALOE VERA INFUSION

This cutting edge biotechnology coats and protects the living microbes in the soil, and also the plant foliage, with a "slimy layer" that allows both to stay hydrated and protected against temperature extremes. It soothes the microbes' cell walls and plant foliage.

## RAW SUPER FOODS RAW MEAL. VITAMINS, MINERALS, CARBOHYDRATES & GROWTH BOOSTERS

Deliver nutrients the way nature intended, giving the full benefit of fresh whole food concentrates. Raw foods are the ideal source, because they have not been adulterated by human synthetic processes.



Natural & Organic Year-Round Fertilization Technology
Packed In Simple, Easy To Use, Ready To Spray Premium Bottles



Starter

Home Grown® Vegetable



Flower Girl® Bud & Bloom



Natural Wonder® Fruit Tree



Premium Gold® All Purpose



Total Advantage® Rose and Flower



Super Natural® Lawn





## Healthy Soil Healthy Plants Healthy

### 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®, ProBiotic™ and ProMoisture Hydrate® 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.



## 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.





#### 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 our 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

#### 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.





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.

## 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.







## The Promise of ProMoisture Hydrate® Keeping the intelligence alive



A report on a patented scientific advancement in the viability of microbes in packaged soils By Milo Shammas - Founder and Formulator of Dr. Earth® products



In 1991, I invented the concept of infusing fertilizers and soils with beneficial soil microbes and mycorrhizae, utilizing "Nature's Intelligence<sup>®</sup>." My Dr. Earth<sup>®</sup> products with ProBiotic™ revolutionized the lawn and garden industry and changed expectations of customers. Now other companies, with the best of intentions, sell products believed to include living organisms.

However, my continuing scientific research has revealed serious discrepancies between laboratory conditions and conditions typically found in nursery or garden center environments, conditions that can render ineffective, the microbe-infused products of all well-meaning soil baggers.

After years of research, I discovered a solution to the problem. Now my patented invention, Pro-Moisture Hydrate<sup>®</sup>, is included in every Dr. Earth<sup>®</sup> branded soil. But in the case of all other brands who have copied the use of beneficial organisms, the effectiveness of their products remains at serious risk, if it exists at all, as I will presently explain.

#### THE MYTH

that what works in the lab works in the real world

Beneficial microbes are cultured in a clean laboratory environment - with a stable and moderate temperature - for use in such products as yogurt, nutritional supplements, animal feed, beer, or packaged soil.

Soil producers add these costly microbes to their products with the belief that they are selling "living" soil. In fact, it may be "dead."

I was the first to include living organisms in DRY organic fertilizers, and there was no problem with viability. But soon everyone wanted this biology in BOTH dry fertilizers and WET bagged soils. After packaging, these WET soils are shipped from the manufacturer into the real world and are no longer in a controlled situation favorable to living microbes.



The aloe vera plant, a succulent, has fleshy leaves with a tough outer skin, under which is a resinous, extremely bitter tasting, yellow substance. Although when dried, this "aloe drug extract" has beneficial properties, including being anti-bacterial, it is NOT in Pro-Moisture Hydrate® because that anti-bacterial property would harm the beneficial microbes and defeat our purpose. We use only the "inner fillet."



#### THE REALITY

#### an explanation of microbiology in relation to environment

When soil baggers ship their products to retail markets, the biology contained in the packages faces the harsh conditions of the real world: extreme heat and cold. In 2004, one of my customers questioned how microbes could survive in the bags in his hot parking lot. I replied that they could because they were in a dormant state. The original Dr. Earth® microbeinfused products, the first ever available, were dry fertilizers in which microbes survived regardless of temperature extremes. Ongoing random tests proved their sustained viability. However, no one in the industry realized at the time, that adding them to WET soils created completely different, and fatal, circumstances for these tiny life forms.

I considered the customer's question carefully and grew concerned. I could not, with a clear conscience, sell products claiming to contain live organisms if I wasn't sure of the truth of that claim. I purchased my own soil from a Los Angeles nursery, where it sat in full sun, and had it tested. Two weeks later I received the bad news; all the microbes were dead.

I tested other brands that had begun adding microbes and mycorrhizae, stored under the same conditions, and saw the same results. The organisms were dying within 30 to 60 days after packaging. The temperature of bagged soils stored outside on pallets, in direct sun, can reach 175°F, killing beneficial microbes just as cooking our food kills those that could harm us. Conversely, exposure to freezing kills them too. Microbes infused into WET soils break dormancy and come to life. They are full of water, actively multiplying and digesting organic materials. When frozen, these organisms swell - since water expands when it freezes - causing their cell walls to crack open. They rupture, and DIE. Other soil producers, who embraced this profitable response to consumer demand for microbe-infused soils, still live with the problems my research revealed.

They continue to sell products of questionable value while I have perfected my invention.

#### THE SOLUTION

#### using "nature's intelligence," requires "keeping the intelligence alive"

For years, the answer to the problem had been right in my own home and part of my everyday life: ALOE VERA. This desert plant, used by early civilizations, thrives where temperatures reach as high as 140°F during the day and below freezing at night. Aloe vera works like a natural "anti-freeze." It draws water from the surrounding environment and reduces "evapo-respiration." Just as it protects plants, aloe vera keeps microbes moist and alive in extreme heat or cold, and elastic enough to survive the expansion that occurs with freezing, so they can swell without bursting and dying. What aloe vera does for your human skin and hair, it also does for living micro-organisms when incorporated into our wet packaged soils. It coats and protects them, remains in contact, and by lowering the surface tension of water, aloe vera serves to transport synergistic elements, such as moisturizing acids, through the cell walls to penetrate deeply.

I needed permission from the Department of Agriculture to include Pro-Moisture Hydrate® with aloe vera in my soils, but the USDA did not recognize aloe vera as a soil ingredient. I carried out extensive research between April 2005 and September 2008 and prepared a field trial and efficacy report. Results in our test gardens, comparing plants grown in our soils with and without Pro-Moisture Hydrate®, proved conclusively that Pro-Moisture Hydrate® increases plant yields, vigor, and color penetration.

With a patent and the Department of Agriculture approval, Dr. Earth® was prepared to offer the only packaged soil in America that protects beneficial microbes.

The integrity of our company - along with our pioneering research - allows us to make the PROMISE of Pro-Moisture Hydrate®: LIVING SOIL. We were the first to infuse beneficial microbes and mycorrhizae into fertilizers and packaged soils, offering customers "Nature's Intelligence®. Now, with our patented Pro-Moisture Hydrate® we are the first AND ONLY soil producer with the ability to ensure that we are "Keeping the intelligence alive®!"

## **NATURAL & ORGANIC SOIL**

## Infused With Promoisture Hydrate®

A soil for every need:



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



#### POT OF GOLD<sup>®</sup>

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.



**ROSE AND FLOWER PLANTING MIX** 

To provide the ideal growing medium for all roses and flowers.



SEED STARTER PLANTING MIX

To help seeds sprout, increase success of transplants, establish plants quickly.



House Plant All Purpose Potting Soil

Growing medium for all house plants, patio containers and hanging baskets.



#### 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.



#### **Contains Patented Aloe Vera Infused With Soil**

The integrity of our company-along with our pioneering research-allows us to make the promise of ProMoisture Hydrate®: LIVING SOIL. We were the first to infuse beneficial microbes and mycorrhizae into fertilizers and packaged soils, offering customers "Nature's Intelligence<sup>®</sup>." Now, with our patented ProMoisture Hydrate® we are the first, and only, soil producer with the ability to ensure that we are "Keeping the intelligence alive®!"

#### Pro-Moisture Hydrate® Is Found Only In Dr. Earth® Soils

After years of research we discovered a solution to the problem. Now our patented invention, Pro-Moisture Hydrate®, is included in every Dr. Earth® branded soil. But in the case of all other brands who have copied the use of beneficial organisms, the effectiveness of their products remains at serious risk, if it exists at all. Stick with the original company that invented the technology that started it all. Innovations are our guiding lights.

## Recipe for Success

**ORGANIC VEGETABLES** 



#### **4 EASY STEPS FOR A HEALTHY HARVEST**

## STEP 1 PLANT MIX SOIL

One bag of soil mix will amend approximately 35-50 square feet of garden for healthy plants, maximum yield & old-fashioned flavor.

## STEP 2 FEED DRY FERTILIZER

Feed your vegetables once in early Spring or during transplanting, nourishing them so they can better nourish you.

## STEP 3 PROVIDE LIQUID FERTILIZER

Feeding your vegetables throughout the year as often as every 2 weeks for maximum results and delicious "homegrown health."

## STEP 4 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.

### FLOWER EMPOWERED

#### The promise of bigger, more abundant flowers

#### LIQUID FERTILIZER

Our liquid fertilizers should never replace our dry fertilizers. They were created to make it easy for you to feed more often organically because they are super easy to use. They were designed to apply after plants have been growing for several weeks and need their second, third, fourth or final feeding for the growing season. Contains advanced technologies with PreBiotic® raw super foods and ProMoisture Hydrate® aloe vera fertilizer infusion.







PEOPLE & PET SAFE

DR. EARTH



#### DRY FERTILIZER

Feed once a year in early spring to inoculate the soil with ProBiotic™, or especially during transplanting, because you can apply the fertilizer deep into the root zone and in direct contact with plant roots.

#### **PLANTING MIX**

Promotes blooms in all flowering plants. Great soil amendment for all types of planting projects. Contains ProMoisture Hydrate® aloe vera infusion to soothe and protect both plant roots and the living microbes and mycorrhizae.

#### PEST CONTROL

Ideal for killing and controlling insects on all flowering plants.
Crafted with essential oils, garlic oil and organic acids to do the job naturally.

#### THE DRY RULE

Feed and inoculate soils every spring of every year with a "living" dry fertilizer. This is a slow feeding approach with lasting results. Most soil microbes go dormant or die over the winter. ProBiotic™ reintroduces beneficial microbes at the beginning of every year for maximum soil health.

#### THE LIQUID RULE

Begin with a dry fertilizer in spring. Then one month after plants start to grow, begin a liquid fertilizer feeding schedule. Keep feeding every two to four weeks until the end of the growing season. PreBiotic® sugars feed and stimulate microbial and mycorrhizal biota. ProMoisture Hydrate® aloe vera fertilizer infusion coats and protects microbes, as well as plant foliage.

# DR. EARTH' Total Advantage FLOWER KIT

## PURE & FRESH

#### Grow your dream nutrition packed garden

#### DRY FERTILIZER

Feed once a year in early spring to inoculate the soil with ProBiotic™, or especially during transplanting, because you can apply the fertilizer deep into the root zone and in direct contact with plant roots.

#### LIQUID FERTILIZER

Our liquid fertilizers should never replace our dry fertilizers. They were created to make it easy for you to feed more often organically because they are super easy to use. They were designed to apply after plants have been growing for several weeks and need their second, third, fourth or final feeding for the growing season. Contains advanced technologies with PreBiotic® raw super foods and ProMoisture Hydrate® aloe vera fertilizer infusion.



## 100% Natural Hand Crafted Blend Crafted Blend ALOE VERA A YUCCA EXTRACT Probleme Report DR. EARTH JUST 60 ORSAURCT

ORGANIC

PEOPLE & PET SAFE

#### VEGETABLE GARDEN PLANTING MIX



organic Vegetable Gardens







SCHO PERMINAN

#### PLANTING MIX

REILIZER

Formulated to establish a healthy soil balance for tender vegetables. Full of life to help plant roots become established and fully thrive. Great soil amendment for all types of edible planting projects. Contains ProMoisture Hydrate® aloe vera infusion to soothe and protect both plant roots and the living microbes and mycorrhizae.

#### PEST CONTROL

Ideal for killing and controlling insects on all edible plants. Crafted with essential oils, garlic oil and organic acids to do the job naturally.

#### THE DRY RULE

Feed and inoculate soils every spring of every year with a "living" dry fertilizer. This is a slow feeding approach with lasting results. Most soil microbes go dormant or die over the winter. ProBiotic™ reintroduces beneficial microbes at the beginning of every year for maximum soil health.

#### THE LIQUID RULE

Begin with a dry fertilizer in spring. Then one month after plants start to grow, begin a liquid fertilizer feeding schedule. Keep feeding every two to four weeks until the end of the growing season. PreBiotic® sugars feed and stimulate microbial and mycorrhizal biota. ProMoisture Hydrate® aloe vera fertilizer infusion coats and protects microbes, as well as plant foliage.

# DR. EARTH' HomeGrown' VEGGIE KIT

### NATURALLY BALANCED

#### Feed and amend any plant at anytime



Best when used in early spring or during transplanting. Full of life with our soil inoculant ProBiotic™. It's especially effective during transplanting, because you can apply the fertilizer deep into the soil and in direct contact with plant roots.



## ALL PURPOSE POTTING SOIL ALL PURPOSE POTTING SOIL ALL PURPOSE NOTTING MIX

ORGANIC 100% Natural Hand Crafted Blend





#### **POTTING & PLANTING MIX**

Crafted specifically for container plants. For amending native soils, use our Mother Land® all-purpose planting mix. Both soils were formulated to help plants become established quickly, while providing the balanced medium that supports long-term health. Contains ProMoisture Hydrate® aloe vera infusion to soothe and protect both plant roots and the living microbes and mycorrhizae.

#### LIQUID FERTILIZER

Designed to maintain the highest nutrient level in any garden anytime of the year. Use it on edibles, ornamentals, annuals, perennials and even your lawn once in a while. Feed as often as 2 weeks to maximize any gardens growing potential. Our liquid was designed to apply any time of the year in any planting project. Contains advanced technologies with PreBiotic® raw super foods and ProMoisture Hydrate® aloe vera fertilizer infusion.

#### THE DRY RULE

Feed and inoculate soils every spring of every year with a "living" dry fertilizer. This is a slow feeding approach with lasting results. Most soil microbes go dormant or die over the winter. ProBiotic™ reintroduces beneficial microbes at the beginning of every year for maximum soil health.

#### THE LIQUID RULE

Begin with a dry fertilizer in spring.
Then one month after plants start to grow, begin a liquid fertilizer feeding schedule. Keep feeding every two to four weeks until the end of the growing season. PreBiotic® sugars feed and stimulate microbial and mycorrhizal biota. ProMoisture Hydrate® aloe vera fertilizer infusion coats and protects microbes, as well as plant foliage.

## DR. EARTH Gold Family

#### ALL PURPOSE KIT

## BACKYARD PURE

#### Fresh taste and nutrition right from your trees

#### DRY — FERTILIZER

Feed once a year in early spring to inoculate the soil with ProBiotic™, or especially during transplanting, because you can apply the fertilizer deep into the root zone and in direct contact with plant roots.

#### PLANTING MIX

Formulated specifically for fruit trees to provide long lasting organic nutrients and proper drainage. Full of nutrition to help plant roots become established quickly. Great soil amendment for all types of fruit trees. Contains ProMoisture Hydrate® aloe vera infusion to soothe and protect both plant roots and the living microbes and mycorrhizae.



# FRUIT TREE PLANTING MIX BICH IN EASTH MOSE AS THE ALLALFALTA MEAL A PISH BONE MEAL ProBiotic Inside

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PEOPLE & PET SAFE

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ORGANIC 100% Natural Hand Crafted Blend

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# PEOPLE & PET SAFE DR. EARTH Natival Wonder ORGANIC 10078 National State Per Book Inside FRUIT TREE FERTILIZER

FERTILIZER



#### LIQUID FERTILIZER

Our liquid fertilizers should never replace our dry fertilizers. They were created to make it easy for you to feed more often organically because they are super easy to use. They were designed to apply after trees have been growing for several months to several years and need their seasonal feedings. Contains advanced technologies with PreBiotic® raw super foods and ProMoisture Hydrate® aloe vera fertilizer infusion.

#### PEST CONTROL

TREE

ARTH

Ideal for killing and controlling insects on all fruit trees. Hand crafted with essential oils, garlic oil and organic acids to do the job naturally.

#### THE DRY RULE

Feed and inoculate soils every spring of every year with a "living" dry fertilizer. This is a slow feeding approach with lasting results. Most soil microbes go dormant or die over the winter. ProBiotic™ reintroduces beneficial microbes at the beginning of every year for maximum soil health.

#### THE LIQUID RULE

Begin with a dry fertilizer in spring. Then one month after plants start to grow, begin a liquid fertilizer feeding schedule. Keep feeding every two to four weeks until the end of the growing season. PreBiotic® sugars feed and stimulate microbial and mycorrhizal biota. ProMoisture Hydrate® aloe vera fertilizer infusion coats and protects microbes, as well as plant foliage.

# DR. EARTH' Matural Wonder' FRUIT KIT

## NATURALLY GORGEOUS

#### Bring beautiful color to life with abundance

#### **DRY FERTILIZER**

Best when used in early spring or during transplanting, but thousands swear by it during the flowering cycle too. Full of life with ProBiotic™. It's especially effective during transplanting, because you can apply the fertilizer deep into the soil and in direct contact with plant roots. Feeding with it later in the year is also great if you don't mind a little dirty work.





NET WT. 12 LBS. (5.4

PEOPLE & PET SAFE



#### HOSE END LIQUID

Designed to promote maximum flowering in all plant types. Our hose end sprayers make it easy to maintain the highest nutrient levels of phosphorous when needed. This is a very versatile product that can be used any time of the year. Use it on edibles, ornamentals, annuals, perennials and even your lawn once in a while. Feed as often as 2 to 3 weeks to maximize budding and flowering in any planting project.

#### LIQUID CONCENTRATE

Mix it in a watering can or in your adjustable hose end sprayer.

Designed to maintain the highest nutrient level in any garden anytime of the year. Use it on edibles, ornamentals, annuals, perennials and even your lawn once in a while. Feed as often as 2 to 3 weeks to maximize any gardens growing potential. Our liquid was designed to apply any time of the year in any planting project. Contains advanced technologies with PreBiotic® raw super foods and ProMoisture Hydrate® aloe vera fertilizer infusion.

#### THE DRY RULE

Feed and inoculate soils every spring of every year with a "living" dry fertilizer. This is a slow feeding approach with lasting results. Most soil microbes go dormant or die over the winter. ProBiotic™ reintroduces beneficial microbes at the beginning of every year for maximum soil health.

#### THE LIQUID RULE

Begin with a dry fertilizer in spring. Then one month after plants start to grow, begin a liquid fertilizer feeding schedule. Keep feeding every two to four weeks until the end of the growing season. PreBiotic® sugars feed and stimulate microbial and mycorrhizal biota. ProMoisture Hydrate® aloe vera fertilizer infusion coats and protects microbes, as well as plant foliage.

# DR. EARTH' Flower Girl' BLOOM KIT

## HEALTHY START

## Feed, amend and love all of your new plants

## DRY FERTILIZER

Feed once a year in early spring to inoculate the soil with our ProBiotic™ beneficial soil microbes and mycorrhizae. Starter fertilizer is especially effective during transplanting, because you can apply this product deep into the rootzone where it will be in direct contact with actively growing plant roots.

## STARTER MIX

Sprout seeds or transplant cuttings in any size container. This mix contains ProMoisture Hydrate® aloe vera infusion to soothe and protect tender young roots. It is rich in seaweed concentrate for additional micronutrients. Holds on to just the right amount of moisture to sprout seeds and keep tender transplants moist. It also inoculates young plants with ProBiotic™ beneficial soil microbes and mycorrhizae for maximum transplant success.



# ORGANIC 100% Natural Hand Crafted Bland Canada ALOE VERA A YUCCAEXTRACT Providence Replace DR. EARTH JUST 00 ORGANICI SEED STARTER POTTING MIX RICH IN SEAWEED EXTRACT ProBiotic Inside ANATURE TO TRANSPORTED Spirouting Seeds & Transplanting Cutting 12 DRY QUARTS 18.24 LITTERS

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PEOPLE & PET SAFE





## LIQUID FERTILIZER

Our liquid fertilizers should never replace our dry fertilizers. They were created to take the work out of feeding organically by being super easy to use. Liquid starter fertilizer can be applied either at the time of transplanting or up to a few weeks after transplanting. It contains advanced technologies with PreBiotic® raw super foods and ProMoisture Hydrate® aloe vera fertilizer infusion for maximum soil and plant health support.

## THE DRY RULE

Feed and inoculate soils every spring of every year with a "living" dry fertilizer. This is a slow feeding approach with lasting results. Most soil microbes go dormant or die over the winter. ProBiotic™ reintroduces beneficial microbes at the beginning of every year for maximum soil health.

## THE LIQUID RULE

MATERIAL SOCIETY OF YOUR PRINTERS

Begin with a dry fertilizer in spring.
Then one month after plants start to grow, begin a liquid fertilizer feeding schedule. Keep feeding every two to four weeks until the end of the growing season. PreBiotic® sugars feed and stimulate microbial and mycorrhizal biota. ProMoisture Hydrate® aloe vera fertilizer infusion coats and protects microbes, as well as plant foliage.

## DR. EARTH Root Zone STARTER KIT

The products that make up the starter kit are sold separately at your favorite garden center.



## ANIMAL HEALTH PET SAFETY IN THE GARDEN



## Designing A Pet Safe Garden



Your pets can also enjoy the natural environment and produce from your garden. If you intend to grow healthy fruits and vegetables for your family, grow enough to feed your pets, too.

Design your garden with pet safety in mind. Most fruit and vegetable plants are not toxic. Common plants like squash, zucchini, cucumbers and melons are safe for animals. The majority of herbs are safe, too. All outdoor pets have access to fallen fruits (apple, plum, cherry, apricot and peach) with seeds or pits. Although seeds and pits of these fruits contain cyanide, the amount is minute. In addition, most pets do not chew the fruits thoroughly, so the seeds are not usually broken open when ingested. The seed will more likely cause a foreign object obstruction in the animal's digestive system (also needing urgent care) than cyanide poisoning.

Still, a few common plants pose health risks. Onions, chives and garlic contain compounds that in large quantities can cause sudden hemolytic anemia. The leafy part of the potato plant and

the green part of the potato skin contain compounds that are toxic in large quantities. Cyanide in fruit seeds and pits can cause fatal seizures. Grapes may cause kidney failure in dogs. Moldy green walnuts are also toxic. Baby's breath, common in many flower arrangements, can be quite toxic.

Visit a good garden nursery for a detailed list of plants that can be grown in your region as well as those not suitable for pets. Many pets accidentally consume harmful plants every year and need emergency treatment by a veterinarian. Chemicals (fertilizer, pesticide and herbicide) are a far greater and more common threat to your pets than the plants you grow. This is another reason, among many, to go organic.

Many nurseries and pet stores offer effective, safe alternatives to chemicals for controlling nasty insects and garden pests. Increasingly, consumers demand higher standards from manufacturers to provide safe, long-lasting pest control treatments that support the growth of organic crops with pet health in mind.

## WISE ADVICE

Let Mother Nature take a portion of your crop to ensure the safety of your pets. Grow more than you plan on harvesting if you want to do it naturally. Remember that all living things need to eat too. If you want 100 percent of your harvest, then grow 120 percent.

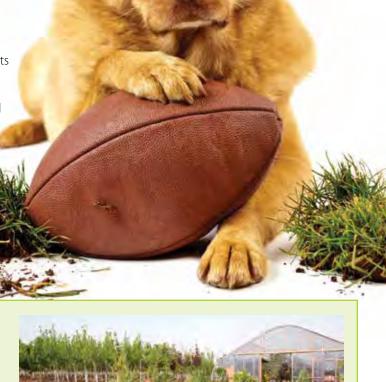




Organic gardening materials (fertilizers, composts and insecticides) pose little health risk to your pets, because they are plant-based or animal-based. Because many of us want to harvest the most produce we can, we may try to completely control all insects, especially when we see pest damage to our 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.



Some plants might be toxic to your pets. For example, baby's breath—which is common in many flower arrangements—can be quite toxic. We really like the ASPCA and the hard work they do. They provide a complete list of plants available for all animal lovers, both the plants that are considered toxic, and those that are considered completely safe. We highly urge you to visit the ASPCA website to learn more about the specific varieties of plants that you could grow in your garden. There are numerous facts and myths surrounding which plants can actually be harmful to small animals. Just remember this when dealing with toxic plants; many plants can be problematic if the animal ingests an inappropriate or large amount. In addition to visiting the ASPCA website, you can also ask for advice at your local independently owned nursery.

Most of the garden variety plants will not pose any life threatening health threats to your pets, but it can't hurt to do a little research just to be sure. Always remember that any time an animal consumes anything that is not a part of its usual diet, in large quantities, a mild to moderate GI imbalance may result. The majority of herbs are safe and most fruits are as well. All outdoor pets have access to fallen fruits such as apples and cherries, which have seeds often thought to be poisonous. Although they do contain cyanide, the amount is minute. In addition, most pets do not chew the fruits thoroughly, which means that the seeds are not usually broken open when ingested. It is more likely that the seed will cause some kind of foreign object obstruction in its digestive system than that it will cause poisoning from cyanide.

Although it is rare, pets could possibly consume green tomatoes, which could cause a toxic reaction. Also, dogs are attracted to eating grapes, which are not good for them. Be careful if you grow avocados. Some pets love them, but they can be toxic. Plants such as rhubarb, garlic and onion, when consumed in large quantities, could cause an adverse reaction as well.

Your backyard is your pet's kingdom. Outside in the in the fresh air, on warm spring and summer days, animals love to roll on the ground. Their safety must be taken into consideration. A little thoughtful planning can create the most productive and enjoyable environment for both you and your pets. Many varieties of ornamental plants naturally attract your pets. Their curiosity often leads them to consume flowers or foliage of even ornamental plants, which can sometimes produce irritating and even life threatening toxic effects that will require a visit to the veterinarian. When you finally make those decisions about the different plant varieties for your garden, both edible and ornamental, make sure to choose those that are non-toxic even to the touch, for some plants can be highly irritating even if your pets come into contact with them. Again, the ASPCA website will provide you with a list of those plants

Your local independent garden nursery is also a good source for a list of plants that could be harmful. Most of the time, your pets will avoid these, but you might not want to buy them if you have a curious pet and are not sure of their behavioral patterns.

Here are some plants we would consider to be toxic to your pets, even though it is highly unlikely that they would ever consume them: trumpet vine, Japanese Yew, Oleander, castor bean, Jerusalem cherry, lily of the valley, precatory beans, foxglove, azaleas, ferns, hydrangeas, lilies, oleander, rhubarb, sweet peas, green fruit particularly, and nightshade (tomatoes, potatoes, sweet pepper and eggplant). If you are intent on growing them, you might want to do so in an inaccessible part of the garden, or simply install a fencing structure just to be safe.

NOTE: Pets like to eat Dr. Earth® because it contains feed grade ingredients. Please do not leave open packages around. Work the fertilizer into the soil, water it in and put the unused portion away.

PEOPLE & PET SAFE



RGANIC & 100% NATURAL HAND CRAFTED BLEND **ProBiotic** NET WT. 4 LBS. (1.814 KG)



Scan To Learn Mor

## A FERTILIZER VEGETARIANS CAN TRUST

Refined with quality and progressive advanced technologies



NATURE'S INTELLIGENCE PURE AND SIMPLE



FEEDING THE INTELLIGENCE



KEEPING THE INTELLIGENCE ALIVE



VITAMINS, MINERALS & GROWTH BOOSTERS





## PreBiotic® Superfoods for ProBiotics

What if you could apply the latest scientific knowledge of human nutrition—the newest, most revolutionary concepts— to your garden?

We mean breakthrough technology on a microscopic level. Now you can.

You've heard of "probiotics," and how they benefit human health. Just as these microbes break down food in our digestive tracts—making nutrients available for absorption—they also break down organic matter in soil and make its nutrients available to plants. But what provides food for the living microbes, or "probiotics?"

## The answer: Prebiotics

Prebiotics are full-spectrum green super foods for probiotics. A prebiotic is a selectively fermented ingredient that results in specific changes in the composition and/or activity of the soil microbiota, thus conferring benefit(s) upon microbial health. Unlike probiotics, a prebiotic targets the microbiota already present within the ecosystem, acting as a food for the target microbes and mycorrhizae with beneficial consequences. Welcome to PreBiotic®, Dr. Earth®'s greatest innovation since

ProBiotic™ & ProMoisture Hydrate®. It works as a food for the probiotics, kicking them into high gear for better performance and maximum results immediately.

In addition to our premium concentrates shown on page 43, Dr. Earth® now offers PreBiotic® in several **NEW** liquid products: Root Zone® Starter Fertilizer, Home Grown® Vegetable Fertilizer, Natural Wonder® Fruit Tree Fertilizer, Flower Girl® Bud & Bloom Booster, Super Natural™ Lawn Ferilizer, Total Advantage® Rose & Flower Fertilizer and Premium Gold® All Purpose Fertilizer.

These formulas also contain ProMoisture Hydrate®. Try them with our soils, all of which contain ProBiotic™ protected by ProMoisture Hydrate®.

Remember: a prebiotic targets the microbiota already present within the ecosystem. This means any soil, from potting soils to backyard garden soils!

No one else can offer genuine PreBiotic®, ProBiotic™, or ProMoisture Hydrate®, all exclusive and protected Dr. Earth® brand names and patents, based on nature's intelligence!



3 groundbreaking technologies ProMoistureHydrate® PreBiotic® Raw Superfoods in four incredible products





## CONCENTRATED LIQUID FERTILIZERS



## **HIGH NITROGEN CONCENTRATE**

Feeds plants the perfect diet that accelerates robust and vigorous vegetative growth.



## GOLDEN BLOOM

## **HIGH PHOSPHOROUS CONCENTRATE** Properly balanced to feed plants as they enter

the critical budding and flowering stage.



Scan To Learn More



## SEAWEED CONCENTRATE

Micronized Seaweed loaded with OVER 70 bioavailable multi-minerals.



## LIQUID SOLUTION® ALL PURPOSE CONCENTRATE

Micronized Essential Nutrients loaded with bioavailable multi-minerals.



## 16 BASIC NUTRIENTS REQUIRED FOR CROP DEVELOPMENT

UNDERSTANDING GARDEN BIOLOGY

## 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.

## DID YOU KNOW?

NPK rating (or N-P-K) is used to label fertilizer based on the relative content of the elements nitrogen (N), phosphorus (P), and potassium (K) that are commonly used in fertilizers. These elements promote plant growth in three different ways. Nitrogen promotes the growth of leaves and vegetation. Phosphorus promotes root and shoot growth. Potassium regulates water and nutrient movement.

## **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.

## 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

## 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.

## **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.

## MAGNESIUM (Mg)

vegetable production

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.

## **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.

## 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.

## **CHLORIDE (CI)**

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 chloridedeficiency, so this micronutrient is not considered in fertilizer programs.

## 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.

## 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.

## **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.

## 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.

## 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.

## CARBON (C)

## **HYDROGEN (H)**

## **OXYGEN (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.

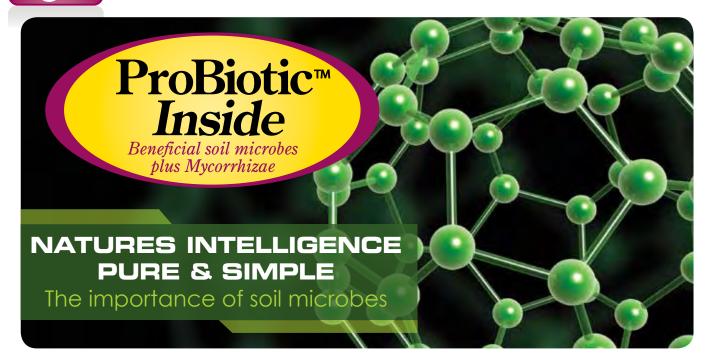


H





## TECHNOLOGY



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 ProBiotic™, a broadspectrum 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 ProBiotic™ 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.



## 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.



TOMATO & VEGETABLE FERTILIZER

Promotes large, healthy vegetables for a nutritional boost to maximize your harvest.



FLOWER GARDEN FERTILIZER

Ideal for annuals, bedding plants, impatients, 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 invention of ProBiotic™ 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 ProBiotic™ always signifies the first, the original, and the absolute supreme microbe-infused fertilizer on the market.



## TECHNOLOGY PROFESSIONAL KILLER SPRAYS



*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 fastacting plant growth and healing capabilities.

## PROFESSIONAL KILLER SPRAYS

When you need it done right - call a professional



## Choose your weapon:



YARD & GARDEN INSECT KILLE Ideal for killing and controlling insects in every part of the yard and garden.



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.



## SE CONTROL FUNGICIDE

Kills and controls diseases, molds and fungi in every part of the yard and garden.



Kills and controls snails, slugs, and their eggs. Use on plants, walkways, yard and garden.



Kills and controls insects on roses, flowers, flowering shrubs, and ornamentals.



Kills and controls insects under sinks, walkways, driveways, basements, etc.



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



Scan To Learn More





## 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.

## FOOD FOR THOUGHT

The large corporations that control most of our food supply and our farmland are set up to produce large quantities of food while making huge commercial profits. Sadly for the health of our nation, the quality of that food has been left far behind. The quality of the food we eat, its ability to nourish us and sustain our health, rests simply on the quality of our soil.



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.

## ONCE AGAIN - ADVANCING ORGANIC INNOVATION



"Innovation distinguishes between a leader and a follower." - STEVE JOBS



"You must be the change you wish to see in the world."

- MAHATMA GANDHI



"What is the use of a house if we don't have a decent planet to put it on? - HENRY DAVID THOREAU



"Our soil is the fundamental basis of human health."
- MILO SHAMMAS

THE FUTURE OF ORGANIC HAS BEEN HERE ALL ALONG

DR. EARTH