
DR. EARTH®
Home Grown®
ORGANIC
CANNABIS
GROWERS GUIDE
An easy to follow schedule that takes all of the guesswork out of what to do and when to do it. This schedule is designed to grow and feed one plant in a 5 gallon size container. If you are growing more, simply multiply by whatever amount you are growing. The basic schedule provides everything your plants need to thrive, but if you want to try a more intense feeding regimen, we have also included an advanced schedule to add additional nutrients to your grow cycle.

LIQUID FERTILIZER
INDOOR FEEDING SCHEDULE

schedule notes:

This Feeding Chart is for weekly applications and may require additional waterings in the same week.

- **GROW STAGE - WEEKS 1-4** Run lights for 18 hours to 24 hours a day. Follow Feeding Schedule.
- **EARLY BLOOM - WEEKS 5-8** Set light timer to 12 hours of light & 12 hours of no light. Follow Schedule.
- **LATE BLOOM - WEEKS 9-14** Continue 12 hour light, 12 hour no light cycle. Follow Schedule. Duration of cycle may need to be adjusted based on environment & strain of cannabis.

LIQUID PROGRAM

Click on any product in the schedule below to view details.

The ratios on the liquids are per gallon of water. The amount of gallons for each plant will vary depending on container size and number of plants, so mix accordingly. Make sure when watering with or with out nutrients to not over water to prevent valuable nutrients from draining out of the pot. Allow approximately 50-75 days to cultivate organic cannabis for harvest.

product lineup:

BASIC FEEDING SCHEDULE PRODUCTS
(All you need to grow healthy, productive plants)

- Nitro Big® High Nitrogen Liquid Plant Food 3-0-1
- Pot Of Gold® All Purpose Liquid Plant Food 1-1-1
- Golden Bloom® High Phosphate Plant Food 1-2-1

ADVANCED FEEDING SCHEDULE PRODUCTS
(To take your feeding schedule up a notch)

- Root Gold® Root Care Plant Food 0-2-1
- Metabolic Transformer® Soil Catalyst
- Home Grown® Tomato, Vegetable & Herb Fertilizer

ADVANCED GROWERS

Basic Feeding Schedule	GROWTH STAGE				EARLY BLOOM STAGE				LATE BLOOM STAGE				FLUSHING STAGE	
14 Week Cycle	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Nitro Big® 3-0-1 (Grow)	2 oz.	2 oz.	1 oz.	1 oz.	1 oz.									
Pot Of Gold® 1-1-1 (Anytime)			1 oz.	1 oz.	1 oz.	2 oz.	1 oz.	1 oz.						
Golden Bloom® 1-2-1 (Bloom)							1 oz.	1 oz.	2 oz.	2 oz.	2 oz.	2 oz.		
Advanced Feeding Schedule														
Root Gold® 0-2-1	1 oz.	1 oz.		1 oz.			1 oz.	1 oz.		1 oz.	1 oz.	1 oz.		
Metabolic Transformer*	2 cups*		2 cups*		2 cups*		2 cups*		2 cups*					
Home Grown® 4-6-3**	¼ Cup						¼ Cup							

* Metabolic Transformer is to be mixed at a rate of 2 tablespoons per gallon of pure water then applied at the rate of 2 cups per individual plant or more as they grow.

** The Home Grown ¼ cup rate is based on a 5 gallon container. Adjust the amount you apply if you are using a smaller or larger size container.

DR. EARTH®

DRY FERTILIZER
INDOOR FEEDING SCHEDULE

schedule notes:

This Feeding Chart is for weekly applications and may require additional waterings in the same week.

- **GROW STAGE - WEEKS 1-4** Run lights for 18 hours to 24 hours a day. Follow Feeding Schedule.
- **EARLY BLOOM - WEEKS 5-8** Set light timer to 12 hours of light & 12 hours of no light. Follow Schedule.
- **LATE BLOOM - WEEKS 9-14** Continue 12 hour light, 12 hour no light cycle. Follow Schedule. Duration of cycle may need to be adjusted based on environment & strain of cannabis.

The basic feeding schedule ¼ cup rate is based on a 5 gallon container. Adjust measurement if you are using a different size container. Make sure when watering with or without nutrients to not over water, causing water to drain from the pots resulting in valuable nutrients draining out. Allow approximately 50-75 days to cultivate organic cannabis for harvest.

DRY FERTILIZER PROGRAM

Click on any product in the schedule below to view details.

product lineup:

BASIC FEEDING SCHEDULE PRODUCTS
(All you need to grow healthy, productive plants)

- Home Grown® Tomato, Vegetable & Herb Fertilizer
- Premium Gold® All Purpose Fertilizer 4-4-4
- Flower Girl® Bud & Bloom Booster 3-9-4

ADVANCED FEEDING SCHEDULE PRODUCTS
(To take your feeding schedule up a notch)

- Pot of Gold® All Purpose Plant Food 1-1-1
- Metabolic Transformer® Soil Catalyst

Basic Feeding Schedule	GROWTH STAGE				EARLY BLOOM STAGE				LATE BLOOM STAGE				FLUSHING STAGE	
14 Week Cycle	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Home Grown® Dry 4-6-3 (Grow)	¼ Cup		¼ Cup											
Premium Gold® Dry 4-4-4 (Anytime)					¼ Cup		¼ Cup							
Flower Girl® Dry 3-9-4 (Bloom)									¼ Cup		¼ Cup			
Advanced Feeding Schedule														
Pot Of Gold® Liquid 1-1-1*		2 cups*		2 cups*		2 cups*		2 cups*		2 cups*		2 cups*		
Metabolic Transformer**	2 cups*			2 cups*		2 cups*		2 cups*		2 cups*				

* Pot of Gold® 1-1-1 Liquid is to be mixed with water first (see product directions) then applied at the rate of 2 cups per individual plant or more as they grow.

** Metabolic Transformer is to be mixed at a rate of 2 tablespoons per gallon of pure water then applied at the rate of 2 cups per individual plant or more as they grow.

DR. EARTH®

16 NUTRIENTS PLANTS MUST HAVE

Sixteen basic nutrients are required for crop development (plus hundreds more we know are needed in minute amounts). 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 and soil amendments 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.

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.

PRIMARY NUTRIENTS

The primary nutrients, 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 vegetable production.*

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)

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

Micronutrients are essential elements that are used by plants in small quantities. In order to be useful, these micronutrients must be available in the soil in which the plants are grown. Too little of one or more of these produces deficiencies resulting in plant disease . Micronutrient deficiencies can be detected by visual symptoms on crops and by testing soils and plant tissues. To understand visual symptoms, it is useful to know the role each micronutrient plays in plant growth and development.

IRON (Fe)

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

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

Fe

CHLORIDE (Cl)

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

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

Cl

ZINC (Z)

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

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

Z

COPPER (Cu)

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

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

Cu

BORON (B)

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

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

B

MOLYBDENUM (Mo)

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

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

Mo

MANGANESE (Mn)

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

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

Mn

CARBON (C)

C

HYDROGEN (H)

H

OXYGEN (O)

O

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

GETTING STARTED:

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

For the healthiest crops, start each new crop by discarding the used soil and refilling containers with fresh potting soil as called for above.

Apply minimum amounts of water, only enough to keep the soil moist, allowing it to dry between watering. This will help your roots to go further down & resist diseases caused by constant moisture.

STARTING FROM SEED:

Best practice is to germinate between the layer of a damp paper towel. Place in a dark, warm place. The seed should germinate in a few days. Once the seed/seeds sprout, transfer to growing cell with Root Zone® Seed Starter Potting Mix.

STARTING FROM CLONE:

Make sure you have a healthy genetic clone. If you cultivate a clone from a plant with a previous health issue/problem, you will have problems. So get your cuttings from a trusted source.

MOST COMMON PROBLEMS:

Yellowing leaves are usually caused by over watering or over feeding your plants. Our organic fertilizers are rich in secondary nutrients and micronutrients or trace elements that shouldn't have any nutrient deficiencies. Check for insects as mites can start causing color change in leaves. Check and adjust the lighting as that may cause leaf burn. Do not get heavy handed when applying nutrients. You are better off using less when unsure and can always add more. Before you attempt to identify any cannabis deficiency, check your pH. Growing in soil or similar mediums should be in a 5.8 - 6.8 range. The ideal range would be around 6.3 pH. If you are using tap water, make sure to use a filter to remove contaminants like chlorine and other toxins that might effect your grow.

HARVESTING:

Always let the soil dry before you harvest, this will allow the maximum amount of nutrient density from your harvest with the best taste and the majority of the water will be removed naturally. Knowing when to harvest is key to maximizing flavor, aroma and potency. When 10-15% of the trichomes are amber in color you can harvest. Hang plants upside down in a dark room for about a week (could vary depending on temperature) until dry. Trim & store in airtight containers, open containers every 5 days to avoid mold.

Cannabis plants thrive in the right environment. Make sure you have suitable lighting, climate and a balanced diet for them. Without these proper basics your plants can get stressed which will make them more prone to problems like disease, mold and insects.

Our easy to follow schedule takes all of the guesswork out of what to do and when to do it. This schedule is designed to grow and feed one plant in a 5 gallon size container. If you are growing more, simply multiply by whatever amount you are growing.

The basic schedule provides everything your plants need to thrive, but if you want to try a more intense feeding regiment, we have also included an advanced schedule to add additional nutrients to your grow cycle.

TruBiotic®

Beneficial soil microbes plus Mycorrhizae

NATURE'S INTELLIGENCE *pure and simple*

The importance of soil microbes

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. 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.

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.

Only Dr. Earth® organic dry fertilizers & soils contain TruBiotic®, a broad-spectrum soil and seed inoculant, already mixed into the products containing beneficial soil microbes and 17 strains of mycorrhizae.

Increased biological activity in the soil, and the buildup of existing bacterial populations, will help make your plants 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.

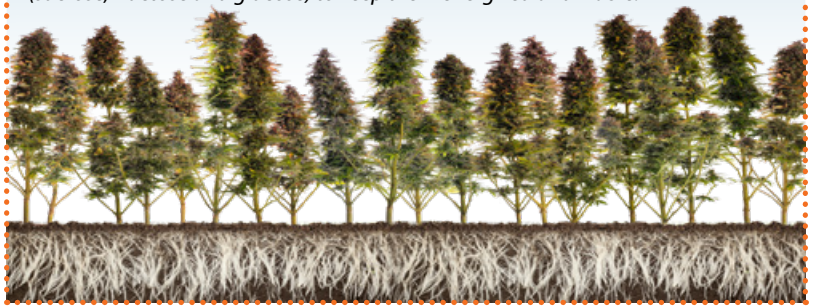
MYCORRHIZAE

THE GOOD FUNGUS

Imagine a giant underground network, a transportation system, complex by nature yet simple in concept. In the network, all plants grow in harmony together, sharing nutrients with each other. How can this be? Mycorrhizae make it possible.

The largest biomass on earth is a network of mycorrhizal hyphae in a mature established forest. It is invisible to the human eye and much smaller than any obvious root system. These threads of life share the nutrients with each other. The essence of mycorrhizae's role is to create an extensive network of microscopic filaments that facilitates nutrient transfer among plants. Mycorrhizae help absorb nutrients, assist in drought tolerance and create ideal garden soil structure, soil that drains, breaths and retains optimum moisture. Using a biologically active soil or fertilizer to introduce mycorrhizae to your garden makes a huge difference in the health and performance of all the plants. On the evolutionary scale, they are as important to the health of all plants as plants are important to us.

Mycorrhizae are beneficial soil fungi that form a symbiotic relationship with your backyard plants and about 90 percent of all plants on earth. They penetrate growing plant root tissues, surround the root mass and extend far into the surrounding soil, encompassing a much greater volume of soil than that occupied by the plant's own root system. The fungi's long thread-like mycelia capture moisture and nutrients from the soil, particularly nitrogen and phosphorous. The fungi consume these nutrients, but, more importantly, they generously share them with the roots of the host plant. In return, the host plant provides the fungi with photosynthesized nutrients such as the simple sugars (sucrose, fructose and glucose) to keep them energized and viable.



WHAT SETS US APART

DR. EARTH®

ORGANIC AND EFFECTIVE!

Dr. Earth liquid fertilizer concentrates are 100% organic & natural. They are OMRI listed, CDFA registered, and can easily be used in any media. Each liquid fertilizer is available in an array of sizes to meet the needs of farmers and growers of any scale - from 24 oz. to 5 gallons and 275 gallon totes custom filled.

Nitro-Big (3-0-1) creates lush compact growth to support heavy fruits and flowers, Pot of Gold (1-1-1) helps maintain optimal nutrient levels to ensure abundant harvests, and Golden Bloom (1-2-1) yields larger bud size and amplified flavor profile by enhancing essential oil production.

Our three part liquid fertilizer concentrates reach the highest level of sustainability of any fertilizer in the world! This is accomplished by utilizing break through science, technology, and enzymes to convert human grade organic food scraps from grocery stores into highly effective premium liquid fertilizers. Our carbon-rich liquid fertilizers are packed with Amino Acids, Fulvic Acid, Micronutrients, and Macronutrients. University studies and field trials strongly suggest that these liquid fertilizers provide exceptional results and a greater return on investment.

SUSTAINABLY MADE LIQUID FERTILIZERS

We take food waste from the supermarket industry and convert into the most nutrient-rich organic liquid fertilizer in the world. Upcycling large volumes of would-be food waste has many benefits, such as lowering greenhouse gas emissions, providing an effective and ecologically sound alternative to petroleum-based fertilization programs and tremendously reducing the carbon footprint of the grocery-store-to-landfill cycle. The dream of a zero-waste, modern society is finally taking shape, and real-world problems are being solved with bold, innovative solutions.

Field trials and university studies strongly suggest that organic liquid fertilizers made from enzymatically digested food scraps provide uniform benefits across an array of crop types. These benefits include elevated yields, improved crop quality and added market value – resulting in greater returns on investment while healing our ecosystem.

PREMIUM DRY FERTILIZER INGREDIENTS

Dr. Earth fertilizers use only the finest ingredients derived from nutrient rich fish. Our ingredients are derived from the highest quality wild-caught fish in the heart of the Pacific Northwest by Alaskan fisherman. Many fertilizers labeled "organic" use cheap chicken manure fillers that may contain GMO's and pathogens. Our base ingredients are "ocean-derived", such as fish bone meal, fish meal and kelp meal. We add these custom, hand made ingredients into our blended fertilizer line which is why our blends are incredibly diversified with a plethora of trace elements and micronutrients in a highly bioavailable form due to its micronized size.

OMRI LISTED® For Organic Use

REGISTERED ORGANIC INPUT MATERIAL cdfa

DR. EARTH®

CHICKEN MANURE FREE

Sustainable Food Trade Association MEMBER