



WILD THING™

PRODUCT GUIDE

AllSeasonsGardenCentre.ca

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1 - Complete Mineral Nutrient System

WILD THiNG is a **Complete Mineral Nutrient System** for growing any plant, anywhere. It can be used from propagation through to harvest, with any growing medium: garden soil, soilless potting mix, perlite / Vermiculite, LECA (light expanded clay aggregate) / Hydrocorn, coco-coir and Rock Wool, as well as medium-free systems such as nutrient film technique and aeroponics.

As a three-part liquid nutrient system, **WILD THiNG** is composed of purified, naturally occurring minerals. These minerals are balanced in a concentrated blend to meet the requirements for optimum plant growth. These purified, naturally occurring minerals are in a balanced and concentrated blend required for optimum plant growth and productivity when mixed in accordance with the directions on pages 6/7.

The **WILD THiNG** system consists of nine products. Three are the base nutrients: **PART A**, **PART B**, and **PART M**.

Base Nutrients	Supplements
PART A	pH DOWN (Phosphoric Acid)
	pH DOWN (Sulphuric Acid)
PART B	pH UP
	LIQUID ROCK
PART M	BOOM BLOOM
	CHLOR DE TOX

The other six are supplements and additives: **pH DOWN (Phosphoric Acid)**, **pH DOWN (Sulphuric Acid)**, **pH UP**, **LIQUID ROCK**, **BOOM BLOOM** and **CHLOR DE-TOX**. These supplements are very beneficial and can be used with any nutrient system as well as with **PART A/B/M**. Here is an overview of each product.

PART A [0-9-6]

PART A gives plants the raw materials required for healthy root development and prolific flowering. As the system's primary source of phosphorous, this component gets increased during the bloom cycle of a plant's life.

PART B [5-0-0]

PART B is the main provider of nitrogen derived from three different sources. It's also supplied with abundant calcium and magnesium, two elements which are often in short supply with many other nutrient systems.

PART M [1-0-1]

MICRO M features a full array of micro-nutrients and minerals combined with a very small amount of macro elements. This makes it not only the ideal nutrient mix to complete the system, but also allows it to be used as the perfect plant propagation food for the beginning of every plant life cycle.

pH Down (Phosphoric Acid) [0-26-0]

pH DOWN (Phosphoric Acid) is the most commonly applied pH adjuster. It's a solution of phosphoric acid, that will supply additional phosphate to the nutrient solution while lowering the pH.

pH Down (Sulphuric Acid)

[0-0-0]

pH DOWN (Sulphuric Acid) is also an efficient pH adjuster, and is useful for promoting certain beneficial forms of microbial life in nutrient solutions. It's a solution of sulphuric acid and will supply additional sulphate while lowering the pH.

pH UP [0-0-15]

pH UP is a solution of potassium hydroxide, and will supply additional potassium while raising the pH. It is always best practice to apply pH Up before adding any other nutrients to the water, and only add **pH DOWN** at the end of mixing. So when in doubt, throw in a little extra **pH UP** (or **LIQUID ROCK**) first.

LIQUID ROCK [0-0-3]

Mineral silicates are amongst the most abundant elements in the earth's crust, and they are very beneficial for growing plants. Often indoor growers neglect this supplement, forgetting that most of the silica found in the various substrates around the roots of the plants are in forms which aren't available for uptake. When **LIQUID ROCK** is added to the nutrient solution it provides soluble silicates for plants to use, and can be especially beneficial for younger plants: roots can better select which minerals they wish to absorb, and the cell walls of the entire plant will be permeated with silicates making them stronger and more resistant to insects, diseases and stress. These silicates also encourage beneficial microbes to grow, both in the medium and on the plant's roots.

As with **pH UP**, **LIQUID ROCK** must always be added to fresh water before the main nutrients are added. This nutrient is essential to use with distilled and reverse-osmosis filtered water as well as with rainwater.

Also, with its naturally high pH and silica content, **LIQUID ROCK** can be an effective natural control for powdery mildew when used as a foliar spray at 3mL / 1L of water along with a suitable wetting agent.

BOOM BLOOM [0-2-42]

BOOM BLOOM is a dry supplement is used during a plant's flowering and fruiting cycle. The effects of this powder are truly magical! Designed to increase the quality of the final product no matter what you are growing, **BOOM BLOOM** will help maximize each plant's best natural abilities, be they more robustly flavorful tomatoes or abundant and pungently aromatic flowers.

CHLOR DE-TOX [0-0-0]

CHLOR DE-TOX is used for neutralizing free chlorine and chloramines in tap water by reducing them to the harmless nutrient forms of chloride, especially useful whenever you want to incorporate living organics in to your nutrient environment. This could include adding beneficial bacteria and mycorrhizal fungi, as well as for all Aquaponic applications where the chlorine would otherwise be harmful to your fish.



2 - Nutrient and Water Quality - TDS & pH

What's best for my plants?

Plants need to be fed the correct amount of nutrient at the proper pH levels in order to give you their best returns. The feeding charts at the end of this guide will give you the basic mixing rates which will work under general conditions, and if desired can be fine tuned to your individual circumstances as you progress.

Useful pH values tend to fall into fairly specific “safe ranges” for the various stages of growth which, when maintained, will always allow for success. The optimum nutrient concentrations, on the other hand, can vary more widely from plant to plant and amongst different growing conditions, and as your familiarity with your own garden increases you may want to pay more attention to this in order to push their plant's growth to the max. In any case when it comes to feeding your plants, especially with potent nutrients like **WILD THING**, remember the old saying that “Less is More”: a somewhat underfed plant will still perform admirably, but an overfed plant can much more easily become a ruined plant. When in doubt, feed lighter rather than heavier.

You can safely start feeding any plant based off of the maximum recommended rates in this guide, with the general rule that plants growing in an organic medium that retains nutrients, particularly peat based potting mixes and soils, require about half the concentration of nutrients as their counterparts in the various versions of pure hydroponic cultivation. Completely pure water does not conduct any electricity, but the more organic or mineral salts that are dissolved in the water the more electricity it can conduct. Nutrient Meters and Pens take this electrical conductance reading and convert it into various units, typically parts-per million (ppm), as an expression of the total-dissolved-solids (TDS). When used wisely, pens and meters are helpful tools for monitoring changes in nutrient levels.

In your hydroponic system, the absolute numbers you that read and record every day are not nearly as important as the overall changes that you see from your daily log readings. If, for example, a new batch of nutrient had a reading of 750 ppm on Monday, and by Thursday it increased to 900 ppm, this nutrient is too strong for your growing situation. In a rising TDS situation like this, the plants are taking in more water than minerals, thus creating a higher concentration of minerals in the reserve solution. If, on the other hand, the reading started at say 1000 on the first day and went down to 600 a few days later, the nutrient could well have been a little stronger.

You would ideally like your weekly readings to stay about the same or if anything show a slight decrease, letting you know that the plant is taking in slightly more food than water. This means that you have the right nutrient concentration for the plants growing in your environment. There is no magic number. Even if a friend or “expert” book or video says that you have to run at, say, 1235 ppm for your specific plant, you may find that for your situation that may not be the best number even though it may look like you are doing all the same as things they are: everyone's individual grow-space will have a complex combination of conditions unique to that facility, and these dynamic conditions can also be changing over time.



he ideal pH on the other hand is relatively consistent throughout different growing methods and environments, and **WILD THING** is best used at a pH 6.3 for vegetative growing and between pH 5.8 to pH 6.3 for a plant's flowering cycle.

LIQUID ROCK has a naturally high pH, and when adding it to fresh water at the rate of 3 ml per liter can reach a pH of 10 or higher, and while the micro/macro nutrients will lower the pH somewhat, **pH DOWN** will always have to be used after adding **LIQUID ROCK** to normalize the pH. When using **LIQUID ROCK**, it must be the first thing added to your fresh water (only after **pH UP**, if used at all) and followed lastly by **pH DOWN**.

The actual, exact pH values seen during nutrient mixing will depend on the buffering capacity and pH of the original fresh water in conjunction with the additives such as **LIQUID ROCK**. Once you have brought your pH down to the desired level somewhere between 5.8 and 6.3 and allowed the system to run for a week while logging your pH, you will see that the pH in a healthy system naturally wanders slightly from morning through evening as well as from day to day.

While we say that the ideal pH is between 5.8 to 6.3, if the pH is compulsively over-adjusted then your plants will become notably stressed. Set the pH of a new batch of nutrient to, say, 6.0 and let the pH naturally wander a few tenths of a point for the 7 days

until the next nutrient change. However, if the pH goes drastically out of range, consistently going up or down, then something else is out of balance and it's best to change the entire reserve while pinning down the issue. Sometimes if you suddenly notice a steadily falling pH, check that there is not a plugged air-stone or disconnected airline somewhere in the system; likewise, occasionally a pH reading will consistently drift upwards during the flowering cycle with some plants in certain systems where it can be remedied by simply increasing the concentration of **PART A**, a bit above the recommended rate.

However these are just basic examples as there are too many possibilities to try to list in this brief guide, and it's always best to consult with a professional if you find a situation that is difficult to troubleshoot by yourself. So aim to adjust pH only when changing nutrient batches, letting your plants can do as they will, within reason, throughout the week. pH and beneficial microorganisms: some beneficial microorganisms will variably impact pH, occasionally lowering it to a range of 5.6 or less

as they may require a slightly acidic environment to survive. In many cases it's best to not try to force the pH when you are using certain beneficial microorganisms.



3 - Propagation

Every great plant comes from a great beginning!

Whether you start a plant from seeds or cuttings (clones) you can follow the same basic procedure, with the exception that seed starting does not require as high levels of humidity as cloning. The following guide discusses propagation from the perspective of cutting/cloning, but you can follow the same basic procedure for seed propagation.

For the most productive root development and a vigorous start, begin with a good rooting medium - Rock Wool cubes, expanding peat pucks (eg Jiffy-7s) or rubberized peat plugs (eg Cocogro or Rapid Rooter) - then add good nutrients and maintain a stable environment including quality full spectrum lighting, a steady temperature of 80°F / 27°C inside and around the medium itself, and a humidity level (cuttings only) at or close to 100%.

- Full spectrum lights are available in a variety of technologies ranging from high-output T5 fluorescents as well as some modern CFL's (compact fluorescents), to true full spectrum LED's as well as plasma lamps (LEP's) and ceramic metal halides (LEC's).
- At a temperature of 80°F / 27°C in the medium rooting should be initiated within 5-7 days. However, at 70°F / 21°C, root initiation may require at least 3 weeks, on the other hand, at 90°F / 33°C everything will most likely rot and turn to mush. Especially in a cooler room, a heat mat is highly recommended. Use a small thermometer inside your propagation tray, preferably wedged against the starting medium itself, to show the temperature.
- The combination of a solid propagation tray with a net tray insert containing the medium and covered with a 6 to 7 inch clear dome will insure maximum humidity - cuttings only. Humidity must be maintained until roots have formed.
- Cuttings will root much more quickly and reliably if a rooting hormone (gel or powder) is used.
- **WILD THING** is equally beneficial for propagation and vegetation, as well as for flower and fruit production.

Nutrient formulas for first few weeks of a plant's life.

Rock Wool pre-soak solution - to one liter of 69°F / 20°C water add:

3 mL **PART M** and stir, then

pH Down dropwise (usually about 0.5mL) and stir, until pH is at 5.5.

Only Rock Wool needs to be soaked in this "Rock Wool pre-soak solution", before being flushed with Propagation Solution #1 prior to planting; all other starting mediums should be soaked in and watered in with Propagation Solution #1 (or #2 later on).

Propagation Solution #1 - Week 1 - To one liter of 69°F / 20°C water add:

1 mL **LIQUID ROCK** and stir, then

1 mL **PART M** and stir, followed by

pH DOWN as necessary (usually a little more than 0.25 mL) to achieve a final pH of 6.3.

Propagation Solution #2 - Week 2 - To one liter of 69°F / 20°C water add:

1 mL **LIQUID ROCK** and stir, then

1 mL **PART A** and stir,

1 mL **PART M** and stir, followed by

pH DOWN as necessary (usually about 0.25 mL) to achieve a final pH of 6.3.

Propagation guide: seeds and cuttings

* Seeds should be soaked overnight in Propagation Solution #1

Stage 1 - Medium preparation

Place into the propagation tray a net tray with the desired growing medium(s) inside.

Rock Wool cubes should be soaked in the “Rock Wool Pre-Soak Solution” for a few minutes to a few hours. Soak Jiffy-7s or Oasis for half an hour in “Propagation Solution #1”.

After soaking, any excess solution should be drained and discarded, and rinse Rock Wool with Propagation Solution #1.

Stage 2 - Planting

Cuttings can now be snipped from the mother plant and put into a bowl of lukewarm water. Next, using very sharp scissors or a razor blade, cut off last inch of stem at a 45 degree angle while holding both the stem and cutting tool underwater. This second, submerged, cut prevents any air bubbles from getting trapped further up the stem. Then dip the cutting in a rooting hormone and plant in your prepared medium.

Presoaked seeds should be germinated according to the instructions provided by the seed supplier, or they may be planted directly in the prepared medium, being sure to lightly cover them with the medium so that they are in the dark until they germinate.

Stage 3 - Environmental control

Place a thermometer in or touch a presoaked cube or puck to monitor its temperature. Cover with a dome (optional for seedlings), and place under 18-hour per day full spectrum light.

Stage 4 - Watering

On the following day, prepare either “Propagation Solution #1” for the first week (or #2 for the second week), and flood the medium, soaking for a couple minutes, then emptying.

Stage 5 - Monitoring: Week 1

Repeat Step 4, with the frequency depending on the medium: Oasis every day, Rock Wool typically every 1-3 days, peat pucks every 2-4 days, and so on until rooting is initiated (white bumps on stem), about one week.

Stage 6 - Monitoring: Week 2

For the second week, repeat as in Steps 4 & 5 but now using Propagation Solution #2 for one more week until new growth starts to appear.

Stage 7 - Preparing for transplanting

Toward the end of the second week, having seen root initiation and increased leaf greening, the dome should be gradually removed over 2 to 3 days, to slowly decrease the relative humidity from 100% down to room humidity. A rapid drop would be extremely stressful to these newly cloned plants.

Stage 8 - Transplanting

Carefully transplant young plants into your vegetative garden, and begin growth under higher intensity lighting such as metal halides or LEDs, using the vegetative feed mixture.

4a - Hydroponics Mixing Instructions

Light dictates how much nutrient the plants can use, and as a general guide give Full rate for 1000 Watt lights or full Sun, 2/3 rate for 400 Watt HID's and most LED's, and 1/3 rate for Lower light levels such as fluorescents.

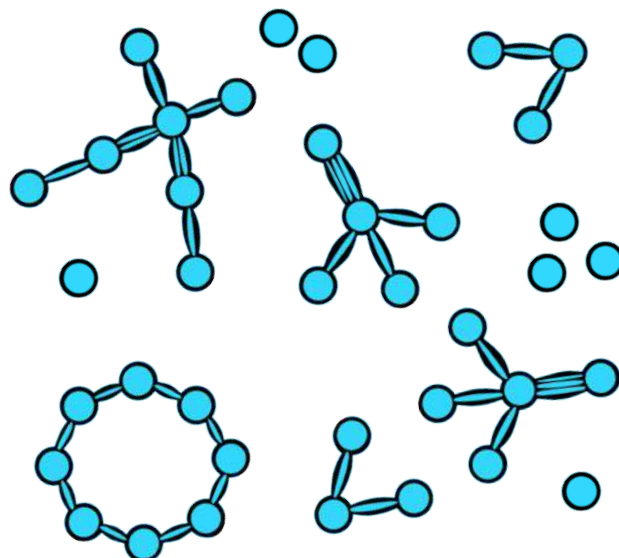
Units are in mL/L unless specified - Maximum !

Steps	Products	Propagation			Vegetative			Flowering		
		Rock Wool pre-soak	Week 1	Week 2	Mild - Fluorescent	Medium - L.E.D	Strong - 1000w	Mild - Fluorescent	Medium - L.E.D	Strong - 1000w
1	pH UP - if required *									
2	LIQUID ROCK	1	1	1	1	2	3	0.5	0.5	0.5
3	PART A			1	1	2	3	2	4	6
4	PART B				1	2	3	1	2	3
5	PART M	3	1	1	1	2	3	1	2	3
6	BOOM BLOOM							0.2	0.4	0.7
								0.3 g	0.6 g	1 g
Final	pH DOWN	pH 5.5	pH 6.3	pH 6.3	pH 6.3			pH 6.0		
* Variable depending on pH of the water										

Irrigation technique

When feeding plants in hand-watered soil/soil-less growing media it is advised to alternate by watering with plain pH balanced water in between feedings. For brighter lit and hungrier plants use up to two feedings in a row followed by one with plain pH balanced water. For average plants give one straight watering for every feeding. And for lower lit and/or more delicate plants alternate each feeding with two waterings of plain pH balanced water.

LIQUID ROCK is optional, but it is very beneficial. Plants will have increased hardiness and nutrient uptake. Also, **LIQUID ROCK** acts as a buffer and is essential when using distilled or reverse osmosis water.



4b - Soil Mixing Instructions

Light dictates how much nutrient the plants can use, and as a general guide give Full rate for 1000 Watt lights or full Sun, 2/3 rate for 400 Watt HID's and most LED's, and 1/3 rate for Lower light levels such as fluorescents.

Units are in mL/L unless specified - Maximum !

Steps	Products	Propagation			Vegetative			Flowering		
		Rock Wool pre-soak	Week 1	Week 2	Mild - Fluorescent	Medium - L.E.D	Strong - 1000w	Mild - Fluorescent	Medium - L.E.D	Strong - 1000w
1	pH UP - if required *									
2	LIQUID ROCK	1	1	1	1	1	1.5	0.25	0.25	0.25
3	PART A			1	1	1	1.5	2	2.5	3
4	PART B				1	1	1.5	1	1.25	1.5
5	PART M	3	1	1	1	1	1.5	1	1.25	1.5
6	BOOM BLOOM							0.1	0.2	0.4
								0.15 g	0.3 g	0.5 g
Final	pH DOWN	pH 5.5	pH 6.3	pH 6.3	pH 6.3			pH 6.0		

* Variable depending on pH of the water

Irrigation technique

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LIQUID ROCK is optional, but it is very beneficial. Plants will have increased hardiness and nutrient uptake. Also, **LIQUID ROCK** acts as a buffer and is essential when using distilled or reverse osmosis water.

