

THE PATH TO HIGH BRIX GARDENS

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The Path to High Brix



Is it really possible to grow fruits and vegetables with high mineral density? More importantly can it actually be accomplished in your backyard? YES it is possible to grow foods with high mineral density and YES it can happen in YOUR backyard. **It is really quite simple—just create the right environment and plants will respond to their full genetic potential.** The difficult part is to understand what conditions are required for plants to grow with optimum nutrition and how those conditions are achieved.

In a nutshell the High Brix Garden Program is all about helping you create the right environment for your garden plants.

So what are the specific requirements to grow high brix? The first requirement on the path to high brix is to ...

Have A Vision

I have a vision—do you? Part of my vision entails healthy soil producing therapeutic foods from my own garden. I further envision my family eating therapeutic foods as an ever-increasing proportion of our diet. The expectation is that this increase in nutrition will amplify our health, energy, and vitality as a family and circumvent the “need” for drugs and surgery. On a larger scale I also envision a growing tide of people having a similar vision to consume therapeutic foods grown on healthy soil. This has the potential to radically change the way some people buy, sell, and grow food.

Before starting on the path to high brix it is important to have a vision of where you want to go and what you want to achieve. A final destination is an indispensable prerequisite before starting any journey. It is no different on the Path to High Brix. To help cement and articulate your vision to others I would encourage you to write out your family’s personalized Vision of Health.

Once you have secured a vision it is now time to take the first practical step on the Path to High Brix ...

Get A Roadmap

A road map is an indispensable requirement when starting a journey to an unfamiliar destination. The first thing it helps us determine is where our starting point is. Once we know our starting point and our final destination the road map helps us plot our course of action needed to get us where we want to go.

On the Path to High Brix our roadmap is the **soil test**. The soil test is the foundation from which all fertility decisions are referenced. It is our eye into the mysterious world beneath our feet. No other tool comes close to matching the soil test in importance when aiming for high brix.

There are a multitude of different soil testing methods all purporting to be the best but there is only one soil test that really lets you [see what you are looking at](#): the Morgan test. If you don’t believe this try an experiment. Find leading proponents of base saturation testing or testing for fungal and bacterial balancing. Now find out what they say about achieving high brix. Whoops—they don’t say a word about brix. Why? Because the soil test they use doesn’t let them see what they are looking at with enough clarity to produce high brix. Once we have the right soil test we are now ready to take the first action in creating the right environment for our garden plants.

Remineralize and Balance the Soil

In college classes soil has been endlessly classified according to its’ proportion of organic mater, sand, silt, and clay while soil typing assigns names to various soils based on its structure, texture, and other parameters.

In the real world of growing high brix plants none of this matters one hoot. What really matters are things like: How much calcium is available for the crop to build healthy cells?

Is calcium in correct ratio with magnesium?

Is there sufficient available phosphates in the soil needed to carry other nutrients into the plant and provide the energy transfer within the plant?

Is there a broad-spectrum of trace minerals available to the plant?

How active is the soil biology?

These are the important issues that must be addressed if we are to achieve high brix.

Calcium

Let’s start with calcium. Calcium is needed in every healthy cell—no life can survive without it. It takes good microbial activity to make calcium available in the soil. At the same time when soil biology is increasing rapidly they will utilize available calcium—even taking it away from what the plants need. High brix foods are higher in calcium than low brix foods. Consequently it is imperative for available calcium to be addressed when embarking on the Path to High Brix.

Phosphates

Let’s move on to phosphates. High brix foods cannot be built with low phosphates—it just doesn’t happen. Dr. Reams said it this way: **“Available phosphates determine the sugar content in plants.”** High Brix foods are not particularly high in phosphates; rather they are significantly higher in calcium, sugars, and

trace minerals. Phosphates are the catalysts that transport nutrients within the plant. Once the nutrients are transported to the correct location the phosphates recycle and again carry more nutrients to the correct location within the plant. Phosphates are the trucker moving nutrients and joining these nutrients to the plant. They are the catalysts of chemical reactions but are not part of the union. **When phosphates are low fewer minerals are transported within a plant—hence lower mineral density.** Phosphates also play a major role as the energy source in the Krebs cycle. This is just a fancy way of saying that phosphates help the plant get more energy out of the sunlight, which leads to a greater production of carbohydrates.

Trace minerals

Trace minerals have received a lot of coverage in the health world lately. They are vital and must be in our diet for good health. A few come to mind: selenium, iodine, cobalt, lithium, and vanadium. They all play a role in our health and we know it. Unfortunately most people just aren't getting enough in their diet because they are not in our foods. Most trace minerals are quite heavy and when foods contain rare earth minerals they weigh more than low brix foods. In other words if two apples of differing weights are the same size the heavier apple will be the most nutritious because it contains more minerals. So how do we get trace minerals into our foods? Obviously the first thing we have to do is apply them to the soil. Since trace minerals are so dense uptake also requires high levels of calcium and phosphates in our plants.

Potassium, nitrogen and sulfur

Other important nutrients to consider when remineralizing soil include potassium, nitrogen, and sulfur. Potassium plays a key role in plant health and yield but its use in recent times has been excessive to the detriment of calcium availability. Nitrogen, like potassium, has also been over used and rarely understood. Sulfur, in the form of sulfates, is indispensable for proper protein formation within plants.

Microbiology

Soil Remineralization is the best time to add microbiology. By combining biology with rock powders, soil amendments, and fertilizers, the soil has greater digestive capacity to make the minerals available for plant uptake. In the High Brix Garden program soil remineralization is accomplished by the annual broadcast of nutrients that is custom formulated according to the results of the soil test.

Achieving Balance

An important consideration in growing high brix is to achieve balance. Excesses and deficiencies are equally debilitating. Deficiencies are, however, much easier to overcome. Many gardeners have so imbalanced their soil with excessive phosphorous and potassium from manure or compost that their soil is virtually ruined for growing high brix. By following the roadmap of the soil test we can avoid the extremes while supplying the missing nutrients. Once we have begun soil remineralization, we need to follow it up with an equally vital step ...

Create and Maintain Soil Energy

Energy in the soil is measured by electrical conductance. The unit of measurement is microSiemens (mS) per centimeter on a conductivity meter. On the soil test electrical conductance is shown as ERGS. This is an acronym, given by Dr. Reams, which stands for Energy Relaxed per Gram per Second.

The governor for electrical conductance in soils is humus. When humus levels are high the Ergs reading is stabilized and does not “climb the highest peak and then plunge to the deepest valley.” When striving for high brix plants on soils with low humus levels it is important to keep the Ergs up. As the growing season progresses plants draw heavily on soil reserves and the Ergs reading drops. In other words the soluble nutrients in the soil are taken up by the plants, which results in a decrease of electrical conductance in soils. Low soil energy causes plant growth to slow way down.

Monthly Nutrient Drench

A monthly nutrient drench increases the soil's electrical conductance and thereby keeps plants growing at optimum rates. This is especially important when it has been raining heavily and the soil solution is already

diluted from the additional water in the soil. The **nutrient drenches** used in the High Brix Garden Program includes **Perk-Up!, WildCat, OND, ErgsBlaster, and DroughtBuster**. Nutrient drenches are used at the rate of 1 quart per 1,000 square feet mixed with 30 gallons of water and applied at the root level of plants. By regularly applying small doses of nutrient drenches we insure a steady growth of plants because soil energy is being maintained. The next step to achieve high brix is to ...

Foliar Feed Regularly

Have you ever used an old-fashioned hand pump to draw out water from the ground? The first thing it needs is some water poured down the shaft followed by vigorous pumping on the handle. It only takes a small amount of water to “prime the pump.”

Foliar feeding is like priming the pump on a growing plant. A prerequisite prior to foliar feeding is to ensure adequate minerals and biology have been added to the soil. When this is coupled with regular nutrient drenches to keep the soil energy at its peak, the plant is now ready to be “primed,” via foliar feeding, for optimum production.

Lets take a closer look at what happens when a foliar spray is applied to plant leaves. A well-made foliar spray is a dilute nutrient solution. If properly constructed it will pas through the leaf surface and increase the photosynthetic capability of the plant. In other words it will allow the plant to take in more energy from the sun. The difficulty is in properly constructing the foliar spray. It is very important to fully understand what effects specific nutrients have on plants. The wrong foliar spray at the wrong time can create a tremendous yield decline. Here is a very important caution when foliar spraying: **Either know what you are doing or work with a consultant who does.**

When a foliar program is properly applied the mineral density within the plant is increased, as are the carbohydrates or plant sugars. This increase of plant sugars and minerals are sent to the roots of the plants, some of which are excreted out of the roots as plant exudates. This increase of plant root exudates, caused by the foliar spray, creates a ready food supply for the bacteria that live symbiotically on the plant roots. Bacteria respond to this increased food supply by making more nutrients in the soil available to the plant. These minerals are picked up by the roots and sent to the aerial part of the plant. This process explains how a foliar spray can increase brix readings.

In addition to increasing nutrient density, a foliar spray is a command to a plant’s physiology. A foliar spray can either push a plant toward vegetative production i.e. growth of leaves, stems, and stalk or it can push a plant toward reproduction i.e. promotion of blossoms, flowers, and fruit set.

Systematic foliar spraying will exhibit a cumulative affect of increasing yield along with mineral density and plant sugars. **In the High Brix Garden program we emphasize a weekly foliar spray of either BrixBlaster or Qualify!** beginning one month after transplanting or emergence. BrixBlaster is used for crops making reproductive growth such as tomatoes, peppers, and sweet corn. Qualify! is used on crops making vegetative growth such as lettuce, kale, and spinach. It can also be used on early growth of crops that will later need BrixBlaster.

The High Brix Garden Program also uses two other foliar sprays: Enthuse and ShowTime.

Enthuse is used on a monthly basis or as needed for plant stress. It contains a broad-spectrum of trace minerals, bio stimulants, and single L-amino acids to help plants cope with stress. ShowTime is used once a month or as needed to enhance the visual appearance of plants and to repel noxious insects. This is a great product to use 1 day before you show your garden off to friends and family and you want it looking its best.

The Path to High Brix Summary

In summary the Path to High Brix is really quite simple—just create the right environment for plants to express their full genetic potential. To do this we must have a vision and a roadmap as we do the following 3 steps:

- **Remineralize and Balance the Soil**
- **Create and Maintain Soil Energy**

- **Foliar Feed Regularly**

Other Important Considerations

Lastly there are several other important considerations when aiming for high brix.

Water

No plant will grow indefinitely without adequate water. If you do everything else right but do not provide your plants with water you still cannot achieve high brix.

Weeds

Weeds need to be kept under control because they compete with the garden plants for moisture and sunlight. A good way to do this is to use a woven vinyl mesh to keep weeds down but still allow movement of water and air.

Tillage

Working the soil has definite benefits and should be part of preparing the land to be used for a high brix garden.

Sunlight

If plants do not have access to adequate light they will not reach their full potential. Light is the basic energy source for all crop growth. Even several cloudy days can significantly reduce brix readings.

Hybrids

As a general rule hybrid genetics do not pick up as much mineral from the soil as do open-pollinated genetics. It is strongly suggested to use open-pollinated genetics when striving for high brix.

Green Manures

Green manures are an important tool used to keep soils healthy, biologically active, and producing carbon dioxide. It is suggested that a high brix garden be divided into 5 parts. Every year 1 part can be used in rotation to grow green manure crops that can be worked back into the soil. Thus every 5 years the garden will have had 1 year of rest and fertility building.

By following the Path To High Brix and keeping in mind other important considerations, one can reasonably expect to produce high brix foods within a 2-3 year time frame.