



General Questions

What does NPK mean? What other nutrients are in your fertilizers?

NPK is a rating system that describes the amount of nitrogen, phosphorus, and potassium in a fertilizer. The NPK nutrient values are expressed as a percentage of the total weight of the product in the package. As an example, our Peace of Mind[®] Tomato & Vegetable fertilizer has an NPK of 7-4-5.

Nitrogen, represented by the first number, is responsible for leafy, green growth and is most important in a plant's early growth stages. Some plants, like tomatoes, are heavy nitrogen feeders and will quickly deplete the soil of nitrogen if more is not added.

Phosphorus, represented by the second number, supports root development, fruit and flowering, and helps the plant fight off disease. It helps plants transfer energy from one part of the plant to another.

Potassium, represented by the third number, helps plants fight off disease and weather extreme heat or cold. It regulates the synthesis of proteins and starches.

The NPK ratings of organic fertilizers tend to be lower, but that does not make them any less powerful. There's more to a good fertilizer than NPK. The organic, biologically active nutrients we use in our organic products have a "functional value" that can't be measured in a test tube. Beneficial microorganisms, pre-digested enzymes, vitamins and amino acids are the key to the power of an organic fertilizer like Big Bloom[™].

Our fertilizers may also include micronutrients such as calcium and magnesium, trace minerals, and beneficial microbes that meet specific nutritional needs.

What is pH and what is the ideal pH for my vegetables and flowers?

Soil pH measures the acidity or alkalinity of the soil. A neutral soil that is neither acid nor alkaline has a pH of 7. Acid soils are considered low pH (below 7) and alkaline soils are classified as high pH (above 7). Some plants thrive in an acid or alkaline soil, but many common garden plants prefer a neutral soil. If a plant is in a soil that is too acid or too alkaline for its particular needs, it will be unable to access the nutrients in the soil. No matter how much you fertilize, the plant won't thrive unless you adjust the soil's pH to meet the needs of the plants.

You can buy a simple home test kit to measure the pH of your soil, and then you can adjust the pH gradually. Acid soils can be neutralized with calcium or agricultural lime, and alkaline soils can be corrected with sulfur or with regular applications of mulch or aged manure. However, it's important to make these adjustments gradually to avoid shocking the plants, and in general we encourage you to choose plants that naturally do well with your soil type.

Our fertilizers and soils are pH-adjusted to meet your plants' needs. For instance, our Peace of Mind® Fertilizer for acid-loving plants like rhododendrons and azaleas is pH-adjusted to meet the needs of flowering shrubs that prefer acid soils.

In general, hydroponic systems work well at a pH of 5.8 – 6.0, and garden soil will support a wide variety of plants with a pH of 6.6 – 6.8.

Why do you use earthworm castings, bat guano, and humic acid in so many of your products?

When we get enthusiastic about a particular ingredient, we can get a little carried away. That's why you'll find three of our favorite ingredients – worm castings, bat guano, and humic acid – in so many of our products.

Earthworm castings are teeming with beneficial microbes that help plants thrive. Scientists have tried to reproduce every nutrient worm castings contain in the laboratory, but they've been unable to create a formula that feeds plants as well as that rich, black, worm poop does. Earthworms – and their castings – help roots access nutrients that are in the soil, and help plants fight off pests and diseases.

Our proprietary source of **bat guano** is naturally high in phosphorus, which helps create dazzling color, scent and taste. It is also packed with beneficial microbes and helps fight off harmful nematode infestations. Bat guano also helps facilitate the transformation of soil nutrients into a form that is easier for plants to absorb, making it the perfect catalyst for our fertilizers and soils.

Humic acid is a natural by-product of organic decomposition. It contains trace amounts of nutrients and it helps hold other nutrients in the soil where plants can use them. It can

improve the humus content in the soil, hold water in the soil, and generally improve soil health for better seed germination and plant growth.

What's the deal with mycorrhizae? How do you tell an endo from an ecto? What's a bacillus?

If you look at the ingredient listing on our products, you'll see that we often put a powerful squadron of beneficial microorganisms in the mix. What's all the fuss about microorganisms? Read on:

Mycorrhizae is a word that describes a symbiotic relationship between a fungus and the roots of a plant. Mycorrhizal fungi attach to plant roots and deliver water and nutrients to them. Tiny strands, called hyphae, can stretch long distances in the soil in search of the nutrients a plant needs. They promote root development, fight off disease, break down fertilizers, and they can even fight off harmful soil borne microbes and encourage the growth of beneficial microbes.

We include **endomycorrhizae**, which form on the insides of plant roots, and **ectomycorrhizae**, which attach to the outside of plant roots, to support a variety of plant life. Under the microscope, mycorrhizae colonies form nodes that look like little rice crispies attached to the roots. The entire surface area of these nodes can absorb and transmit nutrients.

We also include ***Bacillus subtilis***, a beneficial bacteria that controls the growth of a number of plant pathogens, including blight, scab, grey mold, and mildew. It's particularly useful for garden vegetables and fruit trees. Adding a natural disease-fighter like *B. subtilis* to our products helps ensure that your plants will stay healthy, and it also improves the long-term health of your soil.

Can I mix dry and wet fertilizers together?

You can use our dry mix and liquid fertilizers in combination with each other. However, we suggest that you mix dry fertilizers into the soil according to package directions, water well, and wait a few days before applying a liquid fertilizer.

Can I mix FoxFarm fertilizers with products from other companies?

Yes, but for best results, we recommend that you **Keep the Family Together**. Our products are designed to work together and complement one another. If you are using a FoxFarm feeding schedule, we strongly recommend that you not add another company's products to the feeding schedule to avoid the possibility of a nutrient lock-out.

Is it possible to burn plants with FoxFarm fertilizers?

Remember that American Pride® and Marine Cuisine® do include some organic ingredients, but they are not 100% organic fertilizers. Two of our liquid fertilizers, Tiger Bloom® and Grow Big®, are also not 100% organic. Our soluble products, like Open Sesame®, Beastie Bloomz® and Cha Ching®, also contain inorganic ingredients. If you use too much, you can burn your plants. Remember when you use these extra strength, time release fertilizers, less is more.

Don't forget that a powerful plant food needs to be used as directed. Be patient, because a little goes a long way. American Pride® and Marine Cuisine® are meant to be mixed into the soil, so make sure you water thoroughly, pull excess fertilizer away from the base of the plant, and don't allow fertilizer to sit on any external part of the plant.

Also, a helpful hint when feeding: always make sure that you water first, so that the soil is moist, then feed. This will help prevent possible burning with any fertilizer you use.

Organics

Our Products: Organic or Synthetic?

Our Peace of Mind[®] and Happy Frog[®] fertilizers are 100% organic. Our Big Bloom[™] Liquid Fertilizer and all of our soils are also organic. We do offer some fertilizers with mineral-based, time-release ingredients that are not classified as organic. These include American Pride[®] and Marine Cuisine[®] fertilizers, Tiger Bloom[®] and Grow Big[®] liquids, and our soluble products like Cha Ching[®], Beastie Bloomz[®], and Open Sesame[®].

Just What Is An Organic Fertilizer?

Organic fertilizers come directly from nature. For example, our Peace of Mind[®] and Happy Frog[®] fertilizers are made up of ingredients like alfalfa meal, bat guano, and bone meal. Big Bloom[™], our liquid plant food, contains earthworm castings and Norwegian kelp. And when you dig around in our organic potting soil, Ocean Forest[®], you'll find composted forest humus, peat moss, and marine ingredients like crab meal.

When you use organic products in your garden, you are providing the finest ingredients nature has to offer, harvested from all over the globe. These nutrients may be released more slowly, but they'll last longer, too. Because the ingredients are all natural, they provide a rich, well-balanced meal to plants—one that is packed with important, but often overlooked, micronutrients.

Why Use Inorganic Ingredients?

A synthesized or mineral fertilizer can offer just the right support when your plants need it the most. Think of the last time you took vitamin C for a cold. An inorganic fertilizer can offer the same targeted benefit, and it's fast-acting, too. Tiger Bloom[®], Grow Big[®], American Pride[®], and Marine Cuisine[®] all include non-organic ingredients.

Some inorganic fertilizers are simply naturally-occurring minerals that have been treated to make them easier for plants to use. Others may be manufactured in a laboratory. Examples include ammonium sulfate, potassium chloride, and iron sucate. Each of these are specific nutrients designed to address a plant's individual needs.

When it comes to synthetic fertilizers, quality matters. FoxFarm chooses only the finest ingredients for its family of fertilizers that deliver optimal nutrition for each stage of a plant's

growth, and bottom line we never - will never - never going to happen in this lifetime- use cheap fillers or low-grade, industrial chemicals.

Do My Plants Know the Difference Between Organic and Inorganic Fertilizers?

Some people say that the plants cannot tell the difference between an organic and an inorganic fertilizer, but the soil can. Remember, soil is alive. It's teeming with microbes, decaying leaves, tiny insects—all the very life that makes plants grow. Organic fertilizers add food to that rich mix. On the other hand, an inorganic mineral fertilizer can give your garden a boost in the same way that a concentrated multivitamin can give you the extra nutrition you need. What matters most is that everything you feed your garden must be carefully balanced to deliver the nutrition plants need while avoiding the buildup of salts and other toxins.

What's the Big Deal About Salt?

Think about the last time you walked through a forest. It was probably cool and damp, no matter what the weather was like when you left the house. That's because trees and other plants are giant water pumps. Water moves in through the roots, travels through the stems and leaves, and gets released into the air through a remarkable process known as transpiration. A single maple tree can transpire up to 58 gallons of water per hour. Even an ordinary tomato plant transpires 30 gallons during a growing season.

Water, then, is critical to a plant's well-being. Too much salt in the soil can inhibit what we call a plant's "osmotic potential"—its ability to take up water. Just as salty food can make a person thirsty, salty soil can dehydrate a plant. Cheap, poor-quality synthetic fertilizers can create salt build-up in the soil that can cause your garden more harm than good.

I'm worried about using lawn chemicals where my children and pets play. Is it possible to maintain an organic lawn?

Absolutely! In fact, it's easier and more affordable than a chemical lawn program, not to mention better for the environment and for your family. Just follow these easy tips:

- Use Peace of Mind[®] or Happy Frog[®] Premium Lawn according to package directions. For large lawns and repeat applications, it's now available in a convenient 18-pound bag.
- Set the blade on your lawn mower a little higher. This helps the grass develop a deeper, healthier root system, and it conserves water. Leave grass clippings on the lawn to

decompose. They're a great source of nitrogen, the nutrient that supports healthy green growth.

- Aerate the soil in fall to break up thatch. Garden centers sell special tools or spiked sandals for aeration.
- Rake Happy Frog® Soil Conditioner into your lawn once in spring and once in fall, and water well. This will add beneficial organic matter to the soil and keep your lawn healthy.

Hydroponic Questions

Should I follow the directions on the bottle or the feeding schedule?

The directions on the bottle are designed for general use. If you're new to our products and just want to experiment, the directions on the bottle are fine. We have also developed FoxFarm feeding schedules with more precise details for maximum yields. Try one of our feeding schedules for an entire grow cycle and you'll see extraordinary results.

What do I do if my grow cycle is longer than your feeding schedule?

Continue to use the feeding directions for Week 12 until harvest.

Can I mix your liquid and soluble fertilizers with other manufacturer's products?

The FoxFarm family of products are designed with a maximum capacity of nutrient levels. Mixing them with another manufacturer's products risks putting our fertilizers out of healthy ratios, which can create nutrient lock-out. That's why we suggest keeping the FoxFarm family of products together for optimum results. Too many ingredients can spoil the soup, create too much salt build-up, and ultimately your plants will suffer. Our nutrients are created to use together for a complete fertilization program. Using other company's products is simply not necessary. For fantastic results, reference our FoxFarm feeding schedules.

Will Big Bloom™ clog my pump in my hydroponic system?

Big Bloom™ will not clog pumps. Just be sure you shake it well before using, and remember that it needs to be filtered for aeroponic systems.

Using Big Bloom™ and Tiger Bloom® forms a white, salty build up on my rock and rockwool. Should I flush my system?

This residue can be caused by minerals in your community water supply, pH adjustment agents, micronutrient fallout, or organic sources of phosphorous. This material may not burn your plants, but it can stress them and tie up nutrients. We recommend that you change your reservoir every two weeks and flush the system with clean water.

Why do I have to adjust my pH so often with Grow Big[®] and Tiger Bloom[®]?

Both our Grow Big[®] and our Tiger Bloom[®] formulas include a concentrated micronutrient package that is low in pH. The advantage to this is that a low pH enables micronutrients to remain stable without any nutrient fallout. FoxFarm fertilizers are extra-strength, and plants can absorb them easily, but this can cause pH swings. Regular pH adjustments are recommended especially in early growth stages. As the plant ages, you'll notice that the pH will eventually stabilize.

Will I get a chemical taste from the minerals in Grow Big[®] and Tiger Bloom[®]?

Absolutely not. Both formulas are made with high-quality fertilizers, micronutrients, and organic catalysts. You'll never have to sacrifice flavor when you use FoxFarm products.

Why do you have Grow Big[®] in your feeding schedule when my plants are in the flowering cycle?

Grow Big[®] actually helps makes bigger fruit and flowers with sturdier plant structure, so it's not just for early growth stages. It will strengthen the plant's immune system and make it more disease resistant. By delivering some additional nitrogen through early and midterm flower development, you'll see that Grow Big[®] helps maintain healthier foliage without lanky stretching.

When combined with Big Bloom[™] and Tiger Bloom[®], Grow Big[®] will invigorate the root system and improve nutrient uptake and transpiration rate.

Do I need to leach my hydro system when I use FoxFarm fertilizers?

Yes. A regular leaching schedule will reduce the risk of mineral salt build-up. As a result your fertilizers will be used more effectively, and your plants will be healthier overall. In general, organic nutrients contain little or no mineral salts and don't require frequent leaching. However, we recommend leaching the system every two weeks to ensure clean operating conditions.

How often should I change my reservoir when I use FoxFarm fertilizers?

We recommend changing your reservoir every two weeks regardless of your feeding schedule. This will help reduce disease-causing pathogens and keep your system clean.

Do I need to use chlorine free water when I use your products?

No. Chlorinated community water does not adversely affect FoxFarm fertilizers. However, if you expose chlorinated water to the air for several hours, the chlorine will start to volatilize and dissipate. If you're concerned about the chlorine content in your water and you're unable to obtain distilled water, this is a good alternative.

Soil Amendments and Grow Mediums

What is the NPK of your soils?

All of our soil products offer balanced nitrogen, phosphorous, and potassium. We pH adjust them to a neutral range of 6.3 – 6.8. Because of the premium organic ingredients that we use, there is no risk of burning your plants. Our soils are ready to use, right out of the bag. There is no NPK listed on our soil packages because they are not fertilizers, but growing mediums. The real power of our soils lies in the fact that they are teeming with beneficial micro-organisms. Our soils are never steam sterilized, which allows these microorganisms to thrive and convert the organic nutrients into a form the plant can utilize.

Are your soils sterilized?

No, we don't sterilize our soils because that would kill the very beneficial microbes which are critical in making nutrients available to plants. Your soil should be alive, not sterile! Our mixes contain beneficial fungi and micro-organisms that help plants become more disease resistant and grow healthy root systems. FoxFarm soils and fertilizers are specially formulated to build massive microbe populations.

When do I need to add fertilizer to your soils?

Ocean Forest[®] Potting Soil and Original Planting Mix are nutrient-rich blends that won't require any fertilizer at first. However, you may find it easier to blend dry-mix fertilizers like Peace of Mind[®], Happy Frog[®], American Pride[®] and Marine Cuisine[®] into the soil when you plant to make sure that the nutrients get to the root zone. If you're using liquid fertilizers, start feeding in the second week according to package directions.

What is the difference between Ocean Forest[®] Potting Soil and FoxFarm Original Planting Mix?

Ocean Forest[®] is designed for container planting. It contains sea based ingredients and perlite for better aeration and drainage. Our customers tell us that Ocean Forest[®] is the finest potting soil they've ever used, and because container plants depend entirely on the soil they're grown in, that's important.

Our Original Planting Mix is designed for raised beds and in-ground plantings. It retains moisture and is ideal for ornamental landscapes. Both soils are pH adjusted to 6.3 to 6.8 and

are nutrient rich. Each soil has a specific nutrient, humus, earthworm casting and peat moss content that make it ideal for its particular use.

Can I mix Ocean Forest® Potting Soil or Original Planting Mix with native soils?

Ocean Forest® Potting Soil is designed to be used exclusively in containers to deliver the most benefit to plants. Introducing native soil into container plantings can introduce disease-causing pathogens or pests into your container garden. However, if you do add native soil to container plants, mix two parts FoxFarm soil to one part native soil.

Our Original Planting Mix is designed to be mixed with native soil. It helps loosen clay soils, increase organic matter, and it inoculates the planting area with beneficial micro-organisms.

Can I use Original Planting Mix straight out of the bag in containers?

You could, but Ocean Forest® Potting Soil is a better container mix. It creates more aeration at the root zone and is designed to be used full-strength in containers.

What's the difference between the Happy Frog® soils and your other soil products, like Ocean Forest® and Original Planting Mix?

Our Happy Frog® Soil Conditioner comes in a large, economical bale and is ideal for improving poor soils, mulching, and mixing into native soil for new in-ground plantings. Happy Frog® Potting Soil is an affordable alternative for container plantings that contains all the high-quality ingredients you expect from FoxFarm. Each bag is packed with earthworm castings, bat guano, mycorrhizae and humic acid to jump-start the garden.

Ocean Forest® is a premium mix that contains fine marine ingredients like fish, shrimp, crab, and kelp meal in addition to earthworm castings, bat guano, peat moss, and composted forest humus.

When would I use Light Warrior® instead of a potting soil?

Light Warrior® is actually a soilless medium designed just for starting seeds. It's very lightweight and holds water well, which makes it perfect for germination. Be sure to thoroughly dampen Light Warrior® before adding seeds to make sure the water is absorbed. Once seeds germinate, use a continuous feeding program for seedling stage through harvest. For best results, see our feeding schedules.

Use a potting soil instead of Light Warrior® when you are potting up seedlings to a larger container or taking divisions or cuttings that will grow indoors in containers until they are ready to be transplanted into the garden.

Liquid Fertilizers

Is Big Bloom™ only for making flowers bloom?

Big Bloom™ works magic in the flower garden, but that's not all it's good for. It also promotes healthy rooting, speeds healing of stressed or diseased plants, and increases essential oil production for extraordinary fragrance and fabulous flavor.

Why is the NPK rating so low on Big Bloom™ ?

Big Bloom™ is not a mineral salt fertilizer. It's entirely organic. The organic, biologically active nutrients we use in our organic products have a functional value that can't be measured in a test tube. Beneficial microorganisms, pre-digested enzymes, vitamins and amino acids are the key to the power of Big Bloom™. These ingredients don't often register high NPK numbers; however, they do have a profound effect on plant life.

Can I use Big Bloom™ and Tiger Bloom® together?

Yes! Our liquid fertilizer formulas complement one another. Used together, Big Bloom™ and Tiger Bloom® will deliver bigger fruit and flowers with sweeter taste and more aroma. The beneficial microbes on Big Bloom™ will provide optimum nutrient delivery, invigorated root zone health, and accelerated flowering. See our feeding schedules for ideas on how to combine these fertilizers for outstanding results.

How do I mix the liquid fertilizers like Big Bloom™, Tiger Bloom®, and Grow Big® together? What about the solubles, like Cha Ching®, Open Sesame®, and Beastie Bloomz®?

When you mix FoxFarm liquids or our soluble fertilizers together, do the following: Begin with a gallon of water. Add each fertilizer product to the water in the recommended dose. There is no need to use a gallon of water for each kind of fertilizer. Adding the fertilizers individually to the same gallon of water poses no risk. **Do not, however, mix concentrates together in pure form.** Remember not to overfeed, or you could burn your plants.

For best results use the liquid and soluble products together using the above guidelines. Be sure to reference our feeding schedule, because all products should not be used at the same time in order to avoid nutrient lock-out.

Why do you have Grow Big[®] in your feeding schedule when my plants are in the flowering cycle?

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When combined with Big Bloom[™] and Tiger Bloom[®], Grow Big[®] will invigorate the root system and improve nutrient uptake and transpiration rate.

Will Big Bloom[™] clog my pump in my hydroponic system?

Big Bloom[™] will not clog pumps. Just be sure you shake it well before using, and remember that it needs to be filtered for aeroponic systems.

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