CONNECT WITH APTUS

At Aptus Plant Tech USA, we are driven to create a community of the highest level and most successful growers from all over the world. That’s True Plant Science, that’s Aptus.

Accessing our full range of innovative multi-award winning plant nutrient products is now easier than ever due to our exclusive distribution partnership with HYDROFARM. To find your nearest local retailer or for large scale commercial solutions, please visit www.aptus.us/where-to-buy/.

To join our network or to learn more about how Aptus Plant Tech USA can help you achieve your full growing potential, follow the links below for our social media and direct contact information:

**Wholesale Inquiries**
info@aptus.us  
(866) 277-2816 ext 1

**Technical Support**
support@aptus.us  
(866) 277-2816 ext 0

WWW.APTUS.US

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youtube.com/AptusUSA  
instagram.com/Aptus.us
TRUE PLANT SCIENCE
SUCCESS BEGINS WITH EDUCATION

WWW.APTUS.US
1) The right nutrition, in the right amounts, at the right time

2) Respecting the individual stages in plant development

3) Understanding nutrient antagonism

4) Biochemical sequencing of nutrients

We strive for excellence in everything we do. This applies to products, client service and quality of our public image and beliefs. Our three core brand pillars are:

**Education** – Everything we do begins with proper education. We focus on maximizing a plant’s genetic potential through natural, science-based nutrition technologies. Our chief desire is to create a community of growers who understand why they achieve great quality and yields.

**Quality** – We are constantly vigilant of the quality of our ingredients, distribution channels, and staff. Growers can be confident that their plants receive no harmful inputs from Aptus products—only the highest quality inputs suffice.

**Value** – All of our products are designed to maximize the end user’s value experience. The high concentration of our nutrient formulas mean low per use cost and minimal waste. Growers typically achieve better quality and higher yields for what they put in utilizing Aptus products.

The Aptus Approach is to provide quality uniform products and education that enhance growers’ production and cultivation. The Aptus Approach is based on a preventive methodology for host (plant), pest, and environmental problems. Simply put, to avoid problems before they become problems.

The Aptus Approach is the better way as it fully respects natural plant mechanisms and is a guideline to bring healthy, robust production to your garden. Our targeted feeding regimens will bring out the very best in your plants.
The way plants assimilate nutrients, the interactions between nutrients, and the physical factors affecting the availability of nutrients are widely misunderstood.

Many fertilizer nutritional compounds (especially nitrogen, phosphorus, and potassium salts) and control (pesticides, fungicides and insecticides) are released in excess into the plant’s environment. Results are expected simply because all the proper chemicals are present. In reality, the sequence of adding the ingredients, the amounts, and when are crucial factors.

Many times invasions from pests and fungal diseases stem from improper fertilization practices. Excess chemical fertilizers and harsh pesticides contribute to factors that significantly decrease micro-life populations in the grow medium. The result of these practices leaves your planting medium in a poor state. With depleted micro-life populations coupled with excess salt buildup in the planting medium, the plant is more prone to soil-born pathogens and the display of mineral deficiencies due to it being unable to utilize the nutrition present.

To fix these problems, better understanding of nutrient uptake sequencing, nutrient interactions, and bioavailability of nutrients is essential.

"Insects and disease are the symptoms of a failing crop, not the cause of it. It’s not the overpowering invader we must fear but the weakened condition of the victim." – Dr. William A. Abrecht
Nature desires balance and moderation. Imbalanced feeding from fertilizer "cocktail" recipes creates unknown problems in the growing medium. Feed at the right time, in the right amount, in the right form.

STAGES IN PLANT DEVELOPMENT

Plants have different and distinct development stages. The primary stages are rooting, vegetative, and flowering. These can be broken into more specific stages: rooting, growing, shooting, blooming, fruit or flower development and maturation. Each stage requires a specific balance of nutrition and mineral uptake for maximum production.

Many growers supplement with growth ‘boosters’ at the wrong developmental stage when the plant cannot fully utilize the nutrient. These unused minerals accumulate in the growing medium interacting with micro-life and other minerals, many times contributing to deficiencies and lockout.

Every plant is slightly different as well. The nutritional needs of a leafy green plant like spinach is far different than an apple tree. Often growers look for a ‘silver bullet’ product that will solve all their problems. In nature, there IS NO SILVER BULLET.

A COMMON MISTAKE THAT CAN HURT YIELDS

Many growers add a phosphorus and potassium (P/K) booster during all or most of the bloom phase. This can create significant problems with nutrient uptake that decrease yield and quality. Most plants only need lesser amounts of potassium during growth and early bloom. Larger amounts of potassium needed during the ripening and maturation stages (late bloom).

Excess unused potassium in the growing medium can ‘push’ away nitrogen, calcium, and magnesium which are some of the most common deficiencies. Growers can avoid these issues by utilizing Aptus Peakboost and Finaleboost to individually add phosphorus and potassium at specific developmental stages in a plant’s lifecycle.
If you break the beginning of a sequence, the rest will be broken. Fix the beginning and the rest falls into place.

Most nutrients usually work together. But this is not always the case...

Understanding antagonistic action of nutrients helps to more accurately diagnose and prevent problems.

**NUTRIENT ANTAGONISM**

It is very important to understand how certain nutrients react with each other. If you don’t understand these interactions, you may over-supplement with a specific mineral in attempt to correct a deficiency only to further the ill-effects.

Not all deficiencies are caused by a lack of nutrients! For example, calcium deficiency may be diagnosed due to low calcium levels OR because there are high levels of nitrates (NO₃). Nitrates ‘push’ calcium away and can block absorption.

As calcium is crucial to plant development, excessive amounts of synthetic nitrates should be avoided. Many modern synthetic fertilizers contain primarily nitrates or other salt-based forms of nitrogen. In excess, synthetic nitrates are the most common cause of tip burn, mineral antagonism, and weak plant growth (more on that later).

The antagonistic action of nutrients shows how overdoses of certain elements can lock out or displace another element. This list based on the theory of mineral antagonization shows which elements potentially react. Understanding nutrient antagonism makes diagnosing deficiencies and toxicity a more precise and exacting process.

<table>
<thead>
<tr>
<th>ELEMENT IN EXCESS</th>
<th>NUTRIENTS USUALLY AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>Potassium, Calcium</td>
</tr>
<tr>
<td>Potassium</td>
<td>Nitrogen, Calcium, Magnesium</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>Zinc, Iron, Copper</td>
</tr>
<tr>
<td>Calcium</td>
<td>Boron, Magnesium, Phosphorus</td>
</tr>
<tr>
<td>Magnesium</td>
<td>Calcium, Potassium</td>
</tr>
<tr>
<td>Iron</td>
<td>Manganese</td>
</tr>
<tr>
<td>Manganese</td>
<td>Iron, Molybdenium, Magnesium</td>
</tr>
<tr>
<td>Copper</td>
<td>Molybdenium, Iron, Manganese, Zinc</td>
</tr>
<tr>
<td>Zinc</td>
<td>Iron, Manganese</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>Copper, Iron</td>
</tr>
<tr>
<td>Sodium</td>
<td>Potassium, Calcium, Magnesium</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Phosphorus</td>
</tr>
<tr>
<td>Ammonium Ion</td>
<td>Calcium, Copper</td>
</tr>
<tr>
<td>Sulfur</td>
<td>Molybdenum</td>
</tr>
</tbody>
</table>

Use this chart as a reference guide to find the true problem when your plants show signs of mineral deficiencies or toxicities.

If phosphorus is in excess, it unbalances the nutrition limiting zinc, iron and copper. Optimum nutrition is achieved by balancing the nutrients in the medium.

Problems of mineral excess arise often when growers attempt to create their own ‘custom’ nutrient recipe from multiple product lines from different companies. Unless a grower is highly scientific, this practice results in overdose and deficiency of specific nutrients.

The plants get into wild swings of deficiencies and lockout that result in decreased yield and quality. By using a balanced, high-quality, customizable nutrition system, you can maximize the growth potential of your plants...
BIOCHEMICAL SEQUENCING

It is important to understand that plants have a defined biological sequence of nutrient uptake. This starts with boron, which stimulates the root system to leach sugars into the medium. These sugars feed the microbes, which transform silicates (Si) into bioavailable silicic acid through a process called silicification. Silicic acid precedes calcium uptake, followed by nitrogen, magnesium, phosphorus, carbon, and potassium.

These elements should be present in an available form to plants. If one nutrient in this sequence is not available (or less available), the uptake of all other elements in the sequence is more difficult or missed. It is very important to respect this sequence in order to avoid mineral deficiencies and/or nutrient uptake problems.

APTUS nutrients are developed to work with nature, and it follows the biochemical sequence of plant nutrition as proposed by Mr Hugh Lovell. We believe the only way to optimize our plants is to work with nature and follow its laws. Plants will naturally follow this sequence, so it’s in our best interest to familiarize ourselves with it.

A common nutrient problem in indoor gardening is calcium deficiency. This is because calcium is immobile, meaning it doesn’t easily move into and throughout plant tissue. Calcium is pushed away or locked up by other nutrients that are often added in large quantities, such as nitrogen (as Nitrates) and potassium.

Looking at the chart above we can see that calcium is near the beginning of the sequence. If calcium uptake is limited in any way then all other nutrients uptake and availability will be affected. There are many other problems with calcium deficiency that will be discussed later.

Some of the best ways to increase Calcium uptake and utilization is to use chelation by way of amino acids, reduce excess nitrates in your fertilizer mix, and be careful not to overwater your plants.
Silicic acid is a naturally occurring compound found in healthy soil environments. While silicon is the second most abundant mineral in the earth’s crust, it’s not readily absorbed into biologic tissues in common forms (potassium silicate, calcium silicate, silica, etc.). Silicon is often found in larger molecules that cannot penetrate cell walls.

The most common agriculture input forms of silicon are potassium silicate ($K_2SiO_3$) and calcium silicate ($Ca_2SiO_4$). Much of the naturally occurring silicon is in the form of silica ($SiO_2$). These forms when unprocessed are much less available to plants versus silicic acid.

Before the silicon can be taken up through the roots and into the plant tissue, it must first be converted by microbial and weathering processes into silicic acid where it’s then transported into the plant. This natural process of silicification is slow and makes available silica supplementation crucial.

For indoor applications, speed and availability are critical. Many times crops are grown and harvested from a matter of weeks to a few months. The growing medium is frequently discarded or sterilized before reuse not allowing the formation of established, healthy microbe life nor an adequate accumulation of silicic acid in the soil.

### Available Silica + Micro-Elements

**Nutritional**

**Increased and Balanced Uptake of Nutrients**

Thicker cell walls formed from using Aptus Fasilitor result in less transpiration or loss of water by your plants. As a result, the plants are able to take up and utilize more optimal levels of nutrients.

**Mechanical**

**Builds Structure and Resistance against Stress**

Deposits silicon directly into the outer layer of the cell creating a rigid barrier and more solid structure. Note the borer larvae with worn down pinisers from our sugar cane trial in South Africa.

**Immunity**

**Stimulates Plant’s Immune System**

Under the microscope, it can be seen that plants will utilize available silica by transporting it to sites of attack by fungal spores. Only readily available silicic acid has produced the pictured results.
Amino acids are the building blocks of all life on earth. They participate in many of the critical functions of biological systems. Without amino acids, life would never have formed and would cease to exist. So, they are pretty important. We’ll look at what specific role amino acids play in plant development but first let’s look at what amino acids are.

There are around 500 known amino acids that are categorized in many different ways. For our purposes we’ll keep it simple.

The most important concept of amino acids to understand is the difference between L-amino acids (left-handed) and D-amino acids (right-handed). This topic gets a bit technical and science still has a lot of unanswered questions. What we do know is that nature (life) has decided that the only type of amino acids it will (and can) use is the ‘left-handed’ variety, or L-amino acids (with very rare exceptions).

In natural soil environments with healthy and thriving ecosystems, plants obtain L-amino acids from decaying organic matter and, when necessary, synthesize what is needed. Unfortunately modern agriculture has destroyed healthy soil micro-life so there may not be sufficient levels of naturally occurring L-amino acids. If plants must expend energy on amino acid production, they are not spending energy on more desirable quality- and yield-enhancing functions.

Before L-amino acids can perform their essential functions within plants, they must be bioavailable. Simply applying L-amino acids to the plant is not enough. In order to be absorbed either through the roots or leaf tissue, L-amino acids must be in free form or as peptides. If they are combined into long-chains, the molecules are too big to penetrate the plant tissue.

L-amino acids at work makes minerals more available to plants by preventing interaction with other mineral ions present in the feeding solution. This practice leads to lower dilution ratios and more efficient product use. L-amino acids occur naturally from the digested proteins used to make APTUS BASEBOOST.
ABOUT FASILITOR
As the flagship of the Aptus Premium Series product lineup, Fasilitor combines GMP certified manufacturing and industry leading concentration into a pure, fast acting, and exclusive formula.

Fasilitor provides plant-available silica to as needed across the vegetative, flowering, and fruiting phases of plant growth. Supplementing with plant available silica such as Aptus Fasilitor helps to grow thicker cell walls within your plants. Benefits include promoting upright stature, solid stems & branches, and resistance to high temperature environments by reducing transpiration or loss of water due to evaporation.

WHY USE FASILITOR?
- Industry leading concentration of just 0.5ml per gallon or 3ml per 5 gallons of water
- Resistance against abiotic (environmental: temperature, wind, drought).
- Reduces transpiration (loss of moisture from the leaves) by forming thick cell walls which are made primarily of silica and calcium.

FASILITOR EDUCATION
Silica (Si) from potassium silicate is plant-available silica that’s easily translocated to needed areas within the plant including signs of insect attack, cell wall, and tissue formation. In addition, Fasilitor’s exclusive formula works to provide Boron (B) throughout the plant’s tissue which is the precursor for cell formation, movement of plant energy (sugars), and setting flowers.

The third and final trace mineral in Fasilitor is molybdenum (Mb). Molybdenum is an essential component of enzymatic processes within the plant that convert nitrates into compounds used to manufacture amino acids, convert inorganic phosphorus into organic forms within the plant, and is also crucial to bacteria that fix atmospheric nitrogen into your soil.
HOW TO USE FASILITOR

Add Fasilitor to the water in your reservoir first before any other products. It is important to thoroughly mix Fasilitor with plain water that contains zero additives for the most amounts of available silica to be present for your plants. Add remaining additives and NPK nutrients after Fasilitor.

DOSAGE INSTRUCTIONS

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular feeding</td>
<td>3ml per 5 gallons or 0.5ml per gallon</td>
</tr>
<tr>
<td>Anti-Stretch Flowering</td>
<td>1ml per gallon</td>
</tr>
<tr>
<td>Foliar spray</td>
<td>2ml per gallon</td>
</tr>
</tbody>
</table>

FASILITOR KEY INGREDIENTS

- Potassium Silicate – Strengthens cell walls, increases resistance to draught, promotes upright stature of plant growth
- Boron – Precursor to cell wall formation, translocator of plant energy (sugars), beneficial agent for flower and fruit formation
- Molybdenum – Creator of crucial beneficial plant enzymes, synthesizer of organic phosphorous, and crucial to atmospheric nitrogen fixing bacteria in the soil

TIPS FROM THE FIELD

- Do not contaminate Fasilitor with measuring instruments. Pour Fasilitor into container of choice for measuring.
- Always make sure to add Aptus Fasilitor to your water before everything else including cal-mag supplements.
- Combine with Aptus Bloomboost for a great bloom phase foliar spray for the first 2-3 weeks of flower.
- Aptus Fasilitor is great in hydroponics. Use as a foliar through weeks 2-3 in flower to get the maximum benefits of silica in your recirculating systems.

AVAILABLE SIZES

100ml, 250 ml, 500 ml, 1 liter, 5 liter, 20 liter
ABOUT STARTBOOST

Startboost along with Fasilitor is a foundation product of the Aptus Premium Collection range used throughout the seed starting, cloning, vegetative, and early flowering stages of growth.

Aptus Plant Tech scours the world for the finest quality raw ingredients to make up our Premium Collection range of products. The leonardite used to make Startboost is only of the highest quality available. Leonardite is a mined natural source of humic material found within the earth.

WHY USE STARTBOOST?

- Economical and easy to use. Use Startboost at 2ml per gallon through vegetative phase of growth. No complicated ratios here.
- Natural chelator of materials present in the planting medium

STARTBOOST EDUCATION

Humic substances have a positive effect on plant physiology by influencing nutrient uptake and root system interactions with the planting medium.

Through interactions with various compounds in the soil, countless complexes are formed from organic and mineral components. From the formation of these complexes, compounds may dissolve, mobilize, and transport products throughout the medium. It is these sets of complex-interactions with humic substances that provide soil health, structure, and ultimately benefit to the plant growing above.
HOW TO USE STARTBOOST

Add StartBoost to your reservoir every feeding during the entire vegetative phase and into the first week of flowering to assist with a healthy transition to the bloom cycle.

DOSAGE INSTRUCTIONS

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular feeding</td>
<td>2ml per gallon</td>
</tr>
<tr>
<td>Seedlings/clones (rooted)</td>
<td>8ml per gallon</td>
</tr>
<tr>
<td>Transplant root dip</td>
<td>10ml per Litre (1:100)</td>
</tr>
</tbody>
</table>

STARTBOOST KEY INGREDIENTS

- Humic Acid – Building block of soil structure and health, natural chelator of various elements in the planting medium

TIPS FROM THE FIELD

- Begin feeding with StartBoost (plus FaSilitor) as soon as your plants develop initial roots and leaves. Continue feeding throughout the entire vegetative phase.
- Use at 8ml per gallon to pre-soak cloning plugs or starter plant growth mediums.
- During transplanting, dip the roots of the plants directly in a 1:100 mixture (10 ml per liter).
- You can go up to 4ml per gallon or 20ml per 5 gallons during the vegetative phase for an enhanced effect safely.

AVAILABLE SIZES

100ml, 250 ml, 500 ml, 1 liter, 5 liter, 20 liter
ABOUT BLOOMBOOST

Aptus Bloomboost is an additive used throughout the entirety of the fruiting and flowering periods of a plants lifespan. Bloomboost contains a blend of plant available elements including potassium, sulfur, and boron that work together to increase fruit/flower size, fibre mass and quality. Aptus has designed this product to provide these three elements in precise amounts at desired times during the plants’ reproductive cycles to maximise harvests.

Bloomboost is an excellent all-in-one health additive for your plants during their reproductive phase of growth. Using Bloomboost throughout the fruiting and flowering phases of growth allows for increased flower setting, larger harvests, and even heightened aroma in some species of plants.

WHY USE BLOOMBOOST?

- One product contains multiple minerals beneficial for fruit & flower development with a low dilution ratio
- Contains elements crucial to the formation of certain oils and volatile compounds within plants.
- Assists in the development of a healthy reproductive system within the plant. This includes healthy flower setting as well as pollen and seed formation for breeders.

BLOOMBOOST EDUCATION

Potassium provided by Bloomboost works to form healthy, fibrous fruits and flowers. The underlying amount of slight but constant potassium is designed by Aptus to provide required potassium but at levels to not cause antagonism, the pushing away of other required minerals.

Sulfur is a crucial component in the formation of proteins, certain plant hormones, and aids in the formation of certain oils and volatile compounds. The supplemental Sulfur works to bring out the aromatic characteristics of your plants early to develop ever higher by harvest time.

The last element in Bloomboost, boron works to preserve the integrity of various membranes within the plant allowing for increased structural integrity during flower development.
HOW TO USE BLOOMBOOST

Add BloomBoost to your reservoir every feeding from the second week of the flowering stage the end.

BloomBoost is effective used through harvest without negative affect on quality and flavor.

DOSAGE INSTRUCTIONS

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular feeding</td>
<td>1-2ml per gallon</td>
</tr>
</tbody>
</table>

BLOOMBOOST KEY INGREDIENTS

- Boron – Agent allowing for healthy cell wall synthesis and cell division
- Sulfur – Component of essential amino acids, aromatic characteristic promotant
- Potassium – Thickener of fruit and flower structures

TIPS FROM THE FIELD

- Bloomboost may be used at a higher dilution ratio (up to 2ml per gallon) for an increased result in quality. Be sure your PPM and base nutrient (bloom fertiliser) mixture will allow for increased dosage.

- Combine with Aptus Fasilitor at 2ml per gallon for a foliar spray for the first 2-3 weeks of the flowering phase of growth. If you do foliar, make sure to mix both Fasilitor and Bloomboost at 2ml per gallon and pH to a safe range.

AVAILABLE SIZES

100ml, 250 ml, 500 ml, 1 liter, 5 liter, 20 liter
Peakboost along with its sibling product Finaleboost make up the Aptus flower development and bulking solution. Perhaps the most noticeable implementation of the Third Pillar of Aptus Philosophy; Mineral Antagonism, Peakboost moves the vast majority of phosphorus used during the bloom cycle solely into one product. With this formulation, Aptus has allowed for absolute control of heightened phosphorus application throughout the specific phases of a plant’s growth cycle.

The exacting application of phosphorus allows for optimal health by removing the negative antagonistic effects of cheap bulk products containing high amounts of both phosphorous and potassium.

With Aptus Peakboost, you will see the difference in your final harvest by having optimal Phosphorus supplementation with the elements usually antagonized away including: nitrogen, calcium, and magnesium.

**WHY USE PEAKBOOST?**

- Provides high levels of phosphorus during the first part of the flowering stage of growth
- Minimises antagonism and lockout of phosphorus with other nutrients
- Powerful stimulating effect on the initial blooming process
- 100% water soluble and leaves no residue

**PEAKBOOST EDUCATION**

Aptus Peakboost and Finaleboost are products implemented based on our interpretations of the teachings of nutrient antagonism by Dr. Albrecht. By separating the phosphorus and potassium components of the Aptus Premium Collection range of products, you can individually supplement the macroelements (P) and (K) according to what base fertilizer you use or the preferences of your plant genetics.
HOW TO USE PEAKBOOST

Add PeakBoost to your reservoir every feeding from the second week to the fourth week of the flowering stage. It’s okay to extend or shorten the usage of PeakBoost based upon the total flowering time of your specific plant or by the preferences of differing strains of the plant species you’re cultivating.

When mixing with any calcium supplements (like MassBoost), be sure to allow one to mix in the solution before adding the other to minimise possible lockout.

**DOSAGE INSTRUCTIONS**

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular feeding</td>
<td>0.5-2ml per gallon</td>
</tr>
<tr>
<td>Foliar spray (maintenance)</td>
<td>9ml per gallon</td>
</tr>
<tr>
<td>Foliar spray (repair)</td>
<td>18ml per gallon</td>
</tr>
</tbody>
</table>

**PEAKBOOST KEY INGREDIENTS**

- Urea - Efficient source of plant-required nitrogen during the bloom phase
- Phosphorus - Crucial to the capturing of sunlight into usable forms of energy within the plant

**TIPS FROM THE FIELD**

- Gradually increase PeakBoost dosage throughout the bloom cycle until your fruits/flowers are well set and ready for bulking. It is ok to start Finaleboost transition later on plants with longer maturation periods.

**AVAILABLE SIZES**

250 ml, 500 ml, 1 liter, 5 liter, 20 liter
ABOUT FINALEBOOST
Finaleboost along with its sibling product Peakboost make up the Aptus flower development and bulking solution. Perhaps the most noticeable implementation of the Third Pillar of Aptus Philosophy: Mineral Antagonism, Finaleboost moves the vast majority of potassium used during the bloom cycle solely into one product. With this formulation, Aptus has allowed for absolute control of heightened potassium application throughout the specific phases of a plant’s growth cycle.

The exacting application of potassium allows for optimal health by removing the negative antagonistic effects of cheap bulk products containing high amounts of both phosphorous and potassium.

With Aptus Finaleboost, you will see the difference in your final harvest by having optimal potassium supplementation with the elements usually antagonized away including: zinc, iron and copper.

WHY USE FINALEBOOST?
- Stimulates fruit and bud maturation
- Firmer and more nutritious end product
- Improves crop quality by increasing production of sugars and amino acids
- Minimises antagonism and lockout of potassium with other nutrients
- Powerful stimulating effect on the blooming and finishing process
- 100% water soluble leaving no residue

FINALEBOOST EDUCATION
Aptus Peakboost and Finaleboost are products implemented based on our interpretations of the teachings of nutrient antagonism by Dr. Albrecht. By separating the phosphorus and potassium components of the Aptus Premium Collection range of products, you can individually supplement the macroelements (P) and (K) according to what base fertilizer you use or the preferences of your plant genetics.
HOW TO USE FINALEBOOST

At minimum, add FinaleBoost to your reservoir weeks four through eight of the flowering stage. It’s okay to extend or shorten the usage of Finaleboost based upon the total flowering time of your specific plant or by the preferences of differing strains of the plant species you’re cultivating.

DOSAGE INSTRUCTIONS

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular feeding</td>
<td>1-4ml per 3 gallon</td>
</tr>
<tr>
<td>Foliar spray (maintenance)</td>
<td>9ml per gallon</td>
</tr>
<tr>
<td>Foliar spray (repair)</td>
<td>18ml per gallon</td>
</tr>
</tbody>
</table>

FINALEBOOST KEY INGREDIENTS

- Potassium – Regulator of plant perspiration, enzyme activator, promotes formation of mature, dense fruits & flowers
- Sulfur – Component of essential amino acids, aromatic characteristic promotant in some plant species

TIPS FROM THE FIELD

- Gradually increase Finaleboost dosage throughout the bloom cycle from start, while still using PeakBoost during week 4. As Finaleboost increases, PeakBoost stops being used.
- With longer flowering genetics, you may need to use Peakboost 1-3 weeks longer before fully transitioning to Finaleboost. This should be considered in plants needing to flower for 10-12+ weeks.
- You don’t want to spray sulfur on your finished pristine flowers. It’s not the aroma you’re after. Trust us on this one.

AVAILABLE SIZES

250 ml, 500 ml, 1 liter, 5 liter, 20 liter
ABOUT MASSBOOST

Massboost prevents calcium (Ca) and magnesium (Mg) deficiencies while stimulating powerful fruit set and development.

Calcium and magnesium are in truth just as important as the macro elements nitrogen (N), phosphorus (P), and potassium (K) you see on the front of every fertilizer label. Base grow and bloom NPK fertilizers only include small amounts of Ca and Mg which in high intensity growing environments can quickly be stripped out of the feeding solution by your plants. Aptus Massboost fixes this problem of under-supply by providing large amounts of plant available Ca and Mg.

WHY USE MASSBOOST?

- Highly available, 100% water soluble and leaves no residue
- Provides Ca which improves firmness and structure of fruits
- Provides Mg which is the central element to chlorophyll allowing photosynthesis to occur
- Highly efficient. Use only up to 2ml per gallon

MASSBOOST EDUCATION

Calcium along with the Si in Fasilitor largely comprises the structure of the plant cell wall which gives the plant its physical shape. An uninterrupted supply of Ca contributes to healthy flowers, stout steams, leaves, and continued formation of healthy plant tissue. Calcium’s impact on plant health can be seen by preventing blossom end rot, eliminating dropped flowering sites, and a lack of necrosis on plant tissue.

As the plants undergo cell division forming new tissue, the increased supply of magnesium allows for continued production of chlorophyll in the leaves. Mg is the central element to chlorophyll which is crucial to the process of photosynthesis enabling the plant to turn sunlight into usable forms of energy.
HOW TO USE MASSBOOST

Add MassBoost to your reservoir during weeks 3, 5, and 7 of the flowering state. Week 8 is optional. When mixing with any phosphorus supplements (PeakBoost or mineral fertilisers), be sure to allow one to mix into solution before adding the other.

DOSAGE INSTRUCTIONS

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular feeding (vegetative)*</td>
<td>1ml per gallon</td>
</tr>
<tr>
<td>Regular feeding (flowering)</td>
<td>1-2ml per gallon</td>
</tr>
<tr>
<td>Foliar spray (maintenance / repair)</td>
<td>10ml per gallon</td>
</tr>
</tbody>
</table>

* Take care when using MassBoost on young plants because the nitrates (along with other nitrates from your base fertiliser) can cause tip burn and stress. If this is the case use a CaMg supplement without nitrates to buffer RO water.

MASSBOOST KEY INGREDIENTS

- Calcium (Ca) – Integral Structural Element to Plant Cells
- Magnesium (Mg) – Central Element in the Formation of Chlorophyll

TIPS FROM THE FIELD

- Typically MassBoost is used during weeks 3, 5, 7, and optionally 8 in flowering. You can also use it in veg at 1ml per gallon.
- MassBoost contains nitrates that can sometimes cause tip burn if fed at too high of rates on young or weak plants. If you use MassBoost during early growth, start with a lower dosage and work up to full dosage based on your plant’s response.
- MassBoost is also great as a foliar for outdoor plants. Give your flowering outdoor plants the calcium they need by foliar spraying at 10ml per gallon up through weeks 3-4 of flowering.

AVAILABLE SIZES

250 ml, 500 ml, 1 liter, 5 liter
Modern cultivation methods utilize increasingly large amounts of fertilizer salts in confined volumes of planting medium or soil. The effects of over fertilization are many but most often are made obvious in modern cultivation methods by displaying halted development, mineral deficiencies, and leaf tip burn.

Ecozen allows you as a grower to better manage the performance of your planting medium by reducing salt buildup. By containing minimal amounts of nitrogen and potassium, flushing your medium with Ecozen helps clear out excess junk salts while leaving small amounts of nitrogen and potassium which are necessary to plant health.

**WHY USE ECOZEN?**

- Watering with just Ecozen and water reduces salt buildup in the planting medium
- Flush the majority of excess fertilizer elements out while leaving small amounts of necessary nitrogen and potassium
- Regular (weekly) use can reduce the amount of time required to flush your plants at the end of their flowering cycle

**ECOZEN EDUCATION**

In modern indoor cultivation environments, salt based fertilizers are used seemingly in ever increasing amounts in mediums that have a relatively small, defined volume. This combination results in the buildup of salt in the growing medium that prevents required soil processes from functioning optimally.

With excess salt present, the plants’ roots become less efficient at absorbing necessary nutrients. Although these minerals might be present with the large excesses of fertilizer salts present, the action of water moving these specific needed elements from a source of higher concentration (planting medium) to an area of lower concentration (plant) becomes unreliable resulting in what you see as mineral deficiencies. In the age of modern liquid fertilizers, it is extremely rare to have a true singular micro of macro-element deficiency.
HOW TO USE ECOZEN
Add Ecozen to your nutrient mixture every feeding during all stages of plant growth to keep the medium clean and healthy. Ecozen may also be applied at double strength once per week if desired.

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>With every feeding</td>
<td>1ml per gallon</td>
</tr>
<tr>
<td>Weekly flush with only water</td>
<td>2ml per gallon</td>
</tr>
</tbody>
</table>

ECOZEN KEY INGREDIENTS
- Potassium - Activates enzyme catalysts involved with plant growth
- Nitrogen - Vital component of amino acids, building blocks of plant proteins

TIPS FROM THE FIELD
- As with the rest of Aptus products, we recommend using Ecozen as soon as it is mixed for maximum effect. Over time, nutrients may destabilize and not give you the desired result.
- You can use Ecozen in potting soil, potting mix, coco, rockwool, clay pebbles, and most other popular growing mediums!
- A little goes a long way! You may be able to get by with a smaller bottle than competing products.

AVAILABLE SIZES
100ml, 250 ml, 500 ml, 1 liter, 5 liter, 20 liter
**About BaseBoost**

BaseBoost is a time-release pellet fertilizer that provides complete nutrition for plant development for up to 3 months. Each application lasts 2-3 months and can be reapplied for longer cycles. It is specially formulated with the macro and micro nutrients needed for healthy, robust plant growth.

BaseBoost is effective standalone as a complete fertilizer for the grower with little time or trying to simplify the work of growing. For advanced growers looking to maximize yields, BaseBoost is an effective replacement for a typical base NPK nutrient in combination with the rest of the Premium Collection boosters.

You can apply BaseBoost during transplanting by mixing into the growing medium or as a top dressing to extend the time Baseboost supplies your plants with nutrition. (especially outdoor applications).

**Why Use BaseBoost?**

- Simple and complete plant nutrition – nothing else but water is required for a 3 month cycle, vegetative and flowering
- Complete formulation reduces fertilizer input and work
- Easy to use – application is once every 1 to 3 months simply by mixing in the pellets or top dressing
- Perfect for remote locations and long lasting crop cycles
- Provides nitrogen processed from plant material
- Helps condition soil, improves plant development, and stimulates micro-life
- Long shelf-life if properly stored

**BaseBoost Education**

Nitrogen from digested plant matter promotes robust vegetative growth and photosynthesis with a lowered risk of burn versus fertilizers that are entirely mineral based. Complete time-released nutrition feeds plants as they require the nutrients rather than force feeding with chemical salts.
**HOW TO USE BASEBOOST**

Application is incredibly simple. You can either mix into your soil or planting hole prior to transplanting or topdress and water in. Apply with water only or add boosters for greater effect. BaseBoost is effective and safe even for young plants. BaseBoost can take a week or two to fully kick in so it’s a good idea to use in conjunction with Aptus boosters.

### DOSAGE INSTRUCTIONS

<table>
<thead>
<tr>
<th>Crop/container size</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short crop cycle (1-3 months)</td>
<td>100 g per plant, 5-7 gallon pot</td>
</tr>
<tr>
<td>Long crop cycle (3-6 months)</td>
<td>200-300 g per plant, 5-7 gallon pot</td>
</tr>
<tr>
<td>Larger containers</td>
<td>100-150 g per 10 gal growing media</td>
</tr>
</tbody>
</table>

**BASEBOOST KEY INGREDIENTS**

- Primary macro-nutrients: nitrogen (N), phosphorus (P), potassium (K)
- Secondary macro-nutrients: Calcium (Ca), Magnesium (Mg) and Sulfur (S)
- Micro-nutrients such as, Boron (B), Iron (Fe), Manganese (Mn), Zinc (Zn)

**TIPS FROM THE FIELD**

- Use more pellets for sandy soil (200 grams per plant) than for clay or heavy soil (100 grams per plant), per cycle (2-3 months).
- If your cycle is longer than 3 months, apply a second treatment as topdressing and water from the top, or mix pellets into the top couple inches of soil.
- In case of deficiencies, simply add more pellets as topdressing and water from the top. The pellets will be solubilized and the nutrients assimilated by the plant.
- Mix into the ground during soil preparation or simply place at the bottom of each planting hole.
- For better results outdoors, use with FaSilitor, StartBoost, Massboost, Bloomboost, and NutriSpray.
- For better effect indoors, use with all Aptus Premium Collection Boosters

**AVAILABLE SIZES**

1kg, 10kg, bulk (selected stores)
ABOUT NUTRISPRAY

NutriSpray is a micro-element foliar supplement. It is used to provide essential micro-elements during the vegetative and flowering phases of the growing cycle. NutriSpray can be used for general nutrition or for deficiency correction.

Many outdoor growers use NutriSpray through the vegetative and flowering cycles to correct common deficiencies in outdoor growing environments. NutriSpray is needed infrequently, which makes its application simple and cost effective.

While some foliar sprays are designed to show an immediate change like ‘greening up’ of the leaves, NutriSpray is intended more as a micro-element prevention and corrective solution. If your plants are already healthy, you may not see dramatic physical changes, but NutriSpray is still working to prevent—think vitamins versus drugs.

WHY USE NUTRISPRAY?

- Leaves an active layer containing micro-elements on leaf surface
- Layer fully degrades within days
- Fast-acting nutrient absorption
- Quickly treat common deficiencies

NUTRISPRAY EDUCATION

Some micro-elements don’t move easily through the plant transport systems, are not readily available long-term in soil, or cannot support supply in high intensity planting environments. Aptus Nutrispray provides an available source of critically important micro-elements to the plant that quickly corrects deficiencies in sulfur (S), manganese (Mn), zinc (Zn), iron (Fe), and molybdenum (Mo).
HOW TO USE NUTRISPRAY

Mix NutriSpray alone in clean water. No additional surfactant is needed. Never use straight and always dilute with water. Spray lightly on leaf surface (top and bottom). Best to spray at night, early morning, or with lights off. It’s a good idea to treat a small area first to make sure your plants respond properly.

Indoor: Spray during weeks 1, 3, 5 of flowering and every 10-14 days in veg

Outdoor: Spray 1 week after transplanting and repeat once per month until finish

<table>
<thead>
<tr>
<th>Feeding Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foliar application</td>
<td>6-8ml per gallon</td>
</tr>
</tbody>
</table>

NUTRISPRAY KEY INGREDIENTS

- Micro-elements: Sulfur (S), Manganese (Mn), Zinc (Zn), Iron (Fe), Molybdenum (Mo)

TIPS FROM THE FIELD

- Spray three to four times per cycle for general nutrition (weeks 1, 3, 5 of bloom) and every 14 days in the vegetative phase
- Spraying too often can have a negative effective because NutriSpray can stay on the leaf surface for a period of time. Spray at least 7-10 days apart.
- If micro-element deficiencies appear, apply for faster correction than root feeding
- Spray mother plants one week before cutting clones for robust cuttings

AVAILABLE SIZES

250 ml
**‘EXTREME’ FEED SCHEDULE**

This feeding schedule works well for most growing situations. All you will need in addition to the seven Aptus Boosters is your favorite base NPK fertilizer. Follow the mixing instructions carefully. You can create a customized schedule on our website at www.aptus.us

<table>
<thead>
<tr>
<th>WEEK OF GROWTH</th>
<th>PLANT GROWTH PHASE</th>
<th>Vegetative</th>
<th>Bloom Week 1</th>
<th>Bloom Week 2</th>
<th>Bloom Week 3</th>
<th>Bloom Week 4</th>
<th>Bloom Week 5</th>
<th>Bloom Week 6</th>
<th>Bloom Week 7</th>
<th>Bloom Week 8</th>
<th>Bloom Final Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fill tank with fresh water</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
<td>WATER</td>
</tr>
<tr>
<td>2</td>
<td>Add FaSilitor* - mix well</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
<td>3ML/5G</td>
</tr>
<tr>
<td>3</td>
<td>Add any base NPK nutrient and mix well</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
<td>NPK BASE</td>
</tr>
<tr>
<td>4</td>
<td>Check EC/PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
<td>EC / PPM</td>
</tr>
<tr>
<td>5</td>
<td>Add StartBoost* - mix well</td>
<td>10ML/5G</td>
<td>5ML/5G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Add BloomBoost* - mix well</td>
<td>4ML/5G</td>
<td>4ML/5G</td>
<td>5ML/5G</td>
<td>6ML/5G</td>
<td>7ML/5G</td>
<td>8ML/5G</td>
<td>8ML/5G</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Add PeakBoost - mix well</td>
<td>6ML/5G</td>
<td>10ML/5G</td>
<td>12ML/5G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Add MassBoost - mix well</td>
<td>2.5ML/5G</td>
<td>10ML/5G</td>
<td>10ML/5G</td>
<td>10ML/5G</td>
<td>10ML/5G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Add FinaleBoost - mix well</td>
<td>6ML/5G</td>
<td>8ML/5G</td>
<td>10ML/5G</td>
<td>12ML/5G</td>
<td>15ML/5G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Add Ecozen** - mix well</td>
<td>5ML/5G</td>
<td>5ML/5G</td>
<td>5ML/5G</td>
<td>5ML/5G</td>
<td>5ML/5G</td>
<td>5ML/5G</td>
<td>5ML/5G</td>
<td>5ML/5G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Check pH (Hydro = 5.8, Soil = 6.2)</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
<td>pH</td>
</tr>
<tr>
<td>12</td>
<td>Nutrient mix is ready to use.</td>
<td>PREFERABLY USE NUTRIENT MIX IMMEDIATELY, BUT ALWAYS WITHIN 3 DAYS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Only use the “Extreme” schedule on healthy and vital plants

*These products have minimal effect on EC/PPM readings

**Ecozen may be used once per week at 10 ml per 5 gallons. Always add Ecozen just before watering.

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**Which base NPK fertilizer do you recommend?**

We’ve found the best base NPK is one you are comfortable with. Most bases contain the same elements in similar amounts. So, it’s better for you to stick with the one-, two-, or three-part that you’re already using. Growers report success using virtually every base NPK fertilizer combined with Aptus Boosters.

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**for recirculating hydroponics recommendations**

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**for long outdoor crop recommendations**

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**ADD BASEBOOST PELLETS**

**MIX AND WATER IN**

**MIX AND FOLIAR SPRAY**
**HYDROPONICS WITH RECIRCULATING RESERVOIR**

Aptus is not at its best when sitting in a reservoir for more than 3 days. Use these mixing instructions for a 7-day reservoir. Our research shows that Aptus performs best in soil/soilless media with freshly mixed nutrients. But creative growers are also getting excellent results in hydroponics. Use the weekly dosage recommendations on the Extreme Schedule.

### Reservoir mixing

Follow the weekly dosage recommendations on the Aptus Extreme Schedule. Add boosters based on the amount of water remaining in the reservoir.

### Foliar spray preparation

1. Add FaSilitor to clean water and mix well
2. Add other crop feeding or protection products and mix well
3. Adjust pH to about 5.8
4. Spray lightly with lights off

**OUTDOOR CROPS (BASEBOOST + ADDITIVES)**

Use this feeding schedule for outdoor fruiting and flowering crops with long growth and bloom cycles. This is strictly a baseline recommendation. Individual crops and varieties may require modifications to this schedule. This example is for 200-gal pots.

<table>
<thead>
<tr>
<th>Container Size</th>
<th>5 Gal</th>
<th>10 Gal</th>
<th>30 Gal</th>
<th>100 Gal</th>
<th>200 Gal</th>
</tr>
</thead>
<tbody>
<tr>
<td>BaseBoost</td>
<td>100 gr</td>
<td>150 gr</td>
<td>300 gr</td>
<td>1 kg</td>
<td>2 kg</td>
</tr>
</tbody>
</table>

### Mixing & Usage Instructions

**Reservoir mixing**

- Add FaSilitor to clean water and mix well
- Add other crop feeding or protection products and mix well
- Adjust pH to about 5.8
- Spray lightly with lights off

**Foliar spray**

1. Add FaSilitor first and mix well before adding other products
2. Add PeakBoost, MassBoost or FinaleBoost and mix well
3. Adjust pH to about 5.8
4. Spray lightly when sun is low in the sky

Many growers start young plants indoors before transplanting outdoors. BaseBoost is ideal for this stage but dosage varies based upon length of growth and size of plant/container. Generally, use 100 grams per 10 gallons of media. Use FaSilitor plus StartBoost for best results.

For reservoir changes longer than seven days, simply move Day 5 directions to the third from last day. For example, on a 10-day reservoir change, this would be done on Day 8.

**MIXING & USAGE INSTRUCTIONS**

**Reservoir mixing**

- Mix base NPK fertilizer to desired strength in reservoir.
- Foliar spray with FaSilitor at 1 ml per liter, adjust to 5.8 pH. Use a sticker/spreader for best results.

**Foliar spray preparation**

2. Mix Ecozen into reservoir just before final feeding; use at double strength (2 ml/gallon).

**Hydroponics with Recirculating Reservoir**

Aptus is not at its best when sitting in a reservoir for more than 3 days. Use these mixing instructions when running a 7-day reservoir. Our research shows that Aptus performs best in soil/soilless media with freshly mixed nutrients. But creative growers are also getting excellent results in hydroponics. Use the weekly dosage recommendations on the Extreme Schedule.
## Cost Comparison

There is a lot of misinformation about the cost of nutrients. So we performed a bit of unbiased research so growers can see the truth about what they really pay. The most effective comparison is **Cost Per Gallon**, since pack sizes, concentrations, and product contents vary from brand to brand. See the disclaimer below for our exact method of calculating these numbers.

### Advanced Nutrients

**Schedule: Hobbyist**
- Products: Sensi Bloom A, Sensi Bloom B, Voodoo Juice, Big Bud, B52, Overdrive, Piranha, Bud Candy, Flawless Finish
  - Cost Per Gallon: **$0.94**

**Schedule: Professional**
- Products: Sensi Bloom A, Sensi Bloom B, Voodoo Juice, Big Bud, B52, Overdrive, Piranha, Bud Candy, Flawless Finish, Tarantula, Nirvana, Sensizym
  - Cost Per Gallon: **$1.26**

### Canna

**Schedule: Coco**
- Products: CoCo A, CoCo B, Rhizotonic, Cannazym, CannaBoost, PK 13/14
  - Cost Per Gallon: **$1.86**

### House & Garden

**Schedule: Soil**
- Products: CoCos A, CoCos B, Drip Clean, Roots Excelurator, Amino Treatment, Multi Zen, Bud XL, Top Booster, Shooting Powder, Algen Extract, Nitrogen Boost, Top Shooter, Magic Green
  - Cost Per Gallon: **$1.20**

### General Hydroponics

**Schedule: Flora 3 Part Expert**
  - Cost Per Gallon: **$0.42**

**Schedule: General Organics**
- Products: BioThrive Grow, BioThrive Bloom, CaMg+, BioRoot, BioWeed, BioBud, BioMarine, Diamond Black
  - Cost Per Gallon: **$0.43**

### Botanicare

**Schedule: PureBlend Pro Advanced**
- Products: PBP Grow, PBP Bloom Soil, Cal-Mag Plus, Clearex, Hydroguard, Hydroplex, Liquid Karma, Silica Blast, Sweet, Vitamino
  - Cost Per Gallon: **$0.50**

### Cyco Platinum Series

**Schedule: Advanced**
  - Cost Per Gallon: **$1.00**

### APTUS Plant Tech

**Schedule: Extreme**
- Products*: FaSilitor, StartBoost, BloomBoost, PeakBoost, FinaleBoost, MassBoost, Ecozen
  - Cost Per Gallon: **$1.00**

* APTUS has no base nutrient product so we included average Base NPK cost

### Cost Comparison

**APTUS PLANT TECH**

**Schedule: Extreme**
- Products*: FaSilitor, StartBoost, BloomBoost, PeakBoost, FinaleBoost, MassBoost, Ecozen
  - Cost Per Gallon: **$1.00**

* APTUS has no base nutrient product so we included average Base NPK cost

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**DISCLAIMER: HOW WE DETERMINED THESE COSTS** In determining the prices per gallon of solution on this page, we employed the following methodology. All products used for price calculations were 5L in total volume if available from the manufacturer. In situations with certain products not being available in this size or only sizes grossly more than 5L, the largest size available to match the products being used was chosen. If the only sizes available comparable to 5L were more than 5L less than 5L, the next largest sized products up to 2.5 gallon in size were chosen in calculation the cost per gallon. All calculations utilize a standard four-week vegetative phase and eight-week flowering phase. Additional flush weeks included at end of eight weeks or included as the eighth week if mandated by manufacturer. The average cost per L of solution for each vegetative and flowering period were calculated with the two numbers combining to state an overall average per gallon calculated from average per liter. APTUS per gallon calculation was performed using an average cost and dilution ratio of competing base nutrients in lieu of no APTUS base currently being available for sale in the USA. Numbers may vary depending on desired changes, feeding strength, price discounts from MSRP, etc.
COMMON QUESTIONS

What are my ideal PPM/EC levels?
There are a lot of factors such as strain, growing medium and fertilizer type, so it's impossible to give a number that works for every situation. Aptus Boosters have a small effect on PPM/EC levels. This means, your mixing habits may need to change. Always add FaSilitor first, then your base NPK at the manufacturer recommended levels (or less), check PPM/EC, then add your Aptus Boosters. Most growers see similar or better results at much lower levels than with previous synthetic based recipes. We recommend starting at 30-50% lower than recommend dosage, especially in early growth. On the ppm700 scale, veg averages 500-800 ppm and bloom averages 900-1100 ppm.

What kind of water is best with Aptus?
Bare minimum you should use dechlorinated water since the levels of chlorine and chloramines in most tap water will kill micro-life. You may also use reverse osmosis (RO) water. Aptus growers using both types of water report good results. If using RO water, you may need to supplement with an inexpensive generic CaMg product during the growth phase. MassBoost may be used but sometimes the nitrates in MassBoost can cause tip burn in young plants. Also, with RO water you will notice a significant pH drop in your solution. You can buffer this effect by adding a bit of CaMg.

Other than my base NPK fertilizer, what else should I add?
NOTHING! Aptus Boosters are highly researched and precise in the formulations. Every ingredient has a specific purpose. Nothing is left out. If you add other products like sweeteners, microbial inoculants, synthetic bio-stimulants, or other bloom boosters, there is a high chance of causing imbalance in your growing medium and plants. Aptus is complete nutrition for your garden. Most plant health issues occur when adding other ‘bloom boosting’ type products due to nutrient antagonism and imbalance.

I'm using coco coir and RO water, do I need more CaMg?
You should supplement with some additional Calcium and Magnesium to avoid deficiencies. In this case it's okay to use an inexpensive or generic CaMg product or MassBoost at a lower dosage, especially in early growth. Don’t add any other CaMg during weeks you use MassBoost. You can also foliar feed with MassBoost plus FaSilitor to supplement or correct deficiencies.

Why am I getting tip-burn?
This is likely because of increased uptake of nutrients, especially salts. To fix, lower your dosage of base NPK fertilizer. Too much base fertilizer coupled with the nutritional density of Aptus products is often to blame for tip burn symptoms. Just use less!

What's the first product I should try?
The 7 boosters in the Aptus Premium Collection are synergistic and work best when used together. But there are a few products that stand alone and enhance any existing feeding regimen:

- **FaSilitor** - Helps stems grow upright and protects plants against environmental stress.
- **StartBoost** - Use in vegetative phase, to soak clone plugs, and start seeds.
- **Ecozen** - Manage the salt buildup within your planting medium for better growth with regular flushes.

Why did my FaSilitor turn blue?
FaSilitor is an ultra-pure formulation manufactured at GMP standards conditions to maintain stability. It is a light yellow color when you first open the bottle. If it turns a light blue color that means something contaminated the bottle after opening. But don’t worry, FaSilitor is still effective but with a shorter shelf-life. You should always use clean and dry instruments for measuring (pipette, syringe, or pour). To minimize risk of contamination, never put a measuring instrument into the bottle.

What's the shelf-life of Aptus?
Two years if stored properly in a cool, dark place. Don’t freeze or heat any Aptus products. And always close the bottles tightly when not in use.

Is it okay to add compost teas, inoculants, or beneficials?
Few growers analyze their soil for microbial content. Adding diverse beneficials (like bacteria and fungi) adds unknowns to the growing environment. Unknowns can create problems that are difficult to diagnose and fix. This is especially true with teas and products that contain additional nutrients and stimulants (like guanos and kelps). They can often cause more harm than good. Aptus is a complete, planned formula for easy to obtain plant health.

Have another question or need help?
We want you to have a successful experience with Aptus! No matter the situation or question, always contact Aptus Tech Support to get the answers you need: **support@aptus.us**
You can visit our website for more FAQ and education: **www.aptus.us** or call us: **866-277-2816**.