CONNECT WITH APTUS

At APTUS Plant Tech, we are driven to create a community of successful growers from all over the world.

To join the network or to learn more about how APTUS Plant Tech can help you achieve your full growing potential, follow the links below.

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TRUE PLANT SCIENCE

SUCCESS BEGINS WITH EDUCATION

www.aptusplanttech.com.au

APTUS EDUCATION

1. The right nutrition, in the right amounts, at the right time
2. Respecting the stages in plant development
3. Understanding nutrient antagonism
4. Biochemical sequencing of nutrients

APTUS PHILOSOPHY

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 maximising 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 synthetic or harmful materials from Aptus products - only natural nutrition.

Value - All our products are designed to maximise the end user's value experience. The high concentrations of our nutrient formulas mean low per use cost and minimal waste. Growers typically achieve better quality and higher yields for far less cost.

APTUS NUTRITION TECHNOLOGIES

APTUS APPROACH

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 natural way; it respects fully the rules of nature and is a guideline to get back to ancient natural mechanisms: soil care and plant care. Aptus is the combination of soil bioremediation, plant stimulation and proper nutrition.

SILICIC ACID
PLUS MICRO-ELEMENTS

L-AMINO ACIDS
PLUS NUTRIENTS

TARGETED NUTRITION
PLUS ANTAGONISM PREVENTION

TRUE PLANT NUTRITION

The way plants assimilate nutrients, the interactions between nutrients, and the bioavailability of nutrients are widely misunderstood.

Modern plant nutrition systems are managed as if they were a chemistry experiment. All kinds of chemical compounds for nutrition (especially Nitrogen, Phosphorus, and Potassium salts) and protection (pesticides, fungicides and insecticides) are released in the plant's environment. Results are expected simply because all the proper chemicals are present.

However, nature teaches us that the use of chemical-based nutrients and pesticides is not enough to solve existing plant problems. Typically, as more chemicals are added, more and more problems are created.

This is because chemical-based nutrients typically create imbalance in the nutrition uptake by the plant.

Chemical fertilisers tend to decrease pH in plants, which induces plant weakness against pests and fungal diseases. Chemical fertilisers and pesticides also decrease micro-life populations and species in the grow medium significantly. This results in poor mediums, poor mineralisation and minimal plant stimulation.

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

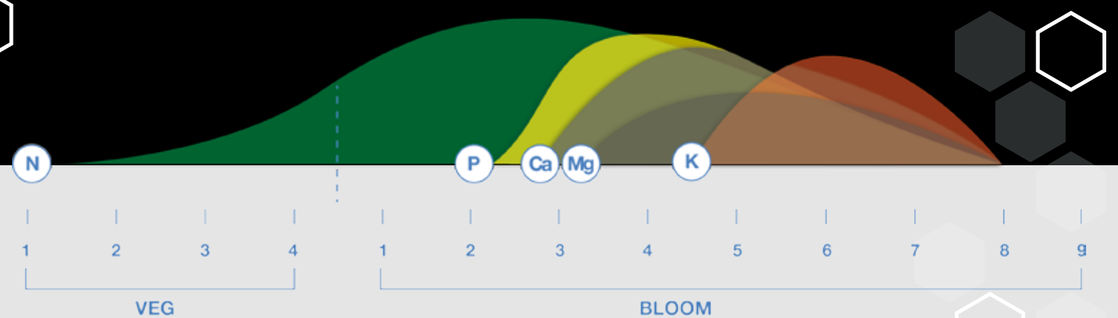
1. Feed at the right time, in the right amount, in the right form.
2. Nature desires balance and moderation.
3. Imbalanced feeding from fertiliser "cocktail" recipes creates unknown problems in the growing medium.

STAGES IN PLANT DEVELOPMENT

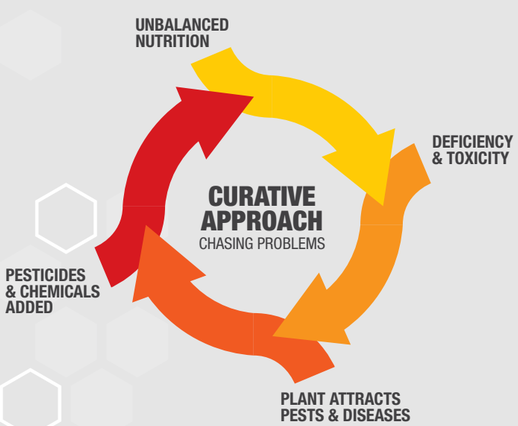
Plants have different and distinct development stages. The primary stages are rooting, vegetative, and flowering. These can be broken into more specific stages: rooting, growing, shooting, blooming, fruit or flower development and maturation. Each stage requires a specific balance of nutrition and mineral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

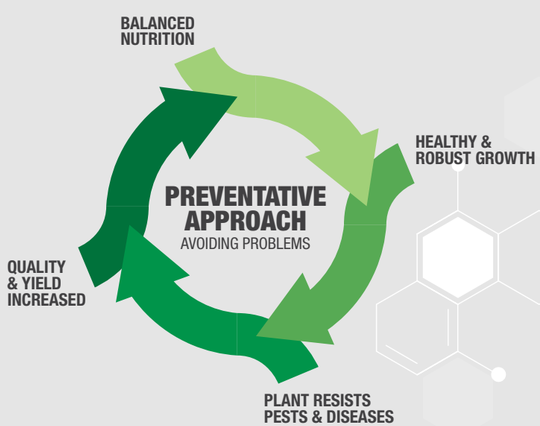
Many growers supplement with growth 'boosters' at the wrong development stage when the plant cannot utilise the nutrient. These unused minerals precipitate in the growing medium interacting with micro-life and other minerals, many times causing deficiencies and lockout.

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**.



PREVENT VERSUS CURE = BETTER RESULTS





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 small amounts of Potassium during growth and early bloom. Potassium is mostly needed during the ripening and maturation stages (late bloom).

Excess unused Potassium in the growing medium can 'push' away Nitrogen, Calcium, and Magnesium. These are some of the most common deficiencies. Growers can avoid these issues by respecting the natural laws and providing the right balance of nutrients at the proper development stage.

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 nutrient in attempt to correct a deficiency.

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 (NO_3). Nitrates 'push' Calcium away and can block absorption.

So you should use organic Nitrogen instead of inorganic Nitrogen, which is high in Nitrates. Many modern synthetic fertilisers contain primarily Nitrates or other salt-based forms of nitrogen.

Fertiliser salts are the most common cause of tip burn, nutrient antagonism, and weak plant growth.

The antagonistic action of nutrients shows how overdoses of certain elements can lock out or displace another element. This list shows which elements react with each other. Understanding nutrient antagonism makes diagnosing deficiencies and toxicity more difficult, but ultimately more accurate.

ELEMENT IN EXCESS	NUTRIENTS USUALLY AFFECTED
Nitrogen	Potassium, Calcium
Potassium	Nitrogen, Calcium, Magnesium
Phosphorus	Zinc, Iron, Copper
Calcium	Boron, Magnesium, Phosphorus
Magnesium	Calcium, Potassium
Iron	Manganese
Manganese	Iron, Molybdenum, Magnesium
Copper	Molybdenum, Iron, Manganese, Zinc
Zinc	Iron, Manganese
Molybdenum	Copper, Iron
Sodium	Potassium, Calcium, Magnesium
Aluminum	Phosphorus
Ammonium Ion	Calcium, Copper
Sulfur	Molybdenum

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 brings in more Nitrogen to the plant, unbalancing the nutrition. At the same time it also limits Zinc, Iron and Copper. Optimum nutrition is achieved by balancing the nutrients in the medium.

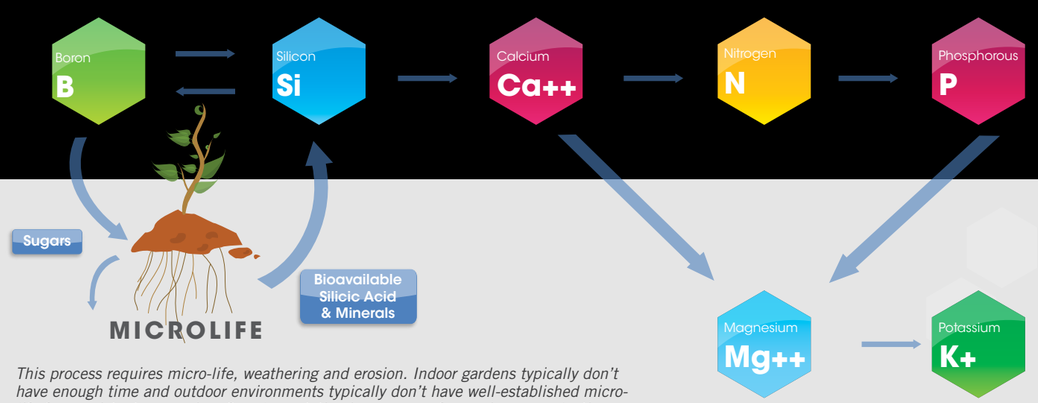
These problems often arise when growers attempt to create their own 'custom' nutrient recipe from multiple product lines from different companies. Unless a grower is highly scientific, this practice results in overdose and deficiency of specific nutrients.

The plants get into wild swings of deficiencies and lockout that result in decreased yield and quality. By using a balanced, high-quality, specifically formulated nutrition system, plants can maximise their genetic potential.

1. Understanding antagonistic action of nutrients helps to more accurately diagnose and prevent problems.
2. Most nutrients usually work together, but this is not always the case. If you break the beginning of a sequence, the rest will be broken. Fix the beginning and the rest falls into place.
3. When you have a problem, start at the beginning.
4. Aptus uses three natural core technologies designed to prevent problems by optimising bioavailability and transport.

BIOCHEMICAL SEQUENCING

It is important to understand that plants have a defined biological sequence of nutrient uptake. This starts with Boron, which actively works to move sugars throughout the plant at sites of new growth. At these new growth sites within the root zone, the plant leaches sugars into the medium. These sugars feed the microbes, which, with the help of weathering, transform silicates (Si) into bioavailable silicic acid through a process called silicification. Silicic acid adjusts the plants' intake of calcium, nitrogen, magnesium, phosphorus, and potassium.



This process requires micro-life, weathering and erosion. Indoor gardens typically don't have enough time and outdoor environments typically don't have well-established micro-life for consistent conversion. Supplementation is necessary for maximum production.

A common nutrient problem in indoor gardening is Calcium deficiency. This is because calcium interacts with many other minerals commonly used in fertiliser regimens. In addition, antagonism towards calcium is common with excess nitrogen, potassium, and ammonium based compounds.

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.

One of the best ways to increase Calcium availability and uptake (other than chelating with amino acids) is to optimise Silicon levels in the form of Silicic Acid.

L-AMINO ACID + MINERALS

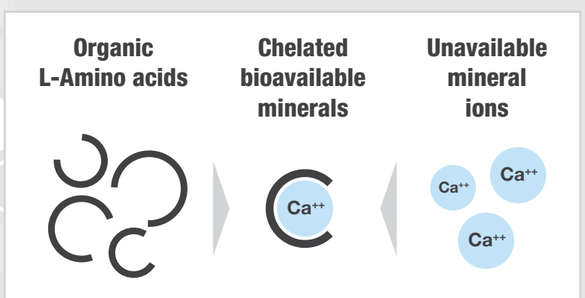
Amino acids are the building blocks of all life on earth. They participate in many of the critical functions of biological systems. Without amino acids, life would never have formed and would cease to exist, so they are pretty important. We'll look at what specific role amino acids play in plant development, but first, let's look at what amino acids are.

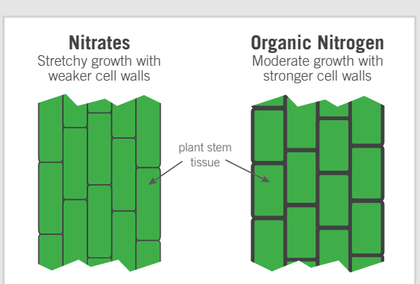
There are around 500 known amino acids that are categorised in many different ways. For our purposes we'll keep it simple.

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, synthesise 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 ACID FUNCTIONS

STABILISES CHLOROPHYLL PRODUCTION

PEST AND PATHOGEN RESISTANCE

INFLUENCE VARIOUS ENZYMATIC SYSTEMS

PROVIDE RICH SOURCE OF ORGANIC NITROGEN

HIGHER NUTRITIONAL CONTENT, SIZE, FLAVOUR, COLOUR

FLOWERING IS STIMULATED

BETTER FRUIT SETTING

SILICIC ACID + MICRO-ELEMENTS

Silicon deposits in the epidermal cells of plants act as a barrier against penetration of invading fungi such as powdery mildew and Pythium. To penetrate the leaves, a pathogen must get through the wax (no problem), then penetrate this hard, rigid layer of silica mineral, before it even reaches the cell wall.

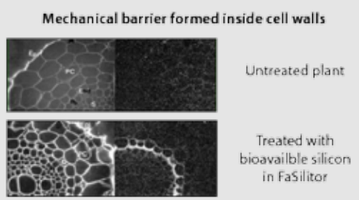
Most important to understand is that the silica doesn't kill the pathogen. By blocking the fungal spores from attaching, the plant maintains it's health and strength. This is the best preventative approach and how nature prefers.

There are also compelling studies showing plants moving extra silicic acid to points of attack and stresses, such as insects, fungi or breakage, an effort to resist and repair. This is much like when we get a cut and platelets in our blood rush to the cut to create a clot while the wound heals. The additional silicon deposits create even stronger tissue.

NUTRITIONAL

INCREASED AND BALANCED UPTAKE OF NUTRIENTS

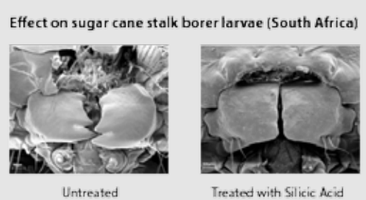
pressurises the plant sap to allow better and more even flow of nutrients throughout the plant vascular system. Increasing nutrient levels in plant tissue raises Brix levels, which naturally deters pests.



Mechanical

BUILDS STRUCTURE AND RESISTANCE AGAINST STRESS

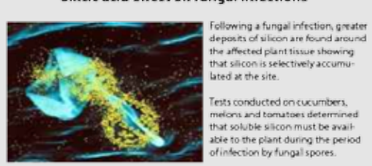
Deposits silicon directly into the outer layer of the cell creating a rigid barrier and more solid structure. Physically stronger plants naturally resist pests, pathogens and environmental stress.



IMMUNITY

STIMULATES PLANT'S IMMUNE SYSTEM

Triggers the production of immunity compounds as well as pulling silicon to the point of attack to rebuild and strengthen tissue. Silicic acid must be continuously present for this effect to be possible.

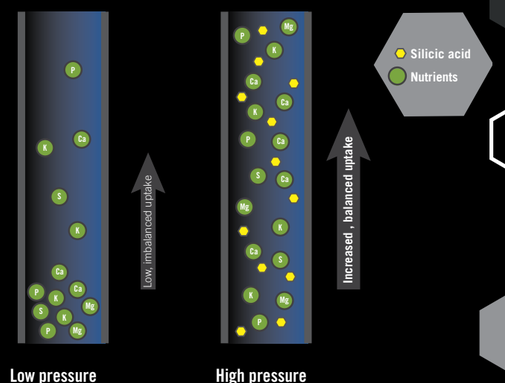


IMPROVES UPTAKE, ABSORPTION AND UTILISATION OF NUTRIENTS

There is a remarkable effect silicic acid has on the uptake of other nutrients. Think of it as a train engine that helps pull other 'cars' throughout the plant sap. Silicic acid is particularly good at increasing the transport of heavy, immobile minerals like Calcium.

Silicic acid is a 'sticky' fluid molecule. When present, the pressure of the vascular system (like our circulatory system) increases. Imagine a hose filled with tiny particles of sand (nutrients). If a trickle of water (plant sap) moves through the hose, most of the particles stay put. If the water pressure is increased to a heavy flow, more of the sand particles are pushed through the hose.

Plants don't have muscles in the same way we do. Instead elements move around the plant by suction, pressure, and molecular interaction. Lower pressure created by synthetic fertilisers and over-watering makes heavier molecules less mobile. By increasing the pressure, minerals are more easily carried throughout the plant.



With higher pressure inside, all other minerals in various forms are more easily moved throughout the plant to where the plant needs them. This vascular pressure is especially important for larger plants with heavy branching as more energy is required to move nutrients along these complex and far-reaching pathways.

SILICIC ACID WITH SYNERGISTIC MICRO-ELEMENTS

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 is 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 (K2SiO3) and calcium silicate (Ca2SiO4). Much of the naturally occurring silicon is in the form of silica (SiO2). These forms when unprocessed are not bioavailable to plants.

Before the silicon can be taken up into the roots and throughout the tissue it must first be converted by microbes into silicic acid by a process called silicification. This natural process is slow and can take weeks or months to occur in any meaningful amounts.

For indoor applications, speed and bioavailability are critical. Many times crops are grown and harvested in a matter of weeks or a couple months. Growing medium is frequently discarded or sterilised before reuse. This destroys the micro-life populations and minimises the process of silicification.

WHY HAS THIS NOT BEEN DISCUSSED IN MODERN AGRICULTURE?

Because of this, true scientific studies are difficult due to the fact it is nearly impossible to have a control group during research. In addition, silicon is not considered 'essential' for plant growth. Only recently has it even been classified as a beneficial nutrient. It seems because of its pervasiveness, silicon has simply been taken for granted.

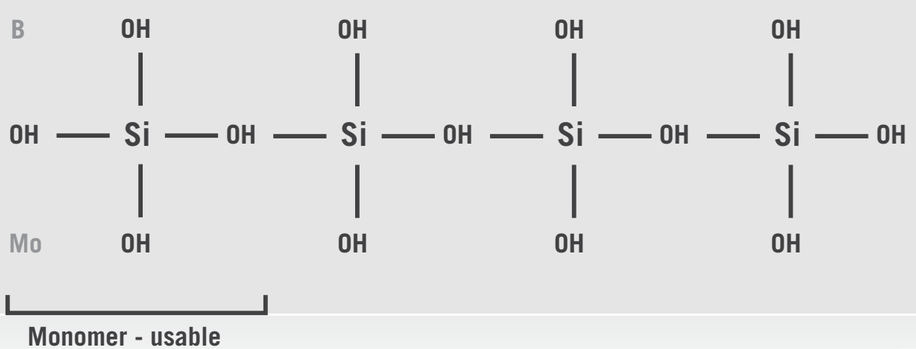
While silicon is not considered essential to plant development, the effects of silicon in plants are remarkable. And without bioavailable silicon, plants don't achieve their greatest potential. It's easy to see why many growers have problems in their garden when bioavailable silicon is not present. Silicon is responsible for increasing dry weight, strengthening plant tissue, balancing and increasing nutritional uptake and assimilation, immunity, and resistance to all forms of biotic and abiotic stress.

With these kinds of benefits, it is critical for growers of all types to understand the power of silicic acid and make it a regular part of their fertiliser program.

THE KEY TO SILICONE UPTAKE

Whilst silicon is everywhere, it is mostly unavailable to plants. In nature, microbes convert unavailable forms of silicon into silicic acid. This is the only bioavailable form of silicon. This process is very slow and dependant on many factors. Meaning a grower may add silicon supplements and not experience the true benefits of silicon.

Pure silicic acid, when stabilised as in Fasilitor, is "packed" in polymer form. It "unpacks" into monomer form when added to clean water, which allows it to enter the plant and carry nutrients (such as boron and molybdenum) along with it. Over time silicic acid will repolymerise, which is why it is important to mix fresh nutrients and feed immediately.



FASiLITOR

NUTRITION MANAGER AND PLANT STRENGTHENER

ABOUT FASILITOR

As the flagship of the Aptus product lineup, Fasilitor is extremely concentrated, pure, and fast acting.

While it is a silica-based solution, it is unlike any other silica product on the market. Fasilitor's patented formula works by increasing vascular pressure within the plant to heighten mineral translocation throughout its entire structure resulting in more complete, robust, and quality tissue formation.

The patented and stabilised concentration of monomer silicic acid particles allows for fast response against abiotic and biotic stress factors (environmental and pests), shorter internodal spacing, incredible bio-availability, and increased yields all while utilising natural mechanisms within the plant to gain these benefits.

FASILITOR EDUCATION

Silicic acid provides bioavailable silica that is easily translocated to needed areas within the plant including signs of insect attack, cell wall, and tissue formation. In addition, Fasilitor's silicic acid formula works to distribute Boron (B) evenly 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. 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.

WHY USE FASILITOR?

- Resistance against abiotic (environmental: temperature, wind, drought).
- Resistance against biotic stress (living: pests and pathogens).
- Improves uptake, absorption and utilisation of nutrients.
- Stronger cell structures and epidermis layer creating thicker tissue (increases dry yield).
- Reduces internodal spacing by adjusting mineral translocation to new limbs.
- Increases resistance against salinity (nutrient salt buildup) by limiting uptake of excess minerals present in the planting medium.
- Reduces transpiration (loss of moisture from the leaves) by forming thick cell walls which are made primarily of silica and calcium.

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
Regular feeding	1ml per 6666mL (6.666L)
Anti-Stretch Flowering	1ml per 3333mL (3.333L)
Foliar spray	1ml per 1000mL (1L)

FASILITOR KEY INGREDIENTS

- Silicic Acid – Mineral translocation adjuster, cell wall strengthener, abiotic and biotic stress reduction agent
- 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, synthesiser of organic phosphorous, and crucial to atmospheric nitrogen fixing bacteria in the soil

HOW TO USE

Add Fasilitor to the water in your reservoir first before any other products. This is important due to the method in which the monomer-silicic-acid particles are stabilised. Failure to do so will result in a loss of Fasilitor's benefits.

TIPS FROM THE FIELD

- Do not contaminate with measuring instruments. Pour Fasilitor into container of choice for measuring.
- Fasilitor makes plants more compact through increasing the variety of minerals being translocated throughout the plant at any given time. This mature, robust growth is a result of complete formation through increased mineral variety and density.
- If you are experiencing nutrient deficiencies, Fasilitor can often help correct these apparent effects. In a soil-container environment, Fasilitor through the action of silicic acid will work to regulate how much of a mineral is let into the plant. This activity can minimise the effects of what would be a toxicity, allowing for healthy growth once again.

AVAILABLE SIZES
100ml, 250 ml, 500 ml, 1 litre, 5 litre, 20 litre

STARTBOOST

ROOT AND GROWTH BOOSTER

ABOUT STARTBOOST

StartBoost along with Fasilitor is a foundation product of Aptus premium collection.
Aptus Startboost consists of two natural ingredients, humic acid and protein hydrolysate.

This synergy of natural ingredients promotes increased transport of nutritional elements across plant cell membranes whilst reducing levels of toxic elements in the growing medium. Startboost also provides organic nitrogen from L-amino acids for natural and initial growth. Startboost is also beneficial for the propagation and root development of seeds and cuttings.

STARTBOOST EDUCATION

Organic Nitrogen provided by L-amino acids promotes robust vegetative growth and photosynthesis without risk of burning or overdose.

A wide spectrum of natural L-amino acids provides beneficial stimuli to bacteria population numbers within the planting medium.

Humic substances have a positive effect on plant physiology by influencing nutrient uptake and root system interactions within 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, mobilise, 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.

WHY USE STARTBOOST?

- Powerful stimulator of tissue formation through organic nitrogen provided by protein hydrolysate
- Natural chelator of elements present in the planting medium
- Provider of organic nitrogen in the form of amino acids resulting from enzymatic digestion of natural materials
- Beneficial agent for propagation of seeds and cuttings

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
Regular feeding	1ml per 4 Litres
Seedlings/clones (rooted)	1ml per Litre
Transplant root dip	10ml per Litre (1:100)

HOW TO USE

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.

Transplant root dip: 10 ml per litre.

STARTBOOST KEY INGREDIENTS

- L-amino acids – Product of enzymatic digestion of natural materials, provider of organic nitrogen (N), stimulant to healthy bacteria population numbers
- 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 a 1:1000 dilution to feed new clones or starts from seeds (1 ml per litre). This is effective as a pre-soak for cloning or seed starting medium.
- During transplanting, dip the roots of the plants directly in a 1:100 mixture (10 ml per litre).
- Do not keep StartBoost in your reservoir for more than 2-3 days in order to avoid organic biofilm buildup and blockage of irrigation drip lines.

AVAILABLE SIZES
100ml, 250 ml, 500 ml, 1 litre, 5 litre, 20 litre

ECOZEN

ENZYME BOOSTER AND MICRO-LIFE STIMULATOR

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
With every feeding	1ml per 4 litres
Once weekly application	1ml per 2 litres

ABOUT ECOZEN

Ecozen is a powerful blend of enzymes that have many different functions, including, keeping the root surface clean and removing dead organic matter and residues. These are important functions for soil health, rhizosphere and maintaining active nutrient uptake.

Ecozen also contains enzyme complexes that transform accumulated or precipitated salts into usable plant nutrients. This helps to stabilise EC in the medium and improves the plant's natural ability to absorb more nutrients while avoiding fertiliser salt build up that can cause antagonism, lock up and pathogen problems in the root system.

Overall Ecozen is an effective root and soil conditioner that works in conjunction with microbial life and bioavailable nutrition. Ecozen also contains a small amount of manganese, which stimulates micro-life, which in turn help further breakdown and recycle the material broken down by the enzymes.

ECOZEN EDUCATION

As roots grow, some die off to make room for new growth. This results in cellulose (starchy plant matter) around the roots, which inhibits nutrient absorption and microbial development. The cellulase in Ecozen breaks down cellulose and keeps the roots clean.

Beta-glucanase enzyme complexes transform precipitated nutrient salts into plant available nutrients helping to minimise build up and increase uptake.

Manganese (Mn) plays a role in the process of supplying energy for photosynthesis. In addition,high concentrations of manganese correlate to high levels of sugars in plants.

WHY USE ECOZEN?

- Grow mediums can be used longer and for multiple cycles (less medium replacement saves cost and work)
- Stabilises EC in mediums and prevents salts accumulation (decreases nutrient lock up)
- Can fertilise later in the cycle without risk of built up salts affecting flavour and quality
- Keeps root system and medium clean (improves absorption, reduces residues)

HOW TO USE

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. Do not allow Ecozen to sit in a reservoir with nutrients for more than a few hours - always add just before feeding.

ECOZEN KEY INGREDIENTS

- Cellulase and beta-glucanase enzyme complexes – Root Zone Conditioners
- Manganese – Crucial Component for Photosynthesis

TIPS FROM THE FIELD

- Reuse your grow medium for multiple cycles. Flush medium between cycles with a higher dosage of Ecozen to clean out dead plant material and accumulated nutrient salts.
- Do not leave a reservoir with nutrients and Ecozen for more than a day to avoid nutrient degradation. Ideally, Ecozen is added last to the nutrient solution, just before feeding.
- Enzymes start to work instantly, especially at temperatures higher than 20 degrees celsius.
- Use Ecozen at least once a week to keep the root area clean and nutrient assimilation optimised.

AVAILABLE SIZES
250 ml, 500 ml, 1 litre, 5 litre, 20 litre

BLOOMBOOST

BLOOM BOOSTER AND QUALITY ENHANCER

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
Regular feeding	1-2ml per 5 Litres

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 heightened aroma of end products.

WHY USE BLOOMBOOST?

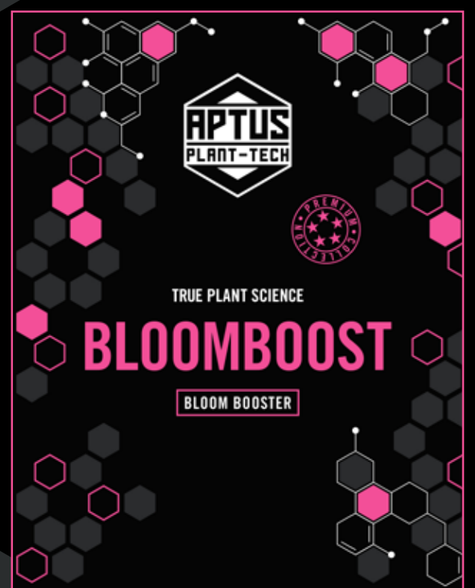
- Precursor to the healthy formation of chlorophyll for optimal photosynthetic activity during the bloom phase allowing for healthy growth and maturation
- Contains elements crucial to the formation of certain oils and volatile compounds within plants.
- Assists in the development of a healthy reproductive system within the plant. This includes heavy flower setting as well as healthy 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 based on Dr. Albreicht's theories of mineral antagonism to give the benefit of potassium's effects in initial flower development.

Sulfur is a crucial component in the formation of proteins, certain plant hormones, and aids in the formation of certain oils and volatile compounds found in some plants. 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

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

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

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 1mL per 2.5L) for an increased result in quality. Be sure your PPM and base nutrient (bloom fertiliser) mixture will allow for increased dosage.

AVAILABLE SIZES
250 ml, 500 ml, 1 litre, 5 litre, 20 litre

MASSBOOST

CALCIUM/MAGNESIUM AND BUD BOOSTER

ABOUT MASSBOOST

MassBoost is an organo-mineral plant booster that prevents Calcium (Ca) and Magnesium (Mg) deficiencies while stimulating powerful fruit set and development.

Calcium and magnesium are easily locked up or combined with other minerals in the growing medium forming what we call “junk salts”. This active behavior can be a problem when trying to dial in supplementation of calcium and magnesium for your plants. Aptus takes a unique approach in that our calcium and magnesium are chelated with natural amino acids much like Peakboost and Finaleboost. This makes the normally very open minerals be more or less directly available for assimilation into the plant.

Whereas most other calcium and magnesium products are classic mineral salt formulations, Massboost functions as a pure source for the plants’ optimum and continued health. Since there is next to no interaction with outside products, you can use Massboost for just 3 weeks in the bloom phase: weeks 3, 5, 7, and an optional fourth week in week 8.

MASSBOOST EDUCATION

Calcium largely comprises the cell walls of plant cells which gives them structure. An uninterrupted supply of calcium allows for stout flowers, stems, leaves, and the continued healthy formation of new plant tissue.

It is important to have available calcium to prevent blossom end rot, dropped flowering sites, and necrosis of leaf tissue.

Chelated magnesium allows for optimal supply to enzymes in the plant which require the element to perform their tasks properly.

Magnesium is the central core of the chlorophyll molecule. A chelated supply allows for continued, robust chlorophyll development allowing the plant to perform photosynthesis at optimal levels.

WHY USE MASSBOOST?

- Provides organic Nitrogen from L-amino acids that stimulate plant development
- High bioavailability, 100% water soluble and leaves no residue
- Combines Calcium (Ca) and Magnesium (Mg) with L-amino acids to eliminate or correct deficiencies
- Improves structure and firmness of the flower and fruit
- Provides the extra boost plants need during certain plant development phases and other important natural bio-stimulants

MASSBOOST KEY INGREDIENTS

- Calcium (Ca) – Integral Structural Element to Plant Cells
- Magnesium (Mg) – Central Element in the Formation of Chlorophyll, Source of Photosynthetic Activity, Enzymatic Process Activator

HOW TO USE

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 to minimise the chance of forming undesirable compounds.

TIPS FROM THE FIELD

- Use MassBoost with PeakBoost & FinaleBoost in the last weeks for yield, firmness, and quality.
- Pay attention when mixing PeakBoost and MassBoost as they can react with each other. Always add one, dilute and mix, then add the other. If using multiple phosphorous based products, take care when adding MassBoost as phosphorous and calcium, when combined in high concentrations, may cause deposits and residues.
- MassBoost contains low levels of nitrates that, when applied at a high dosage to young or weak plants, can cause tip burn. If using MassBoost during early growth start with a lower dosage and gradually work up to full dosage based on the plants response.

DOSAGE INSTRUCTIONS

Feeding Type	Amount
Regular feeding (vegetative)*	1-2ml per 8 Litres
Regular feeding (flowering)	1-2ml per 4 Litres
Foliar spray (maintenance)	2ml per Litre
Foliar spray (repair)	4ml per Litre

*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.

AVAILABLE SIZES
250 ml, 500 ml, 1 litre, 5 litre, 20 litre

PEAKBOOST
PHOSPHORUS BOOSTER

ABOUT PEAKBOOST

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 phosphorous 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.

On top of allowing for specific phosphorous application in consideration of your plant genetics, stage in the growth cycle, or desired flower set behavior, the phosphorous in Aptus Peakboost is chelated into an organo-mineral product. With the addition of L-amino acids, the phosphorous has eye's only for the plants' roots and has a much smaller chance of being affected by outside factors.

The specific application of chelated phosphorous 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 chelated Phosphorous with the elements usually antagonised away including: zinc, iron and copper.

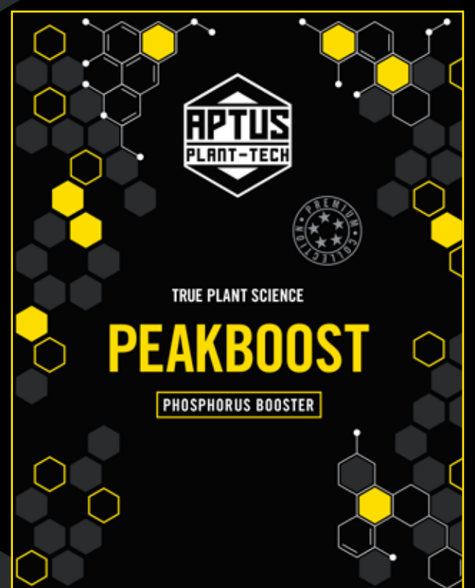
PEAKBOOST EDUCATION

- Organic nitrogen provided by L-amino acids promotes robust tissue formation and photosynthesis while minimising risk of burning or overdose.
- Phosphorous stimulates flower bud formation, set, and development.
- Allows for optimal uptake of trace minerals during flowering cycle commonly minimised by fertilisers containing large amounts of both non-chelated phosphorous and potassium.

WHY USE PEAKBOOST?

- Provides high levels of natural bioavailable phosphorus during the early generative and bloom stages
- Minimises antagonism and lockout of phosphorus with other nutrients
- Powerful stimulating effect on the blooming process
- 100% water soluble and organo-mineral leaving no residue

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
Regular feeding	1ml-2.5ml per 3Litres
Foliar spray (maintenance)	2.5ml per Litre
Foliar spray (repair)	5ml per Litre



PEAKBOOST KEY INGREDIENTS

- L-amino acids, which provide organic nitrogen (N)
- High concentrations of natural phosphorus (P)

HOW TO USE

Add PeakBoost to your reservoir every feeding from the second week to the sixth 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.

When mixing with any calcium supplements (like MassBoost), be sure to allow one to mix in the solution before adding the other to minimise the formation of calcium-phosphate bonds, which renders both unavailable to the plant.

TIPS FROM THE FIELD

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

AVAILABLE SIZES
250 ml, 500 ml, 1 litre, 5 litre, 20 litre

FINALEBOOST
MATURATION BOOSTER

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.

On top of allowing for specific potassium application in consideration of your plant genetics, stage in the growth cycle, or desired flower set behavior, the potassium in Aptus Finaleboost is chelated into an organo-mineral product. With the addition of L-amino acids, the potassium has eyes only for the plants' roots and has a much smaller chance of being affected by outside factors.

The specific application of chelated potassium allows for optimal health by removing the negative antagonistic effects of cheap bulk products containing high amounts of both potassium and phosphorous. With Aptus Finaleboost, you will see the difference in your final harvest by having optimal chelated potassium with the elements usually antagonised away including: nitrogen, calcium and magnesium. It's no wonder some manufacturers want you to load up on cal-mag in bloom.

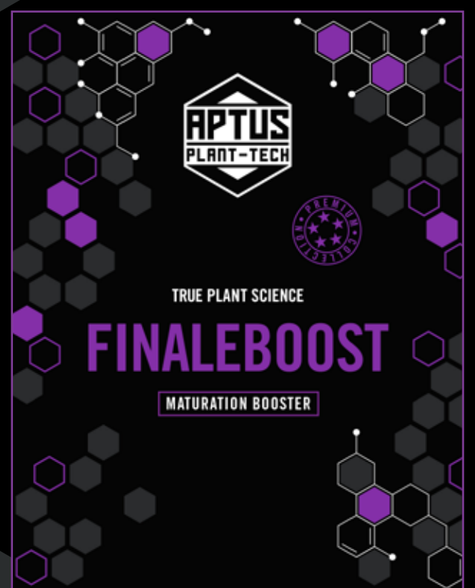
FINALEBOOST EDUCATION

- Organic nitrogen provided by L-amino acids promotes robust tissue formation and photosynthesis while minimising risk of burning or overdose.
- Finaleboost improves the functions of the plants' respiratory system by regulating the opening of the stomata. When deficient, plants can wilt unnecessarily.
- High concentrations of Sulphur are put into Finaleboost to combine with Bloomboost to give you the high sulfur amounts needed for the ultimate result of aroma, quality, and terpene production.

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 and organo-mineral leaving no residue

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
Regular feeding	1-3ml per 3 litres
Foliar spray (maintenance)	2.5ml per Litre
Foliar spray (repair)	5ml per Litre



HOW TO USE

At minimum add FinaleBoost to your reservoir weeks five through eight of the flowering stage. With some plants you may be able to use FinaleBoost at rates 2-3x higher than recommended to increase weight and quality during finishing. Always test on a few plants before applying at these rates.

FINALEBOOST KEY INGREDIENTS

- Potassium – Regulator of plant perspiration, Fibrous mass enhancer, Enzyme Activator
- Sulfur - Component of essential amino acids, aromatic characteristic promotant

TIPS FROM THE FIELD

- Gradually increase Finaleboost dosage throughout the bloom cycle from start, whilst still using PeakBoost. As FinaleBoost increases, PeakBoost decreases.
- With longer flowering genetics, you may want to fast track the Peakboost/FinaleBoost transition so the last 2-3 weeks of flower are without PeakBoost entirely.
- foliar references. You don't want to spray sulfur on your finished pristine flowers.

AVAILABLE SIZES
250 ml, 500 ml, 1 litre, 5 litre, 20 litre

BASE

COMPLETE LIQUID FERTILISER

ABOUT BASE

Aptus Base “liquid” is a 100% mineral based fertiliser compatible with all growing mediums and hydroponics systems. BASE is the only base nutrient product you need to use from the beginning of vegetative growth until the end of the fruiting and flowering phase. Compared to other competing products requiring you to purchase up to four separate bottles, Base is a 1 part, liquid fertiliser for both grow and bloom.

Aptus Base is easy to use throughout your plants’ growth cycle. Simply add at the rate of 1 ml per litre throughout and up to a maximum of 2 ml per litre if needed. Enjoy low dilution ratios and high mineral stability throughout a wide pH range. Whatever your growing method, Aptus Base will impress.

BASE EDUCATION

Aptus Base provides essential macro and micro elements needed for plant growth throughout the vegetative and bloom phases.

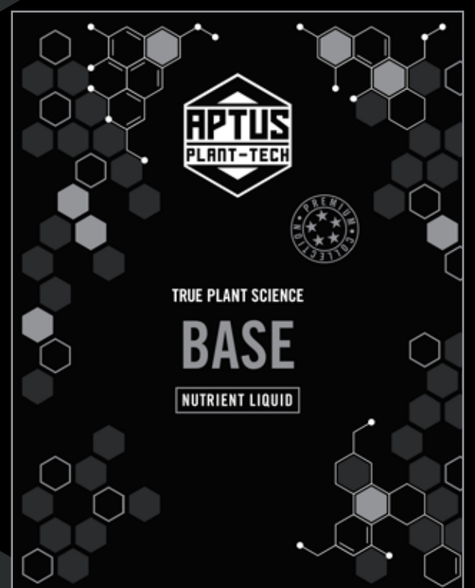
The ingredients put into Aptus Base were chosen specifically to not include chlorides or ballast salts causing unnecessary contamination of the growing substrate.

Without ballast salts or chlorides, the EC reading taken from your feed solution gives you a true view of the nutrient concentration

WHY USE BASE?

- Easy to use - 1 part NPK fertiliser specifically designed for both grow and bloom.
- A recommended dilution rate of 1ml per litre (max 2ml per litre) throughout the plants’ entire growth cycle
- Cost effective and stable
- Applicable in all major growing mediums including: soil, coco, perlite, hydroton, peat moss, and rock wool based mediums
- Contains no chlorides or ballast salts minimising the formation of junk salts in your planting medium

DOSAGE INSTRUCTIONS	
Feeding Type	Amount
Regular feeding	1-2ml per Litre



HOW TO USE

Add Aptus Base Liquid to your reservoir during both vegetative and flowering periods.

BASE KEY INGREDIENTS

- Nitrogen- Crucial Element in Chlorophyll, Crucial Component of Plant Amino Acids
- Phosphorus – Improves Formation of Flowers, Stimulator of Root Development
- Potassium- Core Component of the Unit of Plant Energy, ATP, Controller of Plant Respiration
- Magnesium – Central Core of the Chlorophyll Molecule Essential for Photosynthesis
- Boron- Crucial to Healthy Cell Wall Formation
- Molybdenum – Converter of Inorganic Phosphorus into Organic Forms Within the Plant
- Iron- Essential Component to Chlorophyll Formation, Crucial to Critical Enzyme Formation,
- Manganese- Crucial Agent for Root Growth, Resistor of Root Zone Originating Pathogens
- Zinc- Essential Component in the Formation of Auxins Regulating Plant Growth
- Copper- Activator of Enzymatic Reactions

TIPS FROM THE FIELD

- If starting new from seed, dilute into feed solution at a rate of 0.5ml per litre along with all other vegetative Aptus additives (Fasilitor, Startboost, Massboost) from first signs of leaves. Increase dose to 1ml per Litre as plants begin to establish.
- If adding Massboost, be sure to add Base to your reservoir first and mix for 3 minutes
- In high-intensity flowering situations where plants are grouped together in one system, or if you have a heavy feeder, you may increase feed levels to 2ml per Litre. Always check your EC before feeding.

AVAILABLE SIZES
1 litre, 5 litre, 20 litre

BASEBOOST

COMPLETE TIME-RELEASE FERTILISER PELLET

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
Regular feeding	100grams per 25 Litres of unamended soil/media

ABOUT BASEBOOST

BaseBoost is a time-release 100% organic pellet fertiliser 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 macro-nutrients and micro-nutrients, L-amino acids and bio-stimulants to enhance plant development over a period of time.

BaseBoost is an effective standalone as a complete fertiliser for the grower with little time or trying to simplify the work of growing. For advanced growers looking to maximise 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 growing cycle (especially outdoor applications).

BASEBOOST EDUCATION

Organic Nitrogen provided by L-amino acids promotes robust vegetative growth and photosynthesis without risk of burning or overdose.

Full spectrum organic L-amino acids provide growth materials, plant and microbe bio-stimulation, and boost beneficial bacteria populations.

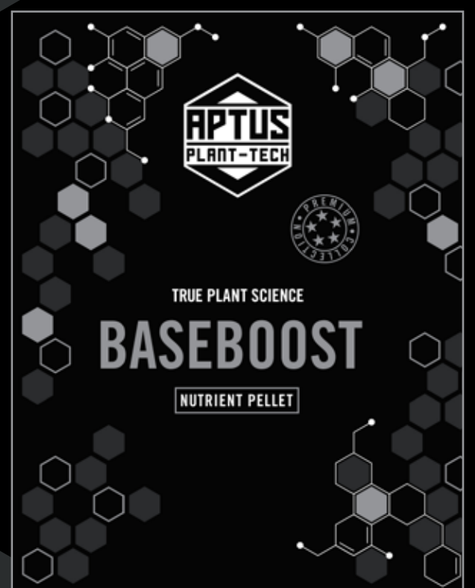
Complete time-released nutrition feeds plants as they require the nutrients rather than force feeding with chemical salts.

L-amino acids stimulate natural plant processes and growth, including stimulating micro-life.

Complete nutrient profile minimises plant stress due to environment, pests, and pathogens. Healthier plants means greater yield and quality.

WHY USE BASEBOOST?

- Simple and complete 100% organic plant nutrition – nothing else but water is required for a 3 month cycle, vegetative and flowering
- Complete formulation reduces fertiliser input and work
- Easy to use – application is once every 2 to 3 months simply by mixing in the pellets or topdressing
- Perfect for remote locations and long lasting crop cycles
- Provides organic nitrogen and L-amino acids that stimulate plant development
- Helps condition soil, improves plant development, and stimulates micro-life
- Long shelf-life if properly stored



HOW TO USE

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 FaSilitor and StartBoost at the beginning for a faster start.

BASEBOOST KEY INGREDIENTS

- L-amino acids, which provide organic nitrogen (N)
- Primary macro-nutrients: nitrogen (N), phosphorus (P), potassium (K)
- Secondary macro-nutrients: Calcium (Ca), Magnesium (Mg) and Sulfur (S)
- Organically chelated 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 solubilised 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, and Bloomboost.
- For better effect indoors, use with all Boosters (StartBoost, BloomBoost, PeakBoost, FinaleBoost).

AVAILABLE SIZES
1 kilogram - 10 kilogram

BREAKOUT POWDER

PHOSPHORUS & POTASSIUM BOOSTER

ABOUT BREAKOUT POWDER

Aptus Breakout Powder provides great value for small and large scale cultivators as an easy to use flower setting and bulking product. Breakout Powder is formulated using the highest quality water-soluble concentrates of phosphorous, potassium, and sulfur helping to achieve higher yields and better taste.

With its easy-measure formulation, APTUS Breakout powder takes the guess work out of application rates. Accurate application can be done in the field with no scales or extra devices. Aptus Breakout Powder is an economical, stable and powerful flower enhancer that promotes additional flower growth and development in the last 3 weeks of the bloom phase.

BREAKOUT POWDER EDUCATION

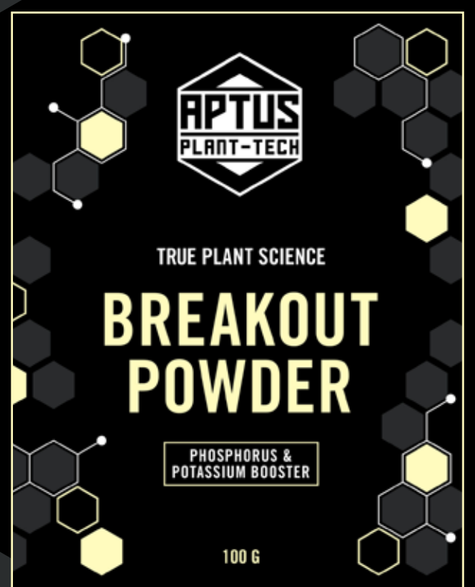
Breakout Powder is not an equivalent to PeakBoost and FinaleBoost. The Aptus Mineral Antagonism principle of separating phosphorous and potassium is not present in this product. Breakout Powder provides a high quality option for gardeners looking for a cost effective, water-soluble flowering additive.

Breakout powder consists of monopotassium phosphate, a concentrated source of both phosphorous and potassium. These elements are 100% critical to the production of energy and photosynthetic activity within the plant. In addition, Breakout Powder contains potassium and magnesium sulfates to ensure strong aroma with the highest quality end products.

WHY USE BREAKOUT POWDER?

- Low cost and high-quality source of important phosphorous, potassium, and sulfur
- Economical with extremely low dilution ratio of up to 100 grams per 100 litres
- Pre filled easy-measure 100g sachets allow you to pour a half (50g per 100 litres) or full (100g per 100 litres) strength application
- Provides a strong source of Sulfur to enhance colours and flavours during the maturation stage

DOSAGE INSTRUCTIONS	
Feeding Type	**Amount**
Week 6 / 3rd last week of feed schedule	50 grams per 100 litres
Week 7 / 2nd last week of feed schedule	100 grams per 100 litres
Week 8 / last week of feed schedule	100 grams per 100 litres



HOW TO USE

Add one sachet at a time to your mixed reservoir and stir well. Always add breakout powder after all other fertlisers and boosters have been added. Remember to always add Fasilitor to your clean reservoir before any other products. Use during the last 3 weeks of flowering, or if flushing, the last 3 weeks of your feeding schedule.

BREAKOUT POWDER KEY INGREDIENTS

- Phosphorous (P): Improver of Overall Crop Quality, Crucial Element in Photosynthetic Units of Energy
- Potassium (K): Essential Component for the Production of Photosynthetic Units of Energy, Regulator of Plant-Water Content and CO2 Consumption
- Sulfur (S): Vital Component of Plant Proteins, Essential to Formation of Certain Oils in Specific Plants

TIPS FROM THE FIELD

- Always ensure all other Aptus products have been correctly added to the reservoir and mixed well before adding breakout powder.
- For best results and fruit set always ensure Breakout Powder is used during the last 3 weeks of flowering, or the last 3 weeks of your feeding schedule.
- Use only at 50 grams (half a sachet) per 100L for the first week (3rd last week of bloom feed schedule), and 100g per 100L for the second and third.
- Do not use in addition to PeakBoost and or FinaleBoost
- Always check your EC after adding breakout powder to your reservoir. Adjust with fresh water if necessary.

AVAILABLE SIZE
100 gr

FEED SCHEDULE

	PLANT GROWTH PHASE WEEK OF GROWTH	Vege-tative All weeks		Bloom Week 1		Bloom Week 2		Bloom Week 3		Bloom Week 4		Bloom Week 5		Bloom Week 6		Bloom Week 7		Bloom Week 8		Bloom Final Week
1	Fill tank with fresh water	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER	FLUSH WITH ECOZEN 10ML/20L	WATER
2	Add FaSilitor* - mix well	3ML/20L		3ML/20L		3ML/20L		3ML/20L		3ML/20L		3ML/20L		3ML/20L		3ML/20L		3ML/20L		
3	Add BASE	20-30ML / 20L		20-30ML / 20L		20-30ML / 20L		20-30ML / 20L		20-30ML / 20L		20-30ML / 20L		20-30ML / 20L		20-30ML / 20L		20-30ML / 20L		
4	Check EC/PPM																			
5	Add StartBoost* - mix well	5ML/20L		5ML/20L																
6	Add Bloom-Boost* - mix well					4ML/20L		4ML/20L		5ML/20L		6ML/20L		7ML/20L		8ML/20L		8ML/20L		
7	Add PeakBoost - mix well					6ML/20L		8ML/20L		8ML/20L		10ML/20L		12ML/20L						
8	Add MassBoost - mix well							10ML/20L				10ML/20L				10ML/20L				
9	Add FinaleBoost - mix well											6ML/20L		10ML/20L		15ML/20L		20ML/20L		
10	Add Ecozen** - mix well	5ML/20L		5ML/20L		5ML/20L		5ML/20L		5ML/20L		5ML/20L		5ML/20L		5ML/20L		5ML/20L		5ML/20L
11	Check pH (Hydro = 5.8, Soil = 6.0)	pH		pH		pH		pH		pH		pH		pH		pH		pH		pH
12	Nutrient mix is ready to use.	Preferably use nutrient mix immediately, but always within 3 days																		

*Aptus Boosters have minimal effect on EC/PPM readings

**Ecozen may be used once per week at 1 ml per 2 litres. Always add Ecozen just before watering.

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 when running a 7 day reservoir. Our research shows that Aptus performs best in soil/soilless media with freshly mixed nutrients. Creative growers however, are also getting excellent results in hydroponics. Use the weekly dosage recommendations on the Feed Schedule.

MIXING & USAGE INSTRUCTIONS

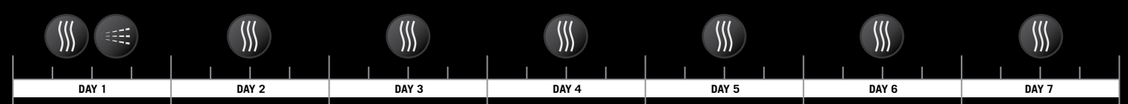
Reservoir mixing
Follow the weekly dosage recommendations on the Aptus Feed Schedule. Add boosters based on amount of water remaining in reservoir.

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**

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

Mix Aptus boosters into remaining reservoir water using weekly dosages on the Aptus Extreme Schedule (StartBoost, BloomBoost, PeakBoost, MassBoost, FinaleBoost).

Mix Ecozen into reservoir just before final feeding; use at double strength (1ml per 2L).



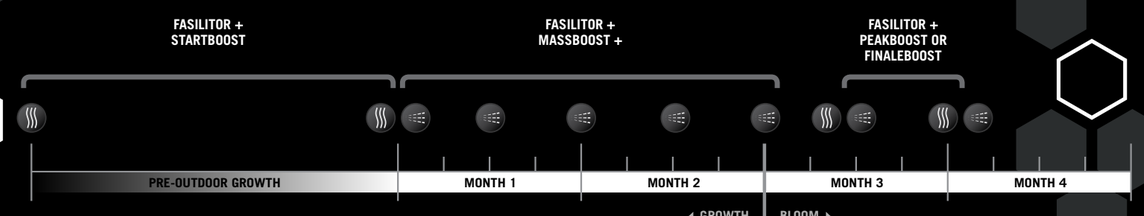
OUTDOOR CROPS (BASEBOOST + ADDITIVES)

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 varietals may require modifications to this schedule.
This example is for 1000 L pots/holes.

MIXING & USAGE INSTRUCTIONS

Reservoir mixing
1. **Add FaSilitor first and mix well before adding other products**
2. **Add StartBoost and mix well**
3. **Adjust pH to about 6.0**

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



MIX-IN BASEBOOST
50 G PER 25 L

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 25 litres of media. Use FaSilitor plus StartBoost for best results.

MIX-IN BASEBOOST
1 KG PER 1000 L

TOP-DRESS BASEBOOST
(WITH CRUSHED PELLETS)
2 KG PER 1000 L

During later bloom some growers prefer not to foliar feed. In this case you may supplement with a P/K booster, such as PeakBoost and FinaleBoost in your regular feed water.

WHY IT ALL MATTERS

Nothing is more important than the quality and nutrition of our food supply. Modern society is disconnected from the production of the food we consume. Farm modernisation, soil mineral depletion, government regulation, urban sprawl, and poor understanding of plant health, are destroying the fabric of what allows us to live.

Urban Agriculture is a worldwide movement to bring the production of food closer to the point of consumption and give the power of true health back to the average person. While bringing food production closer to urban populations is necessary, it's not the complete solution.

We also must change how we grow our food. This means reintroducing biological farming techniques, using sustainable fertiliser and pest prevention programs, and empowering individuals to produce a share of what they consume. By combining all these, we can reduce the strain on our worldwide food production system and increase the health of our citizens.

There is a direct and intimate connection between plants and humans. 100 percent of our nutrition is ultimately derived from plants, which harvest the sun's energy and convert it into food for us. How we feed the plants we consume, determines the health and capabilities of our population. Using artificial chemicals and synthetic fertilisers makes plants sick, which makes us sick.

But it's not too late to change. With some education, effort, and desire, we can make big changes together.

BENEFITS OF URBAN AGRICULTURE

- Grow your own vitamins and minerals
- Higher nutritional value and flavour of produce
- Grow your food the way nature intended
- Longer shelf life, less waste and spoilage
- Healthier plants, healthier people
- With proper education anyone can participate
- Know exactly what goes into the food that goes into you

Why Aptus Nutrients?

Aptus is at the forefront of the Urban Agriculture movement. We create and supply all-natural and organic plant nutrition products that allow you to grow your own food the way nature intended.

Our methods and technologies were invented by nature. We believe it is the best way to get the greatest results.

COMMON QUESTIONS

WHAT ARE MY IDEAL PPM/ECLEVELS?

There are a lot of factors such as strain, growing medium and fertiliser 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, Base at 1ml per litre (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.

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 MassBoost during the growth phase for added CaMg. Always take care when introducing MassBoost to new plants as the nitrates in MassBoost can cause tip burn.

We recommend starting at 40-60% lower than suggested dosage, especially with young plants.

WHAT ELSE SHOULD I ADD IN ADDITION TO MY APTUS BASE AND BOOSTERS?

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.

WHAT'S THE FIRST PRODUCT I SHOULD TRY?

The 7 boosters in the Aptus Premium Collection are synergistic and work best when used together. There are however, a few products that stand alone and enhance any existing feeding regimen:

FaSilitor - Strengthens plants and increases uptake and balance of nutrients.

StartBoost - Stimulate root and vegetative growth organically.

Ecozen - The most powerful and concentrated multi-complex enzyme booster.

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 fertiliser. FaSilitor and L-amino acids increase the bioavailability and uptake of other nutrients so you can use less and get the same (or better) results.

WHY DID MY FASILITOR TURN BLUE?

FaSilitor is an ultra-pure formulation manufactured in pharmaceutical-grade 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 minimise 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 analyse 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 bio-stimulants (like guanos and kelps). They can often cause more harm than good. Aptus is complete, including high populations of specific beneficial bacteria, sugars, and natural bio-stimulants.

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: info@aptusplanttech.com.au - Or visit our website for more FAQ and education:

www.aptusplanttech.com.au