

ESSENTIAL[®] PLUS 1-0-1

100% NATURAL PLANT & ROOT BIOSTIMULANT

Over the past decade, customers depend more on **Essential Plus** in a broad variety of applications, on hundreds of different plant materials and in some very challenging situations... all providing the added insurance of better **crop quality** that results in less returns, more **profits** and satisfied customers. From difficult to root Sundance Hibiscus to delicate tissue culture plantlets, and from costly Gerbera Daisy seeds to the difficult Impatiens, Essential Plus has proven its effectiveness with **success after success.**

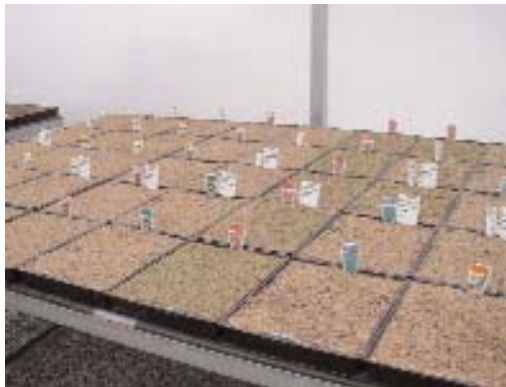


**GROWTH
PRODUCTS**

Sundance Hibiscus is considered "difficult to root". A drench of Essential Plus was applied once a week for three weeks, and compared against a standard rooting hormone (IBA). Essential produced **faster callus formation**, an increase in branching, root mass and weight. Essential Plus improved top growth by 30%.



Impatiens are a notoriously sensitive crop. Essential Plus produced thicker healthier roots as demonstrated in this plug. Essential Plus **improved quality of stand and turgidity**. This helped them arrive at their destination upright, solid and without damage.



This perennial seed germination trial with Essential Plus on Achillea (yarrow) produced dramatic results. Essential Plus resulted in a higher percentage of seed germination because it helps **seed coat permeability**. It also speeds up germination, saving valuable crop cycle time.



Only one drench of Essential Plus was applied to this plug tomato plug. A healthier root system will result in **better customer satisfaction** and less returns. Less returns equals more profits.

Consultant David Plant, displays a 1-gallon pot one month after sticking the liner with a drench of Essential Plus, at the Western Propagator meeting in Tempe, AZ. Using a combination of Essential Plus and Companion microbial inoculant resulted in **abundant new root growth**.



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FUNCTION

PURPOSE

Root Initiator and Enhancer

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| <ul style="list-style-type: none">• Gibberellic Acid and Natural Rooting Extract | <ul style="list-style-type: none">• Promotes cell division and root development• Guaranteed analysis on label• Quickly induces callus formation |
| <ul style="list-style-type: none">• Humic Acid from Leonardite | <ul style="list-style-type: none">• A rich source of auxins that stimulate root growth and branching |
| <ul style="list-style-type: none">• Kelp Extract (Seaweed) | <ul style="list-style-type: none">• A plentiful source of phytohormones that promote cell division and elongation |

Soiless Media

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| <ul style="list-style-type: none">• Natural Wetting Agent (Yucca Schidigera) | <ul style="list-style-type: none">• Improves water absorption and retention in difficult soiless media, such as peat and barks |
| <ul style="list-style-type: none">• Contains abundant natural organic materials from fermented plant solubles and simple sugars | <ul style="list-style-type: none">• Neutralizes both fertilizer and chemical salts• Adds much needed organic matter to the soil• Prevents leaching of nutrients in the soil |
| <ul style="list-style-type: none">• Humic Acid | <ul style="list-style-type: none">• Improves micronutrient uptake in alkaline soil• Keeps nutrient ions from leaching through soiless media |

Plant Physiology

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|---|---|
| <ul style="list-style-type: none">• Agronomically correct ratio of Humic Acid to Seaweed (60:1) | <ul style="list-style-type: none">• Triggers the plant to protect itself against stress from heat, chemical salts and transplant shock• Increases essential leaf moisture during stress• Increases Vitamin E in plant tissue, a natural antioxidant |
| <ul style="list-style-type: none">• Humic Acid from Leonardite | <ul style="list-style-type: none">• Improves crop quality• Reduces terminal extension• Deepens color of leaves, flowers and fruits |
| <ul style="list-style-type: none">• L-Amino Acids from naturally fermented plant extracts | <ul style="list-style-type: none">• Enhances activity and efficacy of fertilizers by better absorption |
| <ul style="list-style-type: none">• Kelp Extract (Seaweed) | <ul style="list-style-type: none">• When applied early in crop cycle the plant produces stronger stems• Improves shelf life of harvested crops• Contains 60 naturally occurring major and minor nutrients for healthier plant growth |

Seeding Enhancement

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| <ul style="list-style-type: none">• Natural Wetting agent | <ul style="list-style-type: none">• Enhances seed coat permeability• Speeds up germination |
| <ul style="list-style-type: none">• Humic Acid | <ul style="list-style-type: none">• Improves seed coat permeability and root formation |

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Essential Plus is truly defined as a “Metabolic Enhancer” ... a biostimulant that initiates and enhances rooting and stimulates plant growth.

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Essential Plus is a unique product for today's fast paced horticultural market.

A versatile and effective product

for use on cuttings, seedlings, tissue culture, liners and transplants.

It can be used on a broad range of plant materials.

Essential Plus contains over twenty **all natural** raw materials, that benefit

plants through their entire growing cycle. As an organic, it is safe for workers to handle and is not subject to environmental regulation. This **holistic** approach produces vigorous plant responses that can not be attributed to traditional N-P-K fertilizers. Essential Plus is a reliable product that provides consistent results through the entire crop cycle, from seed or liner to finished product.

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Cuttings Natural Rooting Substance

Essential Plus provides a safe alternative to chemical hormones like IBA and NAA when propagating cuttings. Essential Plus is a true organic solution containing several unique ingredients with auxin-like properties known to stimulate callus formation and rooting on softwood and hardwood cuttings. Essential Plus contains humic acid, sea kelp extract, Gibberellic acid and a proprietary plant extract, all of which promote rooting. Side by side trials with IBA have proven that Essential Plus produces faster callus formation and greater root mass than IBA. By drenching cuttings with Essential Plus you can avoid the costly and intensive labor of dipping cuttings. This will speed up production, saving you time and money.

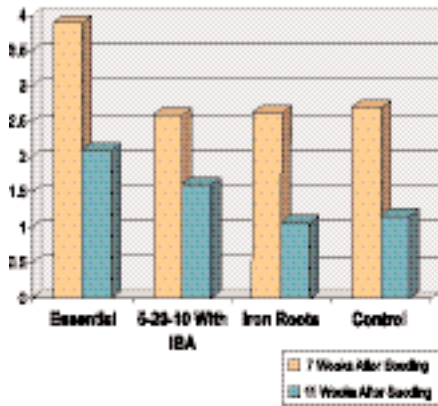


Seeding & Germination

Costly and difficult to germinate seeds such as Gerberas or Impatiens, are examples of the perfect application for Essential Plus. It contains two unique ingredients that work together to assure a faster and higher percentage of seed germination. A natural wetting agent and humic acid quickly soften the seed coat allowing water penetration and faster, more uniform germination even on tough seed coats. University trials at Iowa State show a 50% to 70% increase in seed germination and rooting with Essential Plus over both phosphorous and IBA products. Once germination starts, the Gibberellic acid and natural plant extracts will produce thicker roots with more plentiful branching.



Seeding Study Mean Root Growth



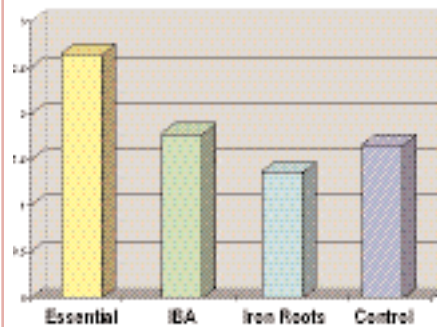
This germination study completed at Iowa State University, compared Essential Plus with an IBA product. Total mean root growth with Essential Plus was superior to all other products. It was also noted that Essential Plus produced the most noticeable response in root development after only 7 days.

Sizing-Up, Transplanting, Re-Potting Help Counteract Transplant Shock

Essential Plus is one of the few products available for the grower to help counteract the the damages caused by transplanting. Even with the utmost TLC, root damage, root pruning, and leaky roots will set the plant back and delay the crop cycle.

The unique ingredients in Essential Plus provide soluble organic nutrients such as sugars, L-Amino acids and enzymes. These are easily absorbed through the root system and helps counteract transplant shock. Both the humic acid and sea kelp boost the plant's metabolic activities such as photosynthesis, respiration, nucleic acid synthesis and ion uptake. These ingredients then continue to stimulate the root system by increasing both branching and total root mass.

Transplant Study Mean Root Growth After 11 Weeks



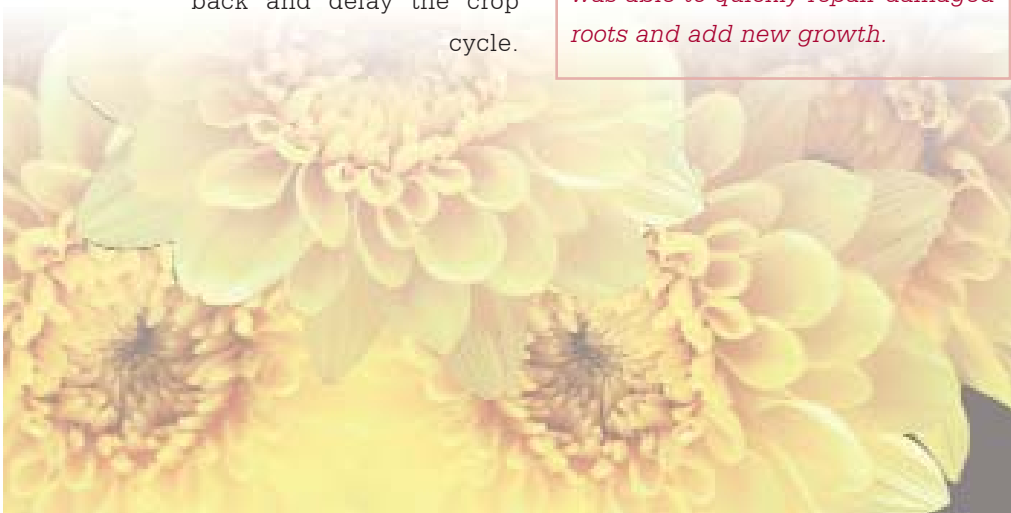
Every plant undergoes stress after transplanting which causes root damage often referred to as "leaky roots". This will often lead to disease problems. The faster the damage is repaired, the less prone the plant is to disease. This Iowa State study indicates that Essential Plus was able to quickly repair damaged roots and add new growth.

Tissue Culture From Agar To Soilless Media

Tissue cultured plantlets require special attention. They must acclimate from completely sterile "lab conditions" into the greenhouse or nursery environment. Special care must be taken with stage II micro-cuttings regarding temperature, pH and nutrients. Because Essential Plus is pasteurized and therefore sterile it can be applied when transplanting plugs to keep the plants growing in nearly lab-like conditions. Once the plug is planted in a peat-based medium, it is important to immediately apply Essential Plus to improve rooting and provide nutrients. Although Stage III plants are more mature and less vulnerable to stress, the same conditions exists. You can apply Essential Plus every 14 days from transplant through the entire plug stage.

Hydroponics Special Help For Growing Without Soil

Initiate good seed germination and increased rooting with the use of Essential Plus. After seeding in foam or rockwool cubes allow to soak in a solution of Essential overnight. It can also be applied through irrigation systems to improve crop vitality and shelf life. Essential Plus is ideal for use on all types of herbs, other leafy crops as well as tomatoes and cucumbers.



Plant Care & Maintenance

A Guarantee You Can Stand Behind

Growers are required to provide “A No Questions Asked Guarantee” on their products for the mass merchants now-a-days. Only better quality will give your plant materials the best survival rates once they leave your operation. Essential Plus will provide improved plant quality, including stronger, denser, and more vigorous plants. This added quality response cannot be obtained from the use of traditional plant N-P-K fertilizers. As a “metabolic enhancers”, Essential Plus promotes other aspects of plant physiology, including photosynthesis, hormonal activity, respiration and ion uptake during the plant's growth cycle, preparing the plant to combat future stress. This all adds up to your INSURANCE POLICY for less returned or rejected plants, therefore saving you time and money while improving your credibility.

Stress Recovery

Neutralize Salts, Repair Phytotoxicity Damage

There are few if any products that can nurse a plant back to health after it has been damaged. Essential Plus can be used as a stand-alone remedy to quickly correct salt injuries from either chemical pesticide use or chemical fertilizers that continually cause salt build-up in greenhouse and container crops. Its

rich organic base will bind with salts and neutralize both chemical and fertilizer salts, leaching them out. The combination of both the seaweed and humic acid will “trigger” the plant to protect itself during stress. This trigger causes the plant to produce “antioxidants” that react with toxins, neutralizing them.

Guaranteed Analysis:

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|---|-----------------------|
| Humic Acid | 7% |
| Cellulose Fiber | 10% |
| Natural Rooting Substance | .001% |
| Gibberellic Acid | .0001% |
| Kelp Extract | 0.1% |
| Carbohydrates | 2% |
| Natural Wetting Agent | .00025% |
| Lignin | 1.2% |
| Mono / Disaccharides | .3% |
| Ash Content | .2% |
| Total L-Amino Acid | 2.75% |
| 0.53% L-Glycine | 0.08% L-Phenylalanine |
| 0.39% L-Glutamic Acid | 0.07% L-Isoleucine |
| 0.35% L-Aspartic Acid | 0.04% L-Histidine |
| 0.26% L-Alanine | 0.02% L-Methionine |
| 0.19% L-Proline | 0.01% L-Tyrosine |
| 0.17% L-Leucine | Trace% L-Carnosine |
| 0.16% L-Lysine | Trace% L-Citrulline |
| 0.16% L-Serine | Trace% L-Cystine |
| 0.12% L-Arginine | Trace% L-Beta-Alanine |
| 0.10% L-Threonine | Trace% L-Taurine |
| 0.10% L-Valine | |
| Riboflavin (B2) | 13.17 mg/lb. |
| Vitamin (B6) | 0.314% |
| Weight per gallon | 8.74 lbs. |
| Derived From: Humic Acid (Potassium Humate), Plant Extracts, Simple and Complex Sugars, North Atlantic Kelp Extract, Hydrolyzed Organic Proteins, Natural Wetting Agent and Carbohydrates | |

