



## **Tech Talk: Sunshine Advanced #4**



### Benefits of and Recommendations for this Mix:

- Indoor, exceptional drainage capabilities (peat moss, perlite and coir in mix)
- Our "signature" mix for hydroponic growing situations
- Dries out faster than some mixes that have more coir

*Product Purpose:* designed specifically for growing indoor foliage crops, vegetables, herbs and other consumable crops.

*Typical Technical specs:* pH 5.5 – 6.5\*  
Soluble salts – 1.0 – 2.0 mmhos/cm  
Nitrate N – 25 – 60 ppm  
Phosphorus – 1 – 10 ppm  
Potassium – 50 – 120 ppm  
Calcium – 30 – 120 ppm  
Magnesium – 10 – 60 ppm

\*Results using SME method

*Product composition:* formulated to retain moisture, provide improved root aeration and drainage and develop strong root systems for maximum stem, flower and foliar growth.

*Rationale/function of each ingredient:* SS Advanced has the dual benefits of peat moss and coir to hold water and nutrients for optimal plant growth. The increased perlite provides excellent drainage, resulting in a growing mix that is adapted for a wide range of growing conditions. And our endomycorrhizal blend enhances the ability of plants to access the nutrients in the root zone.

*Trial summary:* Our Sunshine Advanced formula was trialed in our own greenhouses to develop the best combination of water retention, air porosity and nutrient availability. Many formulations were trialed using a range of garden and vegetable plants until we came up with the ideal blend of peat, coir and perlite. In addition, using our in house lab, we examined the roots for mycorrhizal colonization to ensure that Sunshine Advanced would enhance mycorrhizal growth. Ongoing testing in our trial greenhouses ensures that Sunshine Advanced will continue to provide the maximum results you expect from all Sunshine products.

*Cultivation tips:* Sunshine Advanced is designed to provide a perfect background to your own fertility program. A starter organic fertilizer is included to give an initial boost to your seedlings or transplants. You should start your own feed program within 7 days of planting or seedling emergence. Mycorrhizae prefer a low phosphorus feed for optimal growth, so during the plant's active foliar growth stage, use a high nitrogen, low phosphorus feed.

*Formula Bio-actives:* Using endomycorrhizae means you only get the mycorrhizal species that actually work with garden, foliage, and vegetable plants. Other growing mixes offer ectomycorrhizae as part of their mycorrhizal blend – but ectomycorrhizae only work for plants such as pines, spruces and firs. Why pay for an ingredient that isn't going to benefit your plants? Using a growing media with a blend of endomycorrhizae ensures that your plants will derive the maximum benefit from the same fungi that colonize their roots in nature.

### Frequently Asked Questions:

1. How is Sunshine Advanced different from Sunshine Mix #4?

Sunshine Advanced contains coir, a byproduct of processing coconuts. Coir has unique properties of high aeration coupled with excellent water retention and is frequently used in peat mixes to aid in rapid rewetting of the mix. In addition, Sunshine Advanced contains more perlite than Sunshine Mix #4 for faster drainage and improved aeration.

2. What are mycorrhizae?

Mycorrhizae are a group of fungi which form a symbiotic relationship with plants in nature. These important fungi colonize a plant's root system, sending their hyphae out into the surrounding soil to seek out nutrients. It is estimated that 90% of the world's plants are dependent on mycorrhizae in their native habitats.

3. Why should I use mycorrhizae in my potting soil?

The same benefits apply to potting soils. Mycorrhizae will help the root system take up nutrients and may provide a stronger root system. If you transplant into a garden soil, the presence of mycorrhizae will also assist in drought tolerance and will continue to grow along with the roots, seeking nutrients to supply to the plant.

4. How often should I fertilize my plants since Sunshine Advanced contains an organic fertilizer?

Our custom designed organic fertilizer consisting of feathermeal and sulfate of potash gives your plants an initial boost of fertility. We kept the fertilizer at a low level so you could implement your own feeding program according to the needs of your plant. The organic fertilizer is low in phosphorus so it will not interfere with the establishment of the mycorrhizae in the root zone.

5. So I need to use a low phosphorus fertilizer?

That is correct. While the mycorrhizae is growing along with your plant, please use a fertilizer containing less than 10% phosphorus. Mycorrhizae will not be active in soils with higher phosphorus levels. Look for a fertilizer where the second number is less than 10, such as 20-9-20.