



## ***Tech Talk: Super Hydro***

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### **Benefits of and Recommendations for this Mix:**

- Outdoor "light" mix: bark added to help stabilize pots outside
- Fast draining with a high amount of perlite
- Compost also an added ingredient

#### ***Product Purpose:***

Designed specifically for growing outdoor foliage crops, vegetables, and herbs. Can also be used indoors, where a mix with some bark added is preferred

#### ***Typical Technical specs:*** pH 5.4 – 6.5\*

Soluble salts – 0.80 – 2.0 mmhos/cm

Nitrate N - 25 – 40 ppm

Phosphorus – 20 – 40 ppm

Potassium – 300 – 400 ppm

Calcium – 30 – 60 ppm

Magnesium – 15 – 25 ppm

\*Results using SME method

#### ***Product composition:***

Formulated to provide exceptional drainage and root aeration in a compost-rich growing environment, and enhance the development of strong root systems for maximum foliar growth.

#### ***Rationale/function of each ingredient:***

Sunshine Advanced Super Hydro contains high levels of perlite to provide excellent drainage. Both peat moss and compost hold and release water and nutrients for optimal plant growth. This combination results in a growing mix that is adapted for a wide range of conditions. Our organic nutrient package and worm castings give just enough starter fertilizer to get your plants going. Our endomycorrhizal blend enhances the ability of plants to access the nutrients in the root zone, and the earthworm castings boost microorganism populations which are beneficial to plant root growth.

#### ***Trial summary:***

Our Sunshine Advanced Super Hydro formula was trialed in our own greenhouses to develop the best combination of drainage, moisture management, air porosity and nutrient availability. We evaluated our many successful professional organic mixes to develop a well-draining, nutrient rich organic formula. In addition, using our in-house lab, we examined the roots for mycorrhizal colonization to ensure that Sunshine Advanced Super Hydro would enhance mycorrhizal growth. Ongoing testing in our trial greenhouses ensures that Sunshine Advanced Super Hydro will continue to provide the

maximum results you expect from all Sunshine products. *Importantly, Sunshine Advanced Super Hydro has been proven in laboratory testing to drain twice as fast as ordinary potting soil.*

### *Cultivation tips:*

Sunshine Advanced Super Hydro is designed to provide a perfect background to your own fertility program. The formula includes compost and worm castings along with a starter organic fertilizer. These will give an initial boost to your seedlings or transplants. You should start your own fertilizer program within 14 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. What makes Sunshine Advanced Super Hydro different?

Sunshine Advanced Super Hydro drains twice as fast as ordinary potting soil. It's an organic mix of peat, compost, bark and perlite. In addition, Sunshine Advanced Super Hydro contains worm castings, organic fertilizer and endomycorrhizae. The microbes in the compost and castings help to support the endomycorrhizal fungi in the root zone.

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. Why does Sunshine Advanced contain 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 a low phosphorus fertilizer 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. Formulations such as 16-1-2, 7-4-4 and 20-9-20 are all options with a low phosphorus percentage.