

OASIS®

Hydroponic Fertilizer

16-4-17

OASIS® Hydroponic Fertilizer is a complete, one-bag nutrient solution designed specifically for young plant production in all types of hydroponic substrates, including engineered OASIS® AeroFamily Substrates. By following these instructions, you can get the best performance from your OASIS® engineered foam substrates and this water-soluble, low-salt-index nutrient blend.



Instructions for Fertilizer Usage

During Initial Substrate Preparation and Saturation

OASIS® AeroFamily Substrates are inert and ship without a starter charge. In addition, these engineered foam substrates ship dry (saving on shipping costs and extending storage life).

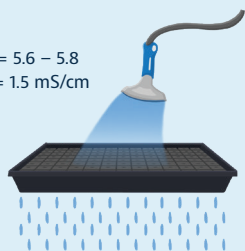
For optimal performance, it is imperative to use a complete fertilizer such as OASIS® Hydroponic Fertilizer 16-4-17 during the initial substrate soak to fully saturate the media and prevent dry spots. However, using the fertilizer at this initial watering also ensures that nutrient concentrations are at your intended levels at subsequent waterings.

Application of OASIS® Hydroponic Fertilizer 16-4-17 with initial saturation of engineered foam substrates has been shown to increase seedling growth by up to 200%. The recommended pH and Electrical conductivity (EC) are 5.6-5.8 and 1.5 mS/cm, respectively.

Complete saturation can be achieved by hand watering or using an automated watering tunnel. For more instructions on initial substrate saturation, refer to the Product Usage sheet for the OASIS® AeroFamily Substrate in use.

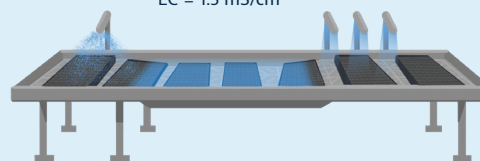
INITIAL WATERING

pH = 5.6 - 5.8
EC = 1.5 mS/cm



Hand Watering

pH = 5.6 - 5.8
EC = 1.5 mS/cm



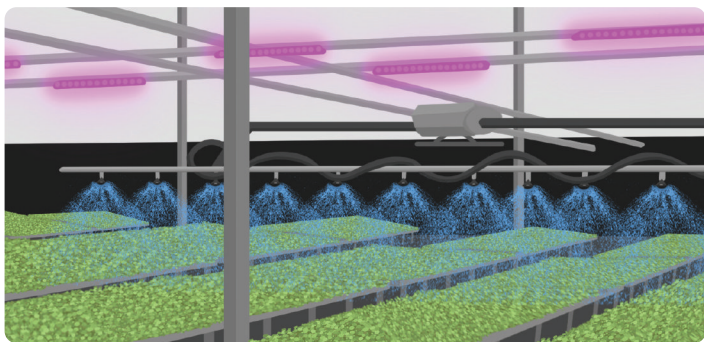
Automated Watering Tunnel

During Young Plant Production (Pre-Transplant)

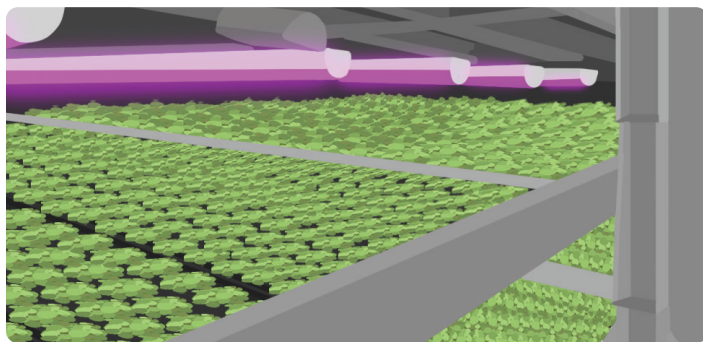
Using OASIS® Hydroponic Fertilizer 16-4-17 during propagation gives your young plants a start that leads to superior results. The recommended rate during young plant production (from the initial substrate saturation until transplant) is 125 ppm N.

Traditional wisdom has considered 75 ppm N to be optimal for young plant propagation. However, research conducted by a team from Oasis Grower Solutions and JR Peters - Jack 's Fertilizers confirmed that young plant growth increases as N increases up to 125 ppm, before leveling off.

OASIS® Hydroponic Fertilizer can be applied by directly preparing the final-use solution, by injector or by automated dosing system. This product is recommended for both overhead irrigation and sub-irrigation systems.



Overhead irrigation

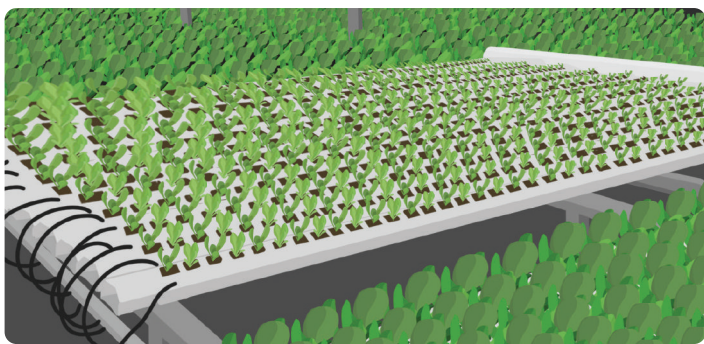


Sub-irrigation

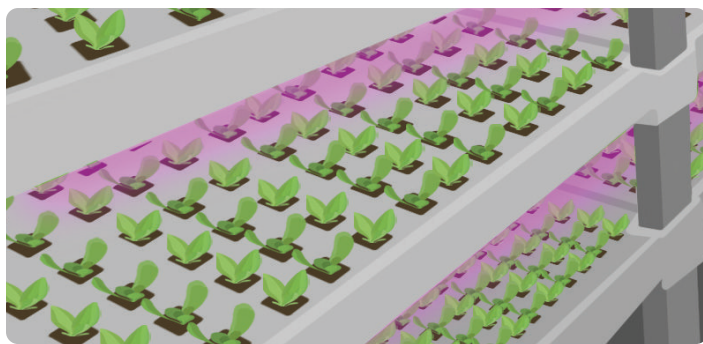
During Hydroponic Plant Production (Post-Transplant)

OASIS® Hydroponic Fertilizer 16-4-17 can be used as part of a hydroponic fertilizer program following transplant into NFT (Nutrient Film Technique) or DWC (Deep Water Culture) systems. (For more information on using this fertilizer in finished plant production, contact an Oasis Grower Solutions Technical Representative at info@oasisgrower.com or by phone at (855) 585-4769.)

In general, the recommended rate during post-transplant production is 150 ppm N for leaf lettuce varieties, 125 ppm N to 150 ppm N for spring mix lettuce, arugula and watercress, and 175 ppm N for basil. OASIS® Hydroponic Fertilizer 16-4-17 is not recommended for finished head lettuce production.



NFT (Nutrient Film Technique)



DWC (Deep Water Culture)

General OASIS® Hydroponic Fertilizer Instructions

The amounts of fertilizer needed to make a 100-gallon fertilizer solution at your desired N rate and the corresponding EC values (mS) are shown in the chart to the right.

Note: When making the final-use solution, dissolve the amount shown in 100 gallons of water. When using a 1:100 injector, dissolve the amount shown in 1 gallon of water to make your stock solution. When using an automated dosing system, use the EC values.

Desired N Rate (ppm)	Oz.	EC (mS)
125	10.5	0.98
150	12.6	1.17
175	14.7	1.37

The elemental ppm concentrations obtained at each N rate (ppm) are as follows:

N Rate (ppm)	NO ₃	NH ₄	P	K	Ca	Mg	Fe	Mn	Zn	B	Mo	Cu
125	97.50	27.38	13.25	107.50	30.50	15.25	1.54	0.38	0.39	0.13	0.06	0.06
150	117.00	32.85	15.90	129.00	36.60	18.30	1.85	0.45	0.47	0.15	0.08	0.08
175	136.50	38.33	18.55	150.50	42.70	21.35	2.15	0.53	0.54	0.18	0.09	0.09

Additional Grower Tips for OASIS® Hydroponic Fertilizer Usage

- + For optimal results with any fertilizer, first test your irrigation water quality and nutrient content with a horticultural testing lab.
- + EC value is the best method to determine fertilizer strength. Remember to factor in the EC of your starting water. At 125 ppm, the nutrient solution EC will be 0.98 *plus* the starting water EC.
- + For recirculating systems, daily EC and pH monitoring and adjustment are crucial for optimal performance. This is not necessary for production where fertilizer solution is not recirculated.
- + OASIS® Hydroponic Fertilizer 16-4-17 is pH neutral. The pH target for the fertilizer solution is between 5.6 and 6.0. Depending on water quality, pH may require regular adjustment with an acid or base solution. To lower the pH, sulfuric acid is recommended. This allows additional S to be incorporated into the final nutrient solution. To raise the pH, potassium bicarbonate is recommended.
- + For best production results, target water alkalinity should be greater than 80 ppm CaCO₃ to minimize pH fluctuations. If the alkalinity is lower than 80 ppm CaCO₃, we recommend the addition of Jack's Hydroponic pH adjuster JR Peters - Jack's Fertilizers to increase the buffering capacity of the water source.



Storage and Handling

Store out of direct sunlight in a cool, dry location. Unopened and stored properly, this product has a shelf life of 2 years from the manufacture date.



Food Safety

This fertilizer is composed of technical-grade nutrients approved for hydroponic production of food crops.



Disposal

For opened and/or unused product, please check with your local waste disposal facility for appropriate disposal options.

Questions

Consult with an Oasis Grower Solutions Technical Representative at info@oasisgrower.com or call us at (855) 585-4769.