

Foremost Environmental Solutions



Office: 303.985.0609
Cell: 720.363.0548
www.foremostsolutions.com
isolite@ix.netcom.com
Lakewood, Colorado

HYDROPONICS, ISOLITE®CG, AND POSSIBLE FERTILIZERS

The following is a quote from Stephen regarding fertilizers. He is answering a question about Isolite and fertilizers when growing hydroponically:

"Although I have never grown orchids hydroponically, I have been using ISOLITE®CG exclusively for a few years and find it superior to all other media I have tried during the previous 15 or so years. After reading about your concern regarding urea nitrogen's inability to be utilized in hydroponics, I did some searching and could not find any related references. However, the variety of methods, containers and nutrients appear to be as diverse as they are with other cultural practices and preferences. With nutrients in mind, there is a urea-free product called Growmore with a formula of 20-10-20. Although I haven't used Growmore, I have had very good results with fertilizers such as Peters 20-20-20, Sterns 15-30-15 and Schultz 19-31-17, all of which contain some micronutrients and, by the way, a proportion of urea nitrogen. However, DynaGro fertilizers are definitely worth considering. They come in a wide range of liquid formulations with more essential trace elements. For example, their 7-9-5 formula contains Ca, Mg, B, Cl, Co, Cu, Fe, Mn, Mo, Na and Zn, and the nitrogen is ammonical and nitrate. There is a noticeable difference in my orchids and more so when combined with DynaGro's potassium, silicon supplement called Pro-Tekt. My observations have included vigorous growth, more roots, firmer leaves and pest resistance. One other product I have used is GROWPLEX--formerly ESP 50--as an enhancement to my regular fertilization program. It is also easy to use and the plants appear more vibrant and a healthier green. "GROWPLEX" is a water soluble source of humic acid. It also supplies high levels of soluble potassium and phosphorus in readily available forms. Combined with humic acid, the potassium, phosphorus, calcium, iron and sulfur can be rapidly absorbed and incorporated into the plant whether via soil or foliar application methods. GROWPLEX is compatible with almost all starter and foliar fertilizers for more efficient uptake and more sustained nutrition. Simply, it makes the fertilizer with which it is applied work better."

Besides the aforementioned suggestions, there are some other factors you may want to consider regarding your plants not appearing to do as well in ISOLITE®CG as those established in bark. Although I grow various genera - including species--successfully in ISOLITE®CG, there are some that take longer to adjust to the new medium just as they would when switched to any other new "footing." As an example - I have seen some hybrids and species of various genera take weeks to adjust and others send out new roots within days.

These have included but are not limited to Cattleya, Phalaenopsis, Paphiopedilum and Lycaste. I have had individual plants from the same cross as well as two of the same species adjust differently. Stage of growth can play a major role when repotting, but the genetics of each plant appear to affect their relative adjustment in varying degrees. Granted, root structures and thereby their functioning for maximum absorption need time to adapt to new media, but the condition and extent of a root system also play a major role in the plant's adjustment. Although the ISOLITE®CG will be moist below the surface of the pot even though the top looks or is dry -- without penetrating, healthy roots, the plant can't reach it. Or if they can, adaptation hasn't sufficiently progressed to reveal its impact. Therefore it may be necessary to mist the surface every day or two until new roots emerge which should readily adapt and absorb throughout the medium. Along with good health and nutrition, misting and/or more shade with the usual good air circulation and careful observation may be all that the reluctant ones need besides extra time to adjust. Also - I have found that the recommendation to use a fertilizer higher in phosphate for the first few feedings/waterings is beneficial and promotes root growth. The addition of a vitamin supplement like Superthrive may also invigorate your plants.

It is all a matter of preference, and the uniqueness of our individual growing environments, practices, type of orchids, etc. Although there are no guarantees, I hope my observations garnered throughout the years will be helpful to you and your collection. If I can be of further assistance, please don't hesitate to contact me. I love orchids and we love ISOLITE®CG."

Good Growing,
Stephen