



**St. Augustine Orchid Society**

[www.staugorchidsociety.org](http://www.staugorchidsociety.org)

## Root Stimulators

by Sue Bottom, sbottom15@gmail.com

Who has not used Rootone powder on cuttings to get their root system started? There are many root stimulators on the market, used to encourage a healthy root system, often to help the plant recover from transplant shock. A healthy root system is essential for the growth and flowering of your orchids. Some effective rooting products contain auxins like indole butyric acid (IBA) and naphthylacetic acid (NAA) in either a synthetic formulation or a natural product like seaweed.



1. Dip 'n Grow is a synthetic rooting compound that John Stanton of [Orchid Trail Greenhouses](http://Orchid_Trail_Greenhouses) recommends.

We have been very impressed with the Dip 'n Grow liquid rooting hormone that contains 1.0% IBA and 0.5% NAA dissolved in an isopropyl and ethyl alcohol solution. We and some other orchid growers have been trialing this product, following the lead of John Stanton of Orchid Trail Greenhouses by placing a dilution of it in a spray bottle and spraying the root mass and forward part of the pseudobulbs during the repotting process. This synthetic hormone product can result in an incredible root response, as Keith Davis determined while experimenting with this product on his cattleyas.

Keith sent us this picture, with the note *"Today is exactly one month to the day since I sprayed the plant with Dip-N-Grow. Notice that there are no new roots initiating, but look at the OLD roots. There are dozens of new branches. Old aerial roots would never do this on their own in this short of time. I am thinking about writing a short article for the AOS on this product.....we have John Stanton to thank for this idea on use with orchids."*



2. Exactly one month after Keith Davis sprayed the base of the plant with Dip 'n Grow, *picture courtesy of Keith Davis.*

You probably know some orchid growers that use seaweed products with some frequency for their growth stimulating properties. Seaweed extracts contain macro- and micro-nutrients, amino acids, vitamins as well as plant hormones albeit in much lower concentrations than in a synthetic root stimulator product. The natural auxins present in seaweed extracts help encourage root growth although there are many other compounds present in these biostimulants that also promote plant growth. There are many seaweed products, from the generally available MaxiCrop to more specialized products like KelpMax offered by Ray Barkalow of [First Rays](http://First Rays).



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Our speakers are always introducing us to new ideas and tricks that they have discovered for growing their orchids. Daryl Venables of [Tezula Plants](#) is a most energetic and informative speaker who talked to us about growing Tolumnias. He recounted a story of receiving a shipment of Tolumnia seedlings that were mostly bereft of roots, so he went online looking at marijuana growing blog sites for some suggestions, and came across Nitrozime. He tried it on his plants and was amazed at the root growth. Another snake oil to try! Europonic Nitrozime made by Hydrodynamics International is a marine algae extract derived from *Ascophyllum nodosum* seaweed that is reported to be eight times more concentrated than typical seaweed extracts.

3. Seaweed contains many growth stimulating compounds, including low levels of auxins that stimulate root growth.

Some orchid growers add seaweed products either weekly or monthly during the growing season as a general growth stimulator. If you are supplying your plants with the proper light, air, moisture and mineral nutrition, you should not need to give them hormonal products to induce root growth, the exception being the period during and after repotting. In many cases, repotting causes a severe disruption to and loss of the root system so moisture and mineral uptake are compromised until the root system gets reestablished. This is why you are often told to repot your orchids only when you see new roots forming to minimize transplant shock.

| Application Rates for Auxin Bearing Root Stimulators  |                                     |                                  |  |
|---|-------------------------------------|----------------------------------|--|
|   | Seaweed Extract                     | Nitrozime                        | Dip 'n Grow                              |
| Recommended Rate on Product Label   | 1 – 2 tablespoons (tbsp) per gallon | 4 – 8 teaspoons (tsp) per gallon | 1 part Dip 'n Grow to 5 – 20 parts water |
| Spray on Roots after the Plant is Prepped for Repotting, Air Dry  | 1 tbsp in 8 oz spray bottle         | 1 tbsp in 8 oz spray bottle      | 2.5 tsp in 8 oz spray bottle             |
| Drench Pots and Baskets as Often as Weekly for 1 month after Repotting, Then Monthly During the Spring and Summer | 1 tbsp/gal drench                   | 1 tbsp/gal drench                | NA                                       |



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We can help our plants get re-established with the selective use of some of the rooting products. Prepare the plant for repotting by removing old tired growths and trimming sick or overlong roots. Plants are only water blasted if necessary to clean them up, otherwise the process proceeds dry. Once the plant is prepped, it is sprayed with one of the root stimulator concentrates and allowed to dry on newspaper or Kraft paper, with its plant tag. Then the plant can be potted. Keep it dry for the first day or three and then start watering. You can drench plants with a more dilute solution of seaweed weekly for the first month or so, and then just water with your normal water/fertilizer combination.

The synthetic root stimulator Dip 'n Grow contains auxins in concentrations several orders of magnitude greater than the seaweed extracts, measured in parts per hundred for the synthetic root stimulators versus parts per million in the seaweed extract. If you are only interested in these types of products to help initiate root growth, the synthetic Dip 'n Grow is probably a more effective solution than seaweed. If you are interested in using seaweed extracts because of its many other biostimulants present in small quantities, you can make up an ultra-concentrated seaweed mixture to spray on roots while repotting. You could make up a solution that is, say, 16 times more concentrated for spraying on the roots by adding 1 tablespoon seaweed into an 8 ounce spray bottle. Then, you could follow up by adding seaweed at the normal application rate weekly for the first month after repotting, and then apply monthly for the rest of the growing season.

The shelf life of auxins present in synthetic products and seaweed is a potential concern. These product should remain active for a year if properly stored, but degrade if stored in warm areas or exposed to sunlight. To be safe, store these products as cool and dry as possible, tightly sealed, and buy only what you think you will use within the next year. Storing them in the refrigerator will maximize their shelf life.

### Citations and Additional Reading”

Ertani A, Francioso O, Tinti A, Schiavon M, Pizzeghello D, Nardi S. Evaluation of Seaweed Extracts From *Laminaria* and *Ascophyllum nodosum* spp. as Biostimulants in *Zea mays* L. Using a Combination of Chemical, Biochemical and Morphological Approaches. *Front Plant Sci.* 2018 Apr 6;9:428. doi: 10.3389/fpls.2018.00428. PMID: 29681909; PMCID: PMC5897654.

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