

Root-Gel®

**K-L-N
Concentrate™**

Product Data

DYNA-GRO™

The Nutrition Solution®

Root Growth Stimulators

Root-Gel®

Dyna-Gro Root-Gel® is a unique vitamin-hormone gel formulated for the propagation of cuttings. It contains Indole-3-Butyric Acid, 1-Naphthaleneacetic Acid and Vitamin B-1 in a water soluble form, plus just the right amount of essential minerals to get cuttings off to a great start.

In tests conducted by a leading Hawaiian foliage propagator, cuttings propagated in Root-Gel rooted out and doubled in size, while cuttings propagated with a leading powder were still forming roots.

Since Root-Gel comes in a gel form, it applies quickly, easily and thoroughly. Cuttings dipped in Root-Gel are surrounded by a viscous coating of protective nutrient gel. When the coated cutting is inserted into the growing medium and soil is pressed around it, Root-Gel spreads into the surrounding soil to serve as a temporary, artificial root system. It has been proven that Root-Gel interfaces between the plant and soil delivering water and minerals to the plant during the critical stage of callus formation. Root-Gel can also be diluted for use as an economical protective dip for shipping bare-root stock.

K-L-N Concentrate™

Dyna-Gro's K-L-N Concentrate is a vitamin-hormone and nutrient solution proven to promote vigorous root development on cuttings, transplants, bare-root stock and newly potted plants. If you are worried about the spread of disease when propagating, then K-L-N Concentrate is the simple answer. No mixing or dipping is necessary. K-L-N Concentrate can be easily applied after cuttings are stuck through an injector, sprayer or added to a reservoir. Save time, money and the spread of disease while increasing your production.

Promotion of New Root Growth: Transplanting and Dividing

When repotting, transplanting or dividing plants, stimulation of new root growth is desirable to help the plant become acclimated quickly to its new medium. This also is the case when deflasking tissue cultured plants or orchid seedlings into community pots. K-L-N Concentrate is particularly useful for stimulating root growth at the critical repotting or transplanting stage in all plants including orchids, African violets, bonsai, foliage and bedding plants. This will lead to more vigorous root growth and improved nutrient uptake. When potting plants, drench the medium with a solution of 1 tsp. K-L-N Concentrate per gallon of water, before potting and for two or three waterings after potting. For bare root plants such as vandaceous orchids, Bromeliads and Tillandsia, a 1 tsp. K-L-N Concentrate per gallon of water solution can be misted on the plants to stimulate additional root growth.

DYNA-GRO NUTRITION SOLUTIONS

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Maintaining Root Growth

K-L-N Concentrate may be used along with the Dyna-Gro Nutrition Solution of your choice to constantly promote new root growth. Use 1/2 tsp. K-L-N Concentrate per gallon of water or nutrient solution once a month throughout the growing season. Do not use K-L-N Concentrate during periods of dormancy, or when flower initiation is desired.

K-L-N + Pro-TeKt®

Addition of 1 tsp/gal of Pro-TeKt® to the K-L-N Concentrate solution for both drenching and misting of cuttings to be rooted will accelerate root formation and increase the percentage of cuttings surviving the process. Tests performed at the University of Florida using Pro-TeKt both as a soak prior to sticking the cuttings and as a drench after sticking the cuttings resulted in 100% successful rooting compared with less than 50% success for those cuttings not receiving Pro-TeKt. Similar studies at the University of Minnesota showed that cuttings misted with soluble silicon rooted faster, had less leaf loss and more new shoots than those misted with water only.

Applications for Cuttings

Preparing the Cutting

Select healthy cuttings 3 to 6 inches long from a growing tip. Take cutting from vigorously growing tissue, but do not use soft spindly stems from rapid growth. Sever the cutting cleanly with a sterilized sharp knife or razor blade at a 45° angle and follow the directions for the propagation method of your choice, outlined below. Do not use pruners since they can crush delicate veins. Never place cuttings in direct sunlight. Maintain root zone temperatures at 70 to 75 degrees for most plants. Clip off excessive leaf surface to reduce transpirational water loss while roots are forming. In areas of poor water quality the use of distilled water is recommended. Feeding the mother plant with Dyna-Gro Pro-TeKt® The Silicon Solution® will strengthen the cutting further reducing transpiration during the period of root formation.

Rockwool, Grow-Tech, Oasis Cubes, Proforma, Sand, Vermiculite, or Other Rooting Media

Cuttings may be soaked in half strength K-L-N Concentrate for 10 to 15 minutes before inserting into rockwool or other rooting media. The cubes should be placed in a non-metallic pan and saturated with a solution of 1 tsp. of K-L-N Concentrate and 1 tsp. Pro-TeKt per gallon of water for easy to root cuttings. Increase K-L-N Concentrate to 1 tbs. per gallon for hard to root cuttings.

Mist Propagation Systems

Mix 1/2 tsp. of K-L-N Concentrate and 1 tsp. Pro-TeKt per gallon of distilled water and add to the system's holding tank. Keep the cutting moist at all times. Do not use on the leaves of plants sensitive to rooting hormones such as chrysanthemums.

Air Rooting

For air rooting, a medium such as New Zealand sphagnum can be saturated with K-L-N Concentrate diluted with an equal amount of water and placed into a cut in the outer plant tissue. This should be covered with opaque plastic or other material that will keep light away from the new roots and hold moisture in the medium. The sphagnum or other medium should be occasionally wetted with the K-L-N solution until adequate roots have formed to support the cutting. Do not allow the moss to dry completely. Keep it evenly moist but not soaking wet.