

DIP 'N GROW

LIQUID ROOTING CONCENTRATE

This package of Dip'N Grow is primarily intended for home use.

Direction for use: It is a violation of federal law to use this product in a manner inconsistent with its labeling. For use on ornamentals only.

Mix only for immediate use. For best results once diluted, Dip'N Grow should be used within 10 hours.

Read and follow the directions for use and precautionary statements printed on the 2 ounce bottle or 0.2 ounce packet.

Applicators and other handlers must wear: long-sleeved shirt and long pants, chemical resistant gloves, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride, or viton, and shoes plus socks.

Directions for using the dilution cup. As soon as possible after taking cuttings, prepare a dilute solution of Dip'N Grow as follows:

To avoid spilling, use scissors to cut the corner of the 0.2 ounce packet and carefully pour Dip'N Grow into the dilution cup, or pour from the 2 ounce bottle to the concentrate line of the dilution cup supplied.

For hardwoods, add water to the 5X dilution line.

For semi-hardwoods, add water to the 10X dilution line.

For softwoods or succulents, add water to the 20X dilution line.

If you are doing more than one type of cutting start with the hardwoods so that you may dilute the solution to a semi-hardwood or a softwood dilution level later.

Dip the basal end (bottom) of the cutting approximately one inch into the dilute Dip'N Grow for 3 to 5 seconds. Following dipping, place cuttings into planting medium. (Vermiculite, perlite, pumice, or any coarse planting medium that drains well, works best).

Useful items to remember when propagating:

Depending on the plant species, rooting will take place in several weeks to a month. During this period, cuttings should be kept in a greenhouse environment. Mini greenhouses are available at lawn and garden centers.

It is best to keep the cuttings out of direct sunlight (50% shading is a common practice) so that the top of the cuttings do not get dehydrated. Keep moisture on the tops of the cuttings throughout the rooting period (a spray bottle works well).

Remember to allow the soil to drain so that the cutting stems are not standing in water. Poor drainage may lead to the cutting stem rotting before root formation has taken place.

The air temperature should be kept cool to warm depending on the natural habitat of the plant species (in a range of 64-90° F). The root zone temperature or the soil temperature can be kept warmer (in a range of 65-

75°F). You can use bottom heat under the flat or tray of cuttings. Once a healthy rooting system has developed, transplant as you would any other nursery stock.¹

TIPS ON PLANT PROPAGATION:

Two variables are used to determine classification of cuttings as softwood, semi-hardwood or hardwood. The first is "timing", and the second is "juvenility". They are complimentary. Depending on what time of year you take your cuttings, it helps determine whether the cutting is "new" or "mature" growth.

While professionals propagate year around, two good times for taking cuttings are in the fall using mature dormant growth which would be classified as a hardwood or semi-hardwood cutting, or in the spring when the cutting would be new growth or classified as a softwood cutting.¹ For example:

Hardwood - Applies to deciduous plants after they have lost their leaves in fall, broadleaf and needle evergreens, Juniper, Yew, Dogwood. Cuttings for needle evergreens are usually rooted under greenhouse conditions.

Semi-hardwood – May apply to broadleaf evergreens and woody ornamentals when the wood is firm and leaves have matured such as Azalea, Photinia, Rhododendron, Magnolia.

Softwood and succulents – The emerging growth of most plants are classified as softwood. Softwood cuttings are easily bruised with a fingernail, can be easily broken, and will wilt rapidly. Examples of softwood cuttings and succulents are ground covers, Cactus, Fuchsia, Begonia, and ice plant.

Taking and propagating cuttings:

- Choose a healthy plant when gathering cuttings.
- Cuttings are best if taken early in the morning.
- Select branch tips from vertical shoots (plant growth that is growing up) with approximately 3-4 leaves/leaf sets.
- When taking the cutting, snip at a 45° angle.
- Keep cuttings moist and cool on ice or in a plastic bag.
- Remove the lower leaves in preparation.

When cuttings are soft they need special treatment to prevent water loss and stem damage. Under these conditions, the cutting may become stressed (wilt), and the cutting stem may be sensitive with application of concentrations that are too high. With Dip'N Grow, less concentrated is generally better than more concentrated. If in doubt, make a greater dilution with water. Also, using a longer dip or soaking the cutting for more than 3-5 seconds, will not necessarily be better, and if the cutting is soft, may be detrimental.

Because of a variety of factors (such as climate, contaminants, condition of cuttings) can affect the results, it is recommended that a test application be made of a few cuttings prior to general application.

Please visit our website at www.dipngrow.com

1. Dirr, Michael and Hauser, Charles. The Reference Manual of Woody Plant Propagation. Athens, GA. Varsity Press, 1987.

PARTS-PER-MILLION MATRIX

(For referenced purposes only)

Use the following table to dilute **Dip’N Grow** concentrate to a desired ppm of IBA or NAA.

<u>Parts of Concentrate</u>	<u>Parts of Water</u>	<u>PPM IBA</u>	<u>PPM NAA</u>
Concentrate	0	10,000	5,000
4	1	8,000	4,000
3	1	7,500	3,750
3	2	6,000	3,000
1	1	5,000	2,500
2	3	4,000	2,000
1	2	3,333	1,666
3	7	3,000	1,500
1	3	2,500	1,250
1	4	2,000	1,000
3	17	1,500	750
1	7	1,250	625
1	9	1,000	500
1	19	500	250
1	49	200	100
1	99	100	50
1	199	50	25