

Essential Factor:

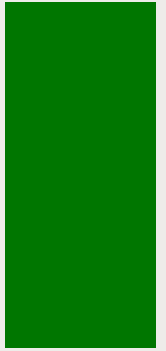
Rooting Hormones

Rooting Hormones are auxins, or plant growth regulators, that are involved in cell elongation and adventitious root formation.

- Reasons to use rooting hormones in your facility
 - Difficult or slow to root crops can benefit greatly from rooting hormone application.
 - Uniformity and speed of rooting can be increased when properly utilized, even for crops that normally root easily.
 - Overhead applications can be made after crop is in the greenhouse to improve efficiency.
 - Any resource or tool that you can use to decrease the time the cutting spends under mist should be considered a valuable part of a propagators tool box.

Rooting Hormones:

Basal end applications



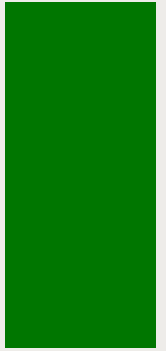
Powder Applications

- Powdered hormone such as Rhizopon AA Dry Powder can be applied to basal end of the cutting.
- Use a duster to apply to the stem only.
- Avoid getting powdered hormone on the leaves.
- Do not dip the stem into a container of hormone....this is a sanitation risk.
- Do not coat the stem with a solid layer of powder.

Liquid Applications

- IBA can be applied as a liquid basal application with typical rates of 500-1000ppm.
- Dip N Grow and Rhizopon AA are two commonly used hormones for this type of application.
- Apply to the basal end with a hand-held spray bottle.
- Do not allow solution to get on the stems or leaves of the cutting.
- Do not dip stems directly into the solution.....this is a sanitation risk.

Rooting Hormone Trial: Pretreated White Lightning Osteo



- Osteospermum White Lightning was pre-treated at Las Limas with 1,500ppm Dip-N-Grow as a basal dip.
- Cuttings sent to several rooting stations around NA for evaluation and results clearly show a huge benefit from the pretreatment.
- Trial was conducted due to poor rooting performance with this variety.
- Appropriate stock management should minimize or eliminate the need for pre-treatment.

**Top row pretreated
Bottom row untreated
18 days after sticking**



Pretreated tray vs. Untreated



Rooting Hormone: Spray Application after sticking

- IBA can also be applied directly over the top of the crop after sticking.
- This method requires a coarse spray that allow some of the solution to run down the stem toward the base of the cutting.
- Hortus IBA Water Soluble Salts are the most commonly used product with rates from 50-300ppm.
- Some leaf curl response can occur but the plants will normally grow out of it prior to shipping.

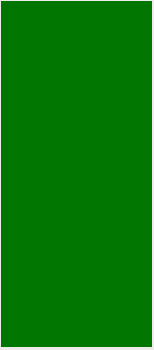
**Argyranthemum showing leaf curl
after IBA spray**



Crop	Requirement
Arctotis	High
Argyranthemum	High
Brachycome	High
Bracteantha (Strawflower)	High
Erysimum	High
Geranium	High
Osteospermum	High
Scaevola	High

Angelonia (Vegetative)	Medium
Calibrachoa	Medium
Chenille	Medium
Chrysocephalum	Medium
Dahlia (Dahlietta/Dalaya/Delicious)	Medium
Evolvulus	Medium
Fuchsia	Medium
Gallardia	Medium
Guara	Medium
Hedera	Medium
Helichrysum petio.	Medium
Heliotrope	Medium
Lantana	Medium
Lobelia	Medium
Lotus Vine	Medium
Mecardonia	Medium
Nemesia (Vegetative)	Medium
Torenia	Medium
Vinca Vine	Medium

Crop	Requirement
Alternanthera (Vegetative)	Low
Bacopa (Sutera types)	Low
Bidens	Low
Coleus Misc. (and Perilla)	Low
Cuphea	Low
Diascia (Vegetative)	Low
Euphorbia	Low
Impatiens (Doubles)	Low
Impatiens (N.G.I.'s)	Low
Impatiens (Patchwork)	Low
Impatiens (Bounce, SunPatiens)	Low
Impatiens Exotic (Fusion)	Low
Ipomoea	Low
Iresine (Vegetative)	Low
Lamium/Lamiastrum	Low
Lophospermum	Low
Lysimachia	Low
Petunia (Petcho, SuperCal)	Low
Plectranthus	Low
Purslane	Low
Salvia	Low
Sanvitalia	Low
Sedum (Ground cover types)	Low
Setcreasea	Low
Streptocarpella	Low
Strobilanthus	Low
Thunbergia	Low
Verbena Aztec/Endurascape/etc.	Low



Please Note: Growers should use the information presented here as a starting point. Crop times will vary depending on the climate, location, time of year and greenhouse environmental conditions. Chemical and PGR recommendations are only guidelines. It is the responsibility of the applicator to read and follow all the current label directions for the specific chemical being used in accordance with all regulations.