TIPS

HEALTHY PLANTS It is essential that your cuttings (sometimes referred as clones or slips) be taken from healthy plants.

SHAKE OR STIR Always shake to mix the bottle of Olivia's Cloning Solution. It is not necessary to shake or stir Olivia's Cloning Gel prior to using.

note: hereafter both Olivia's Cloning Solution and Olivia's Cloning Gel will both be referred to as OCS and OCG.

WATER QUALITY Water quality is of prime concern in hydroponic growing. All plants differ in their preference of pH range. Find out the ideal pH range for your particular plant.

PH RANGE As a general rule of thumb, a pH range of 5.5 to 6.5 is best for most plants. Check your pH level daily and adjust to proper level.

ROCKWOOL If using 'rockwool' as your growing medium pre-treat your medium with OCS and adjust to appropriate pH level. Some rockwool is high in alkaline-8.0 to 8.5. The pH will vary between different manufactures.

SHOCK Be gentle when taking your cuttings - they can shock easily when cut.

STERILE Always use a sterile growing medium; be it rockwool, soil, vermiculite, perlite, sand, etc. Never use soil from your garden.

DISEASE Always keep tools clean to avoid transmitting disease to open plant wounds. Sterilize them before each use if possible.

TEMPERATURE Keep your growing medium warm around-the-clock for best results. Bottom heat (with a heating pad) will help cuttings root faster. Bottom heat: 75-85°F (24-30°C). Greenhouse/indoor temperature (air, bench level): 70°F (21°C).

HUMIDITY High humidity aids in rooting your cuttings. A plastic cover (humidity dome or tent) will increase your percentage of rooting cuttings.

FRESH AIR Don't forget all plants need fresh air. Always have a circulating fan going-24 hours a day. If your cuttings show signs of wilting, cut some holes in your humidity dome/tent to allow air ventilation.

LIGHTS OUT Remember to keep your room temperature warm during the night or lights-out cycle if propagating indoors. Add a space heater if necessary.

OVER WATERING Excessive watering can cause cuttings to wilt or cause stem rot. You don't have to keep the bottom of your tray filled with OCS - the idea is to keep the growing medium or soil moist only.

TRIMMING To achieve a uniform cutting you may trim the leaves. Try to keep all your cuttings around the same height. This allows each cutting to receive the same amount of light.

HUMIDITY If you are using outdoor sunlight, screen your cuttings from the direct sun or place in a shady area under a tree.

FLUORESCENT LIGHTING If you are using fluorescent lighting you may place your lights within a few inches of the tops of your plants without burning them.

HID LIGHTING If using high intensity discharge (HID) lighting, either sodium or metal halide, give cuttings a full 18 hours of light. A 6 hour night cycle is recommended for optimum results.

LAMP HEAT Due to the amount of heat that the HID lamps put out, keep the lights within a safe distance above your cuttings or you will burn them.

FIRST ROOTS Once roots appear, your cuttings can take stronger, more intense light, either indoor HID or outdoor sunlight. Place your lights as close as possible. In other words, the closer the lamps are to your plants, the faster your plants will grow. Transplant as soon as vigorous roots appear.

DOSAGE LENGTH Continue to use OCS during your entire propagating cycle, i.e. from the time you first take your cuttings until they are fully rooted and transplanted.

TRANSPLANT SHOCK Use OCS when transplanting to eliminate transplant shock.

FINAL NOTE: Every plant and growing situation is different, so the length of time it takes roots to appear will vary from a couple of weeks to a month or more depending on the type of plant (and environment)...
... be patient for success is near when you use Olivia's Solutions.
Thanks for buying our products!

Available from Olivia's Solutions:
Olivia's Cloning Solution®
Olivia's Cloning Gel®
Olivia's pH Adjuster "Up"
Olivia's pH Adjuster "Down"
Olivia's Growing Solution®

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OLIVIA'S SOLUTIONS INC
Solutions for all your growing needs™

OLIVIA'S CLONING SOLUTION®

OLIVIA'S CLONING SOLUTION®

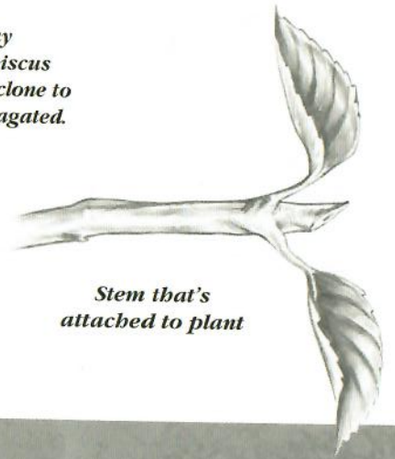
Both Olivia's Cloning Solution® and Olivia's Cloning Gel® promote vigorous, healthy growth and rapid root development for cuttings from all types of plants, flowers, fruits and vegetables.

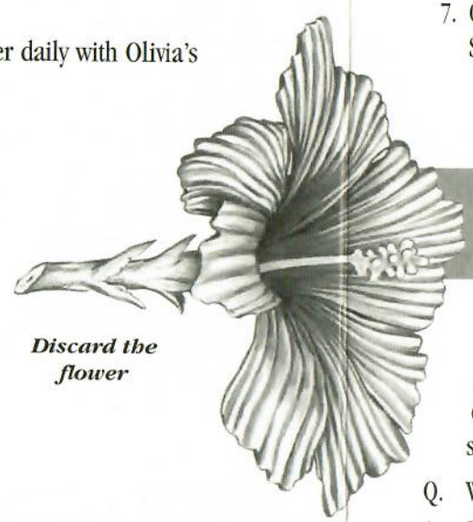
STIMULATES RAPID ROOT DEVELOPMENT
FEEDS NEW CUTTINGS AS THEY ROOT
90% - 100% SUCCESS RATE
ELIMINATES TRANSPLANT SHOCK
SUPERIOR START & GROWTH
FOR ALL PLANTS - INDOOR & OUTDOOR
FOR THE HOME HOBBYIST OR PROFESSIONAL
IN LIQUID & GEL FORM
FOR HYDROPONICS & SOIL
SAFE AND EASY TO USE

How to use Olivia's products:

Dip cuttings in either Olivia's Cloning Solution® or Olivia's Cloning Gel® prior to placing in your growing medium. Water daily with Olivia's Cloning Solution. If your pH level is too high, use Olivia's pH Adjuster-"Down". If your pH level is too low, use Olivia's pH Adjuster-"Up".

Olivia's Cloning Solution and Gel are not recommended for tissue culture propagation.





Olivia's Cloning Basics

Clones are by definition, "a group of genetically identical cells descended from a single common ancestor."

Cutting, or clonal propagation, is a highly efficient method of reproducing any plant type - yielding an exact genetic replica of the plant.

In clonal propagation, roots are induced from a portion of the stem, root,or leaf - an exciting alternative to growing plants from seeds.

Clones can be taken from a favorite plant and by repeating the cloning procedure, you can grow the strain continually and indefinitely.

Cloning is easy if some basic techniques are followed and you use Olivia's Cloning Solution®, Cloning Gel® and pH Adjusters.

Here is an easy and effective way to propagate from cuttings

(for leaf or stem - semi-hardwood, softwood or herbaceous)

1. Select a branch or stem that has at least 2 or 3 sets of leaves.
2. Locate a spot on the branch between, or next to, a set of leaf nodes where your cut will be made. (Leaf nodes are where the branches come out of the stem). Leave at least 1 set of nodes above the cut.
3. Make a clean, neat, 45 degree slice with a razor blade or knife. It is important that you do not damage the branch while handling.
4. Remove the lower 1 or 2 sets of branches (stems and leaves), leaving the upper sets of leaves to be placed above the soil or growing medium line. Trim any flowers or buds that remain (see drawing).
5. To prevent an air bubble (embolism) from lodging in the stem where the cut is, immediately place in a container filled with Olivia's Cloning Solution or dip in Olivia's Cloning Gel. Place cutting into your growing medium - transfer quickly if you are not using the Cloning Gel. If using the Cloning Gel, transferring time is not as critical as the Gel will seal the stem.
6. Keep your growing medium moist and warm with bottom heat at all times for best results. Never let your soil or growing medium dry out.
7. Check your growing medium daily and water with Olivia's Cloning Solution until roots appear.
8. Transfer cuttings once roots appear or a strong root ball is established.

Questions and Answers about Olivia's Cloning Gel®

Q. What is the biggest advantage to using the Gel?

A: It seals the cutting immediately and thus greatly reduces the occurrence of transplant shock, embolisms and infection, plus it is safer to use than many powders and liquids currently on the market.

Q. What is the Gel?

A: Basically it a balanced blend of rooting agents and N.P.K. (Nitrogen, Phosphate, Potash) that are contained in a viscous, inert, water soluble gel base.

Q. Do I still have to water my cuttings if I use the Gel?

A: Yes. You must still water and keep your growing medium warm and moist for success. We recommend watering with Olivia's Cloning Solution® to further stimulate root development.

Q. Is it safer than powders?

A: Yes, much safer. There are no hazardous vapors or particles which can be inhaled.

Q. What size/quantity does the Gel come in?

A: Three sizes: 2oz(60ml), 4oz.(120ml), and 8oz.(240ml) bottle.

Q. What is the shelf life?

A: Approximately 1 year or more if kept in a cool, dark location.

Q. Can it be used on softwood cuttings?

A: Yes. All softwood, semi-hardwood and some hardwoods as well.

Q. How long will the Gel remain viscous in the bottle and does the Gel break down?

A: Indefinitely if kept cool. The Gel will become less viscous if heated or kept in a warm environment. It will become darker over time. Keeping the Gel in the refrigerator is ok.