

GREEN RUSH FARMS GUARANTEE

We guarantee our plants to thrive. Should your plants not make it please send us pics online still in their original containers within 72 hours as this gives you plenty of time to inspect the plant and evaluate its health. If you transplant them into larger containers before they have been given time to adjust to their new environment, you run the risk that they will temporarily stunt and/or pass on to the great garden in the sky. We recommend you avoid transplanting for seven days from the date of pick-up unless told otherwise. We cannot guarantee them indefinitely as we have no way of knowing each individuals growing experience and/or capabilities.

Understanding and Avoiding Transplant Shock

You might think you already know what “transplant shock” is—and you might also be wrong! Most novice growers think transplant shock occurs when clumsy hands treat young plants too roughly when transferring them into a hydroponics system or a larger pot. While your plants will certainly thank you for taking time and care over handling them, this is not the essence of “transplant shock.”

Transplant shock is not so much related to damaging delicate roots during a relocation, but more down to a **sudden change in environmental conditions**. Young plants (especially freshly rooted cuttings) suffer most from transplant shock when they are moved from one environment, such as high relative humidity and lower intensity lighting to a more intense situation. This can occur, for example, when moving plants from a propagation tent under a T5 Fluorescent to a 1000W HID Metal Halide, or from indoors to outdoors on a bright sunny summer's day. The "shock" is the sudden change. Plants are used to change and are more than capable of adapting but the **more gradual and incremental**, the better.

Transplanting into New Growing Media

Preparation is key. Before you even think about moving a plant from its container, make sure you have the new container prepared with fresh media that is pre-moistened. If transplanting to an inert medium (e.g. soilless mixes, coco coir, rockwool, and expanded clay balls) you must pre-load the medium with some nutrition. For clones this should be fairly dilute nutrient solution with an EC of 0.8 to 1.2 and for more mature plants 1.5 to 2 depending on species and size of plant.

For peat moss based soilless mediums, simply water until it is saturated with your own fertilizer mix. A good tip is to try adding some seaweed extract, which contains natural plant growth regulators/hormones that help stimulate root growth and reduce transplant shock. Always make sure your water/nutrient solution temperature **is 68°F (20°C) to** avoid shocking the roots with cold water or depriving them of oxygen with water that is too warm.

Knowing the Best Time to Transplant

For optimal results it's important to transplant at just the right time. For clones this is when they have been fully hardened off and preferably have plenty of air-pruned roots showing from the cube or pellet.

For more mature plants this is when the roots have fully filled the container or cube but haven't become root bound. To check if a plant is ready, gently squeeze the edges of the pot so the plant will come out with little effort. If you can see an abundance of roots just starting to creep along the edge of the pot, but they haven't yet begun to fully circle, you are ready to transplant. If the soil or loose growing media

starts to fall apart and there aren't many visible roots, the plant is telling you that it needs a little longer in its current home before being transplanted.

Make sure not to transplant from a small container to a large one as the medium will stay wet for too long, discouraging the roots from searching out water - this can lead to drowning and dampening off in severe cases. Potting up in stages also helps to produce a dense root mass. As a rough guide freshly rooted cuttings and seedlings will thrive if they are transplanted from a 2" to a 1-gallon sized pot and later into a 2-5-gallon pot. Be careful **not to overwater** new transplants as this will retard root development. You really need to take care when removing the young plant from its original container. Take your time. Gently squeeze around the root zone to loosen the plant from the container

If using loose growth media, place it lovingly into a pre-dug hole and gently backfill the hole and consolidate the media around the plant. Be careful not to compact the media (especially if using soil) when you back-fill the hole, but make sure you haven't left any large air pockets. Then lightly water again to really settle the media around the newly transplanted specimen.

The Ideal Environment for Transplants

Okay, so we've been gentle and moved our clones into their new homes. What about the growing environment? How can you tweak this to allow the plant the easiest transition possible? Remember, the aim of the game here is to give the roots an easy time so they can focus their energy on growing and extending their network, rather than all their energy being monopolized with supplying water and nutrients to a struggling plant.

Newly transplanted clones hate hot and dry conditions. Too much air movement will increase stress too, by forcing the plant to transpire more than necessary. An unforgiving environment will force the young root system to work hard, just to keep up with the transpiration through the leaves. The trick is to keep humidity levels high (70-80%) and gradually wean them to levels around 60%.

Temperature should be kept at no more than 75°F (24°C) and no cooler than 70°F (21°C): the warm temperature will help ease the plant through the transition.

Beware of Too Much Light

During this delicate transition, don't go overboard with the lights! It's so easy to get carried away and get overzealous in the early stages. Remember, the more light you give your plants the more the roots will need to spend their energy supplying the plant with water and food for it to utilize this light. Not a bad thing when you have a large established root system, but just after transplanting it is much better to allow the plant time to establish its roots rather than putting them to work at full tilt.

It's common for indoor gardeners to move their plants from a fluorescent T5 fixture to a metal halide. Suddenly your plants are receiving far more light and enjoying lots more space than they had in the current container. It doesn't matter how delicately you handled the transplantation: young plants simply cannot keep up with the huge demand a high intensity grow light puts on them, especially in a demanding environment. The droop you will inevitably see is simply a symptom of the roots being unable to supply the plant with enough water in order to keep up with its demands. As with everything you do in the indoor garden, it is important to **make changes slowly** and gently, easing plants into more

demanding environments as softly/gently as possible. **Clones in particular should be broken into the more intense lighting conditions as gently and gradually as possible.**