

TROUBLESHOOTING GUIDANCE

Troubleshooting ReNu Terra Microgreen Mats

Introduction

At Re-Nuble, we take pride in our work and strive not only to improve sustainability and profitability in horticulture, but also to create a better user experience that leads to higher efficiency and performance. While we thoroughly test each of our products continuously in our own laboratory as well as partner farms, we know that sometimes things just go wrong. This guide has been provided to help you troubleshoot issues you may be experiencing with our ReNu Terra Mats and get you back on track towards outstanding results.

Problem & Solution 1

Problem: You are experiencing poor germination of your seeds.

Solution: If you are experiencing poor germination of your seeds, it may be due to several possible factors. Here's what you can do to troubleshoot the cause and correct the issue:

- If your seeds are more than 1 year old or have not been purchased from a reputable seed producer, then they may suffer from low germination rates. Buy seeds only from reputable sources and keep them up to date for best results. Ideal storage for your seeds is in a refrigerator at around 38 F/3 C.
- Make sure your mats are saturated with water before seeding by rinsing through them from the top for at least 5 seconds. Be sure and wet them all equally and evenly. Using the "shower" setting on your hose nozzle, sink or shower head is ideal, as the pressure ensures full penetration and even wetting.
- After seeding, mist the seeds using a spray bottle.
- At no point after seeding can the plugs be allowed to dry out completely, as this will abort germination in progress. After they are seeded, you may keep them moist by covering the flats to retain moisture until germination, then either stack them or put them directly into the irrigation system (ideally an ebb-and-flow irrigation system) and begin irrigating them.

Problem & Solution 2

Problem: You are experiencing uneven growth of your microgreens.

Solution: There are a few possible causes for uneven growth of microgreens on your mat. Here's what you can do to troubleshoot the cause and correct the issue:

- If your mats did not get evenly drenched and fully saturated to begin with, this can cause differences in moisture throughout the growth cycle. In this case, take your flat(s) with microgreens to where you rinse them and repeat the procedure to saturate them fully before returning them to the irrigation system.
- If your irrigation system is not properly leveled or maintained, it may be watering some parts of the mat(s) more than others. Ensure your irrigation system is leveled properly and keep the reservoir filled while in use.
- If your lighting is uneven, it can result in uneven microgreen growth. Ensure that whatever lighting solution chosen evenly covers the entire area of the mat(s). To be confident this is the case, you may need to use a quantum PAR meter, as this will give you precise readings on the PPFD or light intensity across the area in question. Try to keep your PPFD between 150 and 250 $\mu\text{Mol}/\text{m}^2\cdot\text{s}$.
- If you have inadequate or uneven airflow, this can cause uneven growth of your microgreens. Ensure that there is air movement throughout the entire space and that no areas are completely stagnant. You can use an anemometer for this task.

Problem & Solution 3

Problem : You are experiencing visible mold or damping off of seedlings after they have developed.

Solution : ReNu Tera Mats are delivered to your sterile and as such do not contribute to mold or disease. Microbial contamination can come from seeds, supplies, tools, or even your hands. If contamination proves to be an issue for you, try following these tips before you plant another round:

- Wash your hands with soap and/or wear examination gloves before you start handling your materials and seed them.
- Sterilize your supplies and tools with bleach, peroxide, or a UV-C light surface sterilizer.
- Soak your seeds briefly in a peroxide solution (pharmacy grade peroxide diluted 1:3 with water).