

Transplanting Tissue Culture Plants to Soil

Soil media: Fafard 3B + Osmocote (15-9-12 NPK, 8 gm/1 gal pot). Other soil mix can be used as well. Osmocote may be skipped for small pots (for short-term growth).

Procedure:

1. Use a spatula to loosen up the agar around roots, so plants can be pulled out without breaking the roots. Pay attention NOT to damage roots.
2. Place the plants in a tray with room temperature tap water to wash away agar. Use (ungloved) fingers to gently rub the roots under water until free of agar. Keep plants in water.



3. Place plantlets into pre-wetted soil, press the soil gently around the stem to make sure the plants are anchored. **Use a spray bottle to keep plants moist during the process.** Plantlets may be transplanted to small pots (~4") initially, and transplanted again to larger pots once established.

4. Place the pots into a plastic tray with dome cover (see photo at right). Add water to 1" to maintain humidity. Alternatively, use plastic bag or Sarah wrap to cover the pots. Use BBQ sticks (taller than the plants) as support, so that the plastic does not touch the plant directly. Place plants under mild conditions (avoid direct sun light, and avoid doing transplanting on hot and sunny days).



5. Watch plants closely. After 3 days, crack open the cover a little to begin the acclimation to normal humidity (**start in the morning and monitor throughout the day – DO NOT plan this on a day when you are not going to be around**). If plants show any sign of wilting, spray water periodically. Gradually open the cover over a 2-3-day period. Some plants may lose a few (old) leaves but will still survive and resume growth. The key is not to let the shoot tip die. This step should be completed in a week. You should expect >90% survival (or you are doing something wrong).
6. Fully acclimated plants can be grown under normal greenhouse conditions (25°C, 16 hr light). Plant pots should be allowed to drain, and watered as needed. Do not over-water the plants, and do not soak plants in standing water.