

Grafting Sweet Pepper and Hot (Chili) Pepper

This section illustrates how to graft pepper scions onto chili rootstocks



1. **Select scion and rootstock with the same diameter. Your sweet pepper scion and chili rootstock stems must be the same diameter, 1.6-1.8 mm. To achieve this, sow the chili approximately 5 to 6 days before sweet pepper.**



2. Cut the chili stem at a 30° angle, 1.5 cm above the cotyledon, or first true leaf.



3. Cut sweet pepper stem at a 30° angle, slightly above the cotyledon. It is critical that the sweet pepper scion stem diameter matches the chili stem diameter. Select a place on the stem to cut the pepper scion to achieve the proper diameter.



4. Slide a 10-mm long latex tube (2-mm inner diameter, cut at a 30° angle) over the scion stem. Make sure that the cut angles of the tube and scion are parallel.



5. Push the scion about halfway into the tube (you must leave room in the tube for the chili rootstock stem).



6. Slide the scion (now fitted with the latex tube) over the chili seedling stem. Again, make sure that the cut angles of the tube and rootstock stem are parallel.



7. Gently push the scion and rootstock together. If you have kept all of the cuts parallel, then you can be certain that the scion and rootstock are in complete contact with one another. The tube will stay on the seedling until it naturally hardens, splits, and falls off in the field.



8. Grafted pepper seedling showing latex tube fitted to scion and rootstock



9. Grafted pepper seedlings in trays ready for moving to grafting chamber.



10. Move the grafted seedlings immediately into the shaded chamber. Recommended temperatures are 25– 32°C. Keep a shallow layer of water in the polyethylene floor liner and keep the doors closed to maintain high humidity (>85% RH). Place seedling trays on bricks to support the plants above the water line. The grafted seedlings may wilt initially but will become upright within three days.



11. Four to five days after grafting, begin the hardening process by peeling away the top (silver) layer of shade net material. Drain the water out of the floor pan. Open the chamber's plastic-covered door, but keep the screen door closed to prevent insect infestation. Maintain these conditions for two to three days.



12. Move the grafted plants out of the chamber and place them into a screenhouse. Nine days after grafting, apply a foliar application of 0.3–0.4% urea solution, or 1 g per liter of BASF foliar Nitrophoska (20N–19P2O5–19K2O), or the equivalent of a similar soluble fertilizer. Hold the plants in the screenhouse for seven to eight days for further development and hardening. The entire process takes 50 to 55 days from sowing.