

Cactus Propagation Tips

“Set & forget” rooting method



When I say this is a self rooting species this is what I mean! When cut, a San Pedro tip section is still a living plant. It wants to heal its cut and then sprout roots to grow. You are literally cloning the original plant.

(right) This tip was cut and allowed to heal for a couple of weeks in the shade. Then it was set on top of the soil. That’s right—on top, not in the soil.



1) First let the cut end dry

It seals off the cut by drying out much like the way our skin makes a scab.

2) Then set it vertically on loose soil

Roots will sprout downward from the cut end.

Set on loose soil & forget about it!

When you remember it again, 6 months later, lift the tip up to see if loose soil comes with it. Surprise! *You have roots.*



Got roots? Then pot it or plant it outside.

Set the newly rooted tip into rich compost soil with sand and perlite added for good drainage. Avoid peat moss because it is acidic and not what San Pedro wants. He likes “sweet soil” (slightly alkaline).

(right) The “Set & forget” rooted tip is potted only 1” deep to prevent rotting the sides. *Mulching the plants is a great idea. Gardening books will teach you about mulching and composting—two of the most important things for healthy plants.*



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The main problem with rooting big sections is mechanical—they need to be supported so they do not fall over.

(right)

Long cactus sections are only difficult to root because they can fall over. You need to support them with wood or plastic stakes, or lean them against something.



This is what a healthy new tip should look like. Notice that the tip has a fresh appearance indicating new growth because it has roots. It is the same diameter—not tapered—that means it is growing normally. If they have too much light without enough roots, fertilizer, and water, *they will grow longer but skinnier*. For that reason I keep them in partial shade until they have a full root system. Even then, you do not want them to bake in full sun—flowerpots can overheat the roots.

(right)

“Set it & forget it” works even for rooting a 30-inch tall tip. I simply set this on the leaf mulch in the shade and let it lean against the fence. *Something has to support the tip from falling over.* Six months later it had a full ball of roots. Then it goes into a pot or can be planted—but make sure you stake it until it can stand on its own.



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What if the cut end starts to mold? What if the end rots after planting?

 Drying the end can be troublesome during the cold rainy winter months. Cold and wet conditions will favor mold and rot.

YUK! Planted too deeply into wet dirt.

It rotted and bugs & worms began to eat it. If you make this mistake, just whack off the bad part, re-dry the cut end and start again. This time set in on top of sterile soil and let it sprout root buds in time. Loose, well draining soil is best. Do not over water such that the soil is wet all the time. That can cause rot along the sides.



Once a plant has established itself it has a stronger immune system. You only have to worry about rotting during the rooting phase.

The cure! Sterilize the knife you use to cut the end cleanly. If the cut end molds or rots, simply cut it again. Sterilize with alcohol, or just lay the cut end in front of an electric fan and let air dry it out.



Cut off the bad portion (say, ½ an inch) and use a sterile knife. Rubbing alcohol wipe or 5% bleach solution is perfect. This stops the spread of microbes. One person says he flames it briefly with a propane torch. *Ouch!*



Flood the end with alcohol to complete sterilize it. The 91%+ isopropyl will take away surface moisture and dry the cut.



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Isopropyl alcohol is a good way to sterilize your knife and the cut end. I use a squeeze bottle to flood the cut. Isopropyl is sold as rubbing alcohol, but buy the 70%—95% and not the 35% variety. *You do not want water, you want alcohol.* Isopropyl will not get you drunk, it is only a poison. Kitty Dukakis once drank some, the famous “Kitty Dukakis Cocktail” after leaving an alcohol detox program—she obviously slept through her college chemistry classes.



Nifty Factoids

Methanol (wood alcohol) will get you drunk but is very poisonous. Only ethanol will get you drunk without killing you immediately. *It takes years.*

An electric fan will quickly dry the cut. This is a great way to evaporate any water so the end becomes like dry paper. Once fully dry it will not become infected with mold, as the cut will heal almost like a scab.



Put your specimen in a dry place in the house to allow the cut end to dry up and suck in before planting. These sections seal in their water and will not dry out. *They are survivors, not idiots.* They will be fine, in fact, for months in a dry place at room temp. *They will sort of hibernate and wait for light.* I have left cut ones in the shade for a couple months in the summer and they are fine.



A well-dried cut end is easy during the dry summer weather, and with warm soil the tips almost never rot unless the soil is water logged. To further ensure rooting success, consider using sterile soil and a rooting hormone.

Fungicides—garden supply places carry brands such as *Safer* or *Schultz* that are sprayed on exposed cuts after pruning. It prevents rot because it has anti-fungal properties. I like the neem oil containing *Schultz* brand. *Bob says he uses neem oil by itself.*

Use a rooting hormone to help jump-start the rooting process. Bob says he is having great results with Schultz's rooting hormone, which has anti-fungal agents too. That is important because if you are not using sterile soil the end may rot if the temperature is cold and the soil wet. An anti-fungal will prevent that.

Cactus Propagation Tips

(right)

The cactus knows it has to make little buds that pop out and look for water—it does this using its own stored energy and will actually send out root buds into dry soil. Be patient.



- *** Do not plant deeply in wet soil. *It may rot.*
- *** Place the cut end on top of, or only an inch deep in loose soil.
- *** Water once, then do not water again for a couple of weeks.
- *** Keep it out of full, hot sun until it roots. Partial shade is OK.
- *** It is OK to lift it up to look for root bud formation.

Log propagation

Logging is very simple. Lay the section on the ground and forget it. Later you can mound earth around the sides when it roots. *You may have to spray any fresh cuts with fungicide during cool, rainy/damp/humid times to fight off mold and rot.*

Planting straight sections

If you cut a tip off and root it, then want to grow buds from the columnar section left over—always mark which end was up. You do not want to plant the end upside down into the ground. *Mark the section when you cut up a long section.*

You can plant sections without a tip vertically. They will bud and grow new tips. But first you have to get it rooted. Slice the top at an angle so rain will slide off. (If it is straight cut on a vertical you will get water pooling.)

Any cactus that has a tip broken off or cut off will simply re-bud one or more new tips. This can be done to generate new tips for propagation.



END

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RESOURCES: Rooting Hormone/Fertilizers/Lime/Fungicide

<http://shop.twomblynursery.com//s/shop/item.asp?id=3008>

TakeRoot Rooting Hormone

This will kick-start your roots. All the professionals use a rooting hormone. I never have, but still think it is a good idea.

You dip the cutting into the powder, then plant. Since your cactus is a big fat section you will need to pour this out into a bowl. Wear gloves and a dust mask so you don't breath the stuff.



<http://homeharvest.com/orgfert.htm>

fertilizers and Ortho Dial-N-Spray

You can use the same ones organic gardeners use: rock phosphate, green sand, oyster shell calcium, etc.

Fish emulsion is a great source of nitrogen and can be sprayed on with this thing—an Ortho Dial-N-Spray. You fill it with a solution of fish emulsion, kelp, or even Miracle Grow and attach to a garden hose. Perfect for the big cactus patch.



<http://homeharvest.com/diseaseandfungus.htm>

Schultz Garden Safe Fungicide 3

Don't use chemical fungicides. Use the ones made from natural neem oil. It is a good idea to stop mold, mildew, etc. on your specimens when you snap tips off for propagation. Not really necessary during warm, dry weather. But a good idea during humid, wet, cold periods.



<http://homeharvest.com/soilconditionerspH.htm>

PH adjustment, Lime

San Pedro likes sweet soil (alkaline). Oyster shells or dolomite limestone are commonly sold at garden stores.

