

## Propagating Roses using Gallon Sized Plastic Bags and Artificial Light

By Pam Coath

I'd like to share with everyone a propagation method that works really well. I came upon this method in the October 2003 issue of the American Rose Magazine. The article is written by Mel Hulse, Volunteer Maintenance Director of the San Jose Heritage Rose Garden.

I follow the instructions in this article fairly closely, but the thing I do differently which I think makes all the difference is I put the plastic bags under artificial light (shop lights), not the bright indirect natural light the above author recommends as do so many other articles on propagation. I have had miserable "success" using any form of bright indirect natural light, but my success increased exponentially using the shop lights. My guess is I get at least 80% success!

Here I've written how I do this, but I do recommend you look up the article because there are some great photos that accompany it. Please don't feel intimidated by all the words that follow here - when you get to actually doing it you'll see it's easy and fun, and I have to tell you, there is something so exiting about seeing those roots forming along the sides of the plastic bags you feel like a kid in a candy shop!

Start with the clear "gallon" plastic zip lock bags. Fill them about 1/3 full, maybe just a bit more, with potting soil, moistened well but not so well water will run out if you turn the bag upside down. I use the Waterloo brand they sell. No timed release fertilizer type, just the regular bland stuff. The light, fluffy kind, with a lot of peat moss and perlite in it. Pro-Mix in the bales would be the type, no built in fertilizer.

I put two cuttings per bag, even three if they're small. I try to get a "heel" on the cutting. A heel is where the smaller stem joins into a bigger stem it's attached to. Some propagation books will have photos of it. The article mentioned above has a good photo of this stem to stem juncture. I just trim around to keep a very small, thin piece of the main stem or "heel" attached to the base of the cutting. It's proven this juncture area has a lot of rooting hormones in it, and it's definitely true because I've seen those particular cuttings root fastest here in my basement.

But if you can't get a heel, don't worry. Just make a cutting with approximately two nodes underneath the soil (the bottom cut should be just below the last node, no excess stem left behind, doesn't matter about angle), and two leaf sets above, trim the leaves if they're huge or can't fit.

Also, the best cuttings I've done are with roses which have just finished their current cycle of bloom. I wait until the petals have fallen off. For some reason having to do with hormones, this is when they are the most ready to root. The only roses I've had trouble rooting are certain old roses and some rugosas, mainly stems with a lot of thorns. I've rooted roses after the first June flush, in the middle of summer, and in the fall, too, in each case just after the petals have fallen.

Sometimes you can only get sort of twiggy cuttings where there are four or more tiny nodes very close together in the section you want to put in the soil. Don't worry, put them all under the soil. With my fingernail, I gently scrape off any tiny forming buds I see because this is where the new roots will form. I don't use a knife to make scrapes at the bottom of the cuttings, as you see advised in some articles - I just haven't seen lots of roots forming from these areas, and suspect it can even cause a cutting not to take.

If you think there might be spider mites on the cuttings, rinse them off really well under gentle hose or a tap...I even gently rub off the undersides of the leaves with my fingers as I hold the cutting upside down under the faucet. If there's blackspot on the leaves, you might see it get bad

and the leaves drop off in the bags. Try for blackspot free cuttings. The author of the above article recommends a spray mixture of 1/8 tsp. Baking Soda with 1/8 tsp. Miracle Gro for Roses in a 16 oz spray bottle which you can use at the time you put the cuttings in the bag and during the rooting process. I skip this step, but don't think it can hurt.

I use the regular rooting hormone stuff, the powdered kind. The kind I use is called Rootone by Rockland. I dip the cutting in, tap the excess off, and just stick it into the moistened soil, I don't even bother with a pencil hole first, etc.

Then I seal the bag. I then re-open a tiny section in the middle and blow the bag up and quickly re-seal it. I also write with an indelible marker the name of the rose and the date I put it in there. I use two plastic straws, the kind that bend at the top, inside the bag at either end, to sort of keep the bags propped up, as I've found even when I blow up the bags with air, eventually it comes out and the top of the bag crumples down, sometimes onto the cuttings. You can keep blowing the air in from time to time, I think the roses like it.

Then, this is the part I consider crucial...I put the bags under shop lights in my basement. I have the shop lights on a timer, 16 hours. The bags are put really close to the lights, the tops of the bags are only an inch or two away from the bulbs, and the leaves if you measured would probably be 4 to 6 inches away from the lights. It is cool light, it's perfect, really. The cuttings appreciate the cool temperatures of the basement, too. This is where my method differs from other write-ups about this, they all seem to say put the bags in indirect natural light - forget this, many will fail, in my opinion. Definitely use the shop lights - I use the full spectrum bulbs. Will they root with just plain fluorescent bulbs? Probably!

In my basement, I have a three-tiered lighting system I bought from a catalog, it is excellent. I wanted even more lights and did it inexpensively by getting two saw-horses from my neighbor, and an old counter top from them too, making a table out of that and just dropped the shop lights from the ceiling with lightweight chains. Either way, the roses don't care, they just like the cool light, plain and simple. I have all this in the room where the furnace and central air conditioning units are. The air conditioner runs a lot in summer and it sure is cool down there! My opinion is, the cuttings and new roots love this.

I've heard of people using bricks or cinder blocks, and just having the lights propped up on those at floor level.

I usually see the roots forming about two to three weeks from putting the cuttings in the bags, sometimes longer, but most are really raring to get out of the bags in one month. I open the bags a little one day, then more the next day, and finally prop them open with the plastic straws for several days, all in an effort to harden them off before planting them in pots.

When the roses have lots of roots that are getting long and look like they really need more space, and I've had them "hardening off" in the bags for a week or so, I then take the cuttings up to the garage where I pot them up in medium sized plastic containers. I'm not good on sizing containers, but use the ones you would find a medium sized perennial for sale in at a nursery. I use scissors to cut the bags open along the side edges, fold away the two sides, and then carefully lift out the cuttings by putting my hand under the soil and roots and gently pulling them out and away from each other with as much of a root ball as I can. I already have the plastic containers filled 1/2 to 2/3 full with moistened potting soil. I put the root ball cutting in, fill the rest of the pot with moistened soil, and water in. Again, use fluffy regular potting soil, with no fertilizers at all in it.

I've used the vitamin B root stimulator stuff, but I've also had just fine results not using it. Go ahead and try it if you want, I don't think it hurts, but go by the directions and don't use too much. I wouldn't water in with any kind of fertilizer, though.

I use the plastic straws as markers, using the indelible pens to write the name of the rose and just sticking it in the pot.

I keep the cuttings in my garage, where they are in the shade during the day, but they are only a few feet away from the driveway where there is blazing sun. So, perhaps that would be considered "bright indirect" light. I take them out of the garage in the late afternoon, say 5:00, and put them into the direct light. They get that gentle sun until evening...they stay out there until morning when they get another several hours of direct, gentle light. Then about 10:00 that morning I put them back in the garage. I do this cycle for about a week, then move them into more sun in the morning, back to the shade in the hottest part of day, back into late afternoon sun maybe at 4:00 instead of 5:00, etc.

After about two to three weeks of this, I have been giving them more and more sun, until they are in sun most or all of the day. I've gotten into the habit of using empty plastic pots in front of the pots with the roses in them to absorb some of the heat of the sun, because I think the roots can fry in those black plastic pots in the hottest sun.

If you can't be at home during the day to do this routine, perhaps put them under the shade of a tree would be good, but protect against rabbits, as I mention later in this article.

After about a week or so when they've been in the pots, I start to use fish emulsion or mild Miracle Gro from time to time, very light doses, like a teaspoon in a gallon and split between 10 cuttings in pots. You can do this if you've planted them in the ground too, but remember, light doses!

After a couple of more weeks, they can go in the ground, or wait until late summer or fall to plant. My opinion after doing this a couple of years is, if you can plant it about four or five weeks or so after you've had it in the pot, this is better. The roses can become root bound. I've had some problems over wintering them if they just stay out in the pots. You can bury the pots in the garden just for wintering over before planting in the spring. This seems to work out fine but the last winters have been pretty mild.

One last piece of advice...I have rabbits here. I don't know who doesn't have rabbits. For some reason, they love these little cuttings and will decimate them with no mercy, each and every one of them. It's like they have radar and find them out - this is no fun after all that time, love and care you've put in. I go out and buy some of that soft green chicken wire, it comes in circular bundles about 2' in height - I cut long pieces and form rings around each and every cutting and use bamboo stakes or sticks to wedge them into the ground. Please don't forget to do this as I've had the heartbreak of seeing happy little cuttings just chewed to bits.

Follow all of this advice and you will be a successful and happy rose propagator!

Happy Propagation!!!