

Notes for Evergreen Azalea Propagation

Slide

1. Disclaimer: Don't take cuttings from patented plants. The name or variety label should give that information. If in doubt, go to the internet. Ask the AI assistant if the named variety of azalea is patented. You will get a very quick answer—yes or no!
2. The title slide. You can do one cutting or a whole bunch. Anyone and everyone can do this!
3. The format—questions, questions, raise your hand, enjoy!
4. **Materials list 1.** Any kind of clear or translucent container that can with a tight lid will work. In a pinch, I have used large zip lock bags with a couple sticks stuck in the pot to hold the sides off the cutting. Perlite is absolutely essential. NOT Vermiculite!!! And peat moss. Any brand will do, but the better brands have less trash, bits of sticks and other debris.
5. Perlite improves aeration. Without oxygen, no roots will form. You must have gas exchange. It also makes it much easier to separate cuttings in group pots, when it's time to put them into soil. Peat provides an acidic condition which greatly inhibits fungus and bacteria growth. It also provides an environment that azaleas need. They are acid loving plants.
6. This is the ratio of perlite to peat. 4:1 Traditionally, I've read and been told for many years, a 1 to 1 or 50/50 ratio is perfect or best. I found out very quickly that it tends to get water logged and cuttings just rotted. I kept the tubs too wet. But I also found it a tricky thing to keep the humidity levels near 100% relative humidity without the media being too wet. Also, it just didn't provide enough aeration for really good root growth. Increasing the ratio of perlite fixed this problem instantly. I played with increasing ratios of perlite. I have found this ratio works very well for my setups. For deciduous azaleas I go to a 5 or 6 to 1 ratio of perlite to peat. Here you see pots with dry mix and wet mix. I fill several pots before I bring the cuttings out of the fridge to stick. More about that later.
7. Here's what the dampened perlite/peat mix looks like. I carefully dumped a pot into my hand.
8. **Materials list 2.** Pots of perlite/peat media already filled—they don't have to be wet yet. Rooting hormone. For most evergreen azaleas it's not necessary. For some varieties, I can't get them to root without it. I want to get the highest number of cuttings to root. That's why I'm taking cuttings! Everything I can do to up my success rate, I aim to do it. I generally have better than a 90% success rate of all the cuttings I stick. Often, it's above 95%. No matter what you pay for rooting hormone, if it gives me 10% more cuttings, it's a bargain! I'll talk more about rooting hormones later—I promise! Spray Bottle. Cuttings are soft tissue. They have no root system and open wounds losing water every second. I keep the cuttings wet or damp constantly. I spray them down at every step. I keep them in containers of water. They are never left lying around drying out.
9. Tools needed. You need very sharp nippers or bonsai scissors to trim leaves and stems. You want clean cuts—not jagged tears! This keeps the dehydration of cuttings to a minimum. As soon as you take the cutting, put it in a zip lock bag. Right then, right now! A sharp knife is needed. You will be making very delicate slices off the base of stems. A table AND CHAIR is

required by me. You might like to stand and work at a bench or very tall table. That's up to you and your legs!

10. Time to collect the cuttings. You want the cuttings a full of water as possible. Water the plants in late afternoon the day before you take cuttings or just after a good rain. They should be stiff and stand straight up after you take them. Put them in the zip lock ASAP. Unless you are taking cuttings from one variety only, label the bag or put a label in the bag. Permanent markers work well on zip locks.
11. You need cuttings that are stiff, even getting almost woody colored at the base. You want this season's new growth. Longer is better! But we can make short stems work too! I can always trim some off the stem but I can't make additional stem length. Plan on cutting the growing tip off of the stem. So do the leaf count, and stem length estimates with that in mind when you cut the stem. 4-6 inches is big enough for me to handle them easily and quickly. Tiny, short cuttings, like from dwarfs and creepers, are harder for my big fat fingers to easily handle. If I'm doing a bunch of those, I also keep a couple pairs of 6 to 8 inch tweezers handy!
12. You can stick the cuttings immediately. That may be what you need to do. Several of my friends agree that if you put them in the fridge for a day or two, there seems to be a higher percentage of rooting, and from casual observations, that maybe, they tend to root quicker. That may be just my imagination. I haven't really had the need to test this. So, take it with a grain of salt. If the cuttings are a bit dehydrated, put them in a cup, tin can, yogurt cup or whatever with enough water to cover the cut bases of the cuttings overnight in the fridge. They will usually regain full turgor by morning. You don't want to leave them standing in water for more than a day or so, because the stem bases will turn soft and rot. Dry cuttings put quickly into a zip lock and within the hour, put in a fridge will usually be fine for two weeks. I have found cuttings three weeks later and they were all just fine!
13. Length of the cuttings is often determined by the variety and the spring conditions of the plant. If you want to prepare a plant for cutting material, make sure to fertilize early in the season and keep the plant well-watered—not to the point of rotting roots, but it takes water to elongate stems.
14. You can sometimes get woody stems to root. Take woody ends of branches. Take them from branches coming as low to the ground as you can. No kidding, they will root more readily than branches taken from the top of the plant.
- 15.– 17. Perfect new season growth and cutting material.
18. Typical cuttings. The nippers are 7 ½ inches long.
19. How to deal with creepers and super dwarfs.
20. – 23. Creepers typically have shorter stems, but you treat them the same way as any other azalea. Go to the ends of the branches and start cutting.
24. Make sure you label cuttings. Write on the zip lock or put some kind of label in the bag. I use a whole lot of surveyors' flagging ribbon or tape.

25. –26. Super dwarfs. Often, you don't get growth with stems. It's almost like the buds sprout leaves but never a central stem. Well, the stem structure and pattern remains true, but on a scale that appears to be no stem at all to our eyes. You can go to small woody stems and have a good amount of success. But with woody stem cuttings, you want to use a rooting hormone to up the chances of roots forming.
27. –29. Remember, take material as close to the ground as you can. This is especially true using woody stems.
30. Sticking cuttings—what's needed.
31. Various pots and containers to put the cuttings in.
32. My humidity chamber—clear plastic tubs with lids.
33. My table all set up to process and stick cuttings.
34. What's on my table. What's on yours?
35. Point out and name what each item is and it's purpose.
36. Three containers of cuttings. Three kinds of cuttings from one trip to the garden.
37. Have your pots filled with the perlite/peat media before you take your cuttings out of the fridge or zip lock.
38. Pots filled with rooting media. Dry.
39. Media that's been sprayed down with water. Before I tamp it down.
40. Media in a clear drink cup. Wet down with the spray bottle.
41. Again, wet media. Notice the ration of perlite to peat. The peat will help maintain good moisture and acidic conditions to prevent fungus and bacteria. The perlite will create good aeration providing oxygen for root production.
42. Two longer cuttings and the Dollar Tree \$1.25 nippers I use. They are the best thing I have found for taking azalea cuttings.
43. I cut the cuttings into 2 cuttings each.
44. I remove WITH THE NIPPERS, leaves from the base of the cuttings going towards the tip, leaving 4-5 leaves at the top.
45. I remove the growing tips from the top half cuttings and nip off the lower leaves.
46. You can see the clean cut where the leaf was removed.
47. I use a pencil to make holes in the media in the cup. My usual practice is to place the cuttings

back in the cup of water unless I am working with that cutting. They don't generally lay on the table, or if they do, they are sprayed down with water. Both cuttings were placed back into a cup of water to await being actually planted in the rooting media.

48. – 49. Holes in the media to receive the cuttings.

50. Take the cutting from the cup of water. Shake off all the excess water, but don't dry the end of the cuttings. You want it damp so the rooting powder will adhere to it. I dip one cutting into Hormex 1. It is a 0.1% powder of IBA. I'll explain more in just a minute. I drop it in one of the pencil holes in the media. There are lots of other IBA products on the market. Some more expensive, but Hormex is on the less expensive end. Gel solutions are also an excellent choice. A 20z bottle of Hormex powder will treat at least 200 typical azalea cuttings. A real cheap 'ace up your sleeve' in my opinion!

51. I dip the end of another cutting into Hormex 3 –0.3% IBA. It goes into the other hole.

52. Explanation of what IBA is and what it does.

53. The cuttings in the clear drink cup.

54. Gently but firmly, press down or pack down the rooting media around the cuttings. Don't crush the cuttings, but you need to have good contact and no big gaping air spaces around the cutting. There needs to be direct contact of the stem with the damp media. Imagine planting an azalea in the ground, sitting on a rock, with the dirt all around the azalea but the roots hanging out in air. Get the idea?

55. Put the label in the cup, one final spray down with the bottle. You should have about an eighth of an inch of water standing in the bottom of the cup. Put the lid on the cup.

56. Cup of cuttings ready to put in the light, in a place of optimal temperature range, and off you go! If the straw hole has been deformed so as not to close, just put a piece of clear tape over the straw hole. Every day or so, check and see how things are going. You should see drops of water on the sides of the cup BUT NOT ON THE LID. Water condensing on the lid also, means you have too much water in the cup. Simply dump some out. The media and cuttings should stay in place.

57. A regular pot of media placed into a tub of water to saturate the media from the bottom up. Much quicker than doing it with the spray bottle. Also, I don't want to keep having to fill the spray bottle. It takes time and when you are doing a bunch of cuttings in a setting, time is important.

58. Two cuttings, tip removed and leaves trimmed. Ready to stick. Place them back into cups of water until you are ready to actually stick them.

59. Put a thin slice in the base of thicker cuttings.

60. – 61. Make the slice.

62. Dip the cuttings into the rooting hormone and stick that same way at the drink cup cuttings.

63. Put the pot of cuttings into the humidity tub and put the lid on the tub until your ready to put another pot of cuttings in the tub. Don't let the cuttings dry out. If you have the lid off and on a lot, then occasionally spray the cutting pots with water.

64. The woody cuttings.

65. Make thin slices at the base of the cuttings just like thick soft tissue cuttings.

66. Dip them into the rooting hormone and stick them in the pot of media. These were from the Rukizan super dwarf, so they are tiny little woody stems. Note the label with the date the cuttings

were stuck, not the date they were taken. Don't be too quick to do the tug check to see if the cuttings are growing roots. Wait 6 weeks before you do the first tug test. Mark the stick date and the first tug date on a calendar.

67. Any 5th grader can do this on their own. Even a kindergartner can do this with a little help. Have fun with it. Get the kids and grandkids excited about rooting cuttings. It isn't limited to azaleas! All kinds of plants can be propagated by this method. Some require more concentrated IBA, some don't need extra help.

68. The coffee cup cuttings. Materials are cheap. You can do this. If the straw hole is deformed or won't seal, put a piece of scotch tape over the whole. You might have to re-apply tape a couple of times before taking well rooted cuttings from the cup. With a clear cup, you can see roots growing!

69. – 71. Lighting. Read the slides.

72. I use mostly clamp lights and strip lights. You can buy all kinds of full spectrum and daylight spectrum bulbs in various configurations and wattage. I have also used pole lamps, and keep a very old desk lamp from the 1950s outfitted with a full spectrum, 100 watt equivalent LED bulb, just for processing seed pods! I have all my light setups going through surge protectors and on timers. I try to give cuttings 16 hours of light daily. I have a room built in my downstairs just for plants. I do lots of cuttings and some years grow off thousands of seedlings. But you don't have to! You can just buy one of those plant trays to keep the water spillage contained and set up a desk lamp on a end table, night stand, or desk top, and root a hundred cuttings in a single tub. You can do two sets of cuttings in a summer and easily root a couple hundred cuttings in a 30 quart clear tub.

73. Desk lamp from the 1960s with a current 14watt 1650 lumen 5000k LED Daylight bulb.

74. How long until roots? Tug test. Moss grows—no problem. Fungus grows—spray a good fungicide. All rose fungicides are fine and readily available

75. Here's what the typical fungus growth will look like. A quick spray of fungicide and it's gone. Fungicide does not stop the moss from growing. Remember, it's an acidic media. Moss spores are in the air everywhere. Eventually, moss will start to grow. NO PROBLEM!

76. Moisture Control. Read the slide. Answer questions.

Too dry—spray the cuttings daily or even twice a day for a couple days and stop when the next morning you see condensation on the sides of the tub.

Too wet—this often in the case. You can add a layer half an inch deep of dry new perlite. This will soak up the excess moisture right from the air! But watch for too much drying out. If it gets too dry, don't water the pots of cuttings. Add a little water to the perlite. A little at a time. Go back to spraying the cuttings until you reach the right balance. Or you can crack the lid of the tube a little for a couple of hours. Then close it back!!! DON'T FORGET TO CLOSE IT BACK. You can repeat this for a couple of days and get the right balance back on track.

77. – 81. Various tubs around the plant room. Different heights give me different temperature ranges. I can easily stick 2k cuttings in my plant room. It's the size of a medium bedroom space.

82. – 92. Tubs and trays of cuttings.

93. – 94. You can pack the pots with several cuttings.

95. – 108. Let's pot the cuttings. When it's time to separate multiple cuttings from a single pot, you can put the wad of cuttings in a bowl of water and gently pull them apart. Then pot them up how you want to grow them up.

109. – 110. I have on rare occasions, taken the individual rooted cuttings and planted them in rows in a single 10 x 20 tray. I place the cuttings in rows, fill in between each rooted cutting with new potting soil, pack in more soil giving a space of soil between rows and fill entire trays with cuttings to hole until I have time to individually pot and label each new little azalea. I have about 800 cuttings that went through the winter in community trays. They stayed in the trays for 9 months before I potted them up individually.

111. – 115. You can stick cuttings from other plants too. Most shrubs will root this way. But some trees will also do well. In some cases, you must use higher concentrations of rooting hormone, but it's a wonderful way to add more plants to your collection for just pennies per plant. GARDENIA CUTTINGS

116. This method works well for many flowering shrubs.

117-119. Carolina Silverbell cuttings showing new growth.

120. Google the shrub and see if this method works. Sometimes, it just takes a slight variation for success or just take cuttings at a different season. Get your kids and grandkids involved! It's a great summer fun project.