

## Ask Dr. Fill



### Dear Dr. Fill

I planted a very young, very spindly oak sapling about 18 years ago, and much to my surprise, it's now a magnificent huge oak tree producing acorns. I'm thinking that it might be fun to collect some acorns with my grandchildren and plant them together and see if they can grow an oak tree that their children could climb when they're the same age as my grandchildren are now. Would you have any tips on attempting to grow an oak from an acorn? I have no idea how many years my little sapling had been growing when I planted it.

**Sincerely**

**A Curious Gardener**



**Dear Curious Gardener,**

Growing oak trees from seed is easy to do as long as you follow a few basic steps, and I love the idea of you planting some with your grandchildren!

It's best to collect acorns from strong, healthy trees after the acorns have begun falling from the trees. You can gather your acorns from the ground or from the tree branches, but once they've begun to fall, that's the signal that they are ready to make a new little tree. If the caps fall off on their own or you can remove them easily, you will know the acorns are mature enough to plant. Choose only nice healthy acorns that show

absolutely no sign of damage – if they're cracked or feel soft or have holes in them where insects have burrowed in, or feel light in weight, don't bother planting them. There's actually a very easy test you can do which your grandkids would likely enjoy. Put them in a bucket and fill it with water. Any acorns that float can be discarded, as they will not grow. They've dried out and the seed inside won't be viable.

Oaks, both white oak and red oak, grow relatively quickly from healthy acorns. Though you could plant acorns outside in the fall and let nature take its course, there is a risk that they'll dry out, freeze, rot or more likely be dug up by hungry squirrels. Planting them in pots is a much safer way to go – and if you do it with your grandchildren, they can watch the little trees grow in their pots. You might even want to snap a few photos of them holding the baby trees in their pots to show them when they're grown up and standing under the huge tree that they grew from seed.

If you want to go the safe route, you'll need to prep them for planting through a process called stratification. This just means storing them in the refrigerator to mimic the natural conditions they would be experiencing outside over the winter. All you have to do is choose a few healthy looking acorns and place them in re-sealable bags with a little bit of peat moss, vermiculite, sawdust, or

a similar soil additive that will remain moist. The bag should only be about half full, so the acorns will have plenty of room to breathe without being crowded. Place your bags in the refrigerator. (According to the Department of Natural Resources, the fridge should ideally be set at 4°C but I think any refrigerator should be fine!) Check the bags periodically over the next 30 to 90 days, making sure the peat moss or other additive stays moist but not wet. It's important not to let the mixture dry out! Eventually the acorns will begin to sprout. You will see an embryonic root, called a radicle that will emerge from the seeds. Once several acorns have sprouted, you can prepare to plant all of them – even the ones that haven't sprouted- or you can leave them in the fridge until they do sprout. Be really gentle when removing a bag of sprouted acorns from the fridge, and be careful to separate each one without jostling the bag or breaking sprouts off. If the sprout breaks on one and you have more, plant them instead and discard the broken one.

You also need to avoid breaking their little sprouted roots when planting, so create a small hole in the soil deep enough for the longest root. Holding the acorn suspended in the hole, gently gather the soil around the root, starting at the bottom and working your way up until the seed and all of the sprouted parts have been covered.

Due to the very long taproot produced by oaks, a deep container (more than 20cm deep) is best for planting. Make sure the pots have drainage holes at the bottom. One great option for a homemade pot that is nice and deep is to use a cardboard one-litre milk carton with some holes cut into the base for drainage. Fill your pots to within 2 – 3 cm of the top with moistened commercial potting mix. Place the acorns about 2 cm below the surface, or deeper if the acorn is particularly large. Plant one acorn in each container and cover with a light layer (about 1 cm) of potting mix. Water the pots immediately after planting, and water whenever the top few cms of soil is dry. Keep the soil moist but not saturated. Oak seedlings can grow well outside in the partial shade of the tree they fell from, but for indoor growth over the winter, full sun or grow lights are really needed.

It is best to start acorns inside as they are more protected from the elements and wildlife, but if you choose to plant them outside, there are some extra steps you can take to protect them.

Use a tree protector to guard the area from any wildlife that may nibble off the young shoots as soon as they begin to grow in the spring. You can use milk cartons or tin cans with the tops and bottoms removed or other similar household items – anything that can keep the baby sprouting trees from being chewed off – and something that

tells you that what you see sprouting is your oak tree and not a weed! Keep the area well-watered but not saturated. You may also want to add peat moss or compost to create looser, more well-draining soil. When watering your young saplings, don't just give them a sprinkle from a watering can; make sure the water goes down deep. This will encourage the tree to send down deep roots.

It may take some time before the first sprouts appear above the soil, so be patient and don't walk in the area and accidentally break any off that are just poking through the surface.

If you've chosen to grow them indoors, once they have sprouted, you'll want to make sure they receive full sun or place them underneath grow lights for up to 16 hours a day. If you planted them outside, it's okay for them to be in partial shade, but they should still receive a decent amount of sunshine.

Seedlings that you're growing inside must be planted in larger pots as needed. Don't ever allow the taproot to grow out the bottom of the pot, and never allow a young plant to become root bound. Oak seedlings won't survive if they're damaged in any way. That's what makes the deep milk carton a great option. It's narrow, so it doesn't take up a lot of space, but it allows long roots to grow.

Once you've been growing your baby trees indoors throughout the

winter, you should move your seedlings outside in spring before the summer heat has begun, but after any risk of frost. As with any seedlings, you need to move your baby trees outside to harden them off – placing them in more and more sun for longer and longer to get them toughened up and used to being outdoors.

At this point, you'll need to decide whether you want to grow them in their pots for the rest of the summer and plant them in the fall when they're a bit taller, (which is usually the better option – IF you have nice deep pots that allow their roots to grow without coming out the drainage holes) or if you want to plant them in their permanent home and mark them well so they don't get harmed by lawnmowers or whipper snippers. Either way, water well throughout the spring and summer. Trees planted in the ground can be deeply irrigated as often as every week during dry periods.

When transplanting your oak seedlings, the planting hole should be twice as wide and deep as the pot and roots. **Carefully** remove the fragile roots and set in the hole with the root collar (the place where the stem meets the root system) at ground level. Fill the hole with soil, and firmly tamp it down and water thoroughly.

You may keep your potted saplings in their planters as long as you want, but you will have to continue to transplant into larger pots as the

trees grow. If you wait to plant your seedlings in the ground during the fall, make sure they have at least 2 weeks to settle in before the first possible frost.

If you opt to just plant your acorns outdoors as soon as you collect them, you should keep in mind that the germination rate might not be as high, but acorns are plentiful, so that shouldn't be an issue. As I mentioned earlier, planting them as soon as you collect them means that squirrels will be collecting their winter food stores and they'll often dig up any that you plant. They're also more apt to be harmed by mold, bug damage, and excess water in late fall storms when we get hit by the remnants of hurricanes so you might want to consider planting several acorns in each spot and hoping that at least one or two survive.

No matter how you plant them, it's important to keep the grass and weeds away from your tiny saplings as they grow. This way, they will receive the proper water and nutrients they need to become strong and healthy and capable of surviving a few insect bites on their leaves.

So how long will it be until you get an oak tree from an acorn? That depends a bit on the type of oak and the location where it's growing.

In general it takes 1 – 3 months to stratify your seeds, a few weeks to a few months for your seeds to sprout leaves, about a year before you're ready to plant

young saplings you've been growing indoors outside in your yard, and about 15- 20 years before your oak tree is big enough for kids to climb, and before it begins to bear acorns. It will still take another 30 years or so before it truly is a fully mature, majestic oak tree.

Thanks for the great question, and I hope that you do decide to plant a few acorns.

**Sincerely,  
Dr. Fill**