

# **A Simple Way to Root Cuttings of Your Favorite Plants**

**By Michael J. McGroarty**



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Plants.**

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For a true gardener, there is nothing in the world more exciting than successfully rooting cuttings of favorite plants in their yard or garden.

Or better yet, being able to root a cutting from a plant that you see at a friend's house or in a planting at a commercial building like the doctor's office or a restaurant. I'm not suggesting that you "swipe" cuttings from commercial buildings, but if you did I wouldn't judge you for it.

In reality all you are really doing is making the earth a better place by leaving it better than you found it.

However, asking permission before you "swipe" a cutting or two is really the best thing to do.

Okay, we've got that out of the way. Let's get moving!

Rooting cuttings is really easy, but plants are seasonal creatures. There are ideal seasons for rooting cuttings and there are different techniques for rooting cuttings. In an effort to keep things as simple as possible so you are certain to be successful at this, in this little booklet we are going to concentrate on two tried and true techniques that work really, really well.

In the business of rooting cuttings you have to understand that timing is everything.

There are times when you can take cuttings and times when you can't. Understanding the timing is really important.

But first, let's talk about softwood cuttings and hardwood cuttings. If you happen to be in a warmer state the timing is slightly different than what I am going to describe here, but the good news is that you have a much longer growing season than those of us in the cold states.

You folks in warmer states get to start doing cuttings earlier than those of us in colder states.

Here in northern, Ohio, zone 6, our spring growing season usually kicks off about mid April- maybe the third week of April. It's important for you to note when the plants in your area first start to leaf out.

### **The Six Week Rule**

The six week rule is really important (this is one of those timing issues that I mentioned earlier). Contrary to popular belief, spring is really the worst possible time to try and root cuttings because the plants are actively growing and the tissue is way too soft and fragile to use for cuttings. They will never hold up. As soon as you remove the cutting from the parent plant it will wilt and droop over. That's not good. We need the cuttings to stand up on their own.

Thus the six week rule. It goes like this:

We'll use my Ohio weather as an example, but you can adjust this to your climate. Here in Ohio plants break dormancy and start to make leaves about the third week of April. If you pay close attention to your plants and what is going on with them during this period you'll probably be quite amazed.

As soon as the weather warms up in the spring the little buds on the plants start to swell. In a matter of days they open up and new leaf is born. Very quickly from that bud and leaf, a new stem emerges. In a period of about six week that stem grows from just a few inches to 6" or more.

This happens all over the plant, hundreds or even thousands of new stems (branches) are born. It happens quickly. These new stems are considered "current year's growth". In other words, this is new growth from the current growing season, not older wood from previous growing seasons.

### **Always Use Current Season's Growth for Cuttings**

When making cuttings, you always want to work with current season's growth. Make a note of that!

At first these new stems are very soft and

fragile, but fairly quickly the growing slows down. This gives the new growth a chance to harden off. That's where the six week rule goes into play.

As soon as your plants leaf out in the spring, mark the date on your calendar with an asterisk. Count forward from that date six weeks. That's when you can start taking softwood cuttings. Six weeks from the date that the plants first make leaves marks the beginning of softwood cutting season.

As the growing season goes on the new growth becomes harder and harder. By mid summer we start to refer to the cuttings as semi-hardwood cuttings. This is how plants prepare themselves for the upcoming cold weather. They toughen up!

By the time late fall/early winter arrives the new growth will have gotten very hard and brittle. We refer to cuttings taken at that time of the year as hardwood cuttings.

### **Softwood Cuttings Verses Hardwood Cuttings**

Softwood cuttings are a lot more fragile than hardwood cuttings, but they root much quicker. Hardwood cuttings are tough as nails! They hold up really well with little care, but it also takes them a lot longer to make roots.

Some plants are very easy to do as softwood cuttings and others not so much. Most plants can be done as softwood cuttings. Those that don't like being done as softwood cuttings usually do really well as hardwood cuttings.

### **Let's Recap**

For all practical purposes the ideal time to start your plant propagation projects is the first week of June. If you are in a warmer climate (one of the southern states) you can probably get started in mid May.

You can't make cuttings in the spring because the wood is too soft and fragile. But once you get started, be it May or June depending on where you live, it's full speed ahead all summer into the fall and winter!

We start making cuttings in early June and continue making cuttings through the winter until mid February or so. So the window of time is really wide.

But with that said, the softer the wood the faster the cuttings will root. They're more frail, but they do root quickly. I'll show you how to keep those frail cuttings happy until they make roots. Let's get started!

### **Making a Simple Plant Propagator**

Go to your favorite discount store and buy



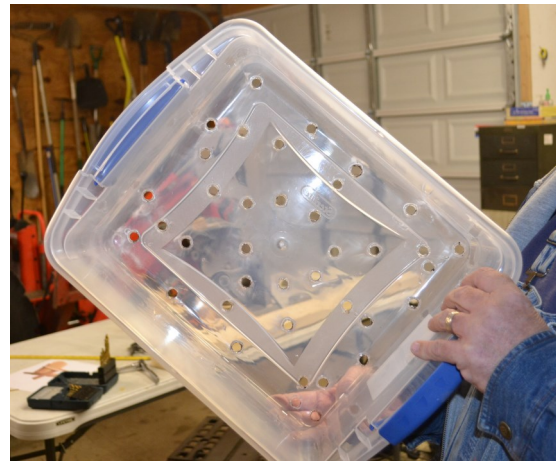
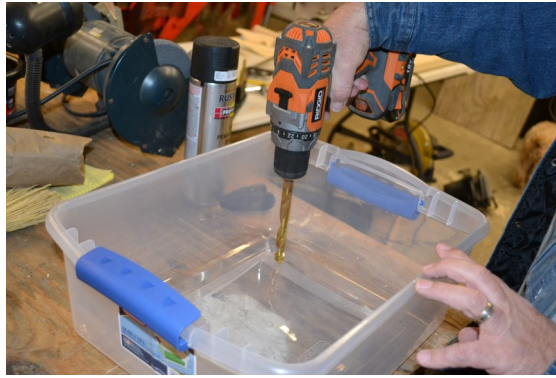
a plastic storage tote like the one shown here.

You can use any size tote you want. Keep in mind, clear is not good because the sun will shine through the clear plastic and heat your cuttings up too much. I bought clear tote because that's all they had at the time,



so I will spray paint the lid of this tote white. If you can buy a tote with a white lid that would be perfect!

The first thing you need to do is drill holes in the bottom of the tote so excess water can easily escape from the tote.



When rooting cuttings the rooting medium must be well drained but moist.

When you drill the holes in the tote it helps if you leave the tote setting out in the sun for about an hour to warm up the plastic so it's not as brittle.

Place a piece of wood under the tote as you drill, this will also prevent the plastic from cracking as you drill.

Next put between two and three inches of

potting soil in the tote. The potting soil that you select should be light and fluffy with Perlite or another drainage enhancing product mixed in so it drains well. Brand name doesn't matter and you don't really need fertilizer in the potting soil you use.



Plants that have no roots and are trying to make roots, really don't need (and probably do better) with no fertilizer in the potting soil. A seed starting mix is ideal because even if it does contain fertilizer, I'm sure it's a very small amount if the soil is specifically blended for seed starting.

With your fingers make sure there are no lumps of soil in the tote and at the same time press the soil down firmly. It's important that there are no air pockets in the soil after the cuttings are inserted. After sticking the cuttings you can water thor-

oughly as well to help remove any air pockets.



### **Important Note!**

When you are working with hardwood cuttings like I am in this example you can collect long canes and cut those canes into multiple cuttings. A cane is just a branch from current year's growth. Current meaning that the wood is less than one year old.

When doing softwood cuttings during the summer you ***cannot*** collect long canes like this. It's best to use only tip cuttings which are the most recent growth on the plant - usually the top 5" of the branch.

Why is that? Because during the summer you want soft growth. The deeper into the

branch you go, the harder the wood is.

Collect the wood to make cuttings.



See the snow on the ground? These are very much hardwood cuttings!

I'm writing this booklet at the end of winter so I am working with hardwood cuttings.

Where you make your cuts when making hardwood cuttings is important. Softwood cuttings? Not quite so much, they are more forgiving, but with hardwood cuttings exactly where you cut to make the cut on the bottom of the cutting is really important.

Also, you have to be careful when handling your canes and cuttings because it's easy to

get them turned around and mix up top and bottom. It matters! **They will not root if**



**you stick them upside down.** Don't ask me how I know that.

Looking at the above photo, pay attention to the bumps on the cutting. Those are called nodes or bud unions. The new leaves and new growth will emerge from those bud unions. When this cutting makes new roots, it will do so right below a node (bud union). It will not make new roots from the smooth part of the stem between the nodes.

The bottom of this cutting is to the left and as you can see, I am cutting right below a node, be careful to not cut into and damage the node. Making this cut is creating a wound right below the node.

Plants have a natural instinct to heal up

wounds much like the human body does. When we break a bone our body immediately starts building callous around a broken bone in an effort to stabilize the break so it can begin to heal and repair the break.

We make our cut on the bottom of the cutting right below the node and the plant will immediately start building up callous around the wound and shortly there after roots will appear.

However, it's important to note that in order for roots to grow the soil around the roots needs to be warm. At least 45 degrees F. The warmer the soil, the faster the plant makes roots.

When working with hardwood cuttings you have to be patient. Stick your cuttings, put them outside in the cold (even if it's freezing) then wait. As the air temperatures warm, the soil warms and the cuttings begin making roots. Often times the cuttings will start to leaf out at the same time that the rooting is taking place.

### **Do Not Keep Hardwood Cuttings in the House**

Resist the urge to keep the cuttings inside where it's nice and warm. With hardwood cuttings that's not a good idea. The cuttings will leaf out way too early. Just put them outside and let nature do it's thing. It



will appear that nothing is happening, but that's not the case. The cutting knows



what to do. When it's cold it will do it very slowly. As it gets warmer outside the cutting will react more quickly.

Looking at this cutting you can see that on the bottom I cut just below, but not into the bottom node. At the top of the cutting, I cut about 3/4" above the top node. This protects that top node as you handle the cuttings. The top node will produce a leaf or leaves and new growth so it's important that you don't damage that top bud. Make



your cuttings about 5” long.

If you are doing something like grape vines you’ll have to make them longer because grapes grow so vigorously that there is a lot of space between the nodes. With grapes you often end up with cuttings that are 12” or 13” long. You’ll need a deeper tote!

#### **A Side Note**

With hardwood cuttings it’s not critical that you have a lid on the tote, but with soft-wood cuttings it is. Right now, at the time of this writing (late winter) we have thousands of hardwood cuttings that haven’t yet rooted sitting outside in the snow uncovered. They are stuck in flats of potting soil.



Before you stick your cuttings into the tote

you can dip them in a rooting compound. Rooting compounds are not magic. They are not always necessary, but they do increase your chances of success.

Brand name does not matter. All rooting compounds are similar and they all seem to work just fine. Rooting compounds come in both liquid and powder formulas.

I like using a liquid because you need a stronger rooting compound for hardwood cuttings than you do softwood cuttings and with a liquid you mix the rooting compound with water to the correct concentration. The directions are on the package.



With a powder you have to buy one strength for hardwood cuttings and another strength with softwood cuttings.

Don't sweat the small stuff. Whatever

rooting compound you buy is just fine.

Stick the cuttings into the potting soil about one inch apart. That's all the room they need. Don't worry about the roots getting tangled, it's never been an issue for me.

When you remove the rooted cuttings from



the tote, use your hand to scoop under the cuttings and gently lift and shake at the same time. The soil will fall away and the cuttings will untangle as you do so.

As you can see I packed this tote full of cuttings, actually putting them closer together than one inch.

Why? Because these are last of the cuttings that we will do this winter and I tried to put as many as I can in this tote. We

won't do any more cuttings until June when we can do softwood cuttings.

By the way, these are Pussy Willow cut-



tings. You were probably wondering.

After all of the cuttings are stuck, use a



sprinkling can and water really well so the potting soil is thoroughly soaked. Excess water will drain out the bottom through the holes that we drilled in the bottom of the tote.

As you can see in this photo I painted the cover of the container white to reflect the rays of the sun. I did not paint the entire container because this container is shallow and when I set it outside I will put it in a shady area so very little sun will hit the sides of the container.

However, if I were using a deeper container I'd either buy one that was white or I would paint the entire container white.

You do not want the sun beating through the plastic heating things up inside of the container.

That's it! My cuttings are stuck, they are watered thoroughly. I will set this container outside (no matter how cold, even if it's really, really freezing) and I will check it from time to time just to make sure that it's not too dry inside.

When doing softwood cuttings during the summer months, do everything the same except only take tip cuttings.

Where you make your cuts is not that critical and I pay little to no attention at all as to where I make my bottom cut. Since you are using only tip cuttings, there usually is no top cut.

However, if the plant that you are working with has really big leaves, you can cut the leaves in half. With softwood cuttings it's

important that you have some air circulation around the leaves so they are not constantly in contact with one another.



These are Potentilla softwood cuttings. Notice how I removed all of the leaves from the bottom two-thirds of the cuttings? That's how you do all of your softwood cuttings.

Doing softwood cuttings is that easy.

1. Take the cutting. About 5" long.
2. Strip the leaves from the bottom two-thirds of the cutting.
3. Dip the cuttings in rooting compound. As you can see from the earlier photo, I dip a handful, probably 25 cuttings at a time, in the rooting compound.
4. Stick the cuttings into your tote or





propagation box.

Plastic tote too small for you? It sure is for me! That's why used this old storm door to make a ***Big Propagation Box***.

After this photo was taken I painted the glass windows white to reflect the rays of the sun. But this also needs to be either located in the shade, or shade created over top of it to keep the sun from pounding on it all day long during the summer.

A propagation box like this can be used during the winter as well just like we did with the plastic tote.

While your cuttings are rooting it's important to make sure they don't dry out. Usually with a tote you can see water droplets on the inside of the container.

When in doubt open the container and look for condensation. If there is no condensation apply some water and close the box back up.

### **How Do You Know When Your Cuttings are Rooted?**

If you stick hardwood cuttings during the winter they probably won't even start to make roots until April and won't be ready to be transplanted until the end of June.

Softwood cuttings stuck in early June should be rooted in 4 to 8 weeks. Some things, like Potentilla and Forsythia will root in about three weeks. Other things can take 8 weeks or longer from a softwood cutting.

You can gently pull on the cuttings to see if they are rooted. If they easily slide out of the rooting medium then they are not root-ed. If you feel resistance as you are pulling just leave them be and rest assured that they are doing exactly what you want them to do. They are making roots!

Once rooted you can gently remove them from the container and plant them into your garden. When first transplanted they'd really appreciate some shade, even if you have to pull a bed sheet over two kitchen chairs to make some shade, your cuttings will love you for it!

### **When to fertilize Your Little Plants.**

Fertilizer can be deadly. Too much will kill small plants faster than ever. So it's better to



plant them in good soil that contains a lot of organic matter. If you feel you need to fertilize use a liquid fertilizer that says right on the bottle; “Will Not Burn Your Plants”.

**You have to prune these little plants!**

Small plants like to be pruned. If you don't prune them, especially deciduous plants like flowering shrubs. Left unpruned they will grow tall and lanky, kinda like those old rabbit ears antennas we used to use on our TV's. Sorry, you'll have ask your grandmother about those. You've probably never heard of them!

The ideal time to prune small plants is when they need it. I'm a nurseryman. This is what I do for a living. If something needs pruned it gets pruned as soon as I see that it needs pruning. The calendar has little effect on when I prune what. I just prune and the plants love me for it!

Thanks for buying this little booklet, I hope you find it useful.





