

How To Propagate Your Own Goji Berry Plants from Cuttings!

"And the LORD God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul. And the LORD God planted a garden eastward in Eden; and there he put the man whom he had formed." - Genesis 2:7-8



In this guide I'm going to share with you a system to cheaply and effectively produce as many Goji plants as you want and how to grow them out.

With some patience and skill you'll have more goji berries than you will be able to pick!

I'm learning a little each year and attempting to pass the information down to you. **For those who have ordered cuttings (whether rooted or unrooted): if you lose a lot of cuttings contact me and I promise we will work something out that is fair.**

This manual was last updated 01.17.20 – future updates for can be found at this link:

<http://wormstarter.com/gojiguide.pdf>

If you have any questions you can email me at countitjoy5@yahoo.com

This manual is free to distribute.

I have a YouTube channel where go further into depth about goji's and get into other cool things that I'm working on...

[Click Here to Subscribe to My YouTube Channel](#)

If you'd like to purchase cuttings, rootstock seeds and other cool things check out *my auctions on eBay...*

<http://tinyurl.com/jnumjqz>

Quick Start Guide

Assuming you got the cuttings from me let's get down to how we can successfully propagate goji's. I have reduced this process to an artform and RARELY lose a cutting when I do it as I'm about to show you.

What you're going to find is that some of the more desirable varieties like Phoenix Tears are tougher than others like Big Lifeberry and NQ1.

The trick is keeping them in high humidity with adequate light and not blistering heat. This guide is kind of funny because you can see all my futile attempts. From bags, to sandflats and so on.

I settled on are clear plastic bins with a clear lid. It works almost perfectly once you get the hang of it. A good one will run you about \$10 but you can use these to do anything.

For goji's soil is not a real big deal – just get you a bag of sterile potting soil. I like to use clear solo cups with drainage holes to observe root development. Put your soil in those cups and wet it down real good.

Take a pencil and make you a hole in the soil for the cutting as deep as you can go. Rooting hormone is optional but never hurts. Put your cuttings in the holes and tamp the soil down around it real good – maybe wet it down some more, let it drain and place the cups in the bin with the lid.

If you got some runts double them up. Many times the thinner longer cuttings will outperform the larger ones because of the sheer number of nodes that are located above and below the soil.

So double the smaller cuttings up with the thicker ones to assure the success of any one planter.

Place the lid on the bin and put in a nice place where some light enters the bin at various times – it won't take but a few hours a day. Don't overheat the bin.

You will begin to at first notice as the leaf nodes begin to swell and then they will shoot out growth. Depending on whether your cuttings arrived with leaves or not they will proceed differently.

Many times the cutting will burst forth a lot of growth then stall as the roots develop... just be patient as nature works it's course.

The next step in the process is to watch for root development. Let your bins air out from time to time. Observe to see if the plants get wilted over time. You want to experiment with leaving the lid off for varying degrees of time.

Experiment also with leaving the lid cracked some to modulate humidity. You are basically hardening the plant off by degree. Once you get the feel of it you will know what to expect.

The plant's root development must support transpiration (the rate at which moisture is lost). If the plant is losing more water than it can take up via roots then you will have wilt. Sometimes the wilt will be rapid and dramatic, other times slow and gradual.

In time as roots develop you can leave the top off and let the soil dry out more and more. Eventually you can take the plant completely out and put in a shady spot.

At this time I like to put some fertilizer sticks or time release fertilizer in the solo cup. Let the plant absorb some of that and harden off a little more and then it's time to transplant to a one gallon container.

When you transplant to one gallon try not to disturb the root mass. If you do and the plant begins to become wilted again put it back in the bin until it gets its feet again.

Now you're on your way to an awesome plant. Let it grow in that for a while and pot up even further if you want to see more growth – the more soil space they have the better they will do.

Wait until the beginning of Fall before you start transplanting your new plants into the ground.

I have videos of all this information on my personal youtube channel. Unfortunately due to time constraints I have condensed the goji project down but you can find the latest propagation starter video here:

<https://www.youtube.com/watch?v=Y4ih5V-Y000>

All future material will be on the channel and not in the guide so be sure to subscribe. By clicking on my name below the video you can go to an index of all the material available.

*From here on out I won't really be adding a whole lot of new information to the guide. I delegate the addition of new information to the Youtube channel. The channel is an easy way for me to get what I have to say out there quick. **Here's link for the Youtube channel with other goji info, be sure to subscribe...***

https://www.youtube.com/channel/UCVSAkJRM5XjTm9_Y0aIQ9iQ/videos

In the next few pages of this guide you will find a mini-journal of my progress. After that are specific instructions. *If you want to see how my goji orchard is progressing and what I'm up to - all extra info is at on the Youtube channel..*

If you purchased unrooted cuttings from me on eBay, I always include with your order a few extras. All batches have some runts that just won't make it. **When supply permits** I will send you extra rooted material to make it worth your while.

As your skill in dealing with the plant increases so will your efficiency in getting results and that's the reason for this guide and the blog. Take a genuine interest in learning how to propagate the goji, you will get the hang of it in no time.

I love the plant and am absolutely convinced of its health benefits. I believe you should have as many of these plants for your very own as you want without going bankrupt. *Established plants with mature root systems are costly and highly sought after.*

But before we go further as a disclaimer **I must warn you**, no matter how good my information is *you will always have cuttings that bud out and die for whatever reason.* It's just the way nature is, not everything will make it. Goji's can be fickle when it comes to rooting cuttings but **it can be done easily once you get the hang of it.**

So please don't fret if your fledgling plant dies. Keep trying! You will build experience this way. In time you will have as many established plants as you want if you are persistent. There are many factors when it comes to getting it right.

If I had a penny for every dead plant I have produced I'd be a rich man. If you get material from me I will cover you if you screw up really bad and want to try again. Just send the \$3 cost of shipping and I will send some more out.

Root Stock and Unrooted Cuttings Are Available

Affordable rooted starts of various sizes are available. They are worth their weight in gold and I have a very limited number I can offer each year. Many of these I keep for my own orchard and to pot up in one gallon containers and sell locally.

These are goji canes of various sizes that come with roots. In the videos I make available I will show these and what they look like. **It's really your goal if you are going to grow this plant but you have to nurture the root system of the plant until it gets mature enough to send up these runners...**

You can make money selling this plant locally as there is a huge market for it.

If you want to get a jump start in getting established, fruiting plants, this is the way to go. They will explode with growth relative to the size of the root. Since everything is so variable, send me an email I will work out for you...

mailto:countitjoy5@yahoo.com?subject=goji_info

If you have ordered unrooted cuttings in the past and would like to get some more, or ***if you have received this manual and would like some unrooted cuttings*** I encourage you to get some from me via eBay so you can see this is legit and help me out by leaving some good feedback... here's the link to a small fixed bid auction:

<http://www.ebay.com/itm/282049213033>

Goji Guide Journal Updates

04.24.16

This year I've been experimenting with using more fertilizer on my plants. I'm using a good amount of 8-8-8 to go with everything else. I try to do most stuff organically but when it comes to the goji I want to see what works best.

I was told up front that I shouldn't use nitrogen fertilizers but this is hogwash. Do you want your plants to grow? Fertilize them if you have mature established plants. If you are working with cuttings and something that doesn't have a developed root system use a good time release fertilizer, fish emulsion, kelp, worm tea or something along these lines.

I can tell you after two years of testing with ample amounts of nitrogen the results are really good, the plants are very green and vigorous. **I will try to post some good vids soon demonstrating that you can use fertilizer.** The point is as with all plants don't burn them. One of my buyers to my initial dismay used triple 13 and his plants took off. Just be careful and test to see what works best for your situation but **throw away the no fertilizer approach that you read of online, it's stupid.**

Last year during the dry periods of summer I lost alot of my starts so this year I'm working on putting down some drip lines in between rows. The middle part in between rows is where I put down my rough compost so this should get interesting... from June to August the hillside is blasted with heat and having these lines in place will do wonders.

It is true, the goji is drought tolerant but **THEY LOVE A MOIST SOIL** like any other plant. If you don't water them adequately they won't send up quality runners and the fruit will taste like something worse than hideous.

Also, in the past we talked about using the freezer bags and the clear totes as humidity bins. **This year I've had tremendous results using the small miniature greenhouses.** Just don't put them in direct sun.

Unfortunately, they do tend to heat up significantly as the temps and sunlight increase so I don't know how much time I have to use these for propagation outside. I can see how these will really help in the early and late part of the year. I have one in the house near a window and this one will be worth it's weight in gold.

I imagine when it get's really warm outside they can only be positioned where you get a little morning sun and shade the rest of the day but we shall see.

As of today the temps have began to climb into the mid 80's and I notice some of the things in the greenhouse are really starting to struggle.

The black goji expiriment is coming along well. The first seedling has taken off – it is a lanky little thing with leaves all over it. It's funny how we cherish little things like this but I look at it with awe everyday, I can't wait until it gets older.

I have started a series of videos showing the time lapse results. I'm going to follow it all the way to maturity if I can. This plant is incredibly difficult to grow from seed. **They are really suspect to damping off.**

Worm castings or vermicompost mixed with sterile potting mixture seem to be the key. Don't keep the soil damp when it only has two leaves. If you can make it to the second set of leaves then you are home free.

As of today I picked my first few semi-ripe berries from the orchard so the frequency should begin to pick of rapidly from here on out.

Also today I began noticing the first flea beetles... that means my nematode experiment wasn't wholly effective but hopefully they won't be as bad. Remember to keep plants up of the ground the best you can to reduce flea beetle damage.

I've acquired a new camera so look for more videos soon on the YouTube channel. In the past I had a cheap Kodak camera that panned terribly – this one looks a lot better.

In this update video I will dispel a notion that the goji only fruits on new growth. It is true that most of your fruit comes from new growth but your first harvest of fruit will come mid to late April from flowers that show on old wood...

We will also look at how things look at the end of April and talk about propagating from softwood and building the soil around the plants...

<https://youtu.be/Gs7AHVzbgzQ>

03.05.16

Greetings! Wow – season four. This is getting funner every year. Recently I began doing vermiculture (worms). Sounds disgusting, right? They are little hogs. I've started a few new projects this year like ginseng, Anne raspberries, Chicago hardy figs, expanding my asparagus beds and propagating a rare and hard to find plant called **the "Black Goji" or Lycium ruthenicum which I will speak about more here in a bit...**

I also acquired a few miniature greenhouses so everything is doing well. I've set up a new channel for the manual but we're going to get into everything dealing with permaculture and sustainable living.

I'd like to get into Bokashi anaerobic composting, chickens and some other things but I'll have to see what kind of time I have for it...

I believe there are times coming where you are going to need to know how to live sustainable and self-sufficiently.

That's why I really like the Goji plants – you get so much more nutrition and enjoyment when you grow these for your time input, and they are very easy to tend. This is a very independent plant.

In the future, quality and affordable sustenance is going to become more difficult to come by. Perilous times are coming, I believe the bible makes mention of this. But it doesn't take theologian to realize something is not quite right in this world.

We need to be ready to stand before our Creator. **The bible teaches us that we receive Jesus Christ's righteousness by FAITH ALONE.** *We need to put our trust and reliance in Christ's shed blood for the remission of sins.*

The world is about to be put to the test unlike anything we've ever known. And I think one of things God is calling us to is to live more in harmony with the way He created us and to *live more in-tune with His will.* We live in such synthetic and fake world of dependency and perversion, especially here in America... **when our dollar system collapses our way of life will evaporate like the morning dew...**

BLACK GOJI – LYCIUM RUTHENICUM

This year the thing I'm most excited about is "Lycium ruthenicum", or **Black Goji**. The plant is impossible to find but there is a great demand for it because of the general interest in Lycium barbarum. I first became aware of it in November when a friend sent me a couple of packs of seed from China.

My first experiment this winter failed but I do have one lone seedling survivor in worm castings and it is doing quite well. It has 11 leaves as of now with a new set coming out. I plan on doing a time lapse with it so I will post a link for that soon.

If you'd like some seeds be sure to check out my auctions on eBay I will send you a pack with some GOOD instructions on keeping these alive.

On the blog I have a series of short time lapse videos tracking the life of the seedling.

11.19.15

As promised the long awaited update of the manual is at hand. I am currently in the process of revising and adding new information. I will still have some entries from time to time but all the extra good information I will be posting at...

<http://gojiguide.us>

I am very thankful for you who have bought the cuttings and read this manual. You wouldn't know it but God himself gave me this business idea a few years ago. When I first started it looked like it would fail horribly **but He's been teaching me how to make it work.** It's not a big business but it's growing a little each year and I'm learning so much!

And it's getting funner and funner watching everything grow. I had more fruit this year than I could pick. I'm very excited about next year. This year I was able to get a good number of the NQ1 hybrids mixed in with the Pheonix Tears. I was able to KILL all the bermuda grass and expand the size of the orchard.

My big challenge now is getting more organic material back into the garden – lots of hard work there but that's the fun part about this time of year. I have my eyes on a few more strains of the plant to start next season. I will continue to update the manual but ***I'm to putting alot more emphasis on the blog in the future...***

09.08.15

Couple of things to bring up before I officially wind the season down. Anticipate a major overhaul of the manual as there is just so much information to update. I have a million new ideas, a million outdated ones and I want to pass it along.

Also, I know I have probably said it before but so many times people think their plant is dying because of leaf drop. The goji grows in flushes and has a very distinct growth pattern that you need to become familiar with. In this video I talk about it...

<http://youtu.be/Bj0NPZlufkQ>

When I first started I wasn't familiar with that pattern and lost many a night sleep thinking that my plants were done for.

On the other hand sometimes fronds die back due to many factors such as root rot, heat stress et al. Always check the growth tips with pruning shears to ascertain if it is still alive.

If the plant has green when you trim the tips just be patient it will bud back out along the nodes.

This is especially important to remember with unrooted cuttings as they will eventually drop all their leaves before they bud back out.

If when checking the plant with shears you find that the stem is brown and dried, it is dead – or at least that part of the plant, there is no hope for that part of the plant. Trim it back little by little until you run into green wood again.

The main thing that gets cuttings again and again as I discovered afresh this year as I tried to get my NQ1 cuttings established is ROOT ROT. Usually happens when the soil is too wet for too long.

09.07.15

It's been a while since I last added to this manual. This year has been fun – 100 times more so than last year. Last year was incredibly stressful watching good plants die and just doing everything wrong. And not knowing what to expect. This year I had a good idea.

I've learned a lot but alas the season is almost over. Actually that is what I want to talk about abit.

First, the two varieties of goji that I offer, Pheonix Tears and NQ1 are a cold hard plant. The can take a barage of cold snaps with no problem to foliage.

On the other hand, the first real hard frost will kill the flowers so no more fruit sets at that point. Fruit that has set will mature afterwards, I was still gathering berries well into December last year.

The bad news cold is coming to end the season, the good news is the next two months can be prime times of growth for the plant. Once the temperature dips below 90 the plant really starts to boom. Lower to mid 80's is ideal.

Here in Alabama where I live the average date for the first frost is about mid November. At that point for you wherever you live you will want to start packing up your propagation stuff and bringing it inside.

You can still continue to root material inside provided you have the proper resources which this manual will cover.

Plants that you have already started can be put in their permanent homes or you can bring your plants inside provided you have a nice sunny spot and let them continue to grow...

Yes, they will be fine in the ground during the winter. The cold won't harm them. They will go dormant and drop their leaves. Plants that you get into the ground when it cools will have the whole winter to root and will boom with growth when the growing season rolls around again.

06.15.15

It is so important to get your plants up off the ground, even in containers. Goji's are climbers given the opportunity. Giving them support does several things...

- 1.) It gets more light to the plant (more growth, more fruit)
- 2.) Air circulation – this helps with issues like blight
- 3.) Makes finding plant growth tips impossible for flea beetles

This year I'm using tomato cages and bamboo sticks. Some of the cages we made, some are the teepee cages you find at the stores. I found a good deal for \$1.50 per cage.

Bamboo is obviously cheaper and it gets the job done. With the bamboo sticks you can train your main vine(s) to grow upward and thicken into a trunk with sidebranches. This will provide tons of fruit.

When you let the plant run on the ground all kinds of nasty things happen to the vines and growth tips.

Needless to say, many of my plants have no support and I will spend the remainder of this year training them into a better plant for picking fruit.

06.06.15

I have to admit, I made a couple of mistakes last year. In my zeal to establish my goji orchard and to get plants into the ground I placed the mother plants too close together.

The plants broke dormancy around mid February with a vengeance. Before long I had an unmanagable mess of vines. It was chaos. So first lesson, leave space between plants to work (weeding, mulching, pruning, etc.)

Another phenomena that is ravaging my orchard right now is **early blight**. This is a fungal disease that commonly affects nightshades, particularly tomatoes. It turns pretty green goji leaves into crispy critters. Vines that a few weeks ago were lush with vegetation now look bleak, exhausted and defoliated.

Thankfully, all the vines are green and they will bud out again in short order. Tomorrow I am going to the store for some spray that treats this.

Last year I was under the impression that flea beetle damage caused this phenomena of leaf drop from early. It does not. Typically what spreads the disease are damp conditions and not enough space between plants.

Flea beetle are still quit troublesome – especially the damage they do to new growth tips and the foilage on newly emerging starts (which is where they really hurt). I'm not certain how to combat this yet.

06.03.15

It's been about 4 months since the last update. Once I ran out of cuttings I took a break from selling online. Sparkleberry goji orchard is now in full bloom, berries are already here.

In the near future I'm going to be gathering all the impressive nutritional specs for the plant. I'm learning more each day about antioxidant potential of not just the berries but the leaves as well.

I bought a dehydrator yesterday to experiment making goji tea. The leaves are so high in special nutrients like Betaine and PQQ that I couldn't let them go to waste. I'm going dry these and make teas or put them in my nutribullets.

These are some berries I picked a week ago. You notice the different stage of ripeness. This is good to do. Though fully ripe berries are sweeter and redder their nutrient profile isn't as good as for the ones that are orange.

These also are smallish compared to some of the larger ones that come in at the end of the year – soil moisture plays into it alot as well.



02.09.15

When you're using humidity bags there are several things that can go wrong... from aphids, to leaves rotting up against the side of the bag.

I started 10 dormant goji cuttings started in late December and early January. The first one did so well that I gave it to friend. Six are A1 with some sporadic aphid problems and three are out of their bags and struggling. I believe they will be fine... they have roots.

Remember if you go with this approach, this is what it should look like...



I can't stress how much clear cups will help – being able to see root development without disturbing the roots is crucial. This is main reason I don't use the sandflat method any more for Goji's. Their roots simply don't like to be disturbed after they have been in high humidity. **Notice the condensation in the bag... this is what you want to see.**

Use a pencil or some other peice of material to help prop up the bag. This will help prevent the leaves from rotting as they grow up against the side. **In the video section below you will get to see a worst case scenario of this.**

02.01.15

I'm always looking for new cultivars, propagation techniques and so forth. Recently I became aware of hybrid of the goji called Crimson Star, or NQ1. It is the commercial variety grown in China. I have acquired some of these and will begin to offer them soon.

The variety you have is called Pheonix Tears, a type of heirloom goji. These goji's came from Chinese migrant workers who were building the railroads out west a long time ago. They are very good plants and I'm sure you will enjoy working with them.

New Simple Technique to Get Cuttings Going

I have a few things to share in this update. I like to root fig cuttings. One of my techniques for figs I have began to use for goji root cuttings – you can also use them for unrooted cuttings.

It is real good for causing the plant to break dormancy and to find out what plant material that is most viable. It also gives you some time to prepare for your new plants.

This is a breakdown of this simple technique...

1. **Get a simple clear plastic container** from the dollar store or around the house.
2. **Wet some napkins or a rag and cover the bottom of container.** Pour out any extra standing water – you want damp and not soggy.
3. **Lay your cuttings out at room temperature to cause them to break dormancy** and bud out quickly – they will even grow roots like this especially if you wrap the cutting in damp tissue paper. Make sure to put lid on it.
4. Once your cuttings begin to bud out and/or form root hairs you can then place them in the humidity bags (see the rest of the manual).

Alternatively, to slow the propagation process down, store them in the container at about 40-45 degrees fahrenheit. You can't do this indefinitely. Don from Pheonix Tears stores his no longer than 6 months but his cuttings are larger mature root cuttings. Yours aren't for the most part. Don't put in cold storage any longer than you have to in order to prepare materials.

Some cuttings for various reasons have much more vigor than others. This technique will allow you to select the ones you want to work with first while you leave the other some more time to get going. **It works like magic!**

Moldy tips

Also, another issue that has come up. Some times cutting become necrotic, meaning part or all of them become dead. If you notice mold forming on the tip you can trim it off. If you see a lot of mold forming on the cutting and its nodes chances are it's dead. Remove it.

You can check to see if it rotting by cutting the tip. If it is a nice green color it is still good. If it looks hollowed out or discolored then is rotting. Hold a funeral service for it and then flush it down the commode.

Another thing you can do is seal the tip with wax to prevent the tip from getting diseased and moldy.

Most cuttings are fine but sometimes they go bad especially if a cutting dries out parts. Hard prolonged freezes during shipping could cause some problems as well.

Rooted Cuttings

My supply of unrooted cuttings will be coming to an end here pretty soon once I have pruned all the plants. If you want faster growing root cuttings make sure to let me know. I am offering these now. When it comes to propagating Goji's, rooted canes (rootstock) are the way to go. They are vigorous and become established in no time at all and produce fruit the first year.

Important Things to Remember

The thicker and longer the cutting the better. When I send cuttings you will get a wide range and it is completely random. Maybe double up some of your thicker cuttings with some that are more scant.

Just remember to be patient in winter. If your cuttings are dormant temperatures indoors is going to affect speed of propagation.

As mentioned before, watch diligently for mold formation whether you chose to do your cuttings in the clear plastic bins or the one gallon bags. You can get some antifungal solution and mix it with water in a spray bottle and keep it near.

VIDEO UPDATES!

Every so often I will post video updates to my blog and Youtube channel. You can see tutorials, time lapse results, tips and how the sparkleberry goji orchard is doing. **Newer ones listed at the top going down to the older ones...**

Here's the link to the channel, you will be able to find all sorts of useful propagation information there...

https://www.youtube.com/channel/UCVSAkJRM5XjTm9_Y0aIQ9iQ/videos

What Can You Expect?

Developing established plant from stem cuttings takes some patience. It is MUCH faster than seeds but MUCH slower than mature root cuttings (which I will explain later).

If you start early in the year you might see a plant with some fruit the first year but don't expect a lot. By the second year you will see a lot of growth and a moderate amount of fruit if all goes well.

It's all about getting a mature root system built up...

Every plant is different so don't get discouraged – some plants straggle along before they get established. On the other hand some cuttings especially the thicker ones can really take under the right conditions. **Once you get your plant established you will have an health producing engine.**

As for the cuttings I send you. They aren't as big and thick as you might expect but they are ALIVE and ready to root. I try to send a good mixture of thicker ones which do really well. I don't count the more scant cuttings but don't be fooled – they will become plants too.

Obviously the thicker cuttings are in less abundance so I try to distribute them out the best I can.

So let's hit the highlights for 2014 and a brief overview of what I learned that I can share with you... also, the 2015 year in review is posted at the blog.

2014 In Review

Last year was a tremendous learning experience with the goji plant. I jumped in feet first when I ordered 500 plants from Pheonix Tears nursery in Utah. Don sent me a lot of nice mature root cuttings. I sold some online and locally, planted some for the orchard and lost quite a few. **I tried to get a credit on about 200 of the 500 and was turned down.** I will share with you what happened as we go.

I figured if I was going to succeed at it I had to go all or nothing. I got in over my head but it stretched me so and got me out of my comfort zone so that was good.

If you decide to go that route (with mature root cutting) it's best because those grow the fastest but unfortunately it can cost quite a bit of money. I'm going to be showing you how to make plants not from mature root cuttings but how to "root" the live plant growth, the vines. **There is a tremendous difference.**

It takes several years before the plant is mature enough to generate the growth necessary to take these root cuttings. Since most people want the plant and don't have a lot of money I had to come up with a way to help people propagate the plant in a more cost effective way. **That's what this guide is about.**

So let's begin. Most people that deal with the plant don't think rooting cutting can done with any degree of reliability. I'm here to tell you it can – and once you learn how it will save you a ton of money on plants and even make some if you so chose.

Wintertime Propagation Tips

Goji's are deciduous meaning they shed their leaves and go dormant at the end of the year when freezing temps arrive. They will continue to flower until about October and set fruit until the first frost. After that the berries that are on the vine will continue to mature and ripen.

They are quite cold hardy and as I write this it is the the end of December and there are still leaves and a few berries on the vines even though temps have been low.

This is variable each year though – depending on how much cold and rain you get near the end of the season.

Some plants for whatever reason will shed their leaves and go dormant before others. Varieties like Crimson Star are VERY cold hardy and will keep their leaves far into winter.

So if you're like me, you want to know if you can propagate during the winter time? The answer is yes. All you need is a partially sunny window. Or a place that receives a good deal of indirect sunlight. Also, a warm room that doesn't get incredibly cold for a long period of time.

Assuming you have purchased the cuttings during the colder parts of the year say from the first frost until the last one, roughly October to March depending on where you live your dormant cuttings will do just fine in a cup of water on a window seal until you get your materials ready.

If it gets cold in your house it will greatly slow propagation but it won't harm anything. The cuttings will merely remain in hibernation mode.

One thing Goji cuttings do before they set roots is form these little green leaf buds from their nodes. If you leave them in water they will do this. They will also do this if you just go ahead and put them in the mini greenhouse.

Once the average temperature has been in the acceptable range for a sufficient period of time the cutting will begin to bud and set root. You can help this along by keeping the cuttings in a warm spot or by using heating pads.

The earlier you start the process the longer your plant can take advantage of the growing season. These small plants can be planted at the beginning of the year before it gets hot in a large container.

These plants that are started in winter and planted early in the growing season do super well.

So yes, the process can be started indoors. Had I understood this the first year I would have done a lot better. The more established the plant is the better it does during the hotter parts of the year. The main thing is keeping the humidity around the cuttings very high.

You want a healthy, robust root system started before the heat gets going for best results.

If you have access to grow lights, heating pads and any other horticultural accessories then great, use them. If not you will still do well following the simple steps outlined.

Just remember not to panic if things aren't going as fast as you like. As the average temperature and light levels around the plant pick up so will the propagation process.

MOLD, Root Rot, Stem Rot, et al.

Please make sure you read this. The number one thing that will get your cuttings are issues relating mold and soil borne pathogens. Unfortunately ideal conditions for plant propagation are also ideal for propagation of nasty spores, viruses and bacteria.

The main thing is sterility of the growing medium but you still need to keep a close eye on your cuttings.

Let's discuss some of the things you can do to eliminate loss of cuttings through mold so that you're propagating beautiful plants and not compost! Fortunately all of these solutions are cheap.

You want to make certain your rooting medium is sterile as possible and drains well. Because of our race against time with these factors we want to introduce the cuttings to normal humidity as soon as possible. **Once we can take them out of the bag without them dying we want to do that.**

You don't have to do all of these – they are good suggestions on how to suppress molds and other nasties. In nature plants live with all this stuff so don't sweat it too much. I did my propagations last year without any respect to mold.

I lost a lot of cuttings to disease and so forth but I had plenty of successes. The main thing is to efficiently produce the plant from cuttings as you can. Get this issue under control to minimize loss and maximize your success.

- * **Microwave or cook the rooting media to sterilize it.** Put a large covered container of your mix in the microwave for about 10 minutes. The idea is to get the temperature up to about 190 degrees. This will kill molds and pathogens in the soil. You could bake the soil if you want. It's good with barbecue sauce.
- * **Baking Soda.** Mix 1 teaspoon of baking soda with one pint of water. Use this to wet your media and/or mist your cuttings with.
- * **Hydrogen Peroxide.** If you see mold forming on the cutting or at the base of the cutting get a Q-tip and dip it in peroxide. Wet the moldy areas away. You can also put it in a sprayer to apply to cuttings. It is antifungal and release oxygen into the soil as well. You can mix with water to wet your rooting media. Do not use concentrated Hydrogen Peroxide, 10% will kill plants undiluted. 3-5% is good.
- * **Antibacterial soap.** With antibacterial soap simply use a Q-tip and dab the affected areas.
- * **Bleach.** A 10% solution of bleach to water can be used as dip for cuttings to kill any existing fungus on cuttings. The cuttings need to then be rinsed in water before putting them in soil. Don't use it to sterilize the soil.

There are other fungicides on the market you may want to look into. I'm trying one called Physan that I got on eBay – 20 ounces for about \$16...

During the warmer times of the year cuttings usually develop fast enough that mold doesn't become a problem, I only have trouble during the colder parts of the year when propagation slower.

Sandflat Failure

I propagate several types of plants throughout the year. My first year I tried a few different methods for propagating the plant cuttings. The one that seemed to hold the most promise was the sandflat method because I could root a lot of cuttings at one time.

While this worked well for getting the plants to root the casualty rate was high. As previously mentioned mold was an issue but not the main one.

The cuttings roots don't like to be disturbed when they are starting to root. The goji cuttings are very tender. The transition out of the sandflat was a big issue. The main issue is to let root system become established before you move it.

A lot of the casualties also had to do with the heat and heavy rain. Most of what I did last year was outside in a mostly unprotected environment so nature dealt me fits.

A lot of plants succumbed to root and stem rot because I just randomly used soil on hand.

What Worked?

What did work was the mini-greenhouse method using the solo cups and a good rooting medium. From there once the cutting is going transplant into the largest container that you can.

The last method I settled on was to put these cups in a large, deep clear plastic bin instead of the bags. If you want to use bags that's fine but from now on I will be using the humidity bin...

Since you're only getting a handful of cuttings don't use the sandflat to avoid the risk of losing anything. The sandflat works good on plants like, grape, forsythia, azalea and just about anything else.

What Rooting Media Should You Use to Start?

Well, I can get lazy sometimes when it comes to this. A lot of times I just use what I have on hand. You'd be amazed at what some plants will root in. It's sleeting outside so I just grab some soil from a container inside. Not ideal but you get the picture.

Goji's are not super particular they will readily root in most anything if the humidity and temperature is high enough.

They say don't use peat with Goji's because it's acidic but for **this year I have a large container with a sand and peat mixture**. When the roots get going in the solo cup I might sprinkle some potash or lime in there for pH. They have done well in this.

But don't overthink it – try different medium, have fun, experiment. These days when I do an unrooted cutting I go for the highest quality soil I can use.

I have a picture of some plants in coke bottles from the first year. If you notice **it is peat and perlite that I was using in that particular instance**.

Main thing is that the rooting media needs to drain well. **It is also important that it be something you can leave the cuttings without disturbing the roots until you are ready to put it in a large container.** At that point you want to consider a more alkaline soil but experience is showing me that they will do fine in just about any soil.

Some people use straight sand or perlite and yes they will root in this. The sandflats work like crazy but the casualty rate is high due to transplant shock. You can't leave them in there too long and if you move them too early they swoon on you.

Goji's will even root in water but don't do that because the roots won't be strong enough. Once again when you transplant it the plant most likely go into shock and die.

We will be addressing this more as we go.

The Goji Bucket

I can't stress how important it is to get these plants in the ground or into a large container, the larger the better. These roots will grow like mad if given a chance. If you give them plenty of soil they will become established...

Also, the more room you give the roots the more fruit you will get. Also Goji roots deeply so depth in a contain is more important than width.

One thing I recommend is the goji bucket. Go to Lowe's and get one of their 5 gallon buckets for a few dollars and put some drain holes in it. Make a mix for it that is alkaline.

A soil pH reader is a good investment. If the soil is acidic you will get a lot of leaves and no fruit. **If it is too acidic the plant will fail to thrive and die.**

For the container I would take some cheap potting soil, lime, wood ash with char and some native clay dirt that is broken up. That would be an ideal mix. You top the whole off with some chopped up leaves and grass clippings to help retain moisture.

You could make a small fortune selling these locally with ads on Craigslist which is what I'm going to be doing this year. The bucket costs about \$2.50 and you could sell the plants for about \$20-25.

Last year the interest in the plant was incredible.

Importance of Ground Cover

Once you plant these in the ground the main thing is eliminate surrounding competition from weeds. We are told that Goji's don't like an acidic soil. So it would seem like using compost material around the plant would be a no-no. I have found the opposite to be true. I use organic material around the plants to kill weeds and help keep to the ground moist.

The main thing that kills Goji's are the weeds so when you put them in the ground it's very beneficial to surround them with organic material (chopped leaves, grass clippings, pine needles, el al).

Conversely... once the plant becomes established it will begin to send up side shoots that you can make rooted cuttings from. As this becomes the case you want to begin to move the compost back away from the plant so these new ones can come through.

Clonex Rooting Gel

The goji cutting will root of their own volition but you can help the process along with rooting hormone. One product that I've started using is called Clonex. It is much better than conventional rooting powder.

<http://hydrodynamicsintl.com/clonex-rooting-gel.html>

Seaweed Extract

Goji's are receptive to organic liquid fertilizer and lots of water. A big secret for growing the goji is seaweed extract. For the first year, water them often with seaweed extract, this will help them build strong healthy roots and assist them to become established and drought-tolerant.

Seaweed extract is a rich source of minerals which will provide the Goji with all the minerals it seeks out in the soil, which end up in the berries, which give them their wonderful health-giving qualities.

Magnesium

Goji's like magnesium. There is a type of lime that you can buy called dolomitic lime which is high in magnesium.

Heavy Rain Pulverizes Cuttings

The main thing that killed the majority of my young plants was heavy rain. The young foliage just cannot endure it. So until your plant becomes established beware of leaving it in a place where it can be pounded by heavy rain.

Hot Sun Will Toast the Cuttings

I got started late last year with my plant cuttings for the goji. Just in time for the hot summer around late May. Don't put cutting out in full sun and heat. I recommend setting up some type of shade cloth structure for them. This will help with the heavy rains as well.

GOJI PESTS!

Nature abhors a vacuum... and a young unestablished goji berry plant. To my surprise gardening turns out to be something akin to modern warfare. Here is a rundown of what assaulted my plants this previous year and what I will have to be ready for this year.

I'm not going lie, pests and varmints will harass your efforts with this plant. **Not to mention weeds.**

Here's what I dealt with in 2014:

1.) **Weeds.** As mentioned this will be your number one concern once putting them in the ground. Use organic material to smother weeds and get an action hoe. Reduce root competition with the goji. It will take some effort up front but will get easier in time as you compost layer gets deeper. Smother the weeds.

2.) **Flea beetles.** This is the number one pest to deal with. They love nightshades and particularly this plant when they are small and struggling to get established. Use 7 dust. Keep an eye on the plants for what is getting it.

3.) **Tomato hornworms.** This huge caterpillar comes along late in the summer... they are hard to spot and good grief they will eat the whole plant. There are fewer of these but they do the most damage by far so keep an eye out.

4.) **Grasshoppers.** Use 7 dust, keep the weeds down. Main thing is to not give them any cover.

5.) **Cutworms.** They can hurt you. Watch for them, use 7 dust.

6.) **CHICKENS!** I don't have them but the neighbor likes to let theirs roam. They will destroy your garden like they did mine uprooting your plants and dreams. They respond well to dogs and 22's.

7.) **Armadillos.** Very destructive - they dig in the compost garden. There are scented traps you can buy that catch them easily - they came along late in the year. They hurt me the worst. They will turn your compost garden into a warzone.

8.) **Voles.** Are like moles but eat all manner of vegetation. Some of my plants have been

Does that mean you will be harassed like me? No. Just keep an eye out. I assumed that these plants would be left in peace. That cost me. Don assured me that the plants are pretty much pest free. **THIS IS NOT TRUE.**

Be prepared, things will mess with your goji's be prepared to defend against this. They say nature abhors a vacuum. They really meant nature abhors a nice looking goji plant that's trying to get established...

Special note – the first year was a nightmare because of the sections of slope covered with bermuda grass in the middle of the garden. Once I knocked that out with the action hoe and covered it things began to get easier. *Don't give up, there is a solution for every problem!*

On the bright side, relatively speaking they aren't bothered like other things in the garden and tend to be pretty resilient **but you must you still must be on the lookout.**

Even if you plan on keeping your Goji's in a large container near your house you need to check daily for pests like flea beetles and cut worms – they will mysteriously find your unestablished plant and kill them.

Compost Gardening

This year we had massive drought where I live. To combat this problem and the weeds I began to pile compost around the area where the plants were. This worked well with keeping the weeds down and the soil moisture up. The plants loved it. Unfortunately the chickens and armadillos did as well.

It requires a lot of work up front but it really begins to pay off as time goes by. Just keep adding organic material as you weed.

Goji Plague

Biggest mistake I made last year with the plant is getting started late in the year and trying to grow the root cuttings in planters that were too small. I ordered 500 plants; 50 never showed growth and about 150 died for various reasons. Many were stunted but seemed to make it through the year, they are still green.

During the hotter times of the year, as soil temperatures go up oxygen in the soil goes down. If you have a plant that is in a container that is too small then you have a problem.

And nothing heats up quicker in the heat than a black container. Therefore, plant the plants in the ground early spring or put in a large container like the 5 gallon Goji bucket.

If you have smaller unestablished plants outside in smaller containers make a shade cloth structure to protect them from the hot sun and heavy rains.

Moral of the story, the earlier you get the plants going the better off you will be. And give the plants lots of soil to grow in.

Different Ways to Grow Goji's

Live plant cuttings offer several distinct advantages for both the buyer and seller alike. There are several good ways to propagate Goji plants:

- 1.) Seed
- 2.) Tissue culture
- 3.) Root cuttings from mature plants
- 4.) Dividing mature goji during dormancy 5.)
Rooting plant cuttings

Each method has their own advantages and drawbacks. We are going to be focusing on the last option, rooting plant cuttings. But I will shortly address the others as well.

With plant cuttings we can root multiple sizable plants all at once and is more reliable and easier than growing from seed.

Producing Goji from Seed

Seedlings tend to have a high casualty rate if you don't know what you're doing and they take forever to reach maturity. In the future once I have finished with the portion of the manual that deals with rooting live plant cuttings I will work on a system for the seedlings.

If you do the seed route the first year you will see very little growth. We want something that doesn't take so long. Rooting cuttings would be the equivalent of gaining a year in plant growth. By the second year you will have a vigorous plant if you root cuttings.

For seeds, they don't really get going until the third year.

Now you're probably thinking, I'd like a propagation method faster than that! One exists. Two actually, but they involve having already mature plants. One is dividing the plant during dormancy the other is making root cuttings. You can expect incredible growth with these methods.

But most people are just starting out with this plant and are looking for something to just get going.

Let me tell you my experience with the plant. In 2013 I was looking for something to grow in order to sell. That year I settled on blueberries but I did order a packet of "Tibetan Goji Seeds". By the way, if you see these being marketed it's a scam.

I had never so much as even seen a goji plant or berry in my life but I was intrigued by the claims. Needless to say, I got my seed germination kit and meticulously went to work. I did everything by the instructions but not one seed germinated!

I think it was more to do with the dealer than anything. I suspect I was given seed that were no longer viable. So when you purchase your seeds make sure they are fresh seeds no more than a year old.

The good thing about seedlings is that you can get a LOT of plants going quickly at once. Under the right conditions you can expect a good result. If you don't have meticulous knowledge of the process of growing these plants out from seed don't bother unless you want to have an aneurism.

The main thing that gets them is damping off. That's all I will say about this method but in future versions of the manual we will develop a system for raising seedlings...

PROS:

- + seedlings develop a deep tap root that other propagation methods don't
- + can get a lot of plants going at one time with little time investment
- + increased genetic variability; can select for better plants, utilize hybridization

CONS:

- + damping off, high mortality rate if you're not skilled
- + requires more time to get mature plants

Producing Goji's from Tissue Culture

Tissue cultures are clones using plant tissue under very controlled conditions. Used mainly in a large scale commercial or during scientific study. We won't need to use it in any case but is fun to note.

PROS:

- + can clone a lot of plants at one time with the right equipment
- + can produce plants anytime, anywhere

CONS:

- + very expensive equipment
- + decreased genetic variability

Producing Goji's from Root Cuttings

Root cuttings from mature plants is the preferred method of Goji propagation but somewhat more expensive. I ordered 500 root cuttings from Phoenix tears nursery for about \$1750 and got a good deal since I was buying in bulk.

They have a high survival rate and grow quickly so by the second year you can expect to have a very large and established plant. The tradeoff is price.

Now, in time I will break this experience down for you but let's just say it was a mixed result.

I lost over 200 plants due to inexperience but recovered most of my initial expense in several different ways.

This is where I can save you a ton of time and money. I made some dreadful mistakes that caused plant casualties and made some good decisions that preserved some plants that were going to die.

I will say a few brief things about root cuttings. This is where it's at. You will normally get explosive growth and fruit the first year from a nice cutting.

Phoenix Tears nursery in Utah makes a lot of money exclusively selling various size cuttings of their Goji's. The plants that develop from root cuttings are robust, tough and grow fast.

Be careful in dealing with them, they tell you they will give you a credit but I found out they will not... for the 200 plants I lost I received all of the blame when it came time to receive replacements. The reality is both sides made mistakes. My side of the story wasn't considered.

I appreciate their business but as a result I am moving on to different cultivars of this plant.

Couple of pointers:

1.) People that promote this plant tout it's resistance to pests. Don't buy it! Flea beetles ravaged my younger plants before I knew what was going on and I lost a lot that way.

2.) I was told that I could plant these in the ground during the heat of the year just keep the soil moist. While you can do it, you will have a high casualty rate and have to struggle to keep the plants from getting zapped by the heat and pests. GET THE CUTTINGS IN SOIL EARLY FOR BEST RESULTS!

3.) Plants in containers during the hot summer don't do as well – try to make a way to get them in the ground if at all possible.

4.) Keep the weeds off the plants. I was advised not to you use compost around the plants because of acidity but I have found the plants doing the best are the ones with groundcover.

5.) I was told that Goji's don't need nitrogen... I think that's because the nursery had experienced so many people kill their plants with fertilizer and then ask for a refund. THEY DO NEED NITROGEN. I use a thin lay of grass clippings and it works wonders. Don't pile it too deep or the plant will get burned by fresh clippings.

During 2015 I even used 10-10-10 before the plants broke dormancy with good results. Just don't over do it.

Once again, in the future I will add more to this – we are mainly interested in rooting plant cuttings at this time.

PROS:

- + preferred method of Goji propagation
- + can get robust, fast growing plants
- + low mortality rate if you know how to do it

CONS:

- + more expensive
- + have to have very mature plants in order to do it
- + if you don't have the expertise you could lost a good bit of money

Propagating Goji by Plant Division

Goji's are deciduous meaning they drop their leaves and go dormant in winter. Most plants at this time can be divided. Goji's are so vigorous that you can even do this when they aren't dormant and the plants will be fine.

Typically a goji in a container will become severely root bound and send up dozen of rooted canes. Eventually the plant will choke itself out. From time to time to reinvigorate the plant take it up and seperate it out.

Replant the most viable part of the plant back in the pot and use your root cuttings for new plants.

I will be sharing info on how to do this in the videos section...

If your goji is in the ground you can also dig the Goji up and divide it, prune it up real good and replant it in a more upright position. This will give it a good support structure.

Goji's produce deep roots. Do this only if the plant has become crooked due to canopy weight. If you have a good upright plant in the ground don't separate it from it's root system.

Let it grow out and get the root cuttings from it. The longer it you leave it undisturbed like this the more plants you can make. I don't recommend digging up goji's to divide them very often. I do however recommend dividing any plants in containers.

PROS:

- + simple way to multiply established plants
- + divisions grow very quickly

CONS:

- + must wait until plant is dormant
- + plant must be in a container; not good to divide plants still in the ground
- + can only make a limited number of plants each year this way

Propagating Cuttings from Live Plant Growth

This is the method we want to focus on since it's cheap and easy to get a lot of decent sized plants going.

So, how easy is it to root Goji berry cuttings? I'm not going to lie. It is very easy if you know how to do it. If you don't know the process it is downright difficult to keep the cuttings alive in the long term.

Along the way expect some casualties. But don't worry, if you have one established plant you will have all the vines you will ever need, this is one vigorous plant. Once you become more skilled you will become more efficient at getting your rooted cuttings to maturity.

Suffice to say, the easiest part is getting your cuttings to produce actual roots. You may have seen a picture on my eBay auction if you got the product there...

It was the scant flick of a twig that fell into the sand flat while I was trimming the edge of my cuttings to place them in sand. On one end you see green growth and on the other end a large root (comparitavely speaking). This was just laying on the the surface.

Let this ecourage you... they will readily root.

But that is only part of the process. The hardest part is working them along until they are an established, self sufficient plant. Particularly difficult is the stage AFTER you remove the plants from their humidity bag. We will cover this in detail.

So to get started. Carefully remove the cuttings I have sent and place them in a half filled cup of water. Don't submerge the cuttings more than half way. Goji's will root in a cup of water but not as high a percentage as the method I'm going to share is much better.

You can leave them in the water while you get your materials ready.

The next picture is a good way to get these cuttings going...



This is how I root multiple cuttings at once. At the end of the document I provided instructions for the mini-greenhouse method which you will need to use.

As you can see, many of these cuttings are budding out with green growth and have roots on them. Even the ones without leaves have swelling leaf nodes that indicate it is about to leaf out.

For multiple cuttings get a cheap rectangular sterilite container. I recommend one with some good depth so you can fill it real good with sand. I got these in the picture for 99 cents at the dollar store.

Put you four drainage holes in the corners of your container. I use a hot knife and a candle to melt the holes.

Fill your container with coarse river sand - play sand is fine as well. The coarser the better. Use sand, it drains quick and the goji's can be removed with their roots easily. It discourages mold as well. They seem to really like sand. I strongly advise against anything else. Sand forces the cuttings to develop roots as their is no nutrition in the soil.

Also, make sure to put plent of sand in the flat as the extra sand will cover more nodes allowing for more root formation.

Wet the sand down good and let it drain. Poke hole in the medium with a stick and pluck your cutting down into the sand past a few nodes at least. Push the sand around the stem. You can use a rooting hormone if you like, it won't hurt. I rarely use it but it will only increase you chances of success.

You can also scarify the stem with a sharp edge which will signal the plant to root but once again it will work without it.

I'm just giving you some tips on increasing your hit ratio. The truth is, some cuttings for whatever reason won't make it but if we follow some simple rules we will get a high percentage.

Once you have the cuttings in the flat mist the sand and cuttings real good one last time with a sprayer. Place the flat in a white plastic bag and close it the edge under the container. Try to keep the bag up off the cuttings to prevent mold. Put in a warm place in the shade outside. Not in a dark place but where indirect light can reach it.

If a little bit of direct sunlight hits the bag each day it should be alright but keep a close eye on it. It's real easy to get too much light on the bag but I've noticed a little does hurt them.

Be wary of leaving the bag where heavy rain can pummel it. If it happens make sure to get the water up off the bag as it encourages the leaves to rot.

Check the cuttings about once a week to see how they are doing. Watch for mold. Usually the molded cuttings are dead pull them out if they appear so and don't have any sign of growth.

Goji cuttings sometime drop leaves but don't worry they will usually bud back out.

Let it sit out in the open air in the cool of the evening for a few hours if you like as cuttings need oxygen too. Make sure the sand is still moist – mist everything really good again and place back in the bag.

Eventually the barren cutting will begin to bud out with leaf growth. This is a good sign that roots are beginning to develop. Don't disturb them yet. You can begin to check for roots.

When you tug gently at the cutting you will feel some resistance.

IMPORTANT RULE: Make sure there is plenty of root formation. I noticed that a lot of my plants that died because I didn't allow adequate root formation. Once I put them in the open air the wilted away because they were unable to uptake enough moisture. Leave them in the flat and/or humidity bag long enough to get sufficient root establishment to survive in the open air.

When ready, gently remove cutting from sand so as to not break the roots.

Transition – Humidity Bag

Once you have taken the rooted cuttings out you can place them in a half-filled cup of water to get them extra hydrated and ready for the next stage.

If the cutting has developed a nice bit of roots you can transfer it into a cup of soil. The little plants aren't super particular in my experience about what they grow in but you want to make sure they it drains really well otherwise the cuttings could get "foot rot".

The ideal medium would be a mixture of sand and peat moss but you can also experiment with other types of soil.

I am not settled on what works best at this stage yet just that it drains well and that the soil is well aerated so as to get oxygen to the roots.

You may want to get some type of fungicide that discourages damping off if that becomes a problem.

Personally I don't but in the future I may experiment with it.

This is one thing that happens to poorly draining soil or soil that stays too damp, not enough oxygen gets to the roots and the leaves begin to get wilted and eventually die.

There are also bacteria and fungus in the soil that will attack a certain percentage of plants. That's why they say use a medium that is sterile but me personally I just use whatever I have handy and go with it. At the end of the day I have losses but get more than enough plants.

POWER TIP: once you take the rooted cuttings out of sand, before you place it in the humidity bag, you may want to dip the roots in a rooting gel product called Clonex. It is a high performance formulation of hormones, vitamins and minerals made especially for root development. It is optional.

Between a nice rooting gel and a good fungicide to protect from damping off you may not lose very many cuttings.

Once you have the rooted cuttings in it's planter with soil water the soil down one good time, let it drain and place the plant in a one gallon plastic bag. You can put two small planters in each bag. TRY to keep the seal bag up off the cutting or the leaves touching the bag will rot. This is easier said than done in most instances.

You're going to want to place this bag in an area that receives mostly indirect sunlight with just small amount of direct sunlight. Don't place the plant in a spot that is too dark or it will die. Don't put it in a spot where it will bake in sun either.

You're going to want to leave these plants in the sealed bag for a few days depending on how much root has developed. After 4-5 days open the sealed bag and let the plant sit in the opened bag and air out. Check the foliage of the plant periodically while the bag is open – is it wilted or vibrant looking?

The humidity is still pretty high in the opened bag. It's a judgment call at this point. If the foliage looks good and feel like the plant can survive you can remove the plant. Carefully observe the foliage once removed.

Here's where it get tricky, this is normally where the die off... here's some rules...

Transition – The Real World

#1. - Keep the soil moist but not overly wet. Check moisture daily. Do NOT put them where heavy rain will beat the young foliage to oblivion. I have lost most of my plants like this. After a while you can put them out in the open but to begin with keep them protected from heavy rain. I put mine on the deck under the eave of the house in a place that gets very little direct sunlight. That way I can control how much moisture they get.

#2. - Don't use fertilizer, yet. Goji's benefit from fertilizer like any plant but now is not the time. I tried an experiment with diluted liquid fertilizer and it causes the plants leaves to burn. So for the time being don't use it. Eventually you can experiment with a SMALL amount of time released fertilizer that won't burn the plant.

#3. - Flea beetle control. The one pest that I have found hurts the young plant the most are flea beetles and they are a terror. They will easily kill younger cuttings and they have a knack for finding. Don't mess around, they will riddle the tender foliage of your plants with a shotgun blast of holes. Study up on this. Main thing: watch for any type of pest. Don't assume they won't mess with it, they will. Get some 7 dust if you're going to do this and LIGHTLY dust the plant. Not too much because once again goji's have VERY sensitive leaves.

#4. - Get them in the ground. If you want your plant to do the best I recommend planting it once the plant has gotten nice and strong and an opportune time presents itself. You want to make sure it has plenty of roots in its container. I don't like to transplant into the ground during the hottest times of the year but you can if needs be – keep the soil around the plant moist and even a nice ground cover of compost around the plant.

POWER TIP: If it's really hot and the plant looks wilted in the field fold a piece of cardboard box in half and use it as a sun tent to shield the plants. It's variable how much you will need to use one. Some plants take to the field with ease, others need time to adapt. The more extensive the root system is the container the better chance it has. Once the plant becomes established you can use the cardboard for other plants or to suppress weeds. You will need these handy if you plan on transplanting them into the ground during the hotter parts of the year.

Once you have your goji out of the humidity bag you want to start hardening the plant off. But I don't recommend full sun UNTIL you pot it up a size because the small containers heat up and dry out quicker.

IMPORTANT RULE: container plants heat up superfast. This is a real problem as plant roots need oxygen. The hotter the container soil is the less oxygen is available for the plant. This is an important principle and its one of the reasons you want the plant in the ground if possible with some good ground cover. Conversely, in the winter small potted plants will die if left in the open when a hard freeze comes through. I know it's convenient to have some plants in containers but my motto is if at all possible GET IT IN THE GROUND!

Gradually get the small plants accustomed to life in full sun.

Eventually as the roots fill out the planter you need to pot up a size in order for the plant to continue to grow.

This picture gives a good example of the process and what they look early on. These coke bottles were in plastic bags to begin with...

These little plants are hardened and love the sun. They are a good example of a success!



Below I have listed the instructions for the mini-greenhouse. All cuttings can be done this way from start to finish. If you only plan on making a few plants here and there this will work best and require the least amount of effort.

The sandflat method is for doing a lot of cuttings at once.

Instruction for Mini-Greenhouse

Here's how to build your own miniature greenhouse to grow your Goji's out. The main thing with these is patience! It will work almost 95% of the time if you go by the directions.

The miniature greenhouse will keep the relative humidity at 100% which and keep the cutting from drying out while it's roots are setting.

About the only thing that will cause it to fail is mold and letting it bake in the sunshine. It has a very high rate of success if you do it right and it seems to work with about every type of plant cutting I've tried given enough time.

1.) Get yourself a small container or some other cup... we will let the plant root in this and grow until we can see its roots fill the cup. You can also use Solo cups whether they be clear or opaque is up to you. You can really use anything you want as long as it holds soil and fits in a gallon bag. I like something clear but it really is immaterial.

2.) Get a small knife, a candle and a pair of scissors. Heat the end of the small knife and poke three or more small drainage holes in the bottom of your bottle/cup. If you use a coke bottle heat your knife tip and melt a horizontal opening above midway on the bottle. Take your scissors and cut the top off.

3.) Fill your bottle with a soil medium - after these steps I've given some instructions for considering a good soil medium. At this point we no longer want to use sand but something closer to what the plant will be growing in.

4.) Saturate the medium with water and let it drain.

5.) Get your cutting. Poke a hole in your soil with a pencil and stick the cutting in there as deep as you can without touching the bottom. Gently place the cutting into the soil without breaking the roots. Tamp the soil down around the stem softly. You can also experiment with putting two cuttings in one container.

6.) With a water bottle mist your cuttings and the soil real good.

7.) Get a 1 gallon freezer bag and put the bottle inside leaving some air before you seal the bag. You can use a bread bag with a tie, or even a simple plastic bag just make sure to tie it shut to create the greenhouse effect. It is best to put TWO bottles in each bag as this will save money and help the bag stand upright. Try not to let the plant touch the bag as it will cause mold growth.

8.) Put the cutting in a warm location in indirect sunlight - don't leave it in direct sunlight or the heat will cook it. I sit mine on the side of the house that get's very little direct sunlight. It can tolerate a little bit of direct sun on a windowsill but be real careful - the cutting can easily bake in the bag in direct sunlight.

9.) Plants need oxygen so from time to time open the bag for several hours - check the moisture levels at this time; see how the foliage is doing - see if there is any new growth. Sometimes the initial leaves will fall off but don't give up if they do - typically the nodes will bud back out. With your sprayer give the plant and the soil a good misting and seal the bag.

10.) Eventually if everything goes as planned you will have yourself a nice new plant with some good roots - you can take it out of the bag a GRADUALLY get it accustomed direct sunlight. Leave it in the bottle until it's root system get established... then transplant. If the leaves seem to be doing okay then everything is still good just be patient.

The big mistake made here is to they think the plant has sufficiently rooted and is ready for some full blown sunshine. Be real careful here. Go easy at first until the roots really get established.

11.) NEVER leave plants in these containers outside during the winter - one solid freeze and all your hard work will be wiped out. Bring them in, put them in a greenhouse or transplant them into the ground. I typically transplant it into the ground as soon as I can and surround it with a good layer of mulch and compost.

Just remember when you transition out of sand make the rooted cutting a soil medium that will be similar to what you will be planting it in. You want this medium to be towards the alkaline side - add lime to your mix. Don't use nitrogen fertilizers or anything that will make the soil acid.

Goji's like magnesium so get some dolomitic lime if you can find it use some of it in your potting mixture. Though it makes the soil acidic, they like sulphur too.

Clay from your garden broken up really well and mixed with finer silt is good - add sand into the mix to help drainage. This is the hardest thing with the plant, getting the soil right. They need a soil pH of 6.8 to set fruit. Too much acidity will kill them.

In the next part of this document I will share some general care information and some ideas on how to create the perfect soil mix for your plant please make sure you read this part as it has important information about the plant and soil for them.

General Care Instructions for Goji Berry

This particular variety of Goji is called, "Phoenix Tears". I encourage you to study up on the plant and take a genuine interest in it – this will aid you in the learning process and help you to succeed with the plant.

Phoenix Tears is pest resistant and tolerates heat and drought very well.

Your plant comes from 1-2 year root cuttings of a mature Goji. This is the preferred method of Goji propagation as it creates a fast growing vining shrub that produces fruit much faster than plants from seed. When the plant goes dormant a cut is made deep down in the soil from the main root of the mother plant. These cuttings are full of carbohydrate and power the plant's growth as it comes out of dormancy.

Among being prolific bearers of fruit from late spring until frost Goji berries are known for being some of the most nutritious fruits known to man.

That's the main reason I took interest in them. I won't get into all the detail but suffice it to say, they are very good for you.

There are two sections to this guide. The first part is for people who ordered online mainly eBay. The other is how to take care of the plant once it is potted up or planted in the ground.

For Online Buyers

Your plant will be shipped to you in the quickest most economical way possible so you can get a good price and so I can make it worthwhile.

My main goal is that the plant makes it to you alive and ready to grow. During the summer months it is particularly challenging. Once it cools off it's not that hard – when the plant goes dormant that's even better.

These plants have already been growing and I've taken them out of their soil. This will be stressful for them but hopefully it won't bother them too much.

#1. Get the plant out of it's box as quickly as you can get it. Live plants are very perishable and a nice bake in the Summer heat might be it's demise. Be really careful with it once you take the plants out. They are very young and have tender parts on their roots and foliage that can break easily. Cut the rubber bands and gently remove the damp media surrounding the main root.

#2. Get the root into a glass of cool water to sit in while you are preparing the potting medium. Maybe even sit it somewhere it can get some light. Fill the glass up to the crown of the plant – don't submerge and foliage that may be on the plant.

#3. Try to get the plant into a container and into some warm sunlight as soon as you can. These little plants have been already growing and they need to get this stressful transition behind them.

You may notice some wilting of the foliage due to its time in the mail. Give it a chance and it should perk back up – even if the foliage falls off it should bud back out if the potting media is kept moist.

In fact, let me know the condition of the plant once it arrives and that will help me out a whole lot. This is really a test to see if I can ship these plants in this fashion. If I have too many casualties I might have to discontinue until it gets cooler.

Preparing Your Potting Soil

If you are an online buyer I REALLY want you to consider putting this in a container until it establishes a good root system. I planted some dormant cuttings directly into the ground and though they are growing it requires diligent care to see that they make it in the hot weather.

I'd like you to keep it in a container this first year and at the beginning of next year when the plant comes out of dormancy consider potting up or plant them in the ground. The best results come from planting in the ground but you have more control over what is going on in a container.

You will get berries sooner if you put them in containers but you will see more fruit if you put it in the ground.

At the end of the year **BRING THE CONTAINER INSIDE!** Sit it in the garage or some place where the soil won't get frozen solid. That would kill the plant. I can't tell you the grief it caused me to learn that painful lesson. When I first got into gardening I purchased a bunch of beautiful blueberry plants in containers. They were my pride and joy – old man winter came along and taught me not to do it. They ALL DIED.

So without further ado, here are some basic rules for ensuring your plant lives and continues to thrive into maturity. Once established Goji's need little care. Getting the plant established is easier said than done but it can be done if you know a few simple things.

Goji's are alkaline soil loving plants. They particularly like magnesium. Dolomite lime is good if you can get it but regular garden lime is good too.

But don't go adding too many soil amendments just yet...

When I talk to people who have had experience with the plant they typically tell me the same thing. The end result is the plant died. Typically it is due some lack of instruction. They almost always make a soil for the plant that is too rich.

There's always a reason things go wrong. Plants don't magically die. We want to do the things that make Goji thrive and avoid the things that will kill it.

If you bought locally your plant came in a pot that has a good soil to start them in. I'm always trying to find a better potting formula for the plant. Eventually they will outgrow this and you will want to pot them up or plant them in the ground... at this time you will consider a proper soil medium for them.

Goji doesn't particularly like a rich soil and is known to grow in very poor soil. I can attest to that – some of the plants I have doing quite well are growing in dirt that nothing would grow in last year.

Here's kind of what my formula looks like. If I were mixing it up in a large wheelbarrow I would have and these are rough figures:

- * coarse river sand -10%
- * lime, pulverized and dolomite granules – 5%
- * garden soil which is a mix of clay, silt and loam – 75%
- * some wood ash if you have it handy – 5%

You will also want the soil to have a little organic material in it. This will keep the soil from turning into a concrete block and keep the medium high in oxygen which is so important.

I would then work it into a consistent mix with a hoe and use this as a potting media.

If planting in the ground, clay and sandy soil is good as long as it is fine and broke up good. Add in some lime as well. Dig a good size hole. You can add some good garden soil into your hole just mix it together real good.

Here's some main rules

Rule #1: Goji's are alkaline soil loving plants. They would die in a medium like peat moss as their roots would not be able to uptake nutrients. To set fruit Goji's like a pH of 6.8 or higher. They can tolerate some soil acidity but don't make it a habit or you'll just get a bunch of leaves or worse yet a dead plant.

Rule #2: Don't overfertilizer. Once the plant is well established you could use some time released fertilizer but nothing too strong. Over fertilization makes the soil acidic and kills a lot of these plants. I use a thin layer of grass clippings around the plant and this seems work wonders.

Rule #3: Don't disturb the plant. Leave it in it's container as it is forming roots, once it has outgrown it's pot then transplant.

Rule #4: Keep the soil moist until the plant gets going good. Water it daily until it gets good and established. Tap water is alright.

Rule #5: Give it a good bit of sun but keep an eye on it. These plants will sometimes get wilted in intense sun and heat until their roots get established. If it begins to get wilted sit it in the shade. Typically in the evening the leaves will perk back up. They will pass through this stage once their roots get going.

So what makes the soil acidic? Things like peat moss. Compost material, manure, pine needles, nitrogen fertilizers, grass clippings... Miracle Grow dirt.

Note: **it is okay to use compost material on top of the soil around the plant to keep moisture up and weeds down. Organic material doesn't raise soil acidity until it is mixed into the soil.**

What are some things that will tilt the scale back in the other direction? Woodash, lime, dolomite lime, clay soils. Watering the soil with tap water pull back toward alkaline since tap water is hard water.

If you plan on putting your Goji in a larger pot consider the soil mix. Remember, if you want to use Miracle Grow dirt or anything of that nature be sure to dilute it down with other soils.

Younger Goji's will benefit from having a loose, slightly acidic soil with organic matter but remember – **the more acidic the less fruit you will get.** Peat moss will essentially kill the plant, I have witnessed this.

I went to go check up on a plant I gave to a friend and it was dead due to soil acidity. The soil was the nicest look stuff you can imagine, unfortunately goji's don't like soils that we would think they would. My best plant are growing on a hillside with little to no topsoil in sandy clay that gets very dry in the summer. Goji's are very weedy in a sense, they can grow in some pretty desolate conditions.

Stay away from fertilizer it will kill the plant. You could conceivably use some fertilizer at the beginning of the year once the plant becomes established but be very careful.

Using a simple soil with some lime mixed in will normally do the trick.

I normally take a nice shovel full of soil from the garden and chop it up real good. This soil might be a mixture of clay and topsoil. I will add potash and some lime, maybe a little organic soil. I work it around until I have a nice uniform soil and that is my potting media.

You can put this in the pot or in the hole you dig for your plant. If it's in the field dig deep and turn that soil and **break it up really good to make it easy for the roots to grow.**