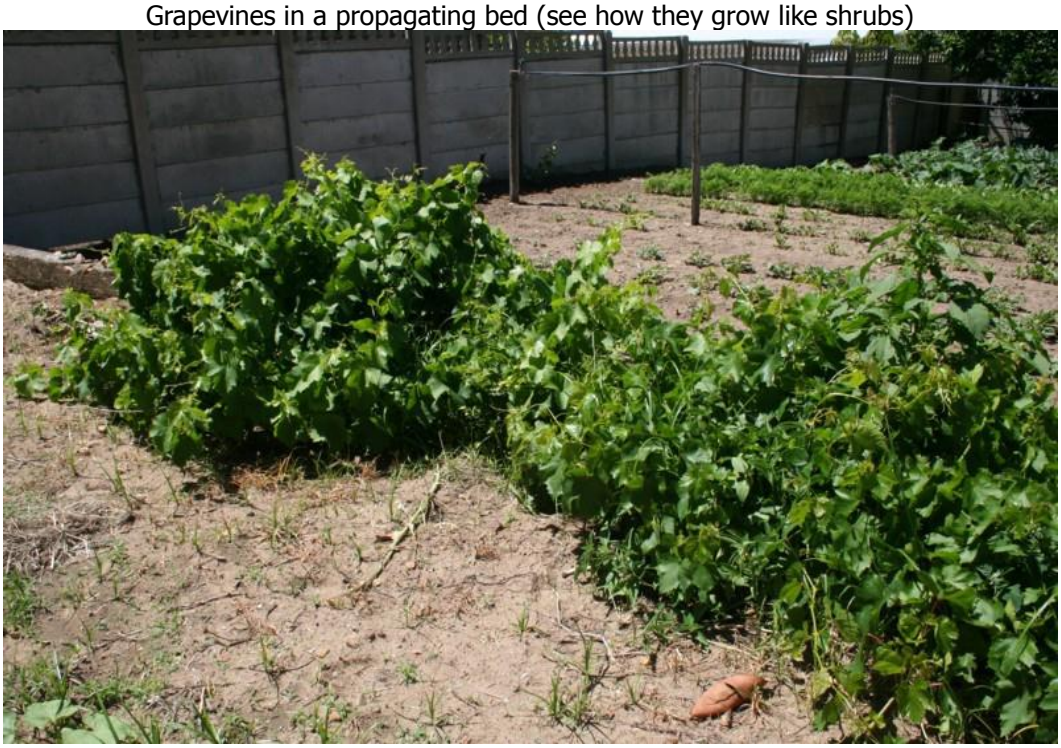
Module 6
Planting a Grape Vine

It is generally preferable to root and grow grape cuttings for 1 year in a well-drained garden area or propagating bed before transplanting them to a permanent location. Prepare this area by tilling the soil and fertilizing it with a well-balanced fertilizer. Plant the cuttings 5 to 6 inches apart in rows 2 to 4 feet apart and let it settle here for a year.

No pruning is necessary while growing in the propagation bed. Just let the grapevine grow, as it likes. One thing you should do is to remove all grape clusters that might develop, at a very early stage. This will ensure that all the energy will go into growth, which the vine needs for developing a strong root system and canes. I know the temptation will be there to leave some of the clusters, but this will do more harm than good. These clusters will be of no value anyway, because the grapevine is too young to ripen the fruit properly.

Grapevines in a propagating bed (see how they grow like shrubs)



At the beginning of fall, you will notice that the leaves of the young vine will turn a brown yellow color and will eventually dry out and fall off. Don't worry, this is normal, the grapevine is a deciduous plant. When the vine has lost all of its leaves, it means that the grapevine is now dormant. This is the time when the plant builds up energy for the growing season ahead. Normally, if your winters are wet and cold, the young grapevine needs no attention except if you get heavy snowfall. If so, cover the grapevine with something.

At the start of spring, it is time to prepare the home of your new grapevine. It is advisable, but not crucial, to take a soil test before planting your grapevine to determine if the soil needs any lime and fertilizer. This is not an expensive test and but very helpful because this will be the home of your new grapevine for many years to come.

If your soil is infertile, it is necessary to fertilize the soil before planting the grapevine. Never fertilize the soil inside the plant hole, it will sear the young roots and can even kill the plant!

Choosing the right spot to plant your grapevine is crucial, for grape plants can survive for 50 to 100 years, provided you care for them properly. Thus, it is important to consider carefully both site selection and site preparation before you plant.

Not giving enough attention to soil preparation and plant location, will surely prevent your grapevine from becoming a grape production "machine"!

Choosing a sunny, frost free position is important, because grapes need lots of sunshine to ripen the fruit and is very susceptible for frost after shooting (early spring). If you plan to plant a row of vines, a north/south row direction is more

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suitable than an east/west direction, because the fruit and leaves will be better exposed to sunlight. If it is possible, choose a location with a slight slope, especially a southern or southwestern slope, because they generally have higher temperatures and are less likely to get frost.

A fully-grown grapevine has a huge root system that stretches for as long as 20 feet! Be sure to prepare your soil well by tilling an area of about 4 feet in diameter and at least 2 feet deep. Grapevines like a deep, well drained soil that is not too cold during the growing season. Avoid soils with impervious subsoil layers of clay, these soils normally have poor drainage and are not suitable for growing grapes, except if you can break these clay layers with some kind of mechanical preparation or tilling.

Make a hole +- (300 x 300 x 300mm) 11 x 11 x 11 inches and mix a hand full humus with the soil taken from the plant hole (do not put the humus in the bottom of the hole – mix it with the soil taken from the plant hole – do not overdo it, just add a hand full of humus to the soil!).

Now that you have prepared your site and you are sure that your soil is fertile and ready to become the home of your new grapevine, it is time to take the cuttings (not really cuttings anymore) from the propagation bed. Use only those cuttings that have grown strong enough during the previous season. Some of the cuttings may have died as well, but you will be able to tell which is perfect for replanting.

DO NOT CUT THE ROOTS OF THE VINES

Try not to disturb or remove the soil around the roots when you take them out of the propagation bed! Plant these cuttings immediately, and do not let the roots dry out, no matter what! Put the young grapevine in the hole you have made, cover all the roots with soil and firm the soil well around roots to remove air pockets, and water thoroughly. Leave a slight depression around the base of the plant to make watering easier. Make sure you apply enough water so that the whole root system is wet.

If you are using a grafted vine, plant the grapevine, with the graft union above ground level. This is very important, because when you cover the graft union with soil, roots will grow from the graft union and the resistibility of the rootstock will have no effect anymore. Now is the time for your first pruning lesson, which I will cover in the next section.

PS: If you live in a cold area, you may cover the cuttings with mulch to protect it from heavy frost; carefully remove this material to expose the top two buds once the danger of frost has passed.

DO NOT LET THE GRAPEVINE DRY OUT AT THIS STAGE!

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Replanting or relocating a grapevine

The reason why so many new grape growers replant their grapevines is poor planning, incorrect soil preparation and choosing the incorrect site or spot to plant their grapevines. Choosing the correct site location for your vineyard, is one of the most important choices you as a new grape grower have to make as this will be the future home for your grapevines in years to come.

Let's get something straight; replanting a grapevine is not ideal, especially if it is older than two years. Therefore you need to do proper planning before you establish your vineyard.

So, your grapevines were not planted in the right spot or you are moving to another house and want to take your grapevine with you – now what?

Transplanting a grapevine poses some risk, there is no doubt about that, but it can be done if you follow the instructions I am going to give to you now. Do not deviate from this too much as you could lose your grapevine.

The first problem with transplanting an old grapevine (2 years and older), is that the root system and structure of the vine gets bigger each year and makes the removal of the vine much harder. When transplanting these grapevines, you will eventually damage some roots, as it is impossible to take them out of the soil intact. Damaging the roots of the vines will result in the loss of moisture through the wounds and could result in the roots drying out too much and die. When taking the vines out of the soil, make sure you dig up as many of the roots as possible – the more roots you can save, the more successfully you will replant your grapevines.

The second problem with replanting a grapevine is the loss of water through the leaves (evaporation). After replanting the grapevine, the roots of the vines are in a state of shock and for a week or two will not be able to take up water from the soil. If the climate is hot, the grapevine will lose water through the leaves which will result in too little water in the vine and the leaves will start to wither.

You therefore need to minimize the apical growth in order to ensure there is enough available water in the vine itself by reducing the number of shoots to a maximum of three. I would recommend you prune back hard and leave only one strong cane from the base of the lowest cordon. You can develop the new structure of the vine from there. Rather lose one or two year's growth and have healthy vine, than trying to retain the old structure and have a dead vine!.

The third problem is planting and watering the vine. Because you have a much bigger root system than a normal rooted cutting, you will have to make a much bigger planting hole. Make the planting hole large enough to accommodate ALL the roots and do not prune back any roots to fit the planting hole – rather make the hole larger.

It is important that you understand, that these vines needs allot of water the first few weeks (as explained before). After removing the vine from its old position, place the roots of the vines in a bucket of water for at least six hours, prior to planting it in the new location. This will ensure the roots stay moist and the vine will not lose any water through the wounds on the roots.

Do not put any fertilizer in the planting hole it will damage the roots.

I have successfully transplanted 5-year-old vines this way, and there should not be any reason you cannot do it yourself, but it is always better to avoid replanting a mature vine.

I hope this gave you more insight on how to relocate a mature vine – the key is:

- Keep as many of the roots as possible,
- Minimize apical growth for at least a month
- Make a large enough planting hole
- Keep the vine well watered.

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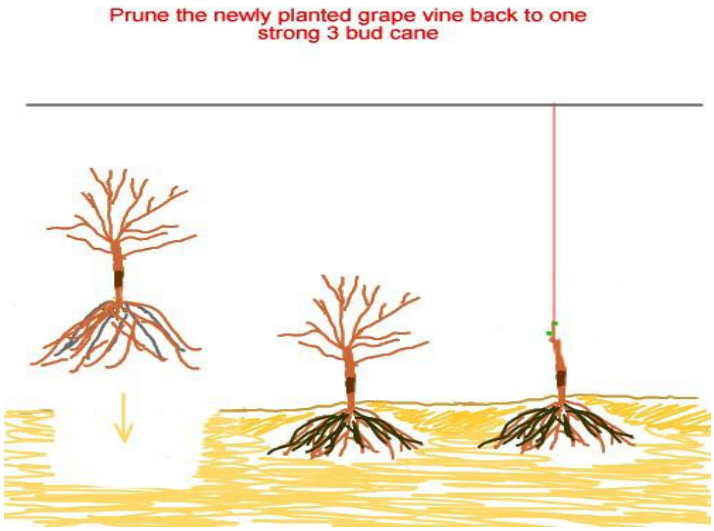
The first year of training your grapevine

OK, so now you have planted your first grapevine! Congratulations! Follow the instructions in this section very closely, as this will ensure the future of your grapevine!

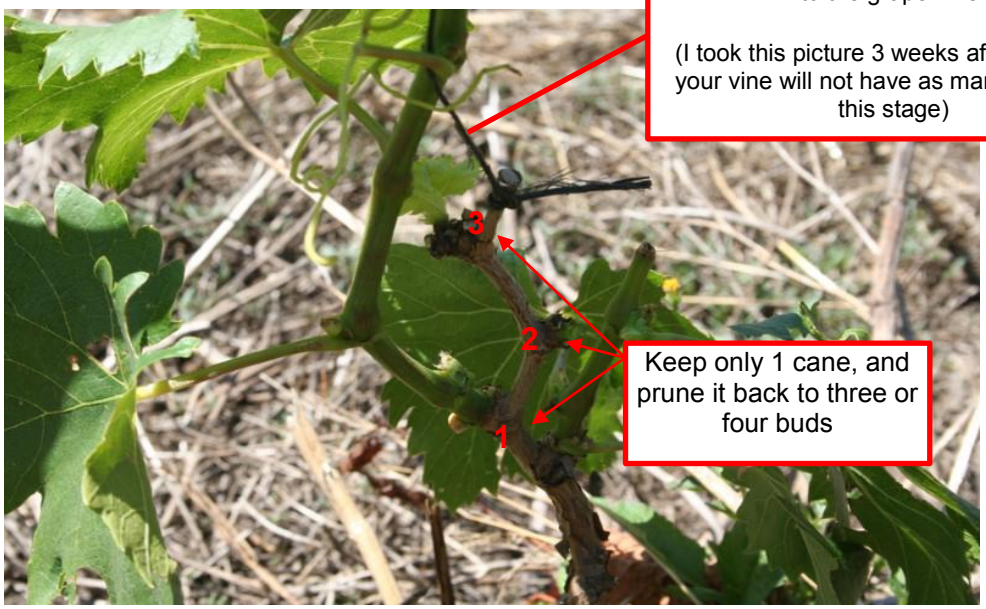
Your grapevine should look something like this:



After you have planted the grapevine, you will have to remove all of the previous year's shoots, except for one strong cane that is facing straight up. Cut this cane through the fourth but.

The reason we do this, is so that when you tie and stretch the training string to the vine, it will not slip off.

(On the next page I will show you how this is done)



Another reason we cut the cane through the fourth bud is to make sure that this bud will not grow and the string will not strangle the main stem after it grows thicker. To be sure, that this will not happen, remove the rest of the bud with your fingernails.

ALLWAYS BE AWARE OF THIS, BECAUSE I HAVE SEEN 2-YEAR-OLD GRAPEVINES STRANGLED BY THIS LITTLE PEASE OF STRING!!

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Use a nylon string (weather resistant as it will support your vine for a full year!), and tie it around the stem of the chosen cane, BETWEEN the third and fourth bud (the one you have removed). Stretch the string and tie it to the bottom wire of your trellis.

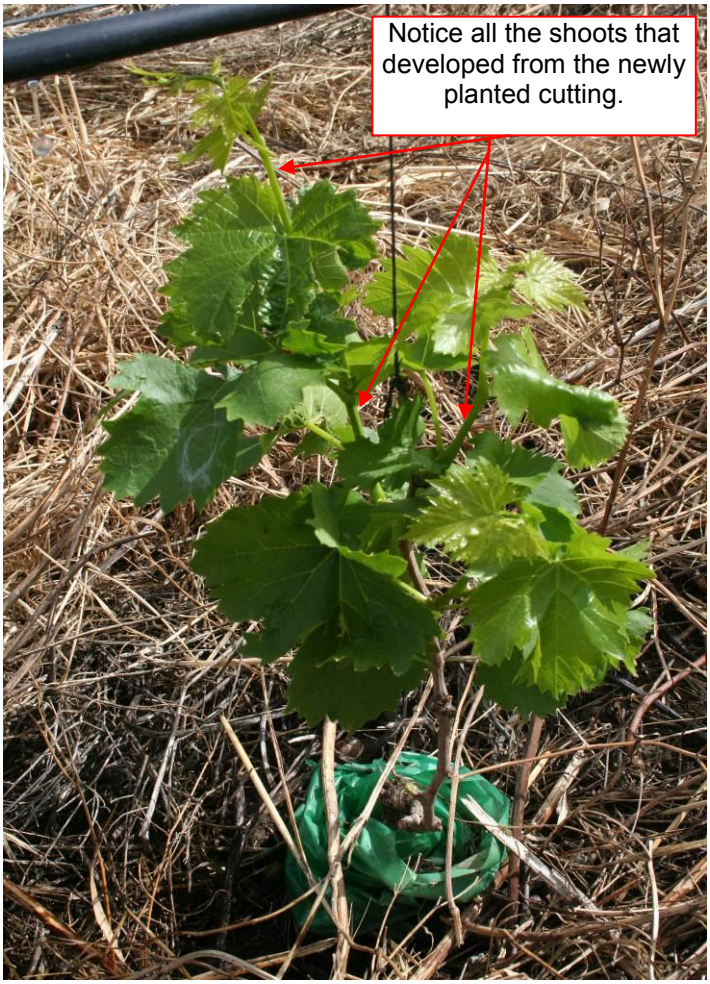
At this stage, your grapevine will start to develop shoots. Do not let the vine dry out too much at this stage. One week after planting the vine, you can give a quarter of a teaspoon well balanced fertilizer. Sprinkle it around the stem of the vine, but *DO NOT* sprinkle it on the leaves or on the stem of the vine, it will sear the vine!

Leave the vine to grow, until the newly formed shoots are about 6 inches long. There should be 3 to 5 growing, but if there is only one or two, you can still start training your grapevine.

Now its time to choose the shoot that will one day be the trunk of your grapevine!

I hope you still following! Make sure you understand the following.

Choosing the correct shoot (training-shoot) is VERY important. This will be the trunk of your grapevine for the next couple of years. Look at the picture on the next page and see which one I have chosen to be the trunk of the grapevine.



Choose the strongest, shoot that grows straight up, so you don't have to bend it too much to twine it around the training string.

If for some reason the fourth bud made a shoot (that is the one above the training string), you must remove it at once and **do not use it as the training shoot!**

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The "insurance" shoot!

From the picture below, you will notice a shoot that was pruned back to 3 buds. This is the "insurance shoot". You will have to remove all the shoots from the cutting, except for the training shoot and the "insurance shoot". We will keep this shoot, just in case the training shoot get damaged or break off. We will remove it later on in the growing season.

Notice how I have twisted the training-shoot around the training-string. Now, you are well on your way training this youngster to become a "monster"!

At this time, the grapevine needs as much energy as possible to grow and to develop more roots. Remove all the clusters as they become visible (do not worry if you don't see any clusters, they will be there one day!). Sadly, you will have no harvest this year, but to ensure next years' harvest you will have to do this.

As time goes by, you will notice that little shoots start developing between the leaf stalk and the training-shoot (side shoots or lateral shoots). Look at the pictures below and remove them by breaking them off, except for the top two, as they develop. This will ensure that all the energy goes to the main growth-point (situated on the very tip of the training-shoot).

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Before removing shoots

After removing shoots

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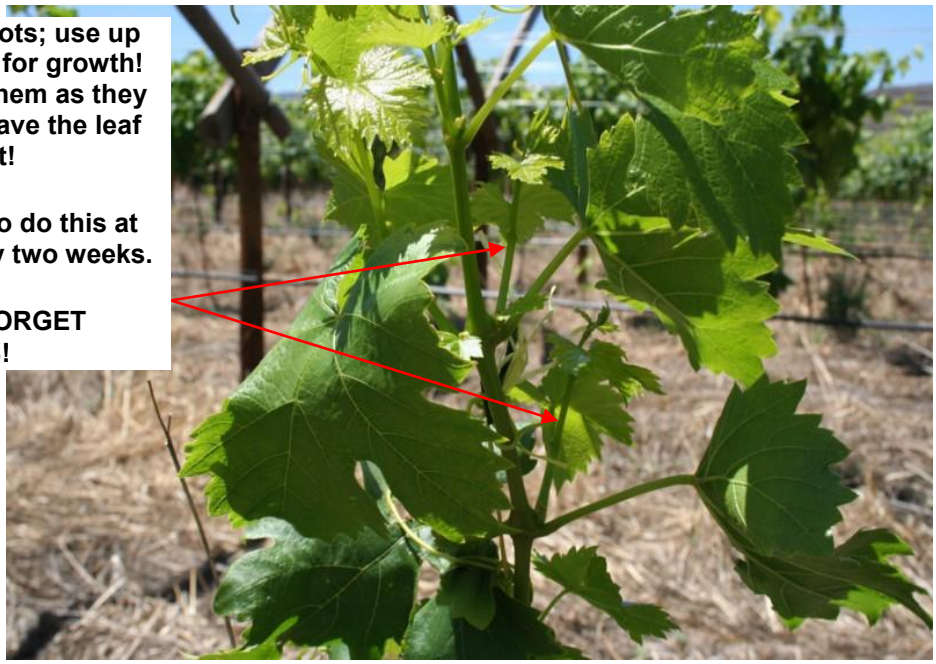
Removing lateral shoots

The lateral shoots; use up energy needed for growth! Remove all of them as they develop, but leave the leaf intact!

You will have to do this at least once every two weeks.

DO NOT FORGET THIS!



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When the grapevine reach the bottom trellis wire

Repeat the above process until the grapevine reach about 6 inches from the bottom wire of your trellis. Now you will have to **stop removing any lateral shoots that develop within 6 inches from wire** of the trellis. We will use these lateral shoots to develop the framework of the grapevine. I will show you how to do that, later.

This vine has almost reached the bottom wire of the trellis.
From now on, I will stop removing any lateral shoots that develop 6 inches from the wire. Notice there are no lateral shoots visible on the vine at this stage.

Well done, your grapevine has reached the bottom wire of the trellis!

Do not stop removing the bottom lateral shoots that will develop again and

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REMEMBER TO LEAVE THE LATERAL SHOOTS - 6 INCHES FROM THE WIRE!

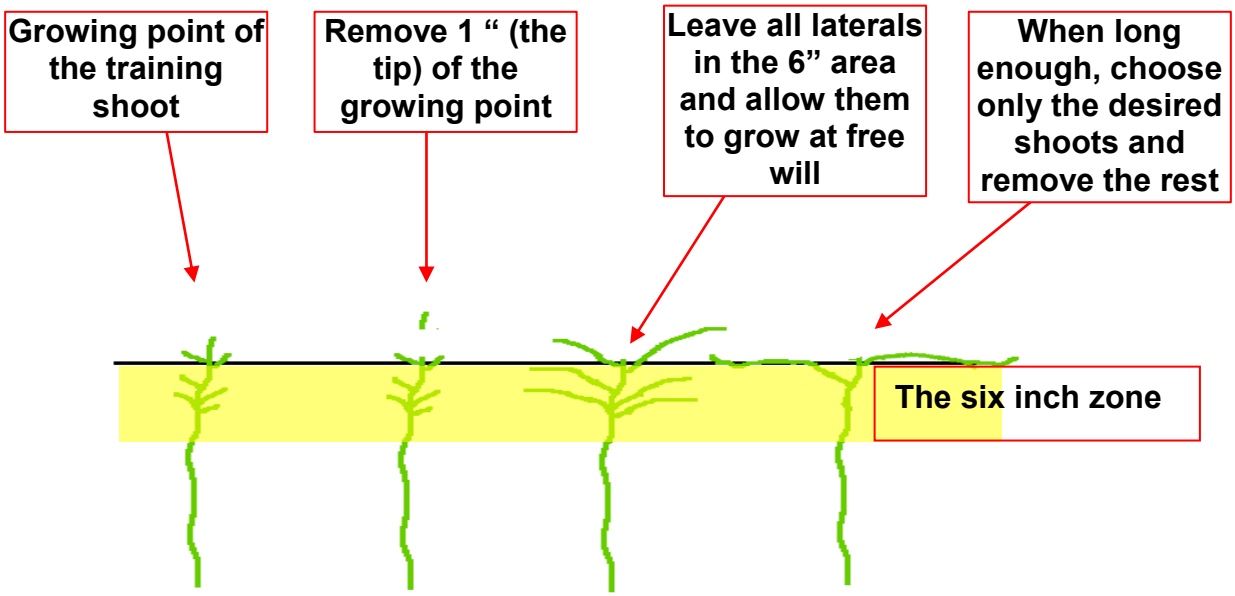
Water your vine, but not too much! Water once a week if your climate is cool, and 2 to 3 times a week if your daily temperature is higher than 25 ˚C or 77 ˚F. Apply some fertilizer every two weeks, as explained before (do not fertilize too much – quarter of a teaspoon is more than enough).

Let's talk about splitting a shoot.

Some trellis systems or training systems require the vine to grow in opposite directions, so you will have to split the vine to grow in these directions.

When your vine reached the trellis wire where you want to split the shoot and build the framework of your vine, you will have to remove about an inch of the growing point of the training shoot.

This will ensure that the lateral shoots (within the 6-inch area) grow much faster. When these lateral shoots have grown long enough, you can choose the required shoots to start develop the framework.



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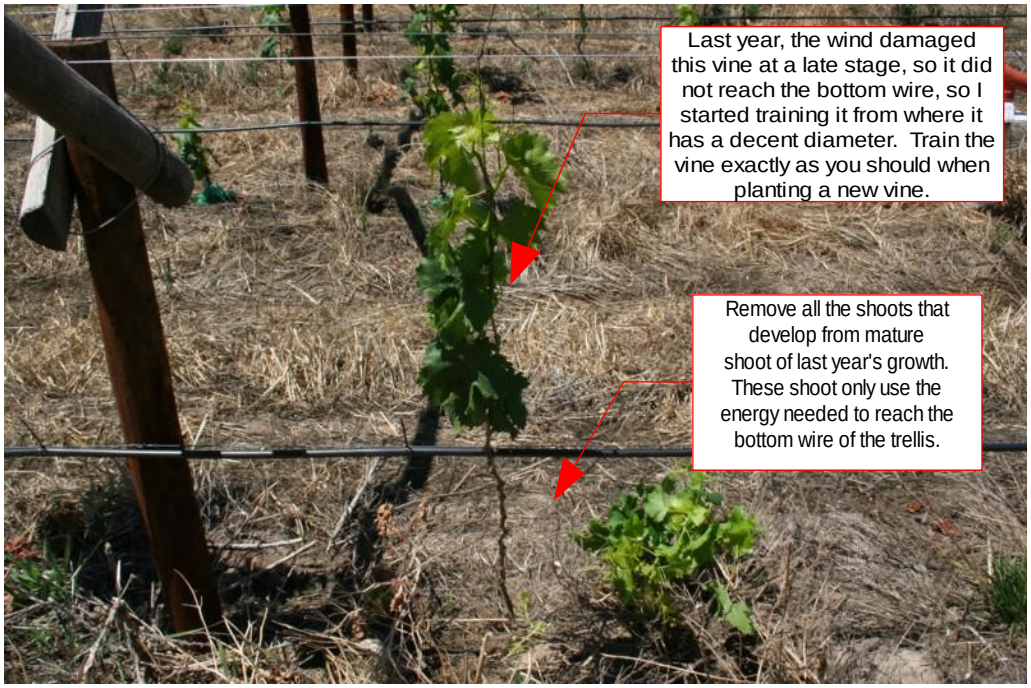
You should be well into summer by now. Remember, even I as an expert grape grower, do not always succeed in getting all my newly planted grapevines to reach the trellis wires in the first year; this should be your objective. If this is the case, I recommend the following method for next season.

Look at the picture below. The vine was damaged by the wind last year, so I started training it again about halfway between the ground and the bottom trellis wire. During winter I pruned the vine back to the last bud, where you can see that the cane is strong enough. Remove the rest of that bud and stretch a new training string between the vine and the bottom wire of the trellis. Use exactly the same principles as you should have, when you started training a newly planted grapevine.



One difference though, next year, it will reach the trellis wire in no time, because it has a well-developed root system and a shorter distance to grow. Some growers prefer to cut these vines back to 3 buds, and start all over again, but I rarely do this, except when a vine is very weak comparing to the others in the same vineyard. Normally I will replace very weak vines with new ones.

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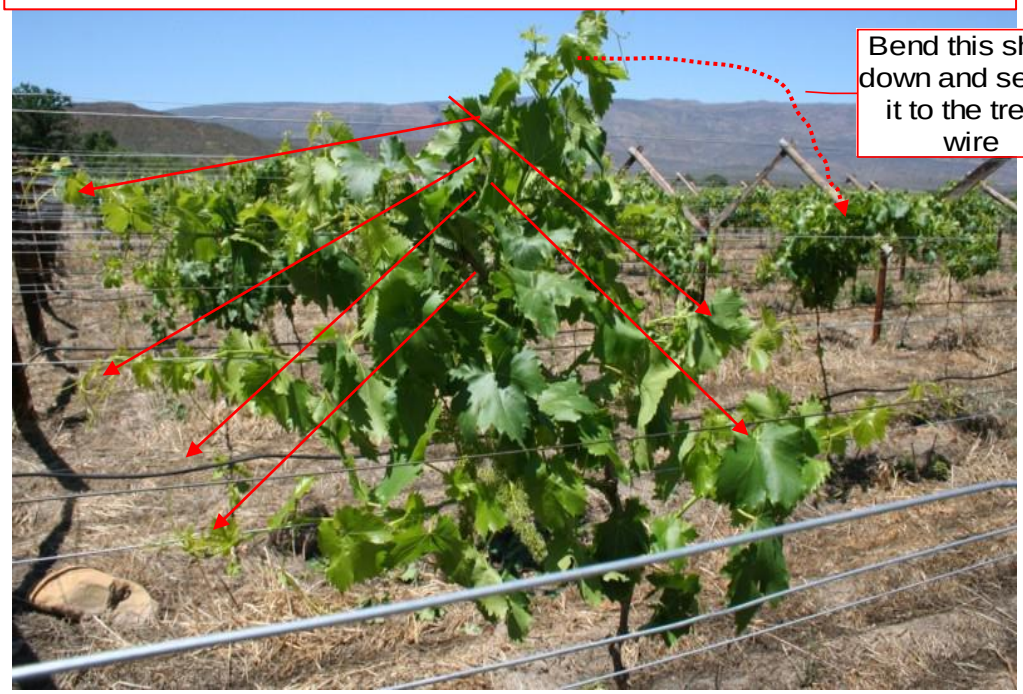
A well looked after grapevine should not have any problems reaching at least the bottom wire of the trellis. If that is the case with your grapevine, I must congratulate you, because you have succeeded in your first year's goal!

Well done!

Notice how I have covered almost all of the trellis wires with shoots – this is ideal for the first year, but most of the times you will only be able to this in the second year.



Remember to remove all of the grape clusters and use the energy to grow your vine!

If your vine grows beyond the bottom wire, that is even better! All you have to do is to twine all of the shoots and lateral shoots to the trellis wires. - remember, you didn't remove laterals that developed in the 6 inch zone, this is where we will use them!. Try to cover as many wires on your trellis as possible and spread the growth of the vine evenly to the left and the right of the training shoot.

You can now remove the training string, which guided your vine to the bottom wire. You can also remove the insurance shoot now.

Look at this picture. It does not matter what trellis system you use, just as long as you try to cover as many of the wires as possible. By doing this, it will be easy to create the framework once you start pruning in winter.

It sometimes happens that the main shoot (training shoot) grows so vigorously and pass the top wire of the trellis, without the lateral shoots developing on the training shoot. If this is the case with your grapevine, you will have to take out the growing point of the main shoot (training shoot) with your fingertips, when it reaches the second last wire of your trellis.

The reason we do this, is so that the vine can translocate all of the energy into the growing points of the lateral shoots (remember, they also have growing points), and they will develop much faster. You need those lateral shoots to develop the permanent framework of your grapevine.

Do not worry about the main shoot; a new growing point will develop again – TRUST ME :-)

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