

# Correct grafting techniques fool Mother Nature – to our benefit!

Humans figured out hundreds of years ago how to take a piece of tree that produced quality fruit, bond that wood onto another tree, and develop a new branch to produce the better fruit.

This is called grafting.

The piece of wood is known as scion wood and can be grafted onto an existing living tree or to a rootstock (base and roots of a young tree to create a new tree). The new scion wood most often provides increased quality and/or quantity of fruit compared to the host tree or rootstock to which it was grafted. The same process that may have started out as guesswork or experiment has evolved into a modern grafting

system that reliably produces the same quality fruit every year.

## Selecting dormant scion wood

This fantastic process begins with collecting wood or buds and can begin well in advance of when you plan to graft. Multiple types of grafting can be done with different types of scion wood. Dormant scion wood can be grafted in the spring, or bud grafting with actively growing buds can be done in the summer.

Scion wood for springtime grafting is generally collected in January and February while the tree is dormant. The wood should be shoots from the previous year,

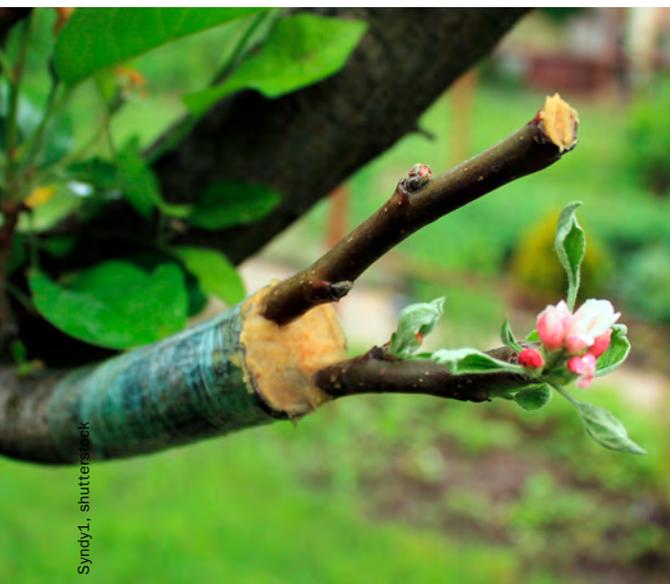
about the diameter of a pencil. The scion size will affect what type of graft you are able to make later. Scion wood collected this way can be stored in storage bags in a refrigerator at or near 32 degrees for several months.

It should go without saying: if the tree is not yours, ask before you collect scion wood! Be sure to use clean,

disinfected cutting tools before and between cuts. Disinfectants for tools include solutions that are 10% bleach, at least 70% ethanol or isopropyl alcohol, and many household cleaners. Sticks of scion wood can be any length, but 8 to 12 inches will fit in a gallon or larger storage bag and store in a refrigerator pretty easily. Keep scion wood away from other fruit in the refrigerator, as gases emitted by ripening fruit can cause the buds on scion wood to break dormancy. The buds on scion wood must be dormant to get a successful graft.

Turn to the Internet and search for a reputable nursery that supplies scion wood if you do not have a tree from which you want to harvest wood. There are hundreds of variety choices, so look around for the variety you'd like and be sure to keep in mind details like your USDA hardiness zone, flowering times, and harvest times.

The cost can run from a few dollars for widely available species to more than \$10 for a highly sought-after or rarer species. Luckily, only one to two buds are needed to successfully graft that piece of wood. Even for the inexperienced grafter, one to two



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trees can most likely be produced from a single scion section. For the experienced grafter, depending on bud location and quality, three to four trees can be grafted from a single stick of scion wood.

Have a plan for scion wood well in advance of the actual grafting.

Rootstock can be grown locally—if you have the space and the patience; however, the easiest and most reliable way to get rootstock is to purchase it from a nursery.

Many of the same companies that harvest and sell scion wood also sell rootstock. While there are some rootstock and scion wood incompatibilities, most rootstock will be compatible with most scions. Simply ask the supplier if you are concerned about this or if you want to know if the choice is a good match.

When grafting onto an established tree, you can wait until the tree is actively growing and the bark is slipping. Slipping refers to tree bark that when cut will easily slip away from the wood below. This is often right before the tree leafs out. Get your dormant wood out of the refrigerator and begin grafting.

## Collecting budwood for T-bud and chip grafting

Summertime grafting can be accomplished by either a t-bud or chip graft. A t-bud is a graft done with a bud and a “T” shaped incision in the wood accepting the

graft. A chip bud is the bud and surrounding wood carved out of the scion, and a similar piece cut out the stock (branch or trunk). The resulting chip of wood is then placed directly into that space and taped in place. Scion wood can be collected and immediately grafted at almost any time during summer. There are only a few rules or guidelines to follow.

Most pruning is recommended when trees are late in dormancy, but if you need to prune trees during the summer, scion material can be collected and used. With the freshly pruned branches, look for the actively growing buds on the current year’s growth. Buds are where new branches and leaves start on a larger branch. Like dormant scion wood, it is a section of wood that is pliable and generally smaller than a pencil that is needed for summer grafting.

Next, remove or ignore the smaller and newer growth near the tip of the branch, as well as the stiffer, woodier growth at the base of the branch. What is left are buds in the center of the freshly cut piece of scion wood that are perfect for grafting. Trim the leaves from the scion wood stick to help prevent it from drying out too fast; however, leave the petiole (the stem that connects a leaf to a branch) of the leaf for a handle—it can be trimmed after the bud is placed.

The only rule that you must follow for t-bud or chip grafting

## For more information

Washington State University

Rootstock: [bit.ly/3lyY0ie](https://bit.ly/3lyY0ie)

University of Missouri Scion Wood:

[bit.ly/3Clv3gt](https://bit.ly/3Clv3gt)

Wyoming Apple Project:

[bit.ly/3Ceov9B](https://bit.ly/3Ceov9B)

General fruit growing community:

[growingfruit.org](https://growingfruit.org)

is that the bark on the tree or rootstock that is receiving the graft must be slipping. If not, you will have a hard or impossible time getting the bud under the bark. The stock is ready for grafting if, after making an incision in the stock, the bark will easily “slip” away from the wood beneath.

If you do not have access to a tree to collect summer budwood, much like dormant scion wood, there are various places online that sell and will ship budwood.

Take care when selecting your scion wood, whether collecting in summer or winter, that it is healthy wood. Inspect the tree for any obvious signs of disease; many of these are very evident while the tree is active, less so during dormancy.

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**Zach Schultz** is a Natrona County Master Gardener and grafting enthusiast. He and his wife are raising three children and are Casper business owners. He has been planting fruit trees with the hope his children will one day be able to pick an apple on their way to school. He can be reached at [zjschultz@gmail.com](mailto:zjschultz@gmail.com).