

'Open notch and bore' safer, more productive for taking trees down

by Tim Ard
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■ No amount of experience can eliminate the risks associated with felling trees. Taking safety precautions is not only necessary, but also helps increase profits. The right safety measures do more than protect workers—they reduce fatigue and stress, making crews more productive.

When felling trees, three important safety guidelines apply: preparation, equipment operation and felling technique.

Preparation—A key to proper felling is planning your work. Look for hazards such as hanging branches, dead or rotted trees nearby, and vines that could pull a tree in a dangerous direction.

When choosing the direction for the tree to fall, keep in mind side, forward and back leans, wind direction and other work planned for the site. And always clean an escape route. Escape routes should be at 45-degree angles away from the felling direction.

Dress is crucial. You should take safety precautions in apparel and protective equipment, literally, from head to toe. Make sure everybody on the site has a helmet and eye, face and ear protection.

Also, make sure crew members have the right gloves and leg protection. Look for chaps and pants with a UL Classification label and made with chain saw-resistant fibers designed to bind a moving chain on contact.

Lastly, make sure crew members are wearing boots made for the task. Steel-toed boots offer the best protection. And remember to have a first aid kit on the job site.

Equipment and operation—Even experienced tree care professionals must take a few moments to ensure proper chain saw operation. Be sure the chain brake is engaged before starting your saw. Start the saw on the ground with the tip of your boot inside the handle as you pull the cord. Keep the chain brake in place until you're ready to begin work. Then, engage it again, should you need to walk around.

Other key points: never use a saw above your shoulders and head, and make sure



Be sure that the open notch cut is 70 degrees or more, to allow the hinge to guide the tree as it falls.

your stance is solid before you begin any cut.

Felling method—For maximum control, many tree care professionals opt for a felling method that incorporates a directional notch and controlling hinge.

The felling process should never begin until you collect data on the tree and formulate a plan. You must have an understanding of the tree's hazards, its leans, the operators' escape route, and how the hinge will be shaped and formed before deciding on the actual cutting techniques.

Here are recommended steps for this felling method:

(1) Begin with an open notch cut on the side of the tree in the direction of the planned fall. Cut the notch at 70 degrees or more, which will allow the hinge to work and guide the tree as it falls.

(2) Make a bore cut, beginning from the side of the tree, parallel with the face

notch. Never begin a cut with the upper tip of the bar. It is likely to kick back, creating the potential for an accident. Ask your chain saw dealer or consult your owner's manual about the reactive forces of the guide bar and saw chain.

Consider the tree's lean now. If you can reach through the tree with your guide bar, do so from the up-lean or preferred side of the tree to complete the back cut. If the tree is wider than the total length of your guide bar, you should cut no more than half the tree from the leaning side first and then finish the cut from the preferred side.

The bottom tip of your bar should be several inches from the back of the notch on the right side of the trunk as you face. Cut into the trunk using the bottom end of your bar. As you cut into the trunk, rotate toward the notch you've already cut and plunge the bar directly into the trunk so it's parallel with your notch cut.

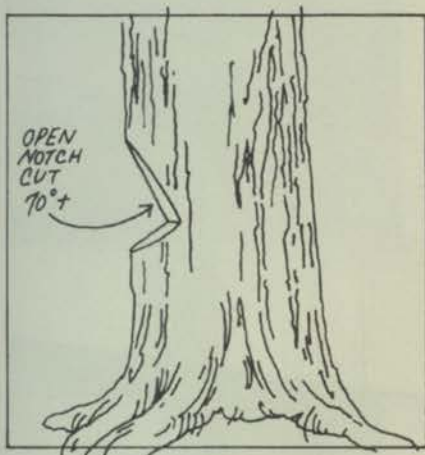
As you make the second cut, take special precautions to enter the trunk with the bottom end of the bar. Do not cut straight into

the trunk without first rotating into the wood. Trying to plunge your bar straight in can create the danger of chain saw kick-back.

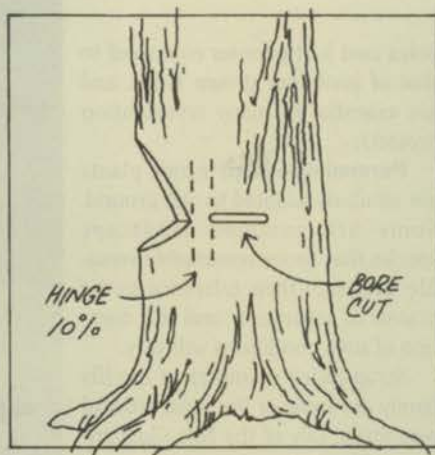
(3) Use the top of the bar—now inside the trunk—to cut toward the notch to create the hinge. Your hinge thickness should be about 10 percent of the diameter of the tree; the length of the hinge should be about 80 percent of the diameter.

(4) Using the bottom of the bar, cut toward the back of the tree, but leave about two inches as your holding wood.

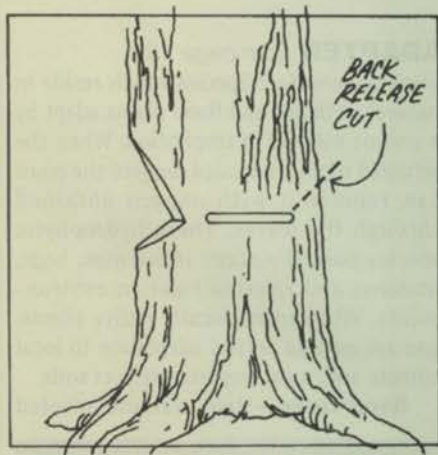
(5) Cut the remaining holding wood, moving from the back side of the tree toward the front until you have severed through. The holding wood should not be confused with the hinge wood, which should never be removed. The hinge will break when the tree is almost to the ground or can be removed if it still holds when the tree has come down.



The open notch should be cut on the side of the tree in the direction of the planned fall. It should be cut at 70 degrees or more, to allow the hinge to work and guide the falling tree.



Begin the bore cut from the side of the tree, parallel to the face notch. Do not cut without first rotating into the wood. Trying to plunge the bar straight in may cause kickback.



To finish felling the tree, cut the holding wood, moving from the back side of the tree toward the front.

Be careful of pressures and binds when working around the downed tree. That's a whole new subject within itself for later discussion.

Stability counts—Tree care professionals should easily see the benefits this method provides over conventional methods. Use of the holding wood in place as part of the back-release helps keep the tree stable until the final cut.

Also, the holding wood will keep the bar from getting pinched, with the holding wood acting as a support. The method also

reduces the chance you will cut all the way through the hinge before the tree begins to fall. This will reduce the chance that the tree falls so quickly that it jumps off the stump and possibly back at crew members.

Lastly, the back-release method keeps the bar at the back of the tree, rather than deep into the trunk. That makes it easier to walk away using your planned escape route when the tree falls.

All these combined will make it easier for you and your crew to come safely away, feeling less fatigue, from a job efficiently

done.

Videos of this open notch and bore cut technique are available through many local chain saw dealers and Forest Applications Training, Inc.

—The author is president of Forest Applications Training, Inc., in Hiram, Ga., and co-creator of "Game of Logging" and "ArborGames," safety and applications training programs for tree professionals. He has been training professional chain saw operations for more than 10 years.

Adapted plants for wet ground

Proper selection is the key to long life, no matter what the cultural conditions.

by Maureen Gilmer

■ It's 100 degrees, the soil surface appears dry and cracked, the plant wilts. So you pour on the water and the plant wilts even more.

If you've struggled with a very high water table, or an impervious hardpan, or low-lying ground subjected to periodic inundation, you may have already experienced these frustrating symptoms.

The cause: root death due to anaerobic



soil conditions where water displaces vital oxygen.

In order to be sure that the plant died from poor drainage, inspect the root sys-

tem for the characteristic peeling skin, blackened roots and unpleasant smell. This will rule out nematodes and other root diseases which can display similar wilt symptoms in plants.

Once poor drainage is diagnosed, first try mechanical remedies like French drains, diversion ditches, grading alterations or constructing elevated planters. But if this isn't possible, or the problem is widespread, choose replacement

plants that won't succumb to the same fate.

Why can some plants like willow stand saturated ground, even with much of the