Choose wisely when selecting where to tap

o matter how much you invest in sugaring equipment, you won't have any syrup if you don't have sap. And you won't have sapat least not as much as you couldif you don't tap your trees carefully. That means more than walking up to a tree and drilling a hole. It means knowing how to select a tapping site, how to know if a tree is healthy enough to be tapped, and what the generally accepted tapping guidelines are.

Deciding when to tap is often the most fraught process. Every sugar maker has had the experience of missing sap runs during a warm spell in January that came before they had set their taps, or of setting up their tubing system in anticipation of the season only to have a deep freeze set in and their lines remain dry for another month. Watch the weather, be aware of previous years' patterns, and communicate with nearby producers to decide when to tap. Sugar makers with small operations who can easily set their taps in a day or two obviously have more flexibility than larger producers who need many weeks to set thousands of taps. Tubing systems, particularly those on vacuum, can also be safely set up earlier, as the tapholes aren't exposed to air and bacteria and aren't as likely to begin healing as those drilled for buckets.

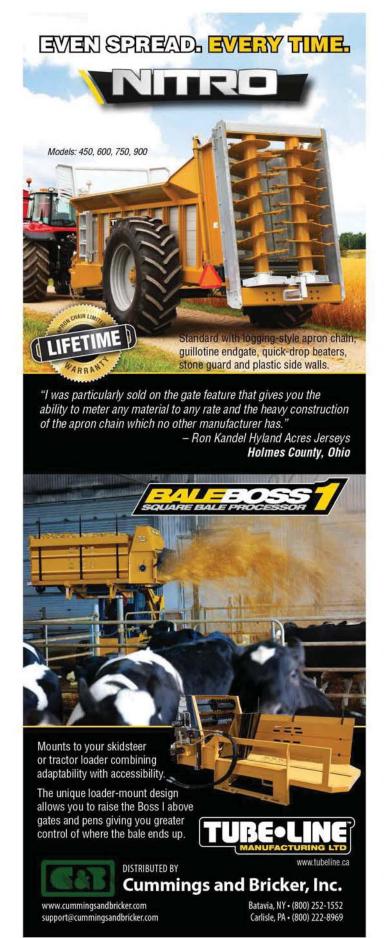
Choosing which trees to tap isn't just something to do at the beginning of the sugaring season, it's a year-round process. Keep an eye on your trees all year to look for signs of stress-poor leafing, insect damage, wind damage, etc .- and note which trees could use a break from tapping the following season. Also Continued on page 48



Knowing where to tap starts with knowing how to spot old tapholes. New holes should be at least 3 inches to either side and 6 inches above or below recent years' holes



Hold the drill steady to avoid misshapen holes that the round taps will be unable to seal properly



Boiling it Down

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look to see which trees are slow to heal over previous years' tapholes and consider giving those a rest too.

While most tapping guidelines suggest waiting until a tree is at least 10 to 12 inches in diameter before tapping it, size is only part of the consideration. A 10-inch-diameter tree deep in the forest struggling to get through the canopy isn't necessarily as ready for tapping as one of the same size on a tree line or along a roadside with a broad, healthy crown.

Starting out with clean equipment is key. To keep your tapholes running for as long as possible, you want to avoid introducing bacteria into the holes from the moment they're drilled. Rinse your drill bit and any taps that you're reusing in a mild chlorine solution, and then in hot water to remove any chlorine residue.

Once you've found a tree that you're confident is ready to be tapped and have your equipment ready, selecting where to drill the hole is the next step. One producer I know tells his workers that he expects to see footprints in the snow all the way around each tree, so he knows they've examined all possibilities and chosen their tapping spots carefully. While many maple producers still subscribe to the theories that tapping on the south side of the tree or above large roots or below large branches yields more sap, research has proven these ideas to be untrue and can actually lead to more damage from clustering tapholes in smaller areas, so look at the entire girth of the tree when deciding where to tap. If you're using a tubing system, make sure your droplines are long enough—30 inches is ideal—to give you a wide range of area to choose from when selecting your tapping site.

Trees in an active sugar bush have likely been tapped for many years, and while recent tapholes are relatively easy to spot, sugar makers should take the time to look closely for the telltale rounded indentations in the bark that show where older taps were. A taphole creates a canoe-shaped compartmentalized wound of nonconductive wood (wood that won't bear sap) inside the tree that extends at least 12 or more inches above and below the taphole. Taps should never be closer than 3 inches to either side of the visible wound from an earlier hole, and should be at least 6 inches above or below recent years' tapholes. Sugar makers should also avoid tapping near wounds from broken branches or other injuries to the tree.

The final test to know if you've picked a healthy spot for a tap comes when drilling into the tree. The sawdust that comes out should be white; brown sawdust means the chosen spot is dead wood and won't yield any sap.

Tapholes should be drilled at a slight incline, no more than 10 degrees, to help reduce the amount of sap that remains in the hole between runs, and thus reduce the possibility of bacterial contamination. Drill bits should be sharp, and high-speed drills should be used to ensure that holes are clean. Hold the drill steady to avoid misshapen holes that the round taps will be unable to seal properly. Depending upon the age of the tree and the thickness of the bark, holes should be no more than 2 inches deep for those using buckets and closer to 1 inch deep for those using vacuum tubing systems. The deeper the hole, the longer it will take to heal and the greater the likelihood of hitting a section of dead wood from older taps.

Any sawdust in the hole should be cleaned out with a twig or other implement; don't blow into the hole, because you could contaminate it and hasten the healing process. The spout should be inserted immediately after drilling and cleaning. Tap the spout in gently so it's firmly in place, but not so hard that you risk creating a small crack in the trunk, particularly if the tree is still frozen.

Deciding on additional taps in a single tree is more complicated than we'll address in this column. It involves understanding the range of

published tapping guidelines and takes into account many variables, such as whether or not you're using a vacuum system. This will be covered in next month's column.

The last step, tap removal, comes when the season is done. Pull all of your taps as soon as you can following your last boil, when the trees are still in their spring growth spurt and are best able to heal over the wound. Pull them carefully and avoid damaging the bark. This chore also gives you an opportunity to check each tree again for its general health. How do the buds look? Are there cracks forming where you tapped? Answer these and other questions so you can begin the process of selecting trees to tap for next season.

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