

Ask Proctor

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Why are my tapholes leaking, and what can I do about it?

As tapping time approaches each year, there is sometimes a mad rush to get ready and get out in the woods and make some holes in trees. Unfortunately, haste in tapping can sometimes lead to some real problems that can affect your production negatively throughout the entire season. A common question we hear each year around tapping time is about “leaking” tapholes and how to “fix” them. There are often several issues involved in this, and sometimes the applied remedy itself turns out to be the actual problem.

When tapping a tree, producers are creating a wound. During subsequent thaws, the natural process of sap exudation results in pressure building up in the wood tissue around the wound, and sap flows out. Typically, such flow will occur through a spout that has been inserted in the taphole because it is the path of least resistance. However, for a brief period of time after tapping producers may notice a disconcerting wetness on the bark around the wound and sap running down the stem of trees from the area around the outside of the taphole. While producers may feel the desire to take immediate corrective action, it is actually a very normal wound response. The injured area of wood on the outside of the spout barrel will naturally weep sap. Since this sap cannot move into the taphole due to the blockage of the spout body, it migrates

to the wounded surface of the taphole along the wound edge and comes out. If the temperature is cold or windy, the wetness might dry out quickly and go unnoticed. If the sap is running well during or soon after tapping, this wetness will be more prominent. Often if let alone, within a few days the wood tissue in this area along the outer edge of the spout/taphole interface will dry out and the seepage will cease.

All too frequently though, maple producers will interpret this phenomenon as a leak and attempt to “fix” the problem by seating the spout more firmly. This practice, when applied too aggressively, can actually create tiny splits in the wood at the taphole (especially with metal or strongly-tapered spiles) which create or worsen leaks, leading to more corrective attempts. This leads to the improper remedy of “pounding” the spouts in harder, which creates more leakage that will not naturally dry out and seal. It is important to remember that spouts are not nails – they are meant to be “tapped” in, not “pounded” in. It takes some experience to recognize when a spout is seated properly. Often this is best accomplished by sound. Initially spouts will have a higher pitched ping-like sound when first tapped, which changes to a dull “thud” when they are seated. STOP hitting them when you hear that change, or just lightly tap again to confirm.

If you’re having trouble with weep-

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ing tapholes or vacuum leaks long after spouts were tapped in, or if seepage and leaks are noticed after a hard freeze, then reseating spouts might be worth a try. A moderately-light tap with the hammer should suffice. Modern plastic spouts (especially polycarbonate spouts) with a very gradual taper are considerably less susceptible to spout heaving than previous generations of spouts.

Leaking spouts throughout the season arise from some common problems: 1) oblong tapholes – caused by poor drill control or dull bits, 2) poor or incorrect matching of drill bit and spout – select the proper bit recommended by the spout manufacturer, and 3) split wood around tapholes – caused by over-pounding of spouts or use of a too heavy hammer. A good bit of attention before and during tapping will help to prevent such problems, and result in less leakage and higher sap yields.



Figure 1. Freshly drilled taphole with sap seepage shown by wet stain around and below taphole (photo T. Perkins).