Beech Disease Control Requires Only Simple Tools

By Maxwell McCormack

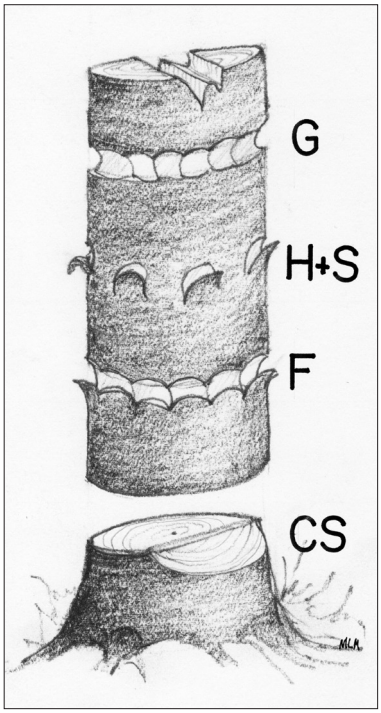
Practical Silviculture

There are several stem treatments for controlling undesirable beech, including removal of trees with beech bark disease. These treatments are suitable for other species (such as aspen, soft maple, gray birch), many of which are easier to control than beech. Foliage sprays will be described in a separate summary. I do not recommend basal, sometimes referred to as basal bark spray treatments in woodlots.

One treatment that requires only an ax or another tool, such as a chainsaw, cuts a girdle (G in the diagram) around the target stem. This technique requires a shallow cut, wide enough to prohibit vertical bridging of the bark and cambial layer, but just deep enough to sever the connection of the outer phloem layers. Minimize the disruption of the inner xylem layers so that the tree will deplete its root reserves while the downward flow of foods produced by the crown is obstructed.

Best results from stem treatments require the use of herbicides. This chemical technology provides us with ecologically sound, effective, safe, and economical tools that are especially useful to woodlot owners because of their labor efficiency and minimal need for repeat treatments. Herbicides should not be used as a silver bullet, general all-purpose cure, however. They must be applied by specific prescription for the silvicultural task at hand and, always according to the product label. Refer to the product labels and supplemental information available from Cooperative Extension or local specialists. Common sense safety precautions include sturdy, protective gloves and eye protection.

We have over 35 years of field experience showing glyphosate chemistry consistently effective for beech control (many products are now available, but the best-known is Roundup.) A second possibility would be triclopyr chemistry (as in Garlon.) This would be my choice if red maple is a principal target but, for beech, glyphosate is the way to go. Delivery of herbicide treatments to targeted stems is usually carried out by one of three ways (*see diagram*): cut stumps (CS), frills (F), or hack and squirt (H+S). In all cases I recommend diluting the herbicide with a suitable penetrating oil, some water, and a small amount of dye. I prefer blue. The dye helps keep track of where you've been and how much material is being delivered. In very cold weather I use winter windshield washer fluid in place of water. Spring applications are ineffective because sap flow flushes away treatments.



Another approach in Maine woodlots is CS treatment. Stump surfaces of harvested beech stems can be treated using a spray bottle, brush, or simply a rag on a stick. Glyphosate penetrates root systems and significantly reduces or eliminates sprouting. Treatment of the circumferential area of the stump is all that's required, not the entire surface. The stump should be treated as soon as possible after cutting.

My preference for standing stems is H+S. There are specialized injection tools available, but a hand ax and squirt bottle is simple, effective and convenient. Snow cover in winter provides good access on snowshoes and your tracks help you stay organized. Simple hacks in the stem provide a pocket to retain a squirt of treatment solution. Recommendations for spacing hacks are described in published guides and product labels.

When you want to be sure of taking out undesirable stems eight inches in diameter or larger, and don't plan to harvest the tree, consider frilling (F). The frill forms a gutter into which you squirt or pour herbicide. It takes a little more ax work and more chemical, but is highly effective. Treatments of standing stems provide snags that add to stand diversity and benefit wildlife. Tree limbs and stems tend to break apart gradually over time, adding coarse organic matter to the soil. When convenient, you can position a frill to determine the point where a stem will break off.

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