

The BroadFork

Many gardeners and growers, especially those working on heavy soils, face the difficulty of deeply compacted soil and want to loosen and aerate it without bringing lower layers to the surface. On a field scale there are tractor-based solutions, but how to tackle the task in the smaller plot? The BroadFork is designed to be at least part of the solution! (The Glaser Bio cultivator (414) has the same objective.)

Here are some of Eliot Coleman's comments from his book *The New Organic Grower*:— "This two-handled deep tillage tool is known by different names, but *broadfork* comes as close to describing it as any other. Like most agricultural tools its genesis surely dates far back in agricultural history. It consists of a 2-foot wide spading fork with a 5-foot-long handle at either side of the fork. The teeth on the fork are spaced 4 inches apart and are about 12 inches long . . . The tines are designed with a parabolic shape and curve down from an attachment point at the back of the crossbar. This difference is the key. The parabolic curve . . . works with an easy, rolling motion. As the handles are pulled down, the tines curve under and lift the soil easily.

"The broadfork is held with the handles tilted slightly forward of vertical. It is pressed into the soil as far as possible by stepping on the crossbar, then the two handles are pulled back towards the operator in an easy rocking motion. The broadfork is then lifted from the loosened soil, the operator steps backwards 6 inches, and the manoeuvre is repeated...



The tool is comfortable to use and makes the work pleasant." See a broadfork in action at <http://www.youtube.com/watch?v=Lfa1h4T2UYc>

Phil in Sussex (seen on the left) asked Malcolm Johnson of Newtimber Forge to make a broadfork for him and was so pleased with the result that he suggested that Malcolm contact us to help him market them. We are delighted to be able to offer a genuinely hand-crafted British-made tool – thanks to both Phil and Malcolm!

Phil points out that using the BroadFork doesn't bring weed seeds to the surface, and it is also very useful for lifting carrots and other root crops!

The frame of the BroadFork is made from box-section steel, and the tines are hand forged from high tensile alloy steel, hardened and tempered to make them as tough as possible. The upright sockets are cross-drilled for bolts to retain the handles (bolts supplied). We now supply two types of custom-made 1.2m (48") ash handles, plus **NEW** 1.5m (60") handles, or you can source them locally.

More information on our website. More of Malcolm's work on his website at www.newtimber-forge.com/

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Getting Started with the BroadFork

Fitting Handles. You need a pair of handles which are 1200mm (48") long and 38mm (1½") diameter. Some people will prefer a slightly longer handle, perhaps 1500mm (60"). Your local DIY or hardware store may have these, but they are often difficult to find and you may need to go to a larger garden centre or an agricultural merchant. The handles we supply are solid ash round poles which have been 'squared off' at one end, though you may want to trim them a little more. Post-hole digger handles (for the 'Faithfull' brand) are also suitable and will need some trimming. Try using a plane, 'Surform' tool or wood rasp. The sockets measure 35 x 35mm (1⅜") internally. A craft knife and coarse sandpaper may also be useful.



Once you have the handles trimmed to size, it's a good idea to treat them with linseed oil. It's also worth drilling the holes for the retaining bolts before painting the oil on the whole length of the handles. Then stand the trimmed ends in a jar of the oil for a day or two. If you re-soak the handles every year, they should last for ages. The BroadFork sockets are deliberately open at the bottom, so that no soil or water can collect, soak into the ends of the handles and rot them.

Using the BroadFork. The notes on the other side of this sheet should give you enough to get started, but you may like to look in Eliot Coleman's books, where he goes into more detail. In Chapter 9, 'Tillage' in *The New Organic Grower*, Eliot discusses the need for deep tillage and shows how the use of the BroadFork fits into the scheme of soil management and improvement. In Chapter 4 of *Four Season Harvest*, he says:

"Do we as gardeners have a problem with soil aeration as long as we don't walk on the soil of the beds? There is one fault worth correcting, Vegetable gardens grow mostly short-season annuals rather than perennials. By so doing, they miss a key factor in natural soil structure and aeration: the roots of perennial plants. The root systems of perennial herbs, grasses, shrubs and trees in a truly undisturbed soil are more fibrous and permanent than the roots of annuals in a garden. Although you may have added extra organic matter with compost, the soil still lacks the additional aeration provided by the perennial roots. To get that extra aeration without breaking up the soil structure, it would be nice to just lift up the soil, without turning it over, and allow air underneath. Fortunately, there is a wonderful tool designed to do just that.

"Once a year, we aerate the soil in our garden with a broadfork. This is a 24-inch-wide, five-tined fork with two handles. It is used to lift and loosen the soil without mixing the layers. The gardener holds a handle in each hand, presses the tool into the soil by stepping on the crossbar, pulls back on the handles to gently lift the soil, pulls out the tool, moves it six to eight inches back, and repeats the process. You can do the same with a standard garden fork in smaller bites, but the broadfork is more fun. Like any classic hand tool designed for a specific job, it is a pleasure to use. With its two handles and wide crossbar, the motion is effortless. Helpers in our garden, especially kids, always enjoy using the broadfork, first because it is a simple tool and makes them feel athletic and coordinated, and second because of the sense of accomplishment it gives. People instinctively feel that the tool makes sense.

"A gardener with a broadfork is doing by hand what large-scale organic farmers do with a winged chisel plough. One belief organic vegetable farmers in many parts of the world share is the value of gentle soil-lifting from below without turning. They regard it as a key practice for enhancing long-term soil productivity."

If you would like to see a short video showing how to use a BroadFork, follow a link to it from the BroadFork page of our website, or go to <http://www.youtube.com/watch?v=Lfa1h4T2Uyc>

Any questions? Get in touch and we will try to help.

Dave Taylor

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