A green thumb is not the only tool one needs to garden well—at least that’s what the makers of gardening catalogs and the designers of the dizzying aisle displays in lawn- and-garden stores would have us believe. Need to plant a bulb, aerate some soil, or keep out a hungry critter? Well, there’s a specific tool for almost everything. But this isn’t just a product of today’s consumer era, since the very earliest gardens, people have been developing tools to make planting and harvesting more efficient and to make flora more beautiful and trees more fruitful. In *A History of the Garden in Fifty Tools*, Bill Laws offers entertaining and colorful anecdotes of implements that have shaped our gardening experience since the beginning.

As Laws reveals, gardening tools have co-evolved with human society, and the story of these fifty individual tools presents an innovative history of humans and the garden over time. Laws takes us back to the Neolithic age, when the microlith, the first “all-in-one” tool was invented. Consisting of a small sharp stone blade that was set into a handle made of wood, bone, or antler, it was a small spade that could be used to dig, clip, and cut plant material. We find out that wheelbarrows originated in China in the second century BC, and their basic form has not changed much since. He also describes how early images of a pruning knife appear in Roman art, in the form of a scythe that could cut through herbs, vegetables, fruits, and nuts and was believed to be able to tell the gardener when and what to harvest.

Organized into five thematic chapters relating to different types of gardens: the flower garden, the kitchen garden, the orchard, the lawn, and ornamental gardens, the book includes a mix of horticulture and history, in addition to stories featuring well-known characters—we learn about Henry David Thoreau’s favorite hoe, for example. *A History of the Garden in Fifty Tools* will be a beautiful gift for any home gardener and a reassuring reminder that gardeners have always struggled with the same quandaries.

**Bill Laws** lives in Hereford, England. His other books include *Fifty Plants that Changed the Course of History*, *Fifty Railroads that Changed the Course of History*, and *The Field Guide to Fields*.  

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As the most widely used tool in the garden, the fork has appeared in many forms: flattined garden or spading forks, two-handled broadforks, four-tine manure forks and pitch, or hay, forks among them. It is a strong contender to be the most useful tool in the garden.

Definition
A multi-use tool for turning soil, aerating lawns, dividing perennials and moving compost and manure.

Origin
Although the name originates from the Latin furca, the implement was a relative latecomer to the garden shed.

The fork comes in many shapes and sizes: there are two-tined forks for lifting parsnips without gashing them; fork-hoe combination tools for working quickly around flower borders between the buried bulbs; and sharp-ended, scoop-shaped forks for gathering up manure or compost. Forks designed to be used on heavy clay soils tend to have straight tines to provide better leverage, whereas slightly curved tines suit lighter soils. While North Americans are happier with their D-shaped handle grips, this design frustrates gardeners with large hands: like the traditionalists of northern England, they prefer a T-shaped grip.

Many gardeners left their fork on the table and managed without in the garden: back in 1657 an inventory of items owned by the governor of the New Haven colony in Connecticut, one Theophilus Eaton, listed garden shears, sickles, hooks, hoes, “sithes,” stone axes, brick axes and a trowel, but neither fork nor spade. One reason may have been the indifferent quality of metal available at the time. A fork was a tricky tool to make, while a long-handled shovel was much simpler and more reliable.

Thief-Punisher
One theory on the origins of the word fork suggests a derivation from the Latin fur, a thief, as “originally the instrument for punishing thieves” (Gresham English Dictionary, 1931). Be that as it may, the Romans were industrious in throwing out their old, worn-out wood and bone tools, and replacing them with iron substitutes. And, once they had occupied the Celtic kingdom they called Noricum (which now forms part of Austria and Slovenia), they had access to the notoriously hard Noric steel. Understandably, the Romans devoted most of their steelworking skills to the manufacture of the gladius, the sword that helped them subjugate Europe. Yet out of swords came plowshares and garden tools. The Romans who first moored their boats on the harborside at Londinium in England around A.D. 43 not only brought their steel swords with them, but their ideas on civic buildings, roads, villas, villa gardens and even the flowers and vegetables that were to grow in them. By this time the wild cabbage (Brassica oleracea) had been tamed, and the Romans introduced its domesticated cousin into northern Europe along with their pastinaca (parsnip), radish, lettuce and...
Requiring neither a power source nor an instruction manual, the bulb planter is the epitome of sustainable simplicity: screw it into the ground to remove a plug of soil, drop in the bulb and replace the soil. Bulb planters have had an especially important role to play with the rise of the wild garden.

One of its practical manifestations was the no-dig vegetable bed. The idea of leaving the land to take care of itself—of performing no digging and applying no compost, chemical fertilizer or herbicide—was promoted by the Japanese farmer Masanobu Fukuoka, who had spent his early career as a soil scientist. Fukuoka, who died in 2008, used neither hoe nor fork on his fruitful little family farm on the island of Shikoku. Other forms of no-dig gardening involved clearing the growing area of weeds then covering the ground with a generous layer of compost and broadcast-sowing the seeds. From that point on the garden fork was needed only to haul out the humus from the compost pile and carry it to the vegetable bed. It was an appropriate time to reintroduce an old design: the right-angled fork, sometimes called a graip (possibly from the Danish greb) and resembling a fork-sized rake. Also known as a muck, or manure, fork, it was used to pull or “grab” material from the pile. These heaps were often raided by nearby gardeners before they were carted away: containing small stones and well-rotted leaf mould, they were a free source of potting compost (see p. 84).

The no-dig garden lobby brought another old design back into fashion: the Basque layu, a multi-pronged fork set along the base of a two-handled frame. It is used to fork over the soil and, according to its advocates, it is an ergonomically perfect tool.

The fork ... which is acted on like the spade, by means of a shoulder or hilt, for thrusting it into the matters to be forked; and as a lever or handle for separating and lifting them.

John Claudius Loudon, An Encyclopaedia of Gardening (1822)
Garden Catalogs

Garden brochures, filled with the allure of a bright and beautiful horticultural future, arrive in the dark days when nothing much stirs in the garden. Gardeners are inspired to order seeds and plants for the new season, and to forget those that failed to flourish last season.

**Definition**
An illustrated publication that provides information on seeds, plants and other horticultural paraphernalia.

**Origin**
“Catalog” derives from the Greek *katalogos*, meaning a comprehensive list. *Brochure* is French, and means something stitched together.

One may be regarded as an indubitable fact, that all plants spring originally from seed,” pronounced John Claudius Loudon in his *Encyclopaedia of Gardening*. His book was published in plain black and white in 1822. By the end of the century, color printing, although still in its infancy, was starting to transform not only garden books such as Loudon’s, but that horticultural bible, the seed catalog. American seed growers were quick to catch on.

Having long relied on European imports, America’s seed sellers began making inroads into the domestic market, led by men such as David Landreth—an Englishman from Northumbria who started a seed business in Montreal, Canada, before moving it to Philadelphia in 1784—and W. Atlee Burpee, who founded his famous seed company in 1876.

**Spreading the Word**
As seed catalogs began rolling off the printing presses for delivery to distant homesteads by boat, coach, railroad and even Pony Express, the 800 or so U.S. seed merchants became relentlessly inventive. Along with their seeds there were special promotions and cash prizes for record-breaking crops. The 1888 Burpee catalog, for example, ran to 128 pages and promised $25.00 and $10.00 for the two largest onions raised from seed purchased of us this year—the onions, or reliable affidavits of their weights, to be sent to us before November 1st. “Then there were the persuasive testimonials: “The package of Vandergaw Cabbage you sent me did much better than the Large Late Flat Dutch.”

Another American seed grower, Henry Field, began his business selling seed door to door in Shenandoah, Iowa, before joining with the Livingston Seed Company in Columbus, Ohio. Livingston was recovering from bankruptcy, advertising in the local newspapers and producing appealing-looking seed catalogs. Henry Field soon picked up enough ideas to leave and launch his own rival company under the slogan “Seeds That Yield are Sold by Field.” By the 1920s Field had opened the first seeds grower’s radio station over the shop in Shenandoah. Radio KFNF’s call sign stood for “Keep Friendly! Never Frown!”
The Vegetable Garden

Hoe

No tool has appeared in such divergent forms or been used for such a variety of purposes as the hoe.

While legend credits the mythical Chinese ruler Shen-nung the Divine Farmer with its invention, the hoe has made its mark on virtually every culture across the globe.

As long ago as the third millennium BC, a Sumerian creation myth invoked a god with a hoe: Enlil. Enlil was said to have first created daylight with his golden hoe, a colossal implement fitted with a blade of lapis lazuli, before creating mankind with his hoe and a brick mould. Around 1770 BC, references to the hoe appear in the Babylonian Code of Hammurabi, one of the oldest social charters in existence. It was mentioned again in the 8th and 7th centuries B.C. in the books of the prophets Samuel and Isaiah.

From earliest times the hoe kept pace with technology, finding its form in copper and bronze until, around the 13th century, iron and steel blades so improved its effectiveness that it spread across the world. The English scholar Anthony Fitzherbert described using a hoe in his Year Book of 1534. The gardener takes up his "wedynge-hoke" (weeding hook). "In his other hand he hath a forked stycke a yard [90 cm] longe, and with his forked stycke he putteth the weed from him, and he putteth the hoke beyond the root of the wede, and putteth it to him, and cutteth the wede fast by the earth."

The hoe was a valuable and prized possession and apparently worth stealing. In 1763 the Pennsylvania Gazette reported how Adam Reed of Lancaster County was escorted by law-enforcement officers to the place where he had "hid in the ground" two spades, four shovels and four "grub hoes."

Tools such as these were custom-made and difficult to acquire. They were manufactured by local craftsmen such as those at Philadelphia’s Sign of the Scythe and Sickle where, in the 18th century, cutler Thomas Goucher and blacksmith Evan Truman offered "all kinds of edge tools and all sorts of hoes."

As hostile forces neared Philadelphia, John Jones of Southwark deposited his tools, including five garden hoes and one grub hoe, for safekeeping with a Captain Christian Grover. When in 1778 the tools disappeared, Jones offered a generous reward for their return.

The American poet, naturalist and philosopher Henry David Thoreau, certainly valued his hoe. In Walden; or, Life in the Woods (1854), he writes of taking a break from his work and, pausing to lean on his hoe, observes the world around him. "When my hoe tinkled against the stones, that music echoed to the
Since it fell out of favor in the West, the mattock is more likely to be seen working the ground in a Botswana paddock than a Boston backyard. And yet this is a highly versatile hand tool, useful in breaking new ground or excavating old roots.

In Australia, meanwhile, the three-pronged hoe is a traditional gardening tool, useful for displacing small weeds and aerating the soil. Very different is the Warren or pointed hoe, with a blade shaped like an arrowhead. Originally designed in North America, it is suitable for digging holes, cultivating between plant rows, and opening and filling seed drills. The Encyclopædia Britannica noted that the crane-neck or the swan-neck hoe “has a long curved neck to attach the blade to the handle; the soil falls back over this, blocking is thus avoided and a longer stroke obtained.”

Finally, there are the scuffle or stirrup hoes formed, as their names imply, so that they can be pushed and pulled through easily worked, friable soils (the similar hula hoe is equipped with a swiveling head), and the Paxton hoe, a Scottish innovation ideally suited for use in confined spaces.

Making light of the hoe’s longstanding association with sustained toil and hard work, the 19th-century dramatist and wit Douglas William Jerrold observed in A Land of Plenty: “Earth is here so kind, that just tickle her with a hoe and shelaughs with a harvest.”

**Mattock**

**Definition**
A two-handed tool that combines the attributes of a digging and a cutting tool.

**Origin**
The world’s first multitool, the mattock was also almost certainly the first tool in the garden.
Composter

Garden designers have come up with all kinds of clever composters, from bottomless barrels to plastic bins, in a bid to transform garden waste into good humus. And humus, claim its advocates, is the best way to green up any garden.

Definition
A wooden or plastic structure designed to convert vegetable matter into compost or humus.

Origin
Compost, from Latin compositum, “a mixture,” is a traditional way to enrich the soil.

Tools in Action
The Foolproof Compost Heap
Create a pair of rectangular bays in an open E-shape, preferably using recycled lumber. Close the front of each bay with boards lightly nailed in place so that they can be removed for easy access: a cross-support across the top of the bays prevents the side walls from splaying out. Spread a layer of old branches or a line of bricks at the base to aid air circulation within the heap. Fill one bay at a time, layering the vegetable waste, grass clippings and weeds between layers of garden soil, old compost or manure (manure will speed up the process). Cover with an insulation layer such as old carpet. When the compost has turned dark brown and crumbly it is ready for the garden. Avoid using meat or dairy waste (it will attract rodents).

There were strange goings-on in the 1960s at the little quasi-religious community on the northeast coast of Scotland. The community’s founders, a former Royal Air Force officer named Peter Caddy, his wife, Eileen, and their companion, Dorothy Maclean, were managing a productive vegetable garden despite the dubious nature of the local sandy soil. They attributed their success to the divine intervention of angelic beings, or devas, although more sceptical observers put it down to their wildly successful composting systems, which enriched the land.

The community, Findhorn, went on to become a major New Age foundation, while the craft of composting continues to attract an army of advocates from Seattle Public Utilities ("Composting is easy and a great way to recycle yard waste and kitchen scraps into a fertile sweet-smelling soil builder") to Auckland’s straightforward GoodShit Compost Company ("Call us and see why, when composting, only GoodShit will do!").

Whether it is made on an industrial or a backyard scale, in plastic Dalek-like barrels or specially designed tumblers, bokashi buckets or New Zealanders (lidded boxes that operate on the conveyor-belt principle), or in a moldering heap at the end of the garden, the principles are the same: any pile of vegetable matter will be turned into humus. And humus is an essential organic matter that enriches the soil.

Provided we do not drive our soils too hard, the land will go on feeding us through the sunlit centuries when motoring is but a memory.

Lawrence D. Hills, Organic Gardening (1977)
Howard was a practical man and he provided the gardener with a practical tool to create humus: the Indore container composter. A slatted wooden structure was built and gradually filled with 6 in. (150 mm) layers of compostable materials sandwiched between 2 in. (50 mm) of manure and a sprinkling of soil until the heap reached 5 ft. (1.5 m). The pile was kept moist, turned at six weeks and again at twelve weeks, and was ready in three months (longer in winter).

The recipe could be speeded up by mixing the compost with manure and turning the heap only once. Similar methods involved laying the biodegradable material directly on the soil and digging or forking it in; or reducing the depth of all materials to around 2 in. (50 mm). One environmentally unfriendly but effective method involved running them over with a lawn mower before heaping them into a 5 ft. (1.5 m) high pile. Turned every three days, this intensive composting was said to mature in three weeks.

There were rival methods including the bokashi system (“fermentation” in Japanese) that pickled all the kitchen waste with the assistance of a bacterial bran in a special closed bucket. Then there was the apparent magic of comfrey.

In the 1950s the freelance journalist Lawrence D. Hills was in the vanguard of the organic food-growing movement. As he would write in 1977: “Some [gardeners] change [to organics] on ethical grounds to stop pollution harmful to birds, bees and men, others to save money, since it is easy even at today’s vegetable prices to spend more on chemicals than you save when growing your own food.”

Interested in experiments with comfrey conducted by 19th-century Quaker Henry Doubleday, Hills trialled the plant as an organic aid. He had rented land at Bocking near Braintree in Essex, England, and was soon writing in his classic Organic Gardening: “Comfrey is so rich in protein . . . that it is a kind of instant compost.”

His leading variety (he called it Bocking 14) was a hybrid between Symphytum asperum from Russia and the wild S. officinale, the herbalists’ comfrey. Hills went on to found an organization (named after Henry Doubleday) to spread the word. Eventually it became Garden Organic, under the patronage of the heir to the British throne, Prince Charles.

Comfrey was judged one of the most important herbs for the organic gardeners because of its composting qualities.
The use of a dead Mediterranean language, Latin, to describe the gardener’s plants has always attracted critics. Nevertheless, Carl Linnaeus’s binomial system for naming plants and flowers has given botanists and gardeners an international lingua franca for more than 200 years.

**Definition**
Latin nomenclature is used to give an accurate and internationally accepted description of all living things.

**Origin**
Latin, the international language of its day, was adopted by Carl Linnaeus in the 18th century to describe the plant world.

The worlds of botany and horticulture come together in the language of plants. Latin might not fall into the more obvious category of physical tools, but nevertheless, it provides the gardener with an accurate and unique description of every plant and a language that can be shared and understood by gardeners from Kazakhstan to Kentucky.

Latin did not please everyone: “Why,” wails one garden blogger, “must I describe plants in an unpronounceable language that died out almost 2,000 years ago? An Auckland farmer doesn’t order a *Bos hornsrebreiensis*: he orders a Shorthorn cow.”

The long answer is that we have saved a forest’s worth of paper by adopting the basic, two-word system invented by a Swedish botanist who had a curious preoccupation with plant sexuality. The short answer is: it works.

Consider the historic ship that sailed to America with 120 pilgrims on board in 1620, the *Mayflower*. The ship set off trailing floral confusion in its wake. The vessel took its name from the delightful *souci de l’eau*, as it was known in France, or the marsh marigold, pollyblob, May-blob and kingcup as it was called in different parts of Britain. In fact, the mayflower boasts almost 300 different vernacular names, yet the “mayflower” of North America (which is also the state plant of Massachusetts) is a different thing altogether. This is the trailing arbutus, which earned its common name from the Pilgrim Fathers who first trampled across wild beds of it when they landed in New England in 1620. In the soothing lexicon of Latin, all confusion comes to an end: the many-named European mayflower earned its official title *Caltha palustris* L. in 1753. The Massachusetts mayflower was named *Epigaea repens* L.

The “L.” refers to the man who set the standard calibration for the garden thermometer (see p. 164), learned to grow bananas in the Netherlands, set the standards for modern...
Lawn mower

It is the most expensive, and the most dangerous, tool in the garden. The sound of the mowing machine destroys the peace and tranquillity of garden life and yet we cannot stop using them. Can we?

**Definition**
A machine with one or more rotary cutters, for cutting grass to a uniform height.

**Origin**
Used to cut grass since the 1830s. The Victa, the first two-stroke lawn mower, was invented in Australia in 1952.

---

The Lawn

Prototype two-stroke lawn mower, equipped with a recycled peach can for a fuel tank and a set of wheels borrowed from a soapbox racer, chugged into life in the suburban gardens of Concord, New South Wales, Australia, in the early 1950s. It was the invention of Mervyn Richardson, middle name Victor. He named his contraption the Victa and sold 30 in the first three months. Within four years, Mervyn, who had built his machine to help out with his son’s summer job mowing neighbors’ lawns, had sold 60,000 Victoras. By 1958 sales to 28 different countries had tipped over 140,000. No wonder a fleet of Victoras were featured in the opening ceremony of the Sydney Olympics in 2000.

The Flying Lawn mower

Back in the late 1950s a frustrated engineer from Cambridge, England, Christopher Cockerell, finally saw his prototype hovercraft wing it across the English Channel. His frustration stemmed from hours spent demonstrating his flying machine along the carpeted corridors of power of the British military, who failed to spot its potential. One person who did spot it was a Swedish engineer, Karl Dahlman, who designed a flying lawn mower, based on Cockerell’s machine, and exhibited it at the International Inventors Fair in Brussels in 1963. Dahlman earned a Gold Medal and enough backing for his Flymo to launch into production at his factory in County Durham, England.

Forty or so years later, the lawn, or rather the mowing machines used on it, were responsible for injuring around 20,000 Americans a year, including children run over by ride-on mowers or small tractors, according to the U.S. Consumer Products Safety Commission. Where did this passion for a sweep of grass that produced neither flowers nor vegetables come from?

The naturalist William Hudson, who died in the 1920s, regarded the lawn as an alien environment. “I am not a lover of lawns. Rather
Cloche

The old-fashioned iron-and-glass handlight (or hand glass) cloche has enjoyed a revival as a decorative ornament. The glass cloche was a practical tool for protecting plants, but material changes, from glass to plastic, brought real benefits to the garden.

**Definition**
A glazed cover placed over a plant to provide a warm environment. The single cloche and the barn cloche can extend the growing season by a week or two.

**Origin**
From the French word for a bell, the cloche was originally made from hand-blown glass.

During World War II, as the German army prepared to occupy Britain, the appropriately named Charles Wyse-Gardner advocated the use of the glass cloche to help halt its advance. “It is a commonplace,” he wrote in the third edition of his booklet *Cloches Versus Hitler* (1941), “that the battle of the Atlantic is being fought not only on the sea and in the air, but also on land in every garden and allotment in the country.”

Liberty ships were needed to ship troops and armaments rather than food to Britain from America, and it was the duty of every citizen to grow as many vegetables as they could. “Cloches are not luxuries, but rank with seeds, manures and garden tools, as part of the equipment essential for successful all-the-year-round vegetable growing.”

Young plants at the start of the growing season, and plants still ripening at the end of it, are vulnerable to the cold. A cloche or a cloche tunnel prolongs the growing period, creating a modestly warmer microclimate for the plants. Modern cloches, which also protect crops from pests and snow damage, range from replicas of 19th-century designs such as the bell, the handlight and the lantern frame (square or octagonal constructions with lids that can be lifted off in the heat of the day) to plastic-covered wire-framed types and even recycled plastic beer bottles with the base cut away. Tunnel cloches vary from a tent-like construction of glass sheets in wire frames to wire hoops covered with clear plastic sheeting, and semi-rigid plastic frames that are light enough to be carried around the vegetable garden (and blown about on stormy nights).

As well as extending the growing season, cloches will help to harden off plants (acclimatize them to cooler temperatures), dry crops such as onions, garlic and potatoes after lifting and before storing, and blanch crops such as endives, celery and rhubarb. Blanching (keeping the crop growing in semi-darkness to slow photosynthesis and produce a pale flesh) can be achieved by covering the crop with blind cloches (which may be made of black plastic or of glass painted to make them opaque) or blanching pots.

The business of blanching rhubarb, the earliest fruiting crop in north European gardens, had developed into a regional speciality in the West Yorkshire “rhubarb triangle,” where crops were brought on for the London market, initially under blanching pots, and later in darkened sheds heated by coal stoves. Bell cloches were marketed in some garden catalogs as being of “correct greenish glass, which does not allow the sun to burn the lettuces or cause them to run quickly to seed.”

Bell cloches were claimed to be among Britain’s secret weapons during World War II.