

New Aspects Of Traditional Tools

There have been numerous changes to traditional gardening tools over the past decade. Stocking the latest products and informing customers about new improvements can help increase your tool sales.

By Brent McHenry

Have you noticed the changes in designs for garden tools? Improvements in design and engineering aren't only for clothes, computers and hybrid cars. The past decade has brought an avalanche of improvements for common household garden tools that affect ergonomics, comfort, weight, strength, usability and efficiency. While there have been many changes, ergonomics, efficiency and product materials top the list. Make sure your customers are aware of the new aspects of traditional gardening tools.

Ergonomics

The word itself is derived from the Greek words *ergon* (work) and *nomos* (the study of). Literally speaking, ergonomics is the study of work. More specifically, it is the study of the interaction between human beings and the tools, environments, and tasks of work and everyday living.

In recent years, ergonomics has evolved as a science. Through empirical testing and an increasing understanding of anatomy and the mechanics of the human body, the experts and practitioners who work in this field of study, known as ergonomists, strive to produce products designed to better match the capabilities, limitations and needs of the people who use them. The results are safer products that cause less fatigue and stress on the body. This translates into increased comfort and greater acceptance by users.

Gardening activities contain many of the risk factors associated with cumulative trauma disorders (CTD). CTD consists of a variety of disorders such as carpal tunnel syndrome and tendonitis that develop over time as a result of repeated "micro-traumas" to the soft tissues of the body. The development of CTD is dependent on many factors. Using tools designed with ergonomic principals can go a long way toward reducing the likelihood of injury. Many lawn and garden tools are currently designed to reduce the fatigue and effort of everyday gardening activities.

Raise Awareness

While the chances of developing a medically diagnosed CTD from gardening alone are probably slim, ignoring the risk factors increases the likelihood of experiencing fatigue and soreness in the muscles and joints after a day outside. Ergonomically designed garden tools prevent fatigue, injury and reduce the possibilities of CTD. New handgrips, comfortable designs, and increased focus on proper usage and tools that reduce forceful exertions make garden tools more ergonomic than ever before.



This grass clipper has a long handle and easy-reach design to eliminate bending and crouching.

Purchasing the right tool for the job is a step in the right direction for consumers. Here are some activities your customers should watch out for when they're gardening.

Repetitiveness. Many lawn and garden chores are repetitive by nature. Trimming hedges, pruning bushes or planting bulbs often requires the same muscles to be used over and over again.



The gear or lever mechanisms on this lopper increase leverage and maximize cutting power. (Photos: Fiskars Garden & Outdoor Living)

Postures. "Postures" refers not only to your whole body position but also to such things as the angle of your wrist while using a hand pruner. Grip strength is at its maximum when the wrist is in a relaxed or neutral position. Testing has shown that people lose up to 25 percent of their grip strength when their wrists are bent.

Contact stresses. Many tools are made with finger grips molded into the handle to provide better slip resistance. However, these form-fitting grooves only fit one hand size perfectly. People with larger hands will find that their fingers overlap the ridges, causing pain, soreness and calluses. Those with smaller hands have to spread their fingers to match the grooves. Strength testing has shown this spreading of the fingers reduces grip strength significantly, requiring more pressure to maintain control of the tool.

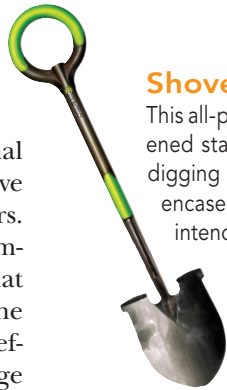
Forceful exertions. Pruning activities require the application of force by the hands and/or arms on the tools that do the cutting. Depending on the material being cut, the design of the blades and many other factors, the force required may be high or low. In general, the higher the percentage of an individual's strength required to perform a given task, the greater the risk of experiencing fatigue and soreness in the muscles and joints.

Don't forget comfort. New designs offer foam-padded handles, large grip areas for all hand sizes and engineered handles that nurture proper hand placement, range of motion and safety.

Efficiency

Gears and levers have been used for centuries to amplify and transfer power. Many new garden tools feature gear or lever designs that provide users with an additional mechanical advantage and reduce stress and fatigue. The mechanical advantage created by gears or levers enables people to do work while using less force.

A traditional pruner opens around a single pivot point and the motion of the index and middle fingers is short, which causes strain on the arm and



Shovel

This all-purpose digging tool features a sharpened stainless steel blade designed for easy digging and greater leverage. The resin-encased steel shaft and extra-long socket are intended to provide strength. An "O" handle with non-slip grip and extra-wide raised forward kick are designed for comfort. Radius Garden, LLC. (734) 222-8044. **Write in 1470**

wrist muscles. Likewise, a traditional (single pivot) lopper puts excessive stress on the forearms and shoulders.

Engineered gear products amplify the cutting force beyond that of just one or two pivot points. The gear mechanism reduces cutting effort and provides excellent leverage throughout the cutting process. Lever products utilize a different type of mechanical advantage through an extension of levers to transfer power from the user to the blade, again increasing efficiency.

Both systems aim to provide additional power through the center of the cut where friction resistance is greatest, reducing cutting effort, strain and fatigue. Ergonomic testing has proven that leveraging mechanical advantages in tools requires nearly 50 percent less muscle effort than other similar garden tools.

Materials

Materials are important. Modern materials such as resin, fiberglass and other composites make cutting tools lighter, more balanced, and easier and more comfortable to grip. New materials also offer nearly indestructible characteristics unlike wood- and metal-designed tools.

The best post-hole diggers, shovels and garden rakes are still made of hard metals, which aide in stability, strength and durability. The added weight improves your ability to dig easier and deeper into hard or dense soils.

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Multi-tool pruner

The new Hybrid multi-tool has ultra-sharp pruning shears and an open-tooth saw design intended to resist corrosion. Additional features include non-slip handles, bypass pruners, wire cutters, weed remover, Phillips screwdriver, flat screwdriver, sprinkler tool, bottle opener, rule and nylon sheath. Leatherman Tool Group, Inc. (800) 847-8665. **Write in 1472**



Weeder and cultivator

The CobraHead is a hand tool for weeding, cultivating and more. The blade is designed to act as a steel fingernail that digs through soil, pulls out whole weeds intact, and is a cultivating and planting device. The handle is made from recycled material and should be comfortable for right- or left-hand use. It weighs 9.2 oz. and measures 13 inches long. CobraHead. (866) 862-6272. **Write in 1467** ▶



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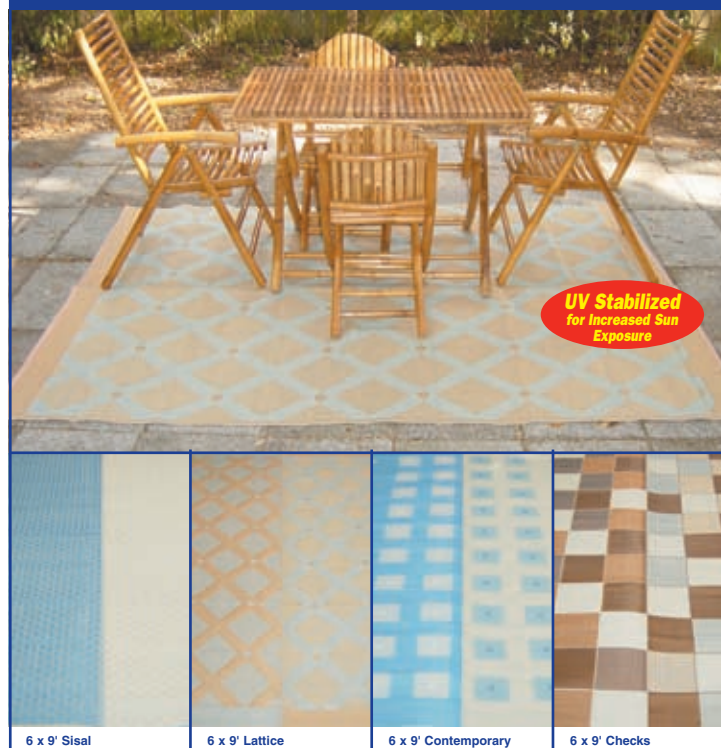
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