

# Well-Watered Cows Make More Milk On Less Feed

Dean Swager keeps his dairy herd well-watered with constantly running water at their feed bunks. His patented watering system lets them alternate bites of feed with a drink of water. He says the result is more milk with less feed.

"I assumed that having constant access to water would drive feed intake, but they actually eat a little less and become more efficient with the feed they do eat," says Swager. "With this system, a cow goes to take a drink and takes some bites. She doesn't slug eat or slug drink."

Swager's water trough is part of a closed loop system that ensures clean, fresh water with limited labor. It's a system he's been thinking about for 40 years.

"Ten years ago I decided that if I didn't build it, the idea would die with me," he says.

Swager has feed line water troughs in three, 100-cow pens at his 4,200-head dairy. Eventually Swager plans to have his entire dairy equipped with the troughs.

With his system, water flows by gravity to the troughs from a 10,000-gal. tank housed in a weather and bird contaminant-proof shed. The troughs are sized for an average Holstein muzzle width, but could be adapted to any species' muzzle size, adds Swager. When the cow puts her muzzle into the trough, she blocks most of the flow of water, allowing her to take a deep drink. There's enough water flow to reach the next cow in line while carrying away any feed particles.

At the end of each trough, the water

gravity-flows through underground pipes to a screened filter. The graduated filter traps solid particles.

Once past the filter, the water is pumped back to the water tank where it recirculates through the system. Once a month, Swager flushes the entire system and fills the tank with fresh water.

The only other labor involved in the system is to periodically power wash the screened filter. Swager describes that as an occasional 10 or 15-min. job versus hiring a worker to clean waterers daily.

The gravity-fed system also eliminates nearly all float valve maintenance. Swager cites the work involved in repairing and replacing the 100 float valves used for the rest of his herd.

"I always have a couple messed up," he says. "With this system, I have only one float valve, and I don't have to worry about waterers freezing up. We've had temperatures down to 10 to 15 degrees below zero, and it keeps working fine."

Unlike with central waterers, boss cows don't keep others away. While modern dairy plans allot inches of water space per cow, Swager's cows have 2 ft. of water access each.

"Even the newest facilities allow only 10 percent of cows to drink at any one time," says Swager. "After cows drink at central waterers, they tend to go lay down. With my system, 100 percent of the cows can drink 100 percent of the time. Plus, they poop where



**Closed loop system supplies constantly running water to a feed line trough. Cows alternate bites of feed with a drink of water, which helps result in more milk with less feed.**

it's easiest to handle the waste, not around water tanks."

He notes that his system offers new facilities tremendous savings over conventional waterers. "With my system, you don't have to plumb with pressurized systems past the front of the dairy," says Swager. "You could save hundreds of thousands of dollars by laying fewer slabs and water pipes."

Swager notes that his closed loop system makes it easy to treat the water supply with chelated minerals or other inputs.

"The warmer the climate, the more advantageous it is," says Swager. "This is especially important when cows are locked in feed line stanchions for breeding and veterinary checks. Time is not an issue, as

the cows have everything they need, both feed and water."

Swager continues to track the impact of the watering system on his cows, comparing it to his conventional watering systems. Based on his experience, he is convinced it would benefit dairies of any size, from 100 cows to 10,000.

"I am looking for ways to bring this system to the public," he says. "I'm hoping to find a company to market it commercially in the future."

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## Boot Helps Heal Horse Leg Injuries

Horses with injured legs which used to be fatal can now be fitted with a "leg boot" called FastTrack™ that lets them heal. Horsepower Technologies co-founder Victoria Boutelle says the orthotic device is made of aircraft grade aluminum and high-strength stainless steel.

FastTrack allows early mobilization and out-of-the-stall load-bearing exercise for injured horses. The device has been tested for several years and proven effective at limiting over extension of a horse's fetlock joint, which significantly reduces strain on injured flexor tendons and ligaments.

"With a custom-fitted FastTrack, the animal can safely perform moderate exercise and recover from lameness over time," Boutelle says. After a FastTrack is custom-fitted, it's held in place with a Velcro wrap and safety straps. Patented SafeStop technology limits the maximum extension angle to reduce the load on injured tendons, helping prevent re-injury. They sell for \$2,500/pair.

Contact: FARM SHOW Followup,



**Aluminum and stainless steel "leg boot" limits over extension of a horse's fetlock joint, reducing strain on injured tendons and ligaments.**

Horsepower Technologies, 175 Cabot Street, Suite 500, Lowell, Mass. 01854 (ph 844 51-HORSE; [www.horsepowertech.com](http://www.horsepowertech.com)).

## "Hoof Cap" Helps Wounds Heal

You can give extra protection to hoof wounds with these nifty caps.

The Hoof Cap provides a protective covering for the application of medication to an abscess, sole bruise, hoof wall crack, or a systemic infection (bacteria, fungal invasion) of the hoof.

Made of surgical grade high-density felt, the Hoof Cap is durable and reusable. It covers the sole surface of the hoof, up to the coronary band on the anterior of the hoof, the bulbs of the heel, and the back of the pastern. The company says Hoof Cap can be used with their HoofSolutions Orthopedic Poultice Pad or with another type of medicated dressing.

Available in 3 to 6-in. sizes and sold 2 per pack. They sell for \$18 plus S&H.

Contact: FARM SHOW Followup,



**"Hoof cap" covers sole surface of hoof, providing a protective cover for application of medication to a sole bruise or infection.**

Hoof Solutions (ph 817 295-4999; [www.hoofsolutions.com](http://www.hoofsolutions.com)).



**Mariner transports freestanding steel sawhorse on his tractor's loader forks. Sawhorse quickly folds up out of the way for storage.**

## He Cuts Firewood With A Freestanding Steel Sawhorse

A Tennessee farmer says his freestanding steel sawhorse was inexpensive to build and makes cutting firewood an easy job. Gordon Mariner, who farms near Goodlettsville, uses the 12-ft. wide sawhorse to cut logs up to 20 ft. long. It's made entirely from 1 and 2-in. sq. tubing and rides on his tractor's loader forks.

"I use the loader to place the log on the sawhorse and then start cutting up the log. It quickly folds up out of the way for storage."

The sawhorse has 3 pairs of 5-ft. long square tubes spaced closely together at one end of the sawhorse, and one pair at the other end. There's a 4-ft. wide opening at one end of the sawhorse where Mariner starts cutting. Each pair of tubes is hinged together in the middle by a single bolt. Spreading the tubes apart forms V-shaped openings at the top to hold the log. A pair of horizontal bars attach with set screws to the front and back sides of the sawhorse, to keep the tubes rigid.

A chain that fastens to metal hooks connects each pair of tubes together to keep

the tubes from spreading too far apart. By removing the chains, Mariner can quickly fold up the sawhorse for storage.

"I used it for the first time last fall, and it worked great. I used material that I already had to build it," says Mariner. "I've even used it to cut old power poles into 6-ft. sections, which a neighbor used as corner posts for his fence."

"I start at one end of the log and work my way down to the other end. I never have to move the log at all. The three pairs of tubes at one end of the sawhorse add weight to keep the sawhorse from tipping over as the log is cut up."

Mariner usually cuts the wood into 18-in. long pieces, but he can adjust the length by loosening the set screws and sliding the tubes back and forth along both horizontal bars.

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