Simple, solar-power system maintains water troughs for clean, fresh water that is critical to horse health and mosquito abatement.

You can lead a horse to water, but you can't make him drink. With a Smart-Trough Mosquito Pump, though, you can significantly increase the odds that the horse will want to drink.

This solar-powered innovation creates the characteristics of a free-flowing river in horses' existing water sources. A submerged pump oxygenates the water and the constant recirculation eliminates the growth of algae and makes the water source unappealing to mosquitoes and other pests. The end result is clean, fresh water that horses want to drink, promoting good digestive function and overall good health through ample water consumption.

Simple set-up and maintenance are additional selling points. The Smart-Trough Mosquito Pump comes as a patented kit complete with everything needed for the simple installation. That includes the hail-proof aluminum-framed solar panel, the "Mosquito pump" and a 20' EZ-Clip cord; three Eversift Bio filters come pre-installed and never need replacing. Aluminum EZ Slip Mounting bracket and a Wind-guard mounting arm make installation very simple and safe. The solar panel only takes a few minutes to mount and the pump is simply dropped into the tank.

The pre-installation routine starts with a thorough trough cleaning. The Wind-guard mounting arm can be used to remove stubborn, glued-on algae and scum. From that point forward, the system keeps the new water clean.

Maintenance is minimal. Hay and other debris from the horse's mouth are caught by a filter that is designed not to clog. Used in pastures with just one or two horses, the filters typically need to be cleaned just once a month and that task is easy, too.
A quick set-up and maintenance video is available on YouTube by searching "Smart Trough."

The system is designed for large water troughs, 70 to 200 gallons is ideal. They were first used in pastures but can easily be used in a stable or stall. A pre-installed 20' cord, and extension cords sold separately in 50', 100', or 300' lengths, can create a up to 320' to connect the pump to a solar panel secured to a post on the stable roof. The 12v set-up does not involve batteries or any type of stored energy, so it presents zero risk of fire or electrocution.

The Smart-Trough Mosquito Pump was developed by 27-year-old Nate Martin. His grandfather started the family's irrigation business in the Monterey area 40 years ago, and Nate has been working in the business since he was 9. Along the way, he has learned a tremendous amount about customer service, product quality and water conveyance and conservation. It's a field that put him and the family business at the forefront of adapting to drought conditions.

Nate studied natural water systems, like rivers and ponds, while experimenting with aquaponic farming and that's where his ideas for the Smart-Trough Mosquito Pump came from. "A water trough is a container of standing water and I had a lot of experience dealing with the problems that come with that," he explains.

Mosquito Alert

This post-drought summer is expected to bring a bumper crop of bugs, especially mosquitoes. “Certain species lay their eggs in anticipation of rainfall,” Nate relays. “With rising water levels, new sources of standing water appear. Run-off and drainage from rain create breeding grounds for multiple bug species. We have all these mass storages of eggs that will start hatching, and the process repeats itself exponentially until cooler weather.

“Typically a female mosquito lives 42-56 days, laying up to 100 eggs a night,” he continues. “For roughly 100 million years, their species have adapted to the harsh environments and battle for resources. Today’s populations survive traditional extermination methods because of their incredible reproduction and survival abilities.” The intercontinental commerce of vegetation, such as bamboo, has also contributed to the increase in the variety of invasive, pesky and disease-bearing populations. “I think the whole world is and always has been unprepared for mosquitoes.”

Nate is ready. “However, my plans are already underway to use our patented system as a mosquito trap, as well as a breeding ground prevention in livestock water troughs. We will ensure that our mosquito trap kit will attract female mosquitoes to lay their eggs at dusk in our water, to be terminated by the flow of the system in the morning,” he continues. “Our goal is to decrease mosquito populations in domesticated and rural regions with two methods: by preventing mosquito breeding where that particular body of water’s function must remain to preserve a facility’s operation and optimum performance, even though it provides a mosquito breeding ground.

“The second method is to provide the world with the ideal mosquito trap by attracting egg-laying females to deposit their young in our water troughs and destroying those offspring in the morning. We let the mosquitoes destroy themselves by taking advantage of their preferred breeding environments and dwindling their numbers.

“The Smart-Trough Mosquito Pump is ready now to serve the livestock agriculture community and the mosquito trap kit will be available soon.”

Nate has enjoyed working with the horse and livestock community in introducing the Smart-Trough Mosquito Pump over the last three years. He was happy to provide the SPCA of Monterey County with the kit for the horses in its charge. “It’s an honor to serve an association that began providing sanctuaries for the injured and abandoned creatures of our society,” says Nate, the father of 9-month-old twins. “We are proud to enhance and further the SPCA towards its goal of stewardship, rehabilitation and prosperity.”

For more information on the Smart-Trough Mosquito Pump, visit www.smart-trough.com . Manufactured by ZAORIL LLC “The Water Finder.”