

# Flame Weeding Catching On For Many Crops



**Red Drag Vegetable Bed Flamer can be used before planting to sterilize the seedbed.**

Charles House has used flame technology to control weeds and insects on many crops including alfalfa, potatoes, tobacco, vegetables and more. He says it's a safe, economical, and non-toxic way to produce vegetable or row crops.

Through his website, waycooltools.com, House sells a variety of flame weeding kits and accessories, typically for gardens and lawns. Through another website, earthhandskysolutions.com, House sells larger vegetable bed flammers that can be used on farm fields.

House and his wife Janet began manufacturing and selling hand torches in 2007. A year later they jumped into products for agribusiness. The walk-behind flamer is one of House's most popular products. It uses a barbecue grill tank with propane vapor,

similar to his hand torches.

"This unit will flame a 30-in. wide path so you can flame a vegetable bed or driveway," House says. "You can also use it on any kind of wide area in one pass because it's easy to push."

His design for the walk-behind flamer came from a conversation he had with a garden writer, who wanted to flame an entire vegetable bed with one pass. Working with an engineer from Flame Engineering in La Crosse, Kan., House built a few prototypes. In 2011, his vision became reality when the GF-2011 multipurpose garden flamer was introduced.

"You can put on a wide axle and it'll straddle a 30-in. wide bed and you just walk next to the bed behind it," House says. "The handle is off to one side, it adjusts to either

the right or left, or you can set the handle right behind it. You can use half the axle width and just walk behind it with half the axle," House says.

The GF-2011, called the Red Dragon, is priced at \$1,195 on waycooltools.com. House says "you can use this model for driveways, pathways, baseball fields, etc."

With these devices gardeners can get close to vegetable plants for weeding without harming them. House says "you can flame underneath the leaf canopy of tomatoes, cabbage, kale and other vegetables to kill weeds and weed seeds."

The Weed Dragon, which includes a lightweight backpack, a 10-lb. propane cylinder and 100,000-400,000-BTU torch, sells for \$230.

Smaller handheld torches, such as the Flame Weeding 25,000 BTU Mini Dragon, sell for about \$50. Gardeners can also purchase accessories and build their own flame kit.

When it's used in gardens, flame weeding eliminates hand-weeding, hoeing, or killing weeds with herbicides. The flame process also eliminates using a tractor in the garden, which can damage plants.

For large fields, the Red Dragon Vegetable Bed Flamer can be used on most crops prior to planting to sterilize the seedbed. Flames are produced by clean and efficient liquid propane. The flamer is available in 2, 4, 6 and 8-row models.



**Weed Dragon comes with a backpack, 10-lb. propane cylinder, and torch.**

"In agriculture, flame weeding in many cases is going to be cheaper than using chemicals," House says. "It's an important tool for organic growers, but even conventional growers trying to do non-GMO are going to save money."

House says the best time to start flaming is when weeds are small, when you have to get on your knees to see them in the crop row. Customers who've used House's weeders tell him they've seen less weed pressure in their fields since they started flaming. "Nothing is going to stand up to heat," House says.

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**Aeration system pumps oxygen through pipes to keep slurry continually agitated and ready for pumping. It also eliminates the buildup of dangerous gasses.**

## Aeration System Keeps Manure "Agitated"

An automatic manure slurry agitation system that's proven effective in Europe since 1998 is being introduced to North America. Grand River Robotics of Fergus, Ontario is the distributor for the Smart Manure Agitation System from Dairy Power, based in Cork, Ireland. The system keeps slurry continually agitated and in a pumpable state so it's always ready for spreading.

Adam Steward of Dairypower says Smart Slurry provides a safer environment for livestock and workers because it eliminates the build up of dangerous methane and hydrogen sulfide gasses in the manure slurry. Agitation also improves the fertility value of manure by keeping nutrients evenly distributed throughout the slurry. Steward says the system has shown nearly a 50 percent increase in total nitrogen in a Netherlands test, which can significantly reduce fertilizer costs for crop producers.

The system works by pumping oxygen through 50mm class D UPVC pipes located around and across the base of a slurry tank or pit. The pipework doesn't corrode or degrade from the manure. It's fixed to the tank floor by stainless steel brackets and bolts. Air is sent through the pipes by a high volume, low

pressure blower pump. The blower operates quietly so it doesn't disturb the animals. Air circulates through the slurry and creates a stirring action several times in a 24-hr. period, resulting in a 1/2 to 2 percent solids content. The company says the typical return on investment is 4 to 6 years.

The fully automatic Smart Manure Aeration System can be installed in new or existing liquid manure facilities for cattle, hogs or poultry. Nicholas Dollard installed his system in 2016 in a building that houses 300 cows. "I wouldn't go away from it for anything," he says. "There's no danger of gasses and whenever we want to spread manure all we do is back the tanker in and take some loads." In Voss, Norway, Gaute Ovstedal says their 28-manifold system operates through 3 rotary valves, eliminating the need for any agitation before loadout. Ostedal says there's almost no smell in the automated system that's electronically controlled, working 24 hrs. a day.

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**Max carriages are designed for draft horses for competition and pleasure riding. There are models for light and heavy draft horses, including the Max IV BTT where the driver sits up high for a better view of his horses.**

## Custom-Built Horse-Drawn Carriages

Whether you want a sleek carriage built for show or one built to use with draft horses, New Heritage Farm Carriages offers a full line of horse-drawn carriages.

They are built in Poland by a company called Poj-Kon (means horse-drawn), says Rebecca Gutierrez who visited the factory after she purchased the U.S.-based carriage business in 2019.

"The designs are very practical. They hold up well and are very sturdy. The price point is in reach for many people," she says.

Customers can choose paint and upholstery colors, wood stains and wheels, or they request specialty carriages personalized for agritourism, weddings, wineries and other specific purposes.

"They have even made a horse-drawn dump truck. They like a challenge," Gutierrez says.

About 70 percent of orders are for the Marathon line.

"They are like ATVs, meant to go fast on varied terrain. They are competition vehicles used for the sport of combined driving," says Gutierrez, who has been competing since 2004.

Another line called Max carriages is designed for draft horses for competition and pleasure riding. There are 4 models for light and heavy draft horses, including the Max IV BTT where the driver sits up high for a better view of his horses. Customers use the carriages with anywhere from 1 to 8 horses.

Both lines have models that start around \$8,000.

Gutierrez has some new carriages and pre-owned carriages in stock. For new custom orders, delivery can take 4 to 6 mos. It takes 2 mos. or more to make the carriage and another month to ship them from overseas. Gutierrez fills a container before they are shipped to reduce the cost.

"It's a great process to see these carriages come to life from metal," she says. "Because we custom make everything, we can accommodate people who are tall or have physical impairments. We can make it work for anybody."

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