Home-Built Flamer Burns Up Weeds

By Dee Goerge, Contributing Editor

After reading about "flamers" used by organic growers to kill weeds, Tibor Sipos of Califon, N.J., decided to build his own fire-powered weed killer. Sipos and his 13-year-old son, Paul, grow about 10 acres of vegetables to sell.

"When dealing with small plants like lettuce, which are close together in beds, it's tough to cultivate," Sipos says. Burning beds before plants emerge kills weeds and weed seeds. Once the plants start to grow, they choke out small weeds that come later.

After much research and finding helpful information at www.attra.ncat.org and www.flameenginnering.com, Sipos gathered angle iron, galvanized water pipes and other materials he had on hand. He purchased scaffold fittings to connect the parts and built a frame to attach to his tractor's 3-pt. hitch. The angle iron frame holds four 20-lb. liquid propane tanks, which are hooked up to four commercially available weed burners. A cross piece on the frame holds the burners about 8 in. off the ground, about 4 ft. behind the LP tanks. Two long water pipes drag behind to maintain an even distance to the ground.

By using one tank per flamer, Sipos says he doesn't overload the liquid propane to the point it freezes up and doesn't work. He was impressed with the results of beds he flamed.

"Where it wasn't flamed, beds had 8-ft. weeds," he says. "But weeds were small where I flamed."

He noted that the weeds don't have to be burned completely.

"If you can see your fingerprint on a leaf, it's burned enough," he explains. "You just need to heat weeds to destroy the cell structure. They just dry right up. I had one area of lambs quarter that was about 4-inches tall. I flamed it and the next day, they were all gone."

He is satisfied with how his homemade flamer worked, but has ideas for improvements: hoods over the flamers for wind protection, tires or metal shoes on the pipes that drag, moving the tanks closer to the tractor driver and adding solenoid switches to turn them off quicker, and maybe adding two more tanks and flamers.

He says he spent about $300 building his own flamer compared to about $4,000 for a manufactured 4-row model.

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Tibor Sipos's home-built, fire-powered weed killer uses four 20-lb. LP tanks.

LP tanks are hooked up to four weed burners held about 8 in. off the ground.

Rain Storage Tanks Water Commercial Gardens

When Mike McKinley needs more irrigation capacity at his "U-pick" farm operation, he simply adds another tank to his 12,000-gal. rain water storage system, which provides water to more than 30 vegetable, fruit and flower beds.

McKinley and his wife, Deb, developed their farm operation, Gem Gardens, over the past 25 years. It includes a U-pick raspberry patch, two-acre tree maze, and beautiful gardens open to the public. Visitors pay by the honor system: "Pick what you want, and leave your money in the cash box in the shop."

Instead of installing a fixed irrigation system, McKinley uses portable tanks to transport water to beds that need it.

A 1,000-gal. tank on wheels can be emptied by either a gas or electric pump and has three hoses and various sprinkler head options. A 250-gal. tank on wheels is used for spot watering pots and small beds.

The garden's 1886 refurbished barn plays a key role in filling the tanks. The loft is braced with pipes to support two 1,500-gal. tanks, which are filled via pumps and hoses from tanks on the ground that have gathered rainwater from eaves troughs on various outbuildings.

"We pump the water up into the barn tanks because it's the fastest way to load for us," McKinley says. "We have two wells, but we try to minimize using them. We just feel rainwater is better."

The system also saves money and conserves energy. "Irrigation is expensive and high maintenance," McKinley notes. There is more control with the portable system. The tank can be parked next to a bed, until it receives a deep watering, then moved to the next bed or to be refilled.

"We test our soil so we are not over watering," McKinley says, noting it's better to water deeply fewer times, than to do shallow watering more often.

At the end of the season, eave troughs are blown out with a leaf blower. Tanks are emptied and cleaned with a brush-type broom. The tanks seem to hold up well, McKinley says. Two of them have been in use for eight years.

Rainwater is pumped to a pair of 1,500-gal. tanks in barn, for later use on garden beds.

"An unexpected benefit is that we have visitors that come to the garden, and we've been able to do some education," McKinley says. "They see the watering tank and ask questions."

The beauty of Gem Gardens is a testimonial to the use of rainwater. McKinley is willing to share ideas and build portable tanks for people who are interested.

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A 1,000-gal. tank on wheels has various sprinkler head options.

Home-built drill has 4 no-till openers on front spaced 8 in. apart, and a seeding width of 32 in.

Custom Made Mini No-Till Drill

"My mini no-till drill works great for planting wildflowers, native grasses and food plots. I can plant three different sizes of seed with it. And, it's small enough to haul on a small trailer," says Terry Moran, Highland, Kansas.

Moran uses his New Holland 30 hp tractor to pull the drill, which measures just 3 ft. wide. It has 4 no-till openers on front spaced 8 in. apart, and has a seeding width of 32 in.

All the drill's components were purchased new. The box, which is divided into three compartments, as well as the openers were bought from Truax, and were originally designed to be 3-pt. mounted. Moran modified the frame that supports the box and added a fold-up tongue and pintle hitch. He modified the drill's seed drive mechanism, adding a single wheel on back that serves as the seed drive mechanism. He also converted the gauge wheel setup to hydraulic lift.

"I used the best components of what I think is one of the best no-till drills on the market," says Moran. "The main advantage of a no-till drill is that I can use herbicides to kill all the vegetation, then go in and seed without having to worry about a lot of competition from weeds. The unit has the same weight per opener as any of Truax's full-sized no-till drills.

"I built it because I have a landscaping business and couldn't find a no-till drill on the market small enough to fit my trailer. It cost about $5,000 to build. A fully outfitted 4-ft. wide no-till drill would have cost $8,000 to $10,000, and I would still have needed to buy a new trailer for it. With the fold-up tongue I can back the drill onto a trailer and there's still room for a small tractor."

One advantage of the Truax box is that it has three compartments so he can seed everything from small, fluffy native grass seed to an oats cover crop - all at the same time. "I can plant just about anything except seed corn with it," says Moran.

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