

PRODUCTION NEWS

Heat getting more attention as means of fighting weeds

By **TERRY ANDERSON**
For Farm & Ranch Guide

As consumers continue to want more organically grown food, and farmers respond accordingly, a Kansas company's decades-old technology is getting more attention.

Flame Engineering Inc. of La Crosse, Kan., manufactures Red Dragon, a flame-throwing implement that the company says kills weeds and insects in a more effective, efficient and safer way.

"Heat is an effective method and will kill any living organism," said Steve Koch, the company's director of agriculture. "It's just a matter of application."

Flame Engineering's agriculture division has propane-powered applicators for row crops, alfalfa, vineyards and orchards, potatoes and poultry houses.

Red Dragon allows farmers to counter weeds and insects without chemicals, imperative in organic food production but also not unnoticed by non-organic farmers who have seen chemical prices spike while weeds and insects have grown more tolerant of the herbicides and pesticides.

"Chemicals, although effective, can't control the eggs of insects," Koch said. "Propane is heavier than air and gets down to the eggs."

Koch said 98 percent of Red Dragon's row-crop usage is in organic operations. Plus, the flame throwers can maneuver in fields that would be too wet to cultivate.

Flame-throwing technology not new

Flame-throwing technology is not new in farming circles. It was used as early as 1938 in cotton fields in Mississippi and became a popular method for controlling weeds. By 1950, 15,000 row crop flame throwers were in use, according to Steve Koch, director of agriculture for Flame Engineering Inc. in La Crosse, Kan.

International Harvester was a major manufacturer. But when chemicals were introduced for weed and insect control in the 1950s and 1960s, flame throwers took a back seat to the new technology.

As environmental quality became more important in recent decades, use of flame throwers has rebounded, Koch said.

Flame Engineering serves agriculture states across the country, with three distributors in the United States, plus sales in South America, Australia, England and Canada.

Nebraska has been a good market, Koch said, mainly because of sales through Fairbank Equipment in Grand Island.

"We also sell through propane dealers and like to get them involved," Koch said. "We make a machine that is safe to use. It's a lot safer than putting gas in your own car." *

**Where to
find
it:**

Flame Engineering Inc.
Box 577
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La Crosse, Kan. 67548
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www.flameengineering.com

Red Dragon's quick blast of intense heat, at about 2,000 degrees, doesn't burn the weeds but destroys the cell structure, killing the weeds. Unlike chemical sprays, a rain right after the application won't diminish the effectiveness.

The Red Dragon comes in 2-, 4-, 6- and 8-row units. But additional kits can expand

the units to 24 rows.

Key to killing the weeds is the size of the crops and the weeds. According to company information, as long as the weeds are smaller than the crop, flaming will kill the weeds without harming the crop. The flames are directed under the crop leaves and across the crop row. They won't affect the hearty stalks.

The throwers will burn between 5 and 10 gallons of propane per acre. Koch said that unlike other fuels, the price of propane has held relatively steady in the last year.

Red Dragon's alfalfa flammers cover a 12-foot swath, using between 20 and 30 gallons of propane per acre. The optimum time to flame is late winter or early spring, to effectively kill alfalfa weevil eggs that have been laid throughout the winter.

If a second application is needed, it should immediately follow the first cutting. The alfalfa won't be hurt, the company says, but the second cutting may be delayed by several days.

The Red Dragon poultry house sanitizer has gained considerable attention with fears of avian flu. The intense heat kills pathogens in floors and litter, and flares off ammonia vapors.

Chemicals used in a 500-foot poultry house would cost about \$500, the company says, while a flame thrower would use \$40

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of propane.

The flame throwers are touted for their safety features. All connectors are closed, Koch said. Stainless steel tubing and brass controls prevent the units from rusting. The

master control box is at the tractor seat for easy access.

There are no chemicals for farmers to come in contact with - and no chemical residues, runoff or groundwater contamination.

"People all over the country have gas grills, and these are safer than those," Koch said.

With many rural Midwest homes heated with propane, farmers are already familiar with the characteristics and qualities of the

fuel, said Mel Limon, Flame Engineering's executive sales director.

"If those in the rural areas are already using it, they won't even have to think about it," he said. *