

PROPANE FLAME WEEDING SYSTEM AN INNOVATIVE, EFFECTIVE TOOL FOR ORGANIC TOBACCO WEED CONTROL

A PROPANE CASE STUDY

Lee Newman has been farming for decades on his family farm near Sumter, South Carolina. The farm includes organic tobacco, corn, soybeans, wheat, and cotton, as well as twelve turkey grower houses. As owner of the operation, Newman is constantly analyzing and searching for the most effective, cost-efficient means of running his farm. Because his products are certified organic, all farming techniques must be carefully and meticulously evaluated in order to meet the specific criteria required of such labeling. The organic stamp also means the farm cannot use many of the conventional farming methods common to non-organic farms.

Weed control is one such method that requires a non-traditional approach for organic farmers. Conventional farmers can rely on fertilizers and herbicides to effectively reduce and eliminate weeds, but many common chemicals are not acceptable for certified organic farming. Instead, many organic farmers rely on

manual labor and cultivation. While these methods can be effective when performed properly, they are also very time- and labor-intensive; so Newman began researching alternative methods for organic weed control, particularly for his tobacco fields.

TOBACCO FLAME WEEDING: A NEW SOLUTION

“Controlling weeds in an organic environment where you can’t use any herbicide is a challenge that tobacco farmers have been struggling with for years and years,” said Newman. “I was looking for another way to control the weeds and had this idea come to me that you could probably burn them. So I got online and began researching that idea, and that’s when I came across propane flame weeding systems.”

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Organic Tobacco Producer

COMPANY

Newman Farms
Sumter, South Carolina

CHALLENGE & SOLUTION

In order to avoid the use of pesticides commonly used in conventional farming, many organic farmers rely on time- and labor-intensive manual removal and tillage to control weeds. When Newman Farms, a certified organic tobacco producer, adopted a propane flame weeding system, they were able to effectively control weeds in tobacco fields while reducing labor time and costs by approximately 40 percent.

RESULT

- Propane flame weeding reduces labor time and costs by approximately 40 percent.
- Propane flame weeding is approved for certified organic farming operations.
- Propane flame weeding avoids the disruption of essential soil nutrients, which commonly occurs with cultivation and tillage weed control methods.
- The 4-row propane flame weed control unit controls between 90 and 100 percent of weeds.



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Newman contacted his local propane dealer to learn more about propane flame weeding equipment. "I wanted to make sure I understood exactly how this was going to work before diving in. It was hard to believe it could really remove weeds in the way I required." Newman's propane marketer and the staff at Flame Engineering, Inc. convinced Newman to give flame weeding a try.

SAVING TIME, MONEY, AND THE ENVIRONMENT

Newman quickly realized just how efficient his 4-row propane flame weeding system was, "I was amazed at its capabilities," said Newman. "When the machine is set up properly to flame weed at the right angle, it will kill 100 percent of weeds."

Before using the flame weeding system, Newman Farms would remove weeds by hand, which was incredibly arduous and time-consuming. "Manual labor is very expensive and required significantly more time," said Newman. "In my experience, it was probably three or four times as

expensive to control weeds manually when compared to running this machine."

In addition to reducing labor costs and time, propane flame weeding systems are more environmentally sustainable. As a certified organic farmer, this was another important factor to Newman. Flame weeding methods replace the need to use harmful chemicals while protecting essential soil nutrients. Propane is also a clean fuel with a lower carbon content than gasoline and diesel. Its nontoxic and insoluble in water, making it safe in contact with aquifers, streams, and soil. Newman Farms was already using propane for grain drying and their work trucks. Using this environmentally friendly energy source for an additional farming application was an easy decision.

INNOVATIVE, EFFECTIVE WEED CONTROL

While propane flame weeding has been around for years; new, innovative models make the use of heat treatments over chemicals for weed removal more effective

than ever. Research supported by the Propane Education and Research Council has shown that weed flaming provides approximately 95 percent effectiveness in weed control for a variety of crops, supporting Newman's own experience with his new flame weeding system. "I have been amazed with the systems' capabilities," said Newman. "Even tobacco farmers who are not certified organic are experiencing benefits from using this method."

FOR MORE INFORMATION

To learn more about using propane for weed control or numerous other applications, visit propane.com/agriculture.

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The Propane Education & Research Council was authorized by the U.S. Congress with the passage of Public Law 104-284, the Propane Education and Research Act (PERA), signed into law on October 11, 1996. The mission of the Propane Education & Research Council is to promote the safe, efficient use of odorized propane gas as a preferred energy source.