Flaming for Weeds

Explaining why carrots are orange, The Carrot King described the hand-held flamer at the June field day.

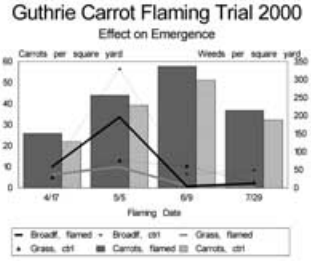
Iowa row crop farmers discovered flame cultivation several years ago. However, it's something new to the state's vegetable farmers. Gary and Nancy Guthrie, Nevada, decided to see what it could do for carrots. The Guthrie operation is just two acres including cover crops, so they aren't likely to be pulling a flamer around with a tractor. Instead, Gary used a hand-held setup. Table 7 provides results for two of the four times he flamed carrots, and Figure 7 shows all four dates. Actually, Gary's strategy was to flame before the carrots emerged from the ground. In this way, he could clear the row of competition and lessen the tedious job of hand-weeding the tiny seedlings.

Gary writes, "In the first two plantings I walked along with the flamer lightly flaming the beds. I thought if the flame touched the small leaves that would take care of it. I had much less effective control. . . On the third and fourth plantings, I prepared the beds, waited one week, then planted the carrots, giving the weeds a head start. Then I flamed the beds, making sure the weeds desiccated and blew away before I moved on. . . This method of intense flaming was very effective. The treated plots were very clean for several weeks to allow the carrots a good jump start. . . The key is to flame the bed a day or two before the carrots begin to pop up through the soil."

Gary points out that the flame weeder "should be used with extreme caution. I use a lot of mulch in my garden system and had to be very careful with the flamer. I also burned my hand from a cold burn where the propane expanded down the steel tube. I recommend using gloves."

Back in the corn field,

Figure 7. Carrot stands and weeds after preemerge flaming, four plantings.



Dennis and Eve Abbas, Hampton, were also flaming. In 1999, they looked at the value of adding flaming to cultivation. Their corn yielded the same, but broadleaf weeds were nearly cut in half. In 2000, they flamed all the corn one day before first cultivation. Then in strips, they also flamed one day before the second cultivation (Table 7). The extra flaming significantly reduced broadleaf weeds and grasses, although overall levels were far below 1999. However, it apparently reduced the corn yield by 4.3 bushels. Was the second flaming just one more shock that the corn didn't need in a very dry summer? More observation and trials will lead to better management of this tool.