

WIRE STAKE FLAGS: AN ALTERNATE STICKY TRAP

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Sticky traps are an effective method for sampling insects. The advantage of sticky traps, i.e. their ability to stick to and hold insects, also represents a major problem. Traps not only stick to the insect but they also stick to everything else. In addition, the current price of yellow cards and stakes can approach \$1 per trap. This cost is further increased by the cost of adhesive, labor and clean up.

Recently, an insect sampling program on spinach in the Arkansas River Valley was initiated. The program required the use of large numbers of sticky traps from September through May. Although yellow cards were initially used, these proved too costly and labor consuming. An alternate trap made from wire stake flags was developed and reported herein.

The trap was made by dipping yellow wire stake flags (Forestry Suppliers, Inc., Jackson, MS) into preheated stickum (Tangle Trap®, Tanglefoot Co., Grand Rapids, MI). Various flag sizes were; however, the 10.2×12.7 cm flag offered advantages of large trap area (2 sides @ 130 cm^2) and ease of use. After dipping, ten flags were stuck together and placed in a plastic bag. Any adhesive adhering to the wire was removed with kerosene. This process allowed relative clean transport of large numbers of traps to the field. Traps were placed in the field by removing the plastic bag and peeling flags from the bundle of ten. The large flags (12.7×20.3 cm) were somewhat difficult to separate during cold weather. This problem was reduced by warming flags with the vehicle window defroster. The medium 10.2×12.7 cm flags were easily separated and were generally preferred. Wires were pushed into the soil at various angles allowing the flag to rest just above the plant canopy. Wires were then bent to allow the flag to hang vertically (Fig. 1). Flag rolling in light wind and cool temperatures was not a problem. With greater winds and warmer conditions, wire stake flags were altered as follows. Large (12.7×20.3 cm) wire stake flags were bent as illustrated in Fig. 2. The distal end of the flag was glued around the wire stake. A "v" was bent into the basal portion of the flag to prevent turning. After drying, flags were coated with adhesive and used as described above.

Traps were collected by placing clear saran over each flag. The use of saran in the field was facilitated by attaching the saran box to a belt by wire. This freed both hands for positioning saran over each flag. Saran isolated the adhesive and allowed relative clean viewing of the collected insects. The flags also allowed collection of fragile insects such as aphids. The flag area containing the aphid was removed by cutting with a scalpel. Washing, which often damaged aphid wings, was thus eliminated. After aphids were removed, flags were discarded, although they can be easily cleaned in kerosene.

The wire flag traps were relatively inexpensive. Medium wire stake flags cost about 4.5¢ and each received about 3¢ worth of adhesive. Thus each trap was produced for about 7.5¢. Furthermore, labor for placement and collection was greatly reduced compared to using standard yellow card traps. Research comparing

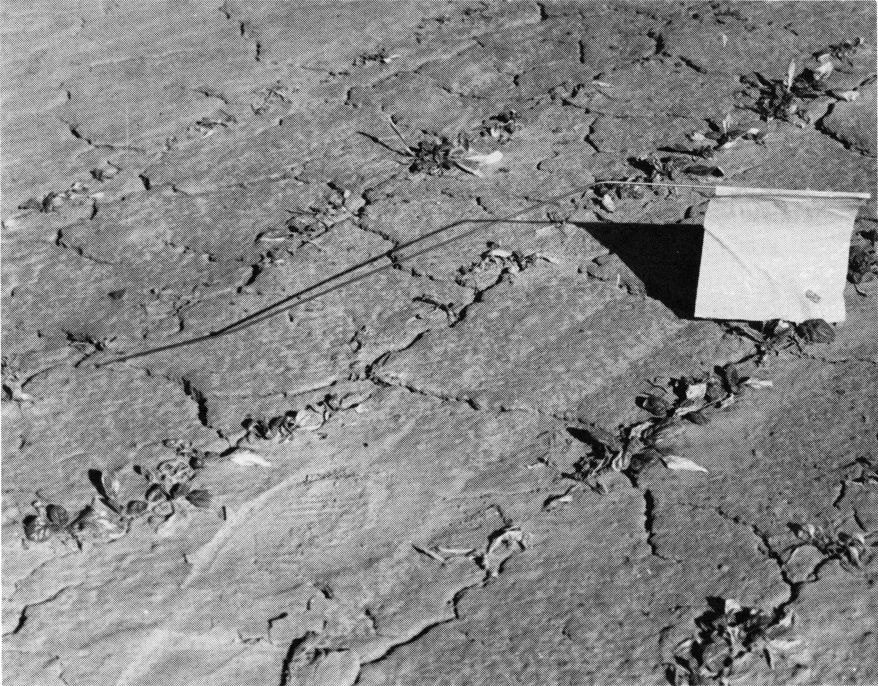


Fig. 1. Wire stake flag sticky trap.

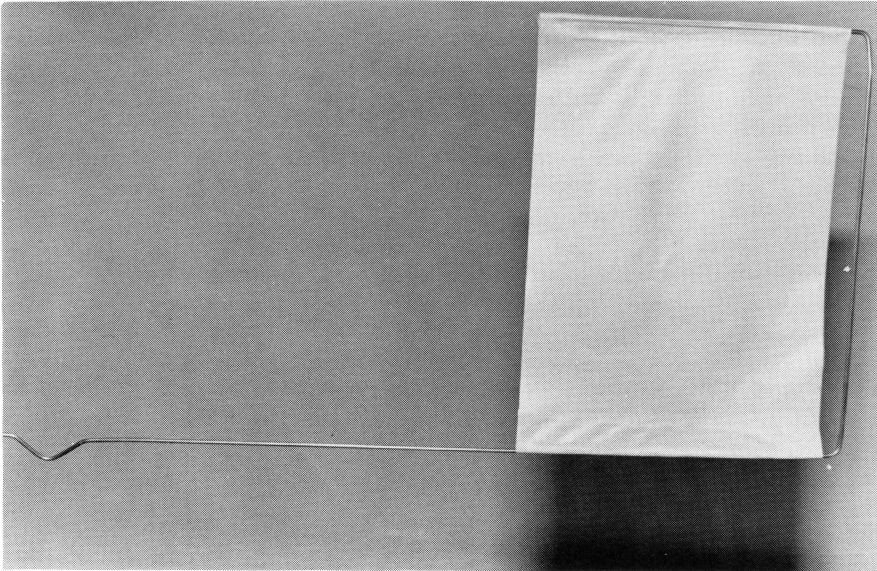


Fig. 2. Large wire stake flag bent and glued to prevent flag rolling in high wind.

the trapping efficiencies of the wire flag traps to more conventional traps has not been undertaken. However, in the spinach study the flags captured numerous insects and provided an inexpensive alternative to standard traps. — Paul McLeod, Department of Entomology, University of Arkansas, Fayetteville, AR 72701. (Accepted for publication June 6, 1986.)
