

Field Tests Evaluating ISCA House Fly Lure and ISCA-Ball Trap on a Calf Operation in Southern California



Prepared by: **ISCA Technologies, Inc.**
Vice President, **Dr. Reginald Coler**

House fly lures and traps were tested throughout a dairy calf operation (Figure 1) over a 12 week period during the summer of 2004. Six candidate fly lures were compared to a commercial standard (Rescue). Traps were situated within a variety of habitats including shaded enclosed areas, shaded open air shelters and traps exposed directly to the elements.

Every week we went out to this calf operation, prepared the fly lures on-site and then set the traps. Traps were visually inspected on a daily basis and the number of flies captured was estimated and recorded; at the end of the four day test period the contents of each trap was processed and the flies counted. Before each weekly test, traps set-up at each location were rotated in a systematic manner to account for any position effects.

At the start of the summer, we compared the ISCA-Ball Trap against an older commercial Xcalibur trap design (Figure 2), eventually, due its superior trap efficiency (Figure 3), we switched to the ball trap for all subsequent tests. As the summer progressed we were able to identify the lures which performed best. The ISCA House Fly Lure typically outperformed the commercial standard in three of the four locations tested (Figure 4). Additionally in most tests, the ISCA House Fly Lure captured **more** house flies *musca domestica* **sooner** then the competition, that is, the ISCA House Fly Lure consistently attracted more house flies during the first half of the test (1-2 days).

Later in the season we demonstrated that the inclusion of “Fly Boost” a non-aqueous attractant, in our trap increased trap-catch even more.



Figure 1 – Ball Traps hanging within calf barn.



Figure 2 – Open traps (Xcalibur design on left) comparing house flies captured over the same time interval with the ISCA House Fly Lure.

Comparing Trap Types

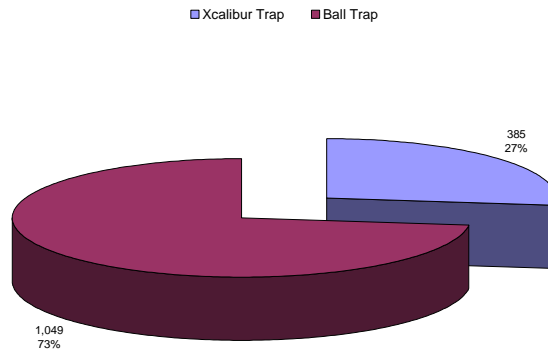


Figure 3 – Results from four to six weeks of data comparing the Ball Trap and the commercially available Xcalibur trap using a variety of lures.

Averages, by Location, over the entire summer

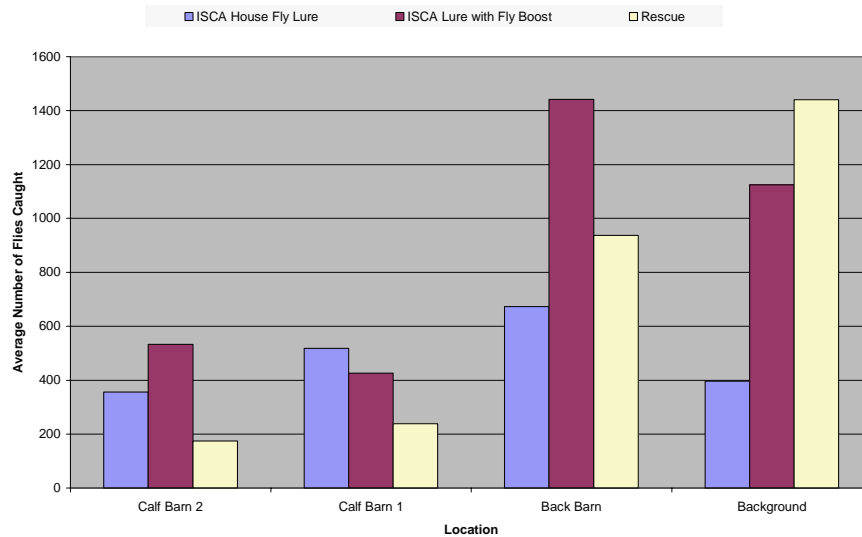


Figure 4 – Trap-catch data collected from four locations and averaged over the 12 weeks study interval, revealing the attraction of house flies to three different types of lures. The ISCA House Fly Lure with Fly Boost out-performs the other lures in three of the four locations tested.

Adult house flies are attracted to different types of nutrients as they age. After the summer of 2004, to better target house flies at the various stages of the aging process, additional research and testing was performed to optimize the lure by increasing/decreasing the ratios of the house fly lure components. As a result, the improved lures were successfully optimized in the following areas :

- a. Lab tests demonstrated an overall improvement in trap catch ranging from 80% to 100%.
- b. The lures satisfied all three nutrient requirements (carbohydrates, proteins and oviposition media) for each distinct physiological stage of the adult house fly : young adults, mid-age adults and ovipositing female adults.
- c. A beneficial effect of these improvements was a reduction in the costs of the experimental lures used over the summer of 2004.

The new and improved ISCA House Fly Lure is packaged in plastic bags containing 40 grams of lure and marketed under ISCA item code IT 219-2. Because the lure is in granular form, other types of packaging can be considered besides plastic bags. The ISCA House Fly Lure is made of non-toxic organic materials.



**Your one stop source for environmentally friendly,
integrated pest management tools and solutions**