



Bait Trial: Comanche County
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Baits are substances usually in pellet form that contain an attractant for certain pest insect species and an insecticide. Targeted pest insects usually die once they have contact or feed on the bait. Baits are a common method used for suppressing adult fly populations around confined animal facilities, as well as homes. The efficacy of three products was examined in this study. One of these products has been on the market for a number of years now, while the other two are relatively new. The products examined were Golden Malrin (old product), QuickBayt (new product), and QuickStrike (new product).

Golden Malrin (Starbar Corp.) is a fly bait containing 1.1% methomyl and 0.049% (Z)-9-Tricosene (muscalure) and is applied at a scatter rate of 8 oz per 1,000 square feet. It has restricted use around confined animal facilities, and care needs to be taken not to contaminate animal feedstuffs. Use only in areas inaccessible to food-producing animals, children, and pets. It **cannot** be used in milking parlors. I was unable to locate a cost for this product. The label can be accessed at:

http://www.starbarproducts.com/MSDS/GoldenMalrin_splbl.pdf

QuickBayt (Bayer Corporation) is a fly bait containing 0.5% imidachloprid and (Z)-9-Tricosene (muscalure) and is applied at a scatter rate of 6.3 oz per 1,000 square feet. Its area of application is similar to that stated for Golden Malrin. It can be used only around the outside of commercial facilities like canneries, dairy, meat and poultry processing plants, and areas where food-producing animals, children, and pets cannot come in contact with it. It also **cannot** be used in milking parlors. If used around horse stables, it must be placed in a bait station that is inaccessible to the horses. QuickBayt currently costs approximately \$23.70 for a 5 lbs bucket and \$111.00 for a 40 lbs bucket. The label for this product can be accessed at:

<http://country.msds@www.compasnac.com/cvp/10/1040/1040043.htm>

QuickStrike (Zoecon Professional Products) is a fly abatement strip containing 1% nithiazine, which is mixed with sugar. Unlike the baits described previously, QuickStrike can be placed in most locations around confined animal facilities including milking parlors and is active for approximately 8 weeks. Each unit costs approximately \$20.00. The label can be accessed at: http://www.zoecon.com/pdf/quikstrike_productLabel.pdf

Methods

The three baits were examined at the John Koster Dairy located in Comanche, TX. Using one feed lane (Figure 1), we placed each treatment, except the QuickStrike, randomly at two sites on a row approximately 3 feet from the cattle feeding sites. Seven sites (stations side by side were separated by < 20 ft) total were located on this row. QuickStrike (only one strip available for testing) was randomly assigned to one of the locations on the row. Each treatment was placed in a standard soft drink cardboard carrying case (Figure 2) that measured 11 x 14 inches with 2 inch sides. The amount of each granular diet evenly placed in the cardboard boxes was based on rates provided by the labels (Golden Malrin at 0.009 oz per replicate, QuickBayt at 0.015 oz per replicate). Baits were scattered evenly in each treatment box. The QuickStrike abatement strip was placed vertically in the cardboard box so that both sides of the strip were available for fly contact. Boxes containing no bait were used as a control. Treatments remained in the field for one hour after which they were removed and the number of dead flies collected in each cardboard box was tabulated. Containers were then emptied of bait and dead flies, re-inoculated with new samples of the bait respectively used in that container and assigned a new location in the row located in the feed lane. The study was replicated three times.



Figure 1. Experimental design for bait study. White circles indicate two of the bait stations.

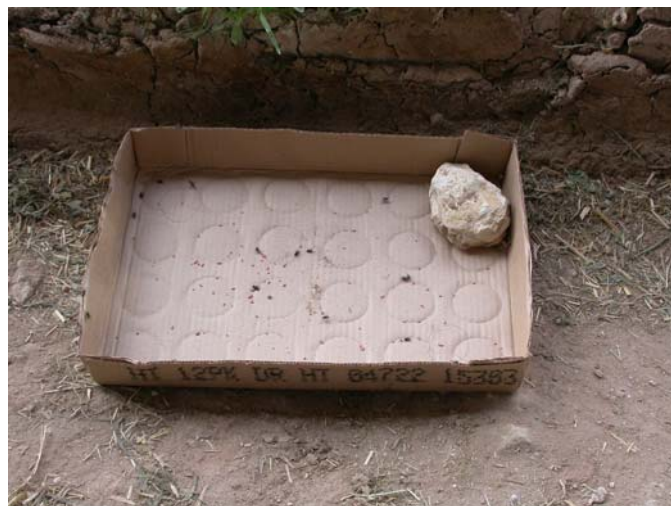


Figure 2. This picture is an example of a bait station used in our experiment. The rock prevented the station from being blown away by the wind.

Results & Discussion

All three treatments results in some adult house fly mortality (Table 1). However, the Golden Malrin and QuickStrike were not as effective as the QuickBayt. These results were not unexpected. As mentioned previously, Golden Malrin has been on the market for a number of years now and resistance to this product has been documented in other studies. QuickBayt is highly effective for controlling house flies, and if applied at the recommended rate, is cost effective. QuickStrike although not accounting for a high number of house fly deaths can be used in milking parlors and other areas where animals and humans frequent unlike the other two products.

These baits can be used for suppressing house fly populations. However, the basic principles of integrated pest management should not be ignored. Sanitation is the best method for reducing pest population along with natural biological control. These practices used concurrently with baits and other insecticides should result in reduced pest numbers.

Table 1. Number of house flies killed with three bait methods and a control at the John Koster Dairy in Comanche, Texas on 8 July 2003.

Treatment	Time					
	10:30 – 11:30		11:30 –12:30		12:30 – 1:30	
	Replicate					
	1	2	3	4	5	6
Golden Malrin	3	3	0	0	3	0
QuickBayt	210	91	150	90	225	110
QuickStrike	26	-	28	-	33	-
Control	0	0	0	0	0	0

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