

FLY CONTROL IN INTENSIVE ANIMAL HOUSES USING TRIFLUMURON TREATED TARGETS.

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Initial experiments were carried out in a high-rise rabbit house. Rectangular targets (60cm×60cm) which were treated with sugar solution and the insect growth regulator triflumuron were attached to square plywood boards (80cm×80cm) suspended from the ceiling for a period of 10 weeks during the summer of 1995. The fly population consisting principally of *Fannia* species was monitored before and during the experiment. Adults were monitored using commercially available sticky fly papers. A 10 fold reduction in the fly population was recorded 5 weeks after the targets were introduced. The number of viable pupae was also monitored preceding and after the experiment. A 2 fold reduction in numbers was recorded. No similar house was available for use as a control but reports from elsewhere in the country indicate that the 1995 season produced enormous fly populations in commercial rabbitries.

Further experiments were carried out on an intensive poultry farm to monitor fly population levels with sticky fly papers in two poultry houses. This was done for 200 days before triflumuron treated targets were introduced into one of the houses. The principal species of fly was the housefly *Musca domestica*.

The efficiency of different target designs incorporating only visual stimuli were investigated inside the poultry houses for their ability to catch flies on sticky surfaces. Targets consisted of variations of plain black or white, and white on black, and black on white squares. All targets tested gave a mean proportion of female catch of between 44–56% in comparison to the sticky fly papers which had 34–36% females.

Different concentrations of sugar and triflumuron on the targets, were compared in the laboratory to assess their ability to arrest flies after landing. Pyrethroid resistant and susceptible strains of houseflies were used to assess any behavioural variation.

Techniques are currently being developed to quantify the amount of triflumuron taken up externally and internally by the flies from the targets.