



## Controlling FLIES with a *Space Sprayer*

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Dairy barn fly control is important to the Arizona dairyman because it affects his personal comfort, the cow's milk production, and the wholesomeness of the product.

Fly reduction is accomplished by a combination of practices in and around the barn. Sanitation about the premises eliminates many of the fly-breeding places. In addition, periodic spraying of the entire premises with malathion, malathion bait sprays, and the more frequent use of space sprays with pyrethrins in the barn materially reduces the fly population.

### Use Every Day

Space sprays are used as often as every day during the worst part of the fly season. Therefore, a simple, labor-saving, standby spraying system is needed in the milking barn. Equipment used in the University dairy barn and observed in use in other barns has produced a very satisfactory fog of a suitable insecticide to produce fast fly knock-down and kill.

The equipment needed to disperse the insecticide includes a small air compressor similar to the 3 C. F. M. paint-sprayer compressor used about the home. Compressed air lines of 1/4 inch galvanized pipe are attached to nozzles capable of dispersing 2 ounces of insecticide in 5 minutes in particle sizes of 4 to 10 microns and mounted on 1/2-gallon jugs. Two or three such nozzles are needed in

Space sprayer in the University of Arizona dairy barn operating from compressed air. (This unit and spray materials were furnished to the University for trial, by the Indian Head Manufacturing Co., Phoenix.)

the average milking barn, depending on shape, to obtain complete coverage. One nozzle placed in the adjoining milkhouse also controls flies in that portion of the building. Here again, the spray should be used prior to the washing of the equipment after milking-time. The equipment can be turned off automatically after the specified length of operation through use of a time switch.

The equipment illustrated in this article was designed for use in either the milking parlor or the conventional, level milking barn. It produces a good fog with 4 ounces of insecticide per 10,000 cubic feet of air. The average walk-through or parlor barn has approximately 7,500 cubic feet of air space and 10 minutes of operation is ample.

### Non-Poisonous Insecticide

The insecticide used must be non-poisonous (non-toxic) and in a clear, odorless oil base. Pyrethrum or synergized pyrethrins (piperonyl butoxide) weighing 6.7 pounds per gallon was very effective in killing the flies in these milking barns.

The space sprays are very appealing to dairymen as a supplement to the use of residual sprays in fly control. Space spraying is a convenient, quick-killing method to use whenever the effectiveness of the residual sprays has worn off and the flies become a great nuisance once again.

The space spray varies widely in its adaptability for application. Fogging may be done either with or without the cows in the barn. When the cows are in the barn, they benefit directly as the spray kills the flies on the animals.

The barn may be fogged while the operator is assembling the milking machines in the milkhouse. Another alternative is at the conclusion of the milking and before clean-up operations begin.

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### THE COVER PICTURE

Field of Upland Cotton on the University of Arizona farm at Tucson, 1954. Notice the University farm buildings at edge of the cotton field. Photo by W. E. Bryan.

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