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EC71-1512 Guide for Control of Insects on Dairy Cattle

John B. Campbell

Robert E. Roselle

University of Nebraska-Lincoln, rroselle1@unl.edu

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GULDE FOR CONTROL OF INSECTS ON DAIRY CATTLE

By John B. Campbell and Robert E. Rosell

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PRECAUTIONS

Read and understand the label on every insecticide before opening the container. If instructions for dairy use are not on the label, do not use the material. Never use more insecticide than recommended on the label.

Keep pesticides in their original containers, outside the house in locked storage, out of reach of children, pets, irresponsible persons, and livestock and away from food and feed.

FLY CONTROL

Sanitation is the first important step in a fly control program. House flies, stable flies and blow flies are the most abundant species around a dairy. These flies breed in strawy manure, spilled hay and grain, bedding and other decaying organic matter as well as manure. These areas should be cleaned up and the material disposed of at least weekly during the summer months. All pens, loafing sheds, calf and cow stalls should be cleaned at regular intervals, and the material spread on the fields to dry before larval development is completed.

The choice of insecticide and method of application depends to some extent on what fly species is involved. For example, wet sprays applied to the cattle aid in control of two blood sucking flies--the horn fly and the stable fly--and the face fly. They are of lesser value for house fly control.

INSECTICIDES FOR APPLICATION TO DAIRY ANIMALS

| <u>Insecticide</u> | <u>Formulation</u> | <u>How to apply</u> |
|---------------------------|-----------------------------------|---|
| Dichlorvos (Vapona, DDVP) | 1% solution | Apply 1 to 2 ounces per animal as a mist spray each day. Do not wet skin. |
| Pyrethrins plus Synergist | 0.1% pyrethrins 1.0% synergist | Use as a mist over animals each day. One to 2 ounces per head. |
| Ciodrin | 1.0% (in water) | Apply at rate of 2 pints per adult cow, less for smaller animals. Do not repeat within 7 days. |
| | 2.0% (in water) | Apply daily 1 to 2 ounces per animal. |
| | 3% dust | Apply 1-2 tablespoonfuls per animal on poll back and upper sides. Do not repeat within 14 days. |

| | | |
|--------------------|-----------|---|
| Coumaphos (Co-Ral) | 5.0% dust | Apply locally in ears and head area, in and around cuts, scratches and wounds. |
| Methoxychlor | 50% WP | 1 tablespoon per head dusted on back. Repeat every 3 weeks. (Horn flies only). |
| Malathion | 5.0% dust | 3 tablespoons per head dusted on back, not within 5 hours of milking. Repeat at 10-14 day intervals if needed. (Horn flies only.) |

Dust Bags and Back Oilers

| | | |
|-----------|--------------------------|--|
| Coumaphos | 5.0% dust 1.0% in oil | Dust bag - self-treatment Backrubber - self-treatment |
| Ciodrin | 5% dust 1.0% in oil | Dust bag - self-treatment Backrubber - self-treatment |

RESIDUAL SPRAYS

Residual sprays are applied to wall surfaces and ceilings within the barns, loafing sheds and milking parlors where house flies congregate. They should also be applied to the outside barn and shed surfaces, wooden fences, sides of feedbunks, windbreaks and similar areas where both house flies and stable flies rest. Some residual sprays are registered for use only on the outside of barns.

Residual Sprays in Barns

| <u>Insecticide</u> | <u>Formulation</u> | <u>How to apply</u> |
|---------------------|--------------------|---------------------------------------|
| Ciodrin | 1% EC spray | Apply to cover surface, avoid runoff. |
| Dimethioate (Cygon) | 1% EC | Apply to cover surface, avoid runoff. |
| Methoxychlor | 5% EC or WP | Apply to cover surface, avoid runoff. |
| Ronnel (Korlan) | 1% EC | Apply to cover surface, avoid runoff. |
| Rabon (Gardona) | 2% EC | Apply to cover surface, avoid runoff. |

SPACE SPRAYS

Space sprays are insecticides with short residual life that can be applied with a fogger or a mist blower to kill flies on contact. Space sprays are recommended where residual sprays are not acting fast enough to keep down fly populations. They should be used as a supplement to residual sprays or if used alone, be repeated often enough to keep fly populations in check.

| <u>Insecticide</u> | <u>Formulation</u> | <u>How to apply</u> |
|---------------------------|--------------------|---|
| Dichlorvos (Vapona, DDVP) | Fog | 1 pint 1% to 8000 cubic feet of space. |
| | Mist | 5 gallons 0.5% per acre of space. |
| Naled (Dibrom) | Fog | 1 ounce 1% to 3000 cubic feet of space. |
| | Mist | 5 gallons 0.5% per acre of space. |

Poison baits can aid in control of house flies, but baits do not control stable flies or horn flies. Distribute dry baits along walls, window sills or other areas, away from feed and water, where flies congregate. Make light applications and sweep up dead flies and old bait periodically. Apply liquid baits to burlap bags, papers or other removable surfaces. Organic phosphate insecticides used in liquid baits will decompose, leaving the sugar or syrup which will attract flies, so remove and replace liquid bait residues regularly. Most dry baits are available as prepared products. Liquid baits can be made as follows:

| <u>Insecticide</u> | <u>Mixture</u> |
|---|--|
| Trichlorfon (Dipterex soluble powder) | Mix 1 pound plus 4 pounds of sugar in 4 gallons water. |
| Dichlorvos (Vapona, DDVP) 46% emulsifiable concentrate | Mix 1½ ounces plus 1 cup of sugar in 5 gallons water. |
| Diazinon 50% wettable powder | Mix 2 ounces and 1 pound of sugar in 5 gallons water. |
| Malathion 25% wettable powder | Mix 1 pound plus 3 pounds in 3 gallons water. |

CATTLE LOUSE AND TICK CONTROL

Cattle lice usually increase in numbers in the fall and winter. Spray or dust cows in the fall to prevent lice. Ticks may be pests from spring to fall and treatment should be applied when they are numerous. Insecticides that can be sprayed on the animals include:

| <u>Insecticide</u> | <u>Formulation and Strength</u> | <u>Method</u> |
|--------------------------|---------------------------------|---|
| Ciodrin | 0.3% spray | Apply 1-4 quarts. Repeat after 1 week, if needed. |
| Pyrethrins and Synergist | 0.025% +0.25% | Spray thoroughly. Repeat after 2-3 weeks. |

In addition to the animal sprays, dust bags containing Coumaphos (Co-Ral) and Ciodrin can be used for lice control as well as horn fly control.

CATTLE GRUB CONTROL

Three systemic chemicals for grub control can be used on dry dairy animals. All precautions and waiting periods should be followed. The materials registered for use and waiting periods before freshening are:

| | | |
|--------------------|---------------------------------|----------|
| Coumaphos (Co-Ral) | Spray or back-line pour-on----- | 14 days. |
| Famphur (Warbex) | Spray or back-line pour-on----- | 21 days. |
| Ruelene | Spray or back-line pour-on----- | 28 days. |

CONTROL OF MANGE MITES

Mange is caused by small mites feeding in skin. Infested areas form scabs. Treat individual infested animals. Use Ciodrin 46% emulsifiable concentrate. Mix $\frac{1}{2}$ pint (1 cup) in 15 gallons water. Spray or sponge, using rubber gloves, on infested areas.

INSECTICIDES ON DAIRY FARMS

DO NOT USE THE FOLLOWING INSECTICIDES ON DAIRY FARMS FOR ANY PURPOSES:

Aldrin, BHC, chlordane, DDT, TDE, dieldrin, endrin, heptachlor, lindane, Thiodan, or toxaphene.

THE FOLLOWING CAN BE USED AS SOIL INSECTICIDES - WITH CARE:

Bux, Di-Syston, diazinon, Dasanit, Dyfonate, Thimet, Furadan.

INSECTICIDES FOR CONTROL OF FOLIATE FEEDING INSECTS ON DAIRY FARMS ARE:

(WAITING PERIODS, AMOUNTS PER ACRE, AND CAUTIONS MUST BE OBSERVED)

Sevin, diazinon, Di-Syston*, Dylox, pyrethrins, Guthion*, malathion, Phosdrin*, methoxychlor, parathion*, methyl parathion*.

*Insecticides followed by an asterisk should be used by commercial applicators. They are too hazardous for use by inexperienced persons.