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EC67-1512 Nebraska Insect Control Guide for Dairymen

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NEBRASKA

INSECT CONTROL GUIDE FOR DAIRYMEN

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Agricultural Extension Entomologists

Federal and state regulations require that milk and milk products be free of insecticides. Read and understand the label on every insecticide before opening the package. If full instructions for dairy use are not on the label, do not use the material. Never use more insecticide than that recommended on the label.

Insecticide uses in this circular are based on research programs at the University of Nebraska, U.S.D.A. recommendations, and label registrations.

CAUTIONS

Insecticides must be handled with care. Read instructions on the label carefully. Store insecticides in a safe place. Do not spill on skin or clothing. Do not inhale fumes when mixing or applying sprays. If concentrates or sprays are spilled on clothing, remove clothing. Do not smoke or eat while using insecticides. Do not contaminate feed or water. Never use residual sprays on animals. Never store insecticides in unlabeled containers. Dispose of empty containers immediately. Bathe and change clothing after using residual sprays. Remove all animals from barns when applying residual sprays.

Be sure, be safe, be satisfied!

FLY CONTROL

Sanitation practices are very important in reducing fly populations on the dairy farm. House flies and stable flies, the two most important kinds, breed in strawy manure, spilled feed, around stacks of hay, in bedding and in other kinds of decaying vegetation.

Manure, hay, spilled feed or silage should not be allowed to accumulate. They should be spread every 4 or 5 days during the spring and summer months. All pens, loafing sheds, stalls and surrounding areas should be cleaned at regular intervals.

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 ^{1/}	0.1% pyrethrins 1.0% synergist	Use as a mist spray over animals each day. 1 to 2 ounces per head.
Ciodrin	2% oil solution	Use 2 ounces per animal per day as a light mist spray. Do not wet skin; use less on small animals.

Insecticides for use in Backrubbers (Horn Fly Control)

Ciodrin	25% Emulsifiable	Mix 1 quart EC to 7 gallons No. 2 fuel oil.
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Coumaphos (Co-Ral)	11.6% Emulsifiable	Mix 1 gallon to 13 gallons No. 2 fuel oil.
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1/Piperonyl butoxide or sulfoxide. Such supplemental synergists as MGK 264, n-propyl isome or sesame oil may be used as a partial replacement for piperonyl butoxide. Additives such as MGK R-11, MGK R-326, Crag and Tabatrex may also be included and used according to manufacturer's directions.

Insecticides for Residual Sprays in Barns

Dimethoate (Cygon)	4 pound per gallon emulsifiable con- centrate (Cygon 4E)	Mix 2 quarts in 25 gallons water. Apply until surfaces are completely covered but do not allow runoff.
Ronnel (Korlan)	24% emulsifiable concentrate.	Mix 1 gallon in 25 gallons water.
Diazinon	50% wettable powder.	Mix 2 pounds in 25 gallons water.

Caution: Never spray animals with residual sprays. Apply to inside and outside surfaces of barns, sheds and other places flies rest until surfaces are wet to the point of runoff. Do not apply in milk rooms. Take special care to avoid contamination of water and feed.

Poisoned baits will control only houseflies. Distribute dry baits along walls, window sills or other areas away from feed and water where flies congregave. Make light applications and sweep up dead flies and old bait periodically. Apply liquid bait 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 bait residues regularly. Most chemicals are available as prepared dry baits or strips. As liquid baits use one of the following:

<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) 41% emulsifiable concentrate.	Mix 1½ ounces plus 1 cup of sugar in 1 gallon 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 of sugar in 3 gallons water.

Space Sprays

Space sprays are recommended where residual sprays fail to control flies, and as a supplement to residual sprays. Use one of the following space sprays:

<u>Insecticide</u>	<u>Amount to Use</u>
Dichlorvos (Vapona, DDVP) 1% solution	1 pint to 8000 cubic feet.
Naled (Dibrom) 1% solution	1 ounce to 3000 cubic feet.
Pyrethrins 0.1% plus synergist 1.0%	As needed.

Impregnated Cords and Strips

Cords or strips impregnated with diazinon, dimetalin or dichlorvos (Vapona) are commercially available. They are effective against house flies if properly used. Cords or strips are hung in rows on the ceiling several feet above head height. Flies are killed when resting on cords or strips, or by vapors given off by dichlorcos. cr by feeding on strips that are prepared as poisoned baits. Directions and precautions of the manufacturer should be carefully followed.

Insecticides for Use in Milk Houses

Prevent the necessity of using chemicals in milk houses if at all possible. Keep all windows tightly screened and use double screened doors in all entryways. If it becomes necessary to use insecticides to control flies, select one of the following:

<u>Insecticide</u>	<u>How to Use</u>
Dichlorvos (Vapona, DDVP) 20% resin strip	Suspend one resin strip from ceiling for each 1000 cubic feet of space. Replace every 3 months or when they are no longer effective.
Pyrethrins	Use aerosol bombs or light mist sprays when flies are present. Will not have residual effect. DO NOT CONTAMINATE UTENSILS OR EQUIPMENT.
Dichlorvos (Vapona, DDVP) 1% in oil:	

LOUSE AND TICK CONTROL

Cattle lice usually increase in numbers in the fall and winter. Spray or dust dairy cows in October or November to prevent lice. Ticks may be important pests spring to fall. For control of lice and ticks use one of the following insecticides:

<u>Insecticide</u>	<u>Mixture</u>
Ciodrin 46% emulsifiable concentrate	Mix 1 pint to 50 gallons water. Spray animals thoroughly, using about 1 gallon finished spray for an adult animal. Apply a second application 14 days later.
Rotenone 5% wettable powder	Mix 2 pounds to 100 gallons water. Spray animals until thoroughly wet.
Rotenone 1% dust	Dust animals thoroughly, rubbing or brushing into hair.

CATTLE GRUB CONTROL

The only material recommended for control of grubs in lactating dairy animals is rotenone. It can be used as a dust, wash or spray as follows:

Rotenone spray.....Mix $7\frac{1}{2}$ pounds of 5% rotenone wettable powder to 100 gallons of water. Spray back-line with power sprayer every 30 days from January to April. Use a grub rake if available.

Rotenone wash.....Mix 12 ounces of 5% rotenone wettable powder in 1 gallon water. Apply 1 pint per head along the back and sponge or brush into hair.

Rotenone dust.....Use 1.5% rotenone dust at the rate of 4 to 5 ounces per head. Shake dust along back and rub in thoroughly with a stiff brush.

Two systemic grub control chemicals can be used on dry dairy animals. It is imperative that all precautions and waiting periods be followed. If systemics are used on dry animals or calves read and understand the label before purchasing the material. If there is any question, do not use these materials on dairy animals.

The materials registered for use and waiting periods are:

Coumaphos (Co-Ral) spray or back-line pour-on.....14 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, infested areas.

INSECTICIDES FOR DAIRY

<u>Insecticide</u>	<u>Pasture & Crops</u>	<u>Dairy Cows</u>	<u>Fly Control In Barns</u>	<u>Fly Control In Milk Rooms</u>
ALDRIN	NO	NO	NO	NO
BHC	NO	NO	NO	NO
SEVIN	YES	NO	NO	NO
CHLORDANE	NO	NO	NO	NO
CIODRIN	NO	YES	NO	NO
CO-RAL	NO	NO	NO	NO
CYGON	NO	NO	YES *	NO
DDT	NO	NO	NO	NO
DIAZINON	YES	NO	YES *	NO
DDVP (VAPONA)	NO	YES	YES	YES
DIELDRIN	NO	NO	NO	NO
DIMETILAN	NO	NO	BANDS	NO
DELNAV	NO	NO	NO	NO
DI-SYSTON	NO	NO	NO	NO
DIPTEREX	NO	NO	BATT	NO
DYLOX	YES	NO	NO	NO
ENDRIN	NO	NO	NO	NO
PYRETHRINS	NO	YES	YES	YES
GUTHION	YES	NO	NO	NO
HEPTACHLOR	NO	NO	NO	NO
LINDANE	NO	NO	NO	NO
MALATHION	YES	NO	YES *	NO
PHOSDRIN	YES	NO	NO	NO
METHOXYCHLOR	YES	NO	NO	NO
PARATHION	YES	NO	NO	NO
KORLAN (RONNEL)	NO	NO	YES *	NO
ROTENONE	NO	YES	NO	NO
TDE (DDD)	NO	NO	NO	NO
THIODAN	NO	NO	NO	NO
TOXAPHENE	NO	NO	NO	NO

CROPS AND PASTURES: When any insecticide is registered or recommended there are limitations as to the amount actual per acre and time that must elapse between application and harvest or pasturing. Some materials are limited to the number of applications.

DAIRY COWS: For direct application the percent concentration and amount per head is limited. The number of applications are limited.

BARNs: The concentration is limited. Contamination of feed, water and equipment must be avoided. Cows must be removed before spraying.

FLY CONTROL IN MILK ROOMS: APPROVED INSECTICIDES MUST BE USED CAREFULLY TO AVOID CONTAMINATION OF MILK AND EQUIPMENT BY CHEMICALS AND DEAD INSECTS.

* For residual sprays on barn surfaces. Not for application to animals. Remove animals before spraying. Do not contaminate feed or water.