



University of Idaho
College of Agriculture

Current Information Series No. 196

Cooperative Extension Service
Agricultural Experiment Station

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MAR 6 1984

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Poultry Pests And Fly Control

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Mites and lice are the most common pests of poultry in Idaho. The effects these parasites have on birds include lower egg production, loss of sleep, loss of appetite, diarrhea, paleness about the head and sometimes even death. Control programs for mites and lice are so similar they should be considered together in one operation.

Flies are another insect problem often confronting poultry producers. This is especially true where poultry are in confinement and where sanitation problems exist.

Poultry Mites

Two kinds of mites are normally found on Idaho poultry. Both mites suck blood, but each feeds on different specific areas of the host. These mites are extremely small (1/30 to 1/40 inch), eight legged, oblong creatures that look like moving dots. You can identify them by knowing when and where to look on the host bird.

The **chicken mite** is usually found at night on roosting birds or on birds in their nests. During the day, the mites are found off the birds, in cracks about the roosts, floors, walls and litter. A flock can

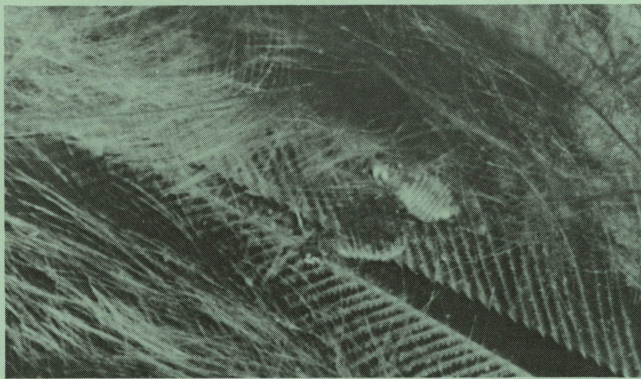
be badly run down before the chicken mite is discovered if the owner examines birds only during the day. When mites become abundant, the litter or manure may appear to be literally crawling with tiny, gray, brown or red specks.

Fowl blood is the only food for these mites. Chickens are the preferred host, but the mites attack other poultry as well. Persons or animals frequenting mite-infested houses can also be temporarily infested and irritated by these pests.

The **northern fowl mite** lives exclusively on birds, and you can find them on birds during the day. These small brown or reddish mites swarm over the skin but are most abundant about the vent, tail and neck. Wild birds, including sparrows and starlings, as well as other domestic fowl serve as sources of infestation.

Poultry Lice

All domestic fowl and wild birds may have one to several kinds of ectoparasitic biting lice. These lice live on the fowl but do not suck blood. They feed by nibbling or chewing dry skin scales, feathers or scabs on the skin.



Chicken lice.

The most common and severe pest is the chicken body louse. Constant irritation from feeding lice or the birds' effort to remove them by raking their claws over their skin causes stress, loss of sleep and a generally unthrifty condition. You can find lice by parting the feathers around the vent, on the head or under the wings. Lice are much larger than mites (1/16 to 1/8 inch) and have six legs.

Control

Do not depend totally upon an insecticide for complete control of mites and lice. Keep a poultry house clean, change nesting material often and remove loose boards and rubbish. Isolate and treat new birds before they are introduced into a clean flock. Fresh air, light and clean drinking water are essential; also, provide for good, clean dust baths.

Poultry Premise Flies — Flies are a disease hazard and a nuisance to man and poultry. Successful control depends upon a combination of good management practices to reduce fly breeding areas and supplemental chemical control when needed.

Manure Management — Poultry manure in its natural state is an ideal medium for fly development. Fly breeding can be prevented if manure is not available to flies. Remove manure from beneath caged layers as frequently as possible, and thoroughly scatter manure lightly outdoors. This kills fly eggs and larvae by drying. Avoid piling manure because manure piles are fly breeding sites.

Chemical Control — Numerous insecticides are available for fly control. They are sold under various brand names and are formulated as baits, wettable powders (WP), emulsifiable concentrates (EC) or space sprays. Consider the following characteristics when choosing an insecticide:

- **Residual Sprays** are long lasting, surface kinds of sprays that are usually the most effective and economical method of control.

- **Baits** are usually a mixture of sugar, an attractant, plus an insecticide which is effective in conjunction with surface spray. Baits must be kept where birds and pets cannot come in contact with them.

- **Resin Strips** are not effective in poultry houses because of air circulation, but they are effective in egg rooms and enclosed areas.

- **Space Sprays** are effective where immediate kill of adult flies is needed. They have no residual effect.

- **Larvicides** are most effective as spot treatments to treat manure in wet areas. Larvicides as general treatments are usually not effective.

Do not spray poultry, poultry houses or other premises with a pesticide unless it is approved for that purpose. Some products have one rate for residual fly spray and another rate for applying

Table 1. Insecticide characteristics.

Insecticide	Toxicity to man ¹	Toxicity to birds ¹	Inside poultry house ²	Rate of knockdown	Residual activity ³
Vapona	high	high	NO	fast	very short
Vapona	high	high	resin strip	fast	1-3 months
dimethoate (Cygon)	moderate	moderate	NO	slow	2-4 weeks
Rabon	low	low	yes	slow	1-3 weeks
malathion	low	low	yes	slow	1-2 weeks
Baytex	moderate	very high	NO	slow	2-6 weeks
naled	low	low	yes	fast	1 week
pyrethrins or pyrethrum	low	low	yes	fast	none
ronnel (Korlan)	low	low	yes	slow	2-6 weeks
permethrin	low	low	yes	fast	2-8 weeks
Sevin	low	low	yes	slow	1-3 weeks
Ravap	high	high	NO	fast	1-3 weeks
CoRal	low	low	yes	slow	1-3 weeks

¹All insecticides listed are poisons. They can be used safely if you follow label directions carefully.

²Certain insecticides are approved for use within poultry houses when birds are present but should not be applied directly to the birds. Some are not approved for use as surface sprays inside the poultry house but may be used inside as baits, strips or larvicides as indicated.

³Residual activity of surface sprays may vary from area to area or ranch to ranch depending upon weather, dust, moisture, type of surface sprayed, exposure to sun, susceptibility of flies to the chemical, dosage used and other factors.

spray to birds directly. A product applied to the birds at the residual spray rate would be illegal and could be fatal.

Insecticides are poisons and may injure man, animals or plants if not handled properly. Follow directions carefully. Use insecticide only according to directions on the container label. Use accurate

means to measure the wettable powders and emulsifiable concentrates. Don't guess! Excessive dosage rates are expensive, do not provide better control, may increase the toxicity hazard to birds and to applicators and increase the possibilities of illegal residues. Low dosage may result in failure to kill pests.

Table 2. Insecticides for use on poultry for lice or mites.

Material and formulation	Minimum days to slaughter	Amount	Comments
Sevin 5% dust	7	1 lb per 100 birds	Use shaker can, squeeze bottle or hand duster. Direct dust onto vent and fluff areas. Repeat within 4 weeks if necessary.
Sevin 5% dust	7	2.5 lb per box for 50 birds	Use a dust bath box 1½ feet long by 1 foot wide by 3 inches deep with 1.5 lb Sevin 5 dust for each 30 floor birds.
Sevin ½% spray	7	Use 1 gal per 100 hens in cages, on litter or on slatted floor	Mix 4 oz Sevin sprayable or 6 oz Sevin 50 WP in 5 gal of water. Repeat in 4 weeks if necessary.
naled (Dibrom) 1% in water spray	0	Use 1 gal diluted spray per 100 birds	Mix 1 pt dibrom 36% EC to 20 gal of water. Spray entire bird except head with light mist. Do not treat chickens under 6 wk old and turkeys under 3 mo old. Concentrate applications under wings and around tail area.
Malathion 1% in water spray	0	Use 1 gal diluted spray to treat 100 to 150 birds	Mix 2 Tbl Malathion 57% EC in 1 gal water. Repeat application in 4 to 8 weeks or when necessary.
Malathion 1% in water spray	0	Use 1 gal of diluted spray to treat 100 to 150 birds	Use 2½ oz Malathion 25% WP per gal water. Repeat application in 4 to 8 weeks or when necessary.
Malathion 4% or 5% dust	0	Dust individual birds or with 10 to 12 lb per 100 birds per 6 cu ft dust box or apply 2 to 5 lb per 100 sq ft on litter, floor and walls	Use shaker can or rotary hand duster. Remove dust bath boxes when dust has been used. Apply liberally to litter, walls, ceilings, roosts, nests and adjacent areas.
Ravap EC spray	0	Use 1 gal spray solution per 100 birds at high pressure (100 to 125 psi)	Use 1 pt Ravap in 6 gal water. Spray bird's vent and fluff areas from below.
Rabon 50 WP spray	0	Apply directly to birds using 1 gal spray solution per 100 birds on wire cages	Use 2½ Tbl Rabon 50 WP or 3 oz Rabon EC per gal of water. Spray vent and fluff areas from below. Repeat when necessary but not more often than every 14 days. Power sprays with 100 to 125 lb pressure are recommended. Use maximum of 1 oz spray solution per bird.
Rabon 3% dust	0	Use hand or power duster directly to birds	Use 1 lb of dust per 300 birds on wire. One lb of dust per 100 sq ft of litter for floor birds. Do not treat birds more often than every 14 days.
CoRal spray	0	Use 1 gal spray solution per 100 to 125 birds or about 1 oz spray per bird	Use 3 oz for northern fowl mite and 6 oz for lice of CoRal 25% WP in 5 gal of water.

Table 3. Control for roosts and buildings.

Material and formulation	Amount	Comments
CoRal spray	Use 1 gal spray solution per 1,000 sq ft	Use 6 oz (2 cups) CoRal 25 WP in 5 gal water for thorough coverage of litter, walls, ceilings, floors, roosts, nests and force spray cracks and crevices. Repeat as necessary.
Sevin spray	Use 1 to 2 gal per 1,000 sq ft of wall, bedding and roosts	Use 2 lb Sevin 50 WP or ½ lb Sevin sprayable or 1 qt of Sevimol or 1 qt Sevin XLR per 25 gal water. Force spray cracks and crevices. Repeat as needed. Ventilate while spraying. Do not apply this rate to poultry or game birds or to their premises within 7 days of slaughter.
Ravap spray	Use 2 gal per 1,000 sq ft of litter surface	Use 1 pt Ravap in 6 gal water. Apply thoroughly to walls, roosts, cracks, crevices and interiors.
Ravap roost paint	Use 1 pt of spray solution per 100 lineal ft of surface	Use 1 qt Ravap in 6 gal water. Apply as a roost spray, roost paint or by brushing.
Malathion 4% roost paint	Brush on at a rate of 1 pt per 150 lineal ft of roost or apply with a paint roller or brush on the underside of floor wires of cages	Do not apply to wires of egg collection racks. Allow 3 to 5 days for treatment to become effective.

Table 4. Residual fly sprays.

Insecticide	Mixing rate	Amount per 1,000 sq ft	Comments
Korlan spray	Mix 1 gal 24% EC in 25 gal of water	Apply 3 gal	Birds do not have to be removed from building during spraying. Do not spray directly on birds.
Malathion spray	Mix 10 lb of 25% WP or 2 qt of 57% EC per 25 gal of water	Apply 1 to 2 gal	Birds do not have to be removed from building during spraying.
Ravap spray	Mix 1 to 2 gal Ravap EC in 25 gal of water	Apply 1 to 2 gal	Birds do not have to be removed from building during spraying. Do not spray birds directly or contaminate feed.
Rabon 1% spray	Mix 1 gal Rabon EC or 4 lb Rabon 50% WP in 25 gal water	Apply 2 gal	Birds do not have to be removed from building during spraying.
naled spray	Mix 1 pt 36% EC to 20 gal of water	Apply 2 gal	Birds do not have to be removed from building during spraying.
dimethoate (Cygon) 1% spray	Mix 1 gal of Cygon 2 EC per 24 gal of water	Apply 1 to 2 gal	Remove birds from building before spraying. Do not contaminate food or water.
Baytex 1½% spray	Mix 4 fl oz Baytex 4 EC to 1 gal of water	Apply 2 gal	Remove birds while spraying and do not allow them to return until spray is dry.
Permethrin	Mix 1 qt Permethrin 10EC to 25 to 250 gal water	Apply 1 gal	Remove birds from building before spraying. Do not contaminate food or water.
Permethrin	Mix 6.7 oz Permethrin 25 WP to 2½ to 10 gal water	Apply 1 gal to 750 ft	Remove birds from building before spraying. Do not contaminate food or water.

Table 5. Fly baits.

Insecticide	Use	Remarks
Ronnel Vapona Malathion naled (Dibrom) Methomyl	Use as directed by manufacturer	Keep bait away from birds. Scatter bait on floors, windowsills and other areas where flies congregate at the rate of 3 to 4 oz per 1,000 sq ft. Apply daily until fly population is reduced; then apply once or twice a week. Do not contaminate equipment, feed or water.
Fly Resin Strips		
Vapona 20% resin strip	As recommended by manufacturer	Do not place strips over feed or water troughs. Do not contaminate feed or water.
Fly space sprays		
pyrethrins plus synergists	As recommended by manufacturer	Spray directly in nesting flies or fog air where flies are numerous. No residual effect upon flies entering premises after treatment.
Fly larvicide		
Vapona spray	Mix 1 pt 23% EC to 6 gal of water	Apply 2 qt of spray solution per 100 sq ft of manure.
Ravap	Mix 1 gal EC with 25 gal of water	Apply 1 gal of spray solution for every 100 sq ft of manure. Do not spray birds directly.
Rabon 1% spray	Mix 4 lb of Rabon WP or mix 1 gal of Rabon EC to 25 gal of water	Apply 1 gal of spray solution for every 100 sq ft of manure.
Korlan 2% spray	Mix 2 gal Korlan EC in 25 gal of water	Spray poultry droppings beneath cages.

Pesticide Residues

These outlines for use are based on the best information currently available for each chemical listed. If followed carefully, residues should not exceed the tolerance established for any particular chemical. To avoid excessive residues, follow suggestions carefully with respect to dosage levels and number of applications.

Trade Names

Trade names are used to simplify the information presented. Use of these names neither implies endorsement of products nor criticism of similar products not mentioned.

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