

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Historical Materials from University of  
Nebraska-Lincoln Extension

Extension

---

1989

## EC89-1551 Nebraska Management Guide For Control of Arthropod Pests Of Poultry and Pets: Featuring: Poultry, Dogs, Cats, Rabbits, Birds, Guinea Pigs and Gerbils

John B. Campbell

University of Nebraska - Lincoln, jcampbell1@unl.edu

Follow this and additional works at: <https://digitalcommons.unl.edu/extensionhist>



Part of the [Agriculture Commons](#), and the [Curriculum and Instruction Commons](#)

---

Campbell, John B., "EC89-1551 Nebraska Management Guide For Control of Arthropod Pests Of Poultry and Pets: Featuring: Poultry, Dogs, Cats, Rabbits, Birds, Guinea Pigs and Gerbils" (1989). *Historical Materials from University of Nebraska-Lincoln Extension*. 1137.

<https://digitalcommons.unl.edu/extensionhist/1137>

This Article is brought to you for free and open access by the Extension at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Historical Materials from University of Nebraska-Lincoln Extension by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

# Nebraska Management Guide For Control of Arthropod Pests Of Poultry and Pets:

Featuring: Poultry, Dogs, Cats, Rabbits, Birds, Guinea Pigs and Gerbils

---

*John B. Campbell, Extension Entomology Specialist*

---

- [Precautions](#)
- [Insecticide Formulations](#)
- [Insecticide Application Methods](#)
- [Insecticide Recommendations for Insect Pests of Poultry \(G78-391\)](#)
- [Insecticide Control Recommendations for Insect Pests of Pets \(G78-412, G84-717\)](#)

## Precautions

- Always read and understand label recommendations before opening the container; preparation, amount to use, how to use and special instructions or restrictions are on the label.
- All insecticides can be hazardous to man, animals and birds if not used correctly.
- Note and follow label restrictions for treatment in conjunction with other insecticides or medication in treating sick or stressed poultry or pets and restrictions on age of poultry or pets to be treated.
- Never use insecticides not labeled for use on poultry or pets.
- Observe minimum time between treatment and slaughter for poultry.

## Insecticide Formulations

When insecticide rates are discussed, the initials AI mean active ingredient. Understand the differences in the insecticide formulations. Dusts (D) may be preferred when only a few birds or individual animals are to be treated or during extremely cold weather. Emulsifiable concentrates (EC) may be mixed with water or fuels. Flowables (FI) are thick fluids which are mixed with water. Soluble Powders (SP), Wettable Powders (WP), and Water Dispersable Liquids (WDL) are to be mixed with water. Agitation is necessary to keep SPs and WPs in suspension. Solutions (S) are used as light mist sprays or as prepared pour-ons.

Insecticides listed in this publication are considered safe when used according to label directions. Proper use will not result in illegal residues in poultry or injury to poultry or pets.

## Insecticide Application Methods

**Sprays:** Non-systemic insecticides may be used as sprays for poultry and pets. The spray needs only to wet the feathers or hair coat which requires a spray pressure of only 40 p.s.i. The addition of household detergent helps the spray stick to the feathers or hair.

**Feed Additives:** The insecticide gets into the poultry digestive system either by ingestion of feed (oral larvicide), salt or mineral containing the product. The insecticide passes through the digestive system with little absorption and then is available in the manure to destroy fly larvae. The feed additives must be consumed at 24-hour intervals to assure manure treatment.

**Self-treatment Devices:** Dust boxes for poultry can be considered self-treatment devices.

**Area Sprays:** Short residual, quick knockdown insecticide sprays applied to an area inhabited by house and

stable flies via hydraulic sprayers, mist blowers and foggers are area sprays.

**Residual Sprays:** These are long residual sprays applied to surfaces which serve as house and stable fly resting places.

**Bats:** Insecticides mixed with a house fly food source (sugar, molasses) serve as bait.

**Larvicides:** Insecticides applied to house and stable fly breeding areas.

**Dips:** Dips can be used on poultry to treat the infested part of the bird (vent).

## **Insecticide Recommendations for Insect Pests of Poultry (G78-391)**

Poultry production in Nebraska is concentrated primarily at large units in eastern Nebraska. Only a few farmers maintain flocks. As a consequence, the major poultry insect pests have changed in importance from those that directly affect the birds to the nuisance pests such as the house fly.

There are several species of lice and mites that occasionally are serious pests of poultry. These include the brown chicken louse, the chicken body louse and, less often, the large chicken louse, shaft louse, head louse and fluff louse. Poultry lice are not blood feeders, they chew dry skin scales and feathers. The feeding and movement of the lice on the chicken produces enough irritation to cause appetite loss and, subsequently, reduced production and increased susceptibility to diseases.

The most common mites are the chicken mite, Northern fowl mite and scaly-leg mite. Most chicken mites feed at night and spend the day in cracks around roosts, nests and walls. The Northern fowl mites remain on the bird. The chicken and Northern fowl mites feed on blood; the scaly-leg mite burrows into the skin on the lower legs and feet, sometimes crippling the bird.

If left untreated, these mites increase to the point of reduced production by the birds and an increase in mortality, either directly or from increased susceptibility to diseases.

Bedbugs may be pests of poultry, and workers accidentally may carry them to their homes where they become a pest of humans. Bedbugs also feed at night and hide during the day in insulation, wall cracks, loose boards, nests or other dark areas.

The section on house and stable fly control in and near livestock facilities is appropriate for poultry facilities, as well. Larger production units, however, must develop a system of fly control based on the type of buildings and production management they are employing. Effort must be made to prevent flies from gaining entrance to manure; care must be taken to keep the manure as dry as possible or move it out of the house to storage before flies start breeding in it.

Chiggers occasionally may be a pest of poultry, particularly turkeys raised under range conditions. Chiggers bore into the skin under the neck, wings and breast or around the vent and legs.

Control of mites and lice that leave the bird can be accomplished by treating the facilities. For those that remain on the bird, treatment can be by spraying or dusting the birds, by treating the litter or by providing dust boxes for self-treatment. Chiggers can be prevented by spraying the range and pens before the birds are pastured.

Turkey range should be treated with malathion at a rate of one lb 57 percent EC in 25 gallons of water per acre prior to pasturing birds. Repeat range spray at two to three week intervals. Treat pens with chlorpyrifos (Lorsban) at a rate of 100 gallons 0.5 percent/acre before birds are penned. Lorsban treatment intervals are four weeks.

## **Insecticide Control Recommendations for Insect Pests of Pets (G84-412, G84-717)**

This guide does not consider the wide spectrum of pets found in Nebraska but primarily concentrates on dogs,

cats, rabbits, birds, guinea pigs and gerbils.

Insect pests of goats, llama and buffalo would be similar to those of sheep and cattle and control recommendations also would be comparable. There are restrictions on insecticides used on milking goats to avoid milk residues. Smaller animals would have insect parasites similar to those found on dogs and cats.

Fleas, mites and ticks are the most common specific pests of pets. Birds also may have lice. Flies of the filth fly complex also are pests associated with pets unless strict sanitation and animal protection is provided.

<b>Insecticide Recommendations for Poultry Infested with Lice, Mites or Chiggers</b>			
<i>Insecticide</i>	<i>Application Method</i>	<i>Rate</i>	<i>Restrictions &amp; Comments</i>
<i>Carbaryl (Sevin)</i>	Dust	5% AI, 1 lb/100 birds	Dust must reach skin. Treatment-slaughter interval 7 days. Treatment interval, 4 weeks.
	Dust Box	5% AI 2.5 lbs/50 birds	
<i>Malathion</i>	Spray	0.5% AI, 57% EC 1 fl oz/bird	
	Dust (in litter)	4% AI, 1 lb/500 sq ft	
<i>Malathion</i>	Dust Box	4% AI, 1 lb/30 birds	
	Tail Dip	0.25% AI, 57% EC Wet vent and surrounding area	
<i>Permethrin (Ectiban)</i>	Spray	0.05% AI, 5.7% EC 1 gal/100 birds	
<i>Stirofos (Rabon)</i>	Spray	0.5% AI, 24% EC 1 gal/100 birds	Treatment interval 13 days.

<b>Insecticides Recommended as Residual Facility Sprays for Poultry Insect Control</b>			
<i>Insecticide</i>	<i>Application Method</i>	<i>Rate</i>	<i>Restrictions &amp; Comments</i>
Carbaryl (Sevin)	Spray	0.5% AI, 50% or 80% WP	Treat surface indicated by label
Malathion	Spray	1.0% AI, 57% EC	for pest to point of runoff.
Stirophos (Rabon)	Spray	0.5% AI, 24% EC	Do not contaminate feed or water.

Mosquitoes feed on dogs or any warm-blooded animals. Mosquitoes transfer a variety of diseases or parasites, including heartworm of dogs. Heartworm generally is considered a southern problem but a few cases have been reported in Nebraska.

Cats are sensitive to some insecticides. Make sure cats are listed on the label before using.

As is true for horses, many of the insecticides recommended for use on pets are formulated by companies specializing in pet products. Commonly used livestock insecticides are sold for pet use under a variety of trade names. Insecticide treatments for animals include sprays, dips, dusts, foams, shampoos, collars and pills.

Mites (usually host specific) parasitize almost all species of animals. The infestation site is termed "mange." The site is unkempt, painful and irritated as a result of mites burrowing and feeding. Mites are spread by animal contact.

Some species of mites burrow deep into the ear canal near the eardrum. Infested animals scratch or rub their ears and may run in circles or show other evidence of nervous disturbance. The hair follicle mite burrows into hair follicles and causes lesions at the infestation site from secondary bacterial infection.

Control of burrowing mites usually requires repeated applications of an insecticide. The ear mite may require removal of debris from the inner ear before treatment is successful.

Fleas attack pets, including birds, livestock and people. There are several species of fleas, but their life cycles are similar. A generation may be completed in a month. The larvae are white, legless and worm-like. Pupation occurs in a silken cocoon. Adult fleas are small, wingless, hard bodied and compressed from side-to-side. Their jumping ability makes them highly mobile.

The flea bite is painful, and some flea species are reservoirs for transmission of bacterial, viral and protozoan diseases and tapeworms. Control of fleas can be achieved best by control efforts aimed at both the premises occupied by the pet and the pet itself, in conjunction with sanitation.

Three tick species feed on pets in Nebraska. These are the American dog tick, which transmits Rocky Mountain spotted fever to dogs and man, and Piroplasmosis to dogs, the brown dog tick which transmits Rickettsia, encephalitis and other diseases or parasites, and the brown dog tick which transmits bovine anaplasmosis and Rocky Mountain spotted fever, Colorado tick fever, and tularemia. All of these species are three-host ticks. They start with small rodents or animals and eventually parasitize cattle, horses or other large animals.

Flies are pests of pets kept outdoors. The same control measures listed for livestock facilities will suffice to reduce fly populations around kennels or other pet facilities. Stable flies feed on the ears of dogs, particularly German shepherds and greyhounds. Treatment of the ears with insecticide at least weekly will provide some protection for the dogs.

<b>Insecticides Recommended for Insect control on Pets</b>			
<i>Insecticide</i>	<i>Application Method</i>	<i>Rate</i>	<i>Restrictions &amp; Comments</i>
<i>Benzene Hexachloride (BHC)</i> (gamma isomer of Lindane)	Spray	0.06% AI, 20% EC	Do not use on cats. Do not use on nursing pups or lactating dogs.
<i>Carbaryl (Sevin)</i>	Dust or Powder	3.9% AI, Dust 5% AI, Powder	Dust entire animal. Do not use dust on nursing puppies. Do not powder puppies under 4 weeks of age.
	Collar	16% AI	Do not use on puppies under 6 weeks

			of age or on sick or convalescent animals.
	Aerosol can	0.5% AI mixed with 0.05% pyrethrin Spray 20-30 seconds for 25 lb. dog	Do not let spray contact eyes or scrotum. Treatment interval 1 week
<i>Chlorpyrifos</i> ( <i>Dursban</i> )	Spray	0.225% AI Ready to use	Do not use on nursing dogs or pups under 10 weeks of age.
	Dip	3.84% AI, 50% EC 30 seconds in dip	Do not use on nursing dogs or pups under 3 months of age.
	Collar	8.0% AI	Do not use on dogs under 12 weeks of age or on sick or convalescent animals.
<i>Cythioate</i> ( <i>Proban</i> )	Feed Additive 1 ml/10 lbs body wt. Two applications/week	1.6% (oral liquid)	
	30 mg tablets 1 tablet/20 lb body wt. Two applications/week		
<i>Diazinon</i>	Dip	0.15% AI, 5% EC	
<i>Malathion + Benzene Hexachloride</i>	Sponge	0.3% AI, 18% EC	
<i>Malathion + Methoxychlor</i>	Spray	0.5% AI, 40.8% EC	Do not use on cats.
<i>Methoxychlor + Pyrethins + piperonyl butoxide</i>	Powder	3.16% AI Ready to Use	Do not use on nursing kittens or kittens under 4 weeks of age.
<i>Naled</i> ( <i>Dibrom</i> )	Collar	15.0% AI + 4.2% AI Propoxur	Do not use on cats.
		7% AI + 4.2% AI Propoxur	Okay for cats.
<i>Propoxur</i> ( <i>Sendran</i> )	Collar	9.4% AI	Do not use on sick or convalescent dogs. Do not use in conjunction with other insecticides.
	Dip	0.125% AI	Do not treat nursing animals under 1 month of age.

	Shampoo	0.25% AI	
	Aerosol	0.25% AI	
<i>Pyrethrins</i>	Aerosol	0.09% AI	Bird spray. Ready to use
<i>Pyrethrin + piperonyl butoxide</i>	Spray	0.05% AI	

<b>Insecticides Recommended for Outdoor Premise Treatment for Pets Application</b>			
<i>Insecticide</i>	<i>Application Method</i>	<i>Rate</i>	<i>Restrictions &amp; Comments</i>
<i>Carbaryl (Sevin)</i>	Dust	0.25-0.5% AI 1 lb/5000 sq ft	Do not expose kittens under 4 weeks of age to treated areas.
		5% AI 8 oz/100 sq ft lawn	Keep pets and children away until grass is dry.
<i>Chlorpyrifos (Lorsban) (Dursban)</i>	Spray	0.5% AI, 6.7% EC	
<i>Naled (Dibrom)</i>	Dry Bait (flies)	36% AI 1 tsp/1 lb sugar	
	Wet Bait	0.06% AI, 36% EC 1 lb sugar/2.5 gal water	

This publication does not supersede label information. Always read and carefully follow the instructions on the container label. For current information, contact your local Cooperative Extension Office. The use of trade names in this circular is not an endorsement by the Nebraska Cooperative Extension.

*Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Kenneth R. Bolen, Director of Cooperative Extension, University of Nebraska, Institute of Agriculture and Natural Resources.*

*University of Nebraska Cooperative Extension educational programs abide with the non-discrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture.*

