

# Treatment Of Poultry For Parasite Control

The Parasites of poultry can first be divided into two main groups, namely External and Internal. The external parasites consist of lice, mites and fleas.

Birds infested with external parasites are usually undernourished and in poor condition. There are many different kinds. Some are closely confined to the bird during the entire life cycle. Others wander freely from bird to bird. Some of these parasites are very particular as to which host they live on, while other species are found on several hosts. A few attack birds only at night, hiding in surrounding shelters during the day time.

Lice spend their entire life on the bird. It takes about two to three weeks for the eggs and nits to hatch and develop into mature lice. One pair of lice may produce 12,000 descendants within a period of a few months.

About 40 different species have been identified on domestic fowls. Heavy infestations render birds more susceptible to disease, and are sometimes the actual cause of death.

It is comparatively easy to rid birds of lice, but as many of the treatments used do not destroy the eggs or nits, a second treatment is usually necessary after an interval of ten days. There are four methods of treatment that may be used.

Dusting, dripping, greasing, and fumigating. The choice of material and method of application in a particular instance will depend upon cause, convenience and personal preference of the operator. Among the materials used successful are D.D.T., Nicotine sulphate, Solium fluoride, and Solium fluosulfate. It is also available to clean and disinfect the poultry house as well.

Mites are microscopic or barely visible to the naked eye. Many species affect poultry. The life cycle, in general, takes from one to four weeks for completion, depending upon species, climate and availability of the susceptible host or bird. Most mites in birds use blood or lymph for food, hence anemia is a more or less common symptom.

These mites that move rapidly over the skin will irritate birds to a considerable degree. Others burrow into the skin causing damage and scab formation. Invasion of feather follicles by certain species result in feather loss, owing to the basis of feathers being destroyed, or the birds pulling out the affected feathers.

The habits of the different species differ, and it is necessary to determine which species has infested a flock then treatment can be advised. Thorough cleaning and treatment of houses, neat boxes, etc. with some suitable spray is necessary in order to eradicate these pests.

Repeated treatments have to be carried out. Clean, dry, well-ventilated houses, which are so built as to admit plenty of sunlight, are much less likely to be badly infested than are damp, dirty, dark houses.

Treatments for mite infested houses include painting of roosts with 40 percent solution of Nicotine sulphate just before the birds go to roost spraying litter, roosts and crevices while the birds are out with a suitable spray; then removing and burning the litter and flushing out the nests with scalding water. In this method of treatment the entire inner surface of the building should be sprayed, and the flock kept out of the house until the fumes have disappeared and the oil has soaked into the wood.

Fleas are rarely found on P. E. I. poultry. Control measures include spraying the nests and roosts as well as the birds.

INTERNAL PARASITES  
Internal species of round worms and tape worms are found in the intestinal tract of poultry. When these parasites are present in large numbers they draw heavily on the nutritive juices and the birds do not assimilate sufficient nourishment. Some worms attach themselves to the lining of the intestines causing injury and some hemorrhage.

The constant irritation sometimes thickens the intestinal wall to such an extent that the opening of the bile ducts are closed. When not sufficient quantities of bile reach the intestines digestion is incomplete and the bird

is undernourished. Such changes obviously are more or less chronic and are never fully repaired even though the parasites are removed.

Worms also secrete two kinds of toxins or poisons. One of these destroys red blood cells, resulting in a pale condition on the skin, comb and wattles in heavily infested birds. The other poison effects the nerves. Its action is evidenced by a partial paralysis of the legs, blindness, or a twisting of the head to one side (wry neck). Worm infestations also render birds more susceptible to disease.

INTESTINAL WORMS  
Some intestinal worms are so small that they can barely be seen without the aid of a microscope. Others are several inches in length.

The general round worm has a direct life cycle. The female deposits its eggs in the Intestines of the bird and these pass out with the droppings. It has been estimated that a single female worm of this species may lay around fifty million eggs.

Under suitable conditions of moisture and temperature these eggs become infective within ten to twenty days and if picked up at this stage by chickens and turkeys will hatch in the Intestines.

Another common round worm is found in the ceca (blind guts), these worms are from 3-10 to 1-5 inches in length and may occur in very large numbers. The eggs become infective in seven days to ten days after passing out in the droppings. This worm is generally called the Cecal worm, and can harbour the causative agent of Blackhead in the turkeys. This is a chief reason why chickens and turkeys should never be raised together.

There are several other species of poultry round worms. However

the two species mentioned here are the one found most commonly in P. E. I. birds.

TAPE WORMS  
The tape worms are fairly widespread. The adult tape worms of poultry differ somewhat as to length (1-5 to 10 inches) and the number of segments vary from two to sixty or more. Tape worms attach their heads in the tissues of the intestinal lining, and the segments farthest from the head are continually breaking off and passing out with the droppings. These segments contain the eggs.

It is necessary for the eggs to be taken into the body of an intermediate host in order to become effective. Flies, slugs, snails, earthworms, grasshoppers, ground beetles, and dung beetles serve in this capacity for some of the tape worms. When a bird eats one of these infested intermediate host the life cycle of the tape starts over again.

CONTROL AND TREATMENT  
No worm medicine for poultry should be used until it has been shown by Post Mortem examination

that parasites are present in sufficient numbers to justify treatment. No treatment can be suggested until it is known what kind or kinds of worms are infesting the birds.

Drugs infective in moving one parasite may not be of any value in moving others. Moreover, no satisfactory treatments are available for the removal of some species of Intestinal worms. The best control of Intestinal parasites has been obtained by those owners who have relied exclusively on preventative measures rather than on curative measures or treatments.

Clean houses, clean ranges, clean property, balanced rations,

water, proper disposal of sick and dead birds, the avoidance of over-crowding, the separating of growing birds from mature stock are important factors in the control of worm infestation.

Worm remedies cannot take the place of sanitation. They do not destroy worm eggs but merely expel the parasites, or in the case of tape worms, only portion of the parasite. In fact, in properly managed poultry flocks there is not often need of worm remedies.

Warts appear most frequently on younger animals, but the infection may attack cattle of all ages. The causative agent is difficult to treat, and the virus spreads from animal to animal by direct contact.

Not a killer disease, warts cause economic loss by damage to hides. When large or numerous they can produce production by causing discomfort and distress to infected animals. A vaccine has been developed which will speed the disappearance of warts, but they often clear up without any attention. Should warts appear in winter, a confined cattle, and persist, a Veterinarian should be consulted to avoid secondary infections entering through the broken surfaces of the lesion.

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4-H MEMBERS RECEIVE W. I. TROPHY  
Phyllis Parker (left), North Wilshire, and Lois Moore, West Royal, are looking at the engraved silver trays they received at the Maritime Winter Fair last November. They were 1957 winners of the Maritime Competitions for Girls' Clubs. The trays were donated by the Women's Institutes of the Maritime Provinces.

## More Careful Attention Would Save Big Losses

Each year the disease and conditions affecting the various classes of livestock form a similar pattern to those observed in the previous years. It is very obvious from disease encountered that most of the losses, which would amount to many thousands of dollars each year, could be averted by more careful attention to the practical principals of livestock management.

In other words we should be constantly concentrating on improved husbandry practices. In poultry we could minimize our losses up to eighty or eighty five per cent by an improved poultry husbandry programme.

Cattle diseases most frequently observed were mastitis, retained afterbirth, acetonaemia, milk fever, difficult calving and poisoning. These six conditions alone resulted over thirty one hundred animals.

MANY AILMENTS  
In swine disease erysipelas showed an upward trend in the number of cases this year. Approximately one thousand cases were treated. Other conditions in

## Should Protect Water Supplies From Danger Of Pollution

In most rural areas the farm well is the only source of drinking water. Many such wells contain bacteria which make the water unfit to drink. The Department of Bacteriology at the Ontario Agriculture College operates a water testing service by which the supply of water for any farm or school may be sampled and tested. It is a wide plan to have water tested so that there is no danger to the farm family from drinking polluted water.

Bacteria may enter the well from several sources. Many soil bacteria gain entrance to the well. Others enter through surface water which runs into poorly located and improperly covered wells. These bacteria include many intestinal types which come from manure piles, barns, chicken houses, septic tanks, cess pools and outside privies. Animals, fowl and insects may all cause pollution of water where the well is not properly protected.

POOR POSITIONS  
Any condition which allows surface water or water in the top few feet of soil to enter the well should be eliminated. Wells located in hollows or depressed areas, may be flooded with surface water unless proper drainage is supplied to prevent this and unless the top of the well is tightly covered.

Wells should be located so that surface water drains away from them. The top of a small rise of land is desirable for this. To prevent movement of bacteria through the soil to the well, it should be as far as possible from any source of pollution—barn, privy, septic tank and chicken pen. In clay soils the well should be 75 to 100 feet from any possible source of pollution.

## Goose Egg Incubation Is Outlined

Incubation practices used for chicken eggs must be modified if satisfactory results with goose eggs are to be achieved. Goose eggs require the same incubation temperature as chicken eggs, but unlike chicken eggs, they require different turnin and humidity practices. The eggs should be turned at least three times daily during the 28 - day incubation period, and turned completely over each time, i.e., through a complete 180 degrees, or as close to 180 degrees as possible. This is in contrast to chicken eggs which are turned only through a 90 degree angle. Goose eggs should be wetted down in the 28 day incubation period about three times a week. This may be done by spraying the eggs with a watering can or dribbling the eggs in water. The water used for this purpose should be about the temperature of the water in the incubator.

## Use Great Care Handling Gas

Would you handle dynamite carelessly? Certainly not, and yet ordinary gasoline, pound for pound, has three times the explosive power of dynamite. Because of the terrific destructive energy available in motor fuel, it must be handled with extreme caution.

1. Gasoline is highly explosive when mixed with air. For this reason, avoid splashing the gasoline when handling it.

2. Repair all leaks in storage tanks, tractor fuel tanks, fuel line connections, etc.

3. Always keep the cover on the tractor battery box. A wrench dropped across the battery terminals can easily start a fire. Keep all electrical wiring and connections on the tractor in good condition.

4. Do not smoke near gasoline. Be especially careful around gasoline when ventilation is limited.

5. Use a metal sediment bulb on the tractor when using a mounted corn picker. In case of fire, the metal sediment bulb will not break and feed the fire.

6. Install a handy carbon dioxide type of fire extinguisher on the tractor for emergencies.

7. Use a spark arrestor on the exhaust stack when it must pass close to combustible materials.

8. Never refuel a tractor when the engine is running or hot.

## earth should be graded to carry off waste water.

The prevention of pollution of the farm water supply is essential to the health of the farm family. A little care and attention in locating and constructing the new well will be well worth while. If a well is in doubtful location arrangements should be made to have the water tested by the Bacteriology Department will be Ontario Agricultural College. The Bacteriology department will be able to determine whether the water is safe to drink and many recommend means of improving polluted water.

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