Control of lice on poultry

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CONTROL OF LICE ON POULTRY

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DURING February and March of 1965 some particularly heavy body lice infestations were found on fowls in both deep litter and cage units in Western Australia. In some instances comparatively new laying cage units were involved. The most seriously-affected flocks showed marked unthriftiness and depressed egg production.

In many cases of severe infestation, the birds had been transferred to laying cages at ages ranging from six to twelve weeks after having been reared on wire floors or in deep litter units. The lice were not noticed until the pullets reached the point of lay, and in all instances the flocks comprised a large proportion of very backward birds. It is accepted that a thrifty bird is more able to cope with lice infestation, and this was supported as the backward birds were the most severely infested. On these birds in particular the body lice were spread extensively over the body, ranging from the tail and abdomen to under the wings, and extensive damage to the skin was apparent.

Although lice are not considered to be a major problem in the poultry industry, cage farmers in particular are advised to examine their flocks thoroughly at regular intervals as the build up of lice may be very rapid. Two factors contributing to this are first, birds in cages are unable to clean themselves because of debeaking, which is most advisable when birds are closely confined with more than one bird to a cage, and second, the birds are unable to bath themselves in litter or sand.

Laying cage farmers sometimes buy their replacements as started stock, and on odd occasions this has led to infestation of the older stock. Farmers who buy started pullets should thoroughly check the young birds on arrival, or preferably the pullets should be examined on the grower's farm.

Species of Lice Affecting Fowls

About 40 species of lice are known to attack poultry, but the five most prevalent are the wing louse *Lipeurus caponis* (L.), body louse *Eomenocanthus stramineus* Nitz., head louse *Lipeurus heterographus* Nitz., fluff louse *Goniocotes gallinae* (De Beer) and shaft louse *Menopon gallinae* (L.).

Of these five, the body louse has been involved in all the recent outbreaks and is by far the most common species affecting poultry in Western Australia.

Life Cycle and Description

Poultry lice are wingless parasitic insects, and are host specific being unable to live away from their particular host for more than three to five days. Their mouth parts are located on the underside of the head and are adapted for biting. Apart from the irritation caused
by the insects moving over the body, considerable damage is done to the scales of the skin and the base of the feathers as the lice feed. The lice have six legs provided with claws to facilitate movement amongst the feathers of the bird.

Lice do not suck blood, but the scales of the skin are lifted in heavy infestations, and in scratching or endeavouring to clean itself, the bird may cause blood to be drawn and scabs to form on the skin. In these severe cases a loss of production and restricted growth results.

The warm, humid conditions of the autumn months are most suitable for lice reproduction. However outbreaks are not uncommon throughout the remainder of the year.

Eggs are laid in clusters, and are held together by a sticky secretion, which also attaches them to the feathers or quills. Over a period of about three weeks the eggs may accumulate to form clusters, one to two inches in size on a group of several feathers, or as small colonies on individual feathers. A single pair of lice may produce 100,000 descendants in two to three months.

The young lice or "nymphs" hatch out in five to eight days and although smaller, closely resemble the adults. After feeding and shedding the skin (moulting) several times over a period of three to four weeks, the lice are fully grown.

The adults, generally yellow and sometimes with black markings, are elongated and flattened and about 1/4 in. to 3/16 in. long.
Insecticides

Numerous insecticides are available for lice control and some of the more common are listed below. All are reported to be effective, provided the manufacturers’ recommendations are followed and the operation is performed efficiently.

MALATHION, 0.5 per cent. spray applied directly to the birds in the cages, or 1 per cent. sprayed onto the walls and floors of deep litter sheds.

A 0.5 per cent. solution can be made by mixing one part of a 50 per cent. miscible oil in 100 parts of water. A 1 per cent. solution can be made by mixing one part of a 50 per cent. miscible oil to 50 parts water.

Poultry tick and red mite may be killed by using a 3 per cent. solution made from one part of miscible oil to 17 parts of water.

MALATHION DUST, 4 to 5 per cent. applied directly to the birds or to the litter and nest boxes.

BENZENE HEXACHLORIDE (B.H.C.), 0.5 to 1 per cent., applied liberally with a brush to the perches.

D.D.T., 1 per cent., applied as litter dust baths and in the nests.

NICOTINE SULPHATE, 40 per cent., (Black leaf 40) applied by brush or as a thin trail on the perches about half an hour before the birds roost.

Control

An experienced operator may be able to suspect lice by the general air of discontent among the poultry and with odd birds persistently scratching themselves. However, it is often necessary to examine numerous birds before lice are found. Even in severe infestations individual birds surrounded by others that are “swarming” with lice may appear to have no lice at all. Lice are very sensitive to light and hide among the feathers.

Some people are sensitive to lice and can detect them after only minutes in the poultry shed without even handling the birds. Such people may suffer from irritation for hours afterwards.

As poultry lice are unable to live away from their hosts for more than three to five days, removing all birds from an affected house for seven to 10 days before re-stocking with clean birds will prevent carry-over of the pests.

Two essential principles of lice control are—

- When using insecticides, ensure that all poultry on the premises are treated, including cockerels used on breeding farms and cull birds separated for market or other reasons.

- Thoroughly examine, and treat if necessary, all new birds brought onto the premises.
The nicotine sulphate treatment should be repeated within 14 days, as there is little or no residual action. It should be applied on a still night so that the fumes are not dispersed through the shed, but there should be adequate ventilation because excessive fumes may kill some birds.

When using dusts or sprays avoid contaminating the feed or water, as most insecticides are toxic, particularly in excessive quantities.

Control Measures in Brief . . .
- Inspect the flock regularly for the presence of lice. Often persistent scratching and "preening" is an indication.
- Examine several birds each time as light infestations can be easily missed.
- Inspect all stock brought onto the property.
- Treat all adult birds on the farm when lice are found.
- For the safety of the operator and the flock follow the manufacturers' directions when using insecticides.
- Do not contaminate feed or drinking water with insecticides.

References
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