

tion is not uncommon. It is frequently stated that a few roundworms do no harm to the hen and that the small caecal worms have no ill effects, but scientific ideas on these worms are now changing and all poultry keepers are strongly advised to keep their stock, especially growing pullets, clear of these parasites. The earlier method of deworming was to put nicotine sulphate in the wet mash at the correct dosage rate and to hope that each bird would eat sufficient, but birds dislike it to such an extent that they will eat some of the medicated mash only after being starved. Even then few of the birds will eat enough.

The correct treatment is by individual dosage and, though some flock owners contend that they have not the time to do this, it can be carried out very simply and quickly by either of two methods. The first is by injecting liquid carbon tetrachloride into the bird's crop with a special type of drenching gun. With experience and the help of three people to catch the birds the operator can dose 200 in 20 minutes. The second is by giving the carbon tetrachloride in pill form, which is easy but takes longer than using the deworming gun.

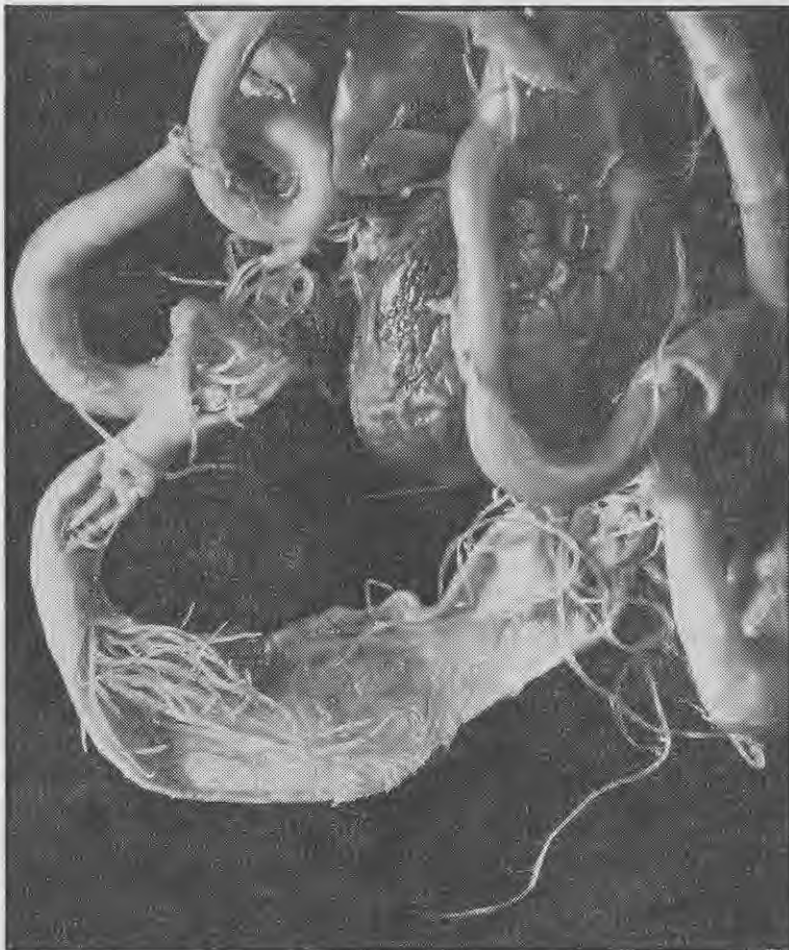
It is most important that growing pullets be prevented from becoming even moderately infested with worms, which affect the bird's appetite, rate of growth, maturity, and egg laying. Whether or not young pullets are suspected of being infested, they should be dewormed at 3 months of age and again at 4½ to 5 months.

In the past poultry keepers were always advised to take great care after dosing to clean up the expelled worms and worm eggs, but now it is felt that serious reinfestation usually is prevented by the development of immunity as the birds increase in age. In many cases a second deworming is easier than making a thorough clean-out.

Vitamin A Deficiency

Many poultry ailments are aggravated and even encouraged by the bodily condition of birds being weakened by worms. Another predisposing factor not considered or properly appreciated by many is lack of certain vitamins, of which vitamin A is important. What used to be called nutritional roup is now known to be not roup at all but vitamin A deficiency.

Lack of vitamin A, infestation with worms, or both weakens young stock to such an extent that intestinal coccidiosis is likely to develop in cases in which otherwise it would cause little or no trouble. Vitamin A deficiency can be guarded against by ensuring that growing chicks receive adequate amounts of good-quality greenfeed. If doubt exists about the vitamin A content of the greens, or if growing stock are not getting sufficient direct sunshine, the feed should be supplemented with 1 per cent. by weight (based on the total daily food intake) of a reliable brand of fish-



The intestines of a fowl cut open to show a heavy infestation of roundworms, the most prevalent of internal parasites of poultry.

liver oil placed in the mash or chick grain. Routine dosing for worms should also be carried out.

External Parasites

Most poultry keepers can at least recognise lice and mites. A bad infestation of these parasites can eventuate only under poor management conditions. They are easy to keep under control if their habits and life cycle are understood. Control methods depend on the principle that mites live and hibernate in the poultry house, starting at the roosts, and the body louse passes its whole existence on the fowl. The mite gets on to the fowl on the perch at night and leaves it before daylight, but the louse never quits the bird except accidentally.

The cheapest methods of counteracting mites are by painting with a brush or spraying with a pump all interior woodwork with creosote, tar distillate, old car sump oil, kerosene, or a combination of them. Special care must be taken to ensure that the liquid seeps well into cracks and spaces between overlaying pieces of timber, especially about the perches and nests.

The house should be permitted to dry out reasonably before the birds are placed in it, as they can be upset by fumes, particularly if they are in lay. If the henhouse is thoroughly treated and cleaned once yearly and the perch and nest areas are painted or sprayed at 3-monthly intervals, mite infestation will be prevented.

As little timber bracing as possible should be used when perches are made and wood should not be nailed to wood, as the cracks make an ideal hide-out for mites. Perches can be rested on two cross-bars suspended by wires from the rafters, and even then they need not be nailed to the bars but can be slotted between projecting nails. A space of at least 3 in. should be left between perches and side walls.

Body lice live entirely on the skin of fowls. They are found mostly on the abdominal portion of the bird, as they prefer the loose, fluffy feathers between the vent and the keelbone. These parasites lay their eggs at the bases of the feathers around and under the vent and also, in cases of very heavy infestation, under the wings. Control is best achieved by direct application to the skin of 40 per cent.