Incidence of Turkey Disease

A study of diagnostic records

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AN EXAMINATION of the records of the Laboratory Diagnostic Service for the past ten years reveals that a number of diseases which were scarcely known to exist or were unknown at the beginning of the period are now of major importance to the turkey industry. A list of such diseases includes coccidiosis, hexamitiasis, infectious sinusitis, moniliasis, paratyphoid infection, pullorum disease, swine erysipelas, trichomoniasis, ulcerative enteritis, and so-called unknown disease. Enterohepatitis (blackhead) still undoubtedly is the most important disease of turkeys, but the time when it was the only disease of turkeys which merited serious consideration has passed. During the past five years more cases of coccidiosis than of enterohepatitis have been directed to the attention of the laboratory. This does not mean that coccidiosis is more prevalent than enterohepatitis because the latter is usually more readily recognized by growers of turkeys and specimens may not be submitted for laboratory examination.

Sanitation Diseases

Coccidiosis, hexamitiasis, moniliasis, trichomoniasis, and ulcerative enteritis may be grouped and considered collectively to be the result of insanitary conditions. The marked increase in these diseases reflect a need for more attention to sanitation. In many instances contaminated material is carried on the feet of the caretaker from the adult flock to the poults. Then the infections multiply in the poults, litter, etc., principally due to the lack of sanitation. For example, coccidiosis frequently follows crowding of poults and subsequent damp and dirty litter. The other diseases in this group can be considered in the same manner, although the means by which they are carried from place to place and the subsequent development of the causative agents may be somewhat different.

Congenital Infections

Paratyphoid infections and pullorum disease in poults are usually the result of transmission of the respective infection from the parent stock through the egg or from exposure to infection in the incubatory. It is becoming easier to buy poults from flocks which have been tested and are recognized to be free of pullorum disease. Such poults are known officially as Pullorum-Clean. Entirely satisfactory methods of testing for paratyphoid infections in breeding flocks are not available. The breeder of turkeys or the buyer of poults must, therefore, rely on the health history of the flock in previous years.

There is much to be learned about infectious sinusitis. This disease seems to be gaining in importance very rapidly. The sinuses are not always involved and in many birds the lower respiratory tract and the air sacs are affected. The disease may spread from adults to poults and be perpetuated from year to year.

Swine erysipelas is less common than other diseases in turkeys. It occurs, however, in some cases with serious losses shortly before marketing time. The observations thus far suggest that it is most

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likely to occur in overcrowded porches, or in birds exposed to adverse weather conditions.

Unknown disease (frequently called "blue comb") has usually appeared in the late summer or early fall. This apparently is the same condition which may appear in chickens at about the same time.

As the turkey industry grows and our knowledge of turkey diseases increases there is growing evidence that sanitation is of basic importance.

Necropsy Records

An examination of the necropsy records for the past ten years reveals that diseases which were unidentified or were directed to the attention of the laboratory only infrequently at the beginning of the period are now of major importance to the industry. A list of such diseases includes coccidiosis, hexamitiasis, infectious sinusitis, moniliasis, paratyphoid, pullorum, swine erysipelas, trichomoniasis, ulcerative enteritis, and so-called unknown disease.

The following compilation of diagnoses for the ten year period 1935-44 includes the observations on 2,547 turkeys received in 483 consignments. The diagnoses are largely on a consignment basis and the percentages are based on the total diagnoses.

Diagnoses	*No.*	*Percent*
Actinomycosis	2	.30
Aspergillosis	8	1.20
Avitaminosis A	3	.45
Avitaminosis G	5	.75
Coccidiosis	71	10.69
Enteritis	28	4.21
Enterohepatitis	74	11.14
Fowl cholera	7	1.05
Fowl pox	9	1.36
Fowl typhoid	8	1.20
Hexamitiasis	3	.45
Infectious sinusitis	4	.60
Internal parasites	18	2.71
Miscellaneous	58	8.73
Moniliasis	15	2.26
No diagnosis	68	10.24
Omphalitis	6	.90
Paralysis	8	1.20
Paratyphoid	68	10.24
Paratyphoid reactors		
Negative	10	1.50
Positive	5	.75
Perosis	15	2.26
Pullorum disease	38	5.72
Pullorum reactors		
Negative	15	2.26
Positive	12	1.81
Rickets	26	3.91
Staphylococcosis	8	1.20
Swine erysipelas	10	1.50
Trichomoniasis	13	1.96
Ulcerative enteritis	39	5.87
Unknown disease	10	1.50

Hookworm Control

At his fox hound kennels in Ambler, Pa., Mr. Ely has practically eliminated hookworm infection, one of the most powerful killers in the dog world, by sprinkling the yards in which his dogs run with concentrated salt water twice a week. He uses table salt to make the brine, and spreads it with an ordinary garden sprinkling can.

The brine kills hookworm eggs by drying them out, and is the only solution known to be fatal in this respect. The only other way to kill them is to burn them—a hard job, since they are so tiny they can be seen only under a microscope. This means that the entire area has to be scorched if fire is to be effective. Brine, of course, is cheaper to use and less dangerous, and, in addition to destroying surface infection it seeps down through the ground and kills the eggs there, too.

Because the eggs are microscopic many dogs suffer from infection when their owners least suspect it. Veterinarians have discovered that they carry it on their paws, and Mr. Ely has worked out a way of sterilizing their feet as well as their yards. He has placed a wooden box filled with wet salt in the kennel in such a way that the dogs have to walk through it before they reach their feeding pans and in that way he has made sure that they arrive at their meals with clean feet.

Tests made after this method of dealing with the infection was inaugurated show that the disease was eliminated throughout the kennel. Far from injuring the paws of dogs, as some owners believe, salt toughens the pads of their feet, and to that extent the brine that results from the use of rock salt on streets during the winter to remove snow and ice, is beneficial. If there is a cut on the dog's foot, for example, brine acts as a disinfecting agent and tends to cleanse the wound.