American Association of Avian Pathologists

Report of the Committee on the Current Status of Poultry Diseases - 1973

I. Preamble.

This committee was charged with assembling current information with regard to trends in poultry diseases and the emergence of new or unusual disease problems in all reporting regions of the United States and Canada. This effort was not intended to duplicate nor to be as definitive as the official reports of the various regions. Rather, it was hoped that information and professional opinions solicited from several sources could provide an up-to-date and concise picture of the dynamics of the major diseases affecting poultry in North America. It should be made very clear at the outset that this Committee has not derived its report from hard statistical facts. This report, therefore, is not an authoritive source of information and should not be so interpreted.

In our consideration of current disease problems we have dealt first with the exotic entities, secondly with new or emerging diseases and, finally, with the more common diseases grouped according to etiologic category. Currently used terminology is applied to new entities without detailed definition.

II. Exotic Diseases.

Viscerotropic, velogenic Newcastle Disease (VVND) continued to present a problem primarily in the quarantine area of California. The progress of eradication efforts has been well covered in the USDA publication "Foreign Animal Diseases Report". The quarantine

area has been progressively reduced in size and the number of confirmed outbreaks has decreased in recent months. Velogenic Newcastle disease was also diagnosed (during the year) in flocks located in Texas (Hidalgo County) and in southern Alberta. From available information, both outbreaks have been contained without spread to other chicken flocks. Puerto Rico remains under VVND quarantine.

Duck virus enteritis (duck plague) has been diagnosed in free flying waterfowl at a large wildlife refuge in South Dakota. This is the first documented occurrence of this disease in the central flyways of the United States. Duck plague has been confirmed in past years as a cause of die-offs in waterfowl on both the east and west coasts.

III. New or Emerging Diseases.

Inclusion body hepatitis continued as a significant disease entity in eastern and western Canada and in all concentrated poultry rearing areas of the United States with the apparent exception of the southwestern states. Reports from Canada indicate that the incidence of the disease has decreased from that of previous years and it appears that the incidence has also been somewhat lower in the north central and southern regions. However, inclusion body hepatitis is reportedly diagnosed with increasing frequency in the northeastern region of the United States.

Decreased egg production and shell quality problems associated with degenerative and inflammatory liver lesions and a mild tracheitis continue to constitute a costly disease syndrome in the midwestern

and southeastern states. This problem, in its early stages of definition, appears to be related to infection with an adenovirus which is serologically similar to the CELO virus.

Viral arthritis (tenosynovitis) continued as a frequent cause of leg weakness in broilers in the northeastern and southern states. This disease was not mentioned as a noteworthy problem in other reporting regions of the United States and Canada.

A skin condition of broilers, variously known as "scabby skin condition""necrotic dermatitis" or "dermatitis" has been a serious problem in concentrated broiler growing areas of the United States. This condition is characterized by feather loss and disseminated encrusted erosions of the epidermis particularly over the back and lateral thighs. The problem often is first recognized at the processing plant in birds that otherwise seemed healthy. The major economic consequence of this condition rests with extensive downgrading and trimming of broilers necessitated by the skin lesions. The causative factor(s) of this condition remain enigmatic.

A syndrome known variously as "the acute death syndrome", "flipovers" or "heart attacks" was reported in many Canadian broiler flocks in the prairie provinces and Ontario. In some flocks the incidence has been over 2 percent. Well fleshed birds are found dead with often the only significant lesion being edema of the lungs. The etiology is not known.

Marble spleen disease of pheasants has been diagnosed in Alberta, Indiana and Connecticut. A characterization of this disease has been published in Avian Diseases.

IV. Viral Diseases.

A. Marek's Disease

All reporting regions note a marked reduction of Marek's disease as a result of widespread use of vaccines. However, this disease is still seen with significant frequency and there are numerous reports of outbreaks in vaccinated flocks. In many but not all cases vaccine failures were attributed to either errors in handling and administration of the vaccine or early exposure to the Marek's virus.

B. Lymphoid Leukosis.

Lymphoid leukosis was reported as a sporadic problem from all regions of the United States and Canada.

C. The Viral Respiratory Diseases.

Newcastle disease and infectious bronchitis continued to be recognized as sporadic or common disease problems in all areas but no remarkable change in incidence patterns were noted. In the northeastern states variant strains of infectious bronchitis are suspect in the causation of an increasing incidence of air sac disease in broilers and layer replacement pullets. Infectious laryngotracheitis (ILT) was not noted as a serious disease entity in eastern Canada or in the northeastern, north/central or southern states. However, it was reported that virulent/strains of the virus have caused severe problems in British Columbia and in some flocks in the state of Washington. ILT was also diagnosed in Oregon and has continued without major incidence changes in California. An outbreak of ILT in 6-week-old pheasants was reported from Ontario. Respiratory fowlpox affected several flocks in Ontario and the midwestern and southern states but was not mentioned as a noteworthy disease problem from other regions. Influenza was noted as a

sporadic disease entity of turkeys in the prairie provinces of Canada and the western and midwestern states.

D. Other Viral Diseases.

Fowl pox, infectious bursal disease, and avian encephalomyelitis persisted as common or sporadic disease problems in most reporting regions without any remarkable change in incidence from last year. Several cases of pigeon pox were recorded in Ontario. An epornitic of eastern encephalomyelitis in pheasants was detected this past fall in Connecticut and New Jersey. Turkey viral hepatitis has been observed with some frequency in the midwestern states.

V. Bacterial Diseases.

Salmonella and Arizona infections continued to constitute very common diagnostic entities. Reportedly most infections are subclinical but these infections remain of great concern to breeders. In the southwestern states, Arizona infections were less frequent and mortality from this cause appeared to decrease. Colibacillosis was a frequently diagnosed bacterial disease in all regions, affecting both chickens and turkeys. Chronic respiratory disease and infectious sinusitis were reported in significant numbers from some midwestern, northeastern and southern states and from Canada. Mycoplasma gallisepticum reportedly is widespread in egg producing flocks in several states and M. meleagridis has continued to be prevalent in most turkey-growing areas. Mycoplasma synoviae infection remained an important part of the leg weakness problem in most regions and thoracic air sac lesions constituted an important cause of broiler condemnations in the major broiler-growing southern states.

Staphylococcosis was a steady and persistent part of the leg weakness problem in both chickens and turkeys. Fowl Cholera has continued to be an economically important disease of poultry especially in concentrated turkey-growing areas. Gangrenous dermatitis (clostridium infection) was mentioned as an important disease problem in growing chickens in Canada and in the southern, northeastern and western regions. Although not remarkably changed from previous years the incidence of erysipelas continued at a significant level in densely populated turkey-growing areas. Infectious coryza occurred sporadically in several regions. Tuberculosis is still seen with some frequency in small farm flocks in midwestern Canada and the United States.

VI. Mycotic Diseases.

Aspergillosis and Candidiasis have persisted as common infections of both chickens and turkeys.

VII. Parasitic Diseases.

Coccidiosis remained one of the most frequently diagnosed diseases of chickens. Reportedly some of the new anticoccidial medications have been highly effective and, in some areas, this has been reflected in a notable reduction in incidence.

Ascaridiosis remains a frequent problem in floor-reared chickens. Capillaria infections of the crop and intestines and ectoparasites (lice and mites) were noted as sporadic problems in several regions. Histomoniasis (blackhead) remains an occasional problem in young turkeys but generally this disease has been well controlled.

VIII. Nutritional Diseases.

Selenium deficiency and fatty liver syndrome remain as significant disease problems in the midwestern, southeastern, and northeastern regions and in Ontario, although the incidence appeared to have decreased somewhat in the past year. Rickets and osteoporosis ("the soft bone problem") also were reported frequently in all regions. Aflatoxicosis was mentioned as an important disease entity from the southern region.

IX. Miscellaneous or Etiologically Undefined Diseases.

Ulcerative enteritis, and necrotic enteritis as well as "non-specific" enteritis were diagnosed with significant frequently in all areas but particularly in the northeastern and southeastern states with concentrated broiler grow-out operations. Undefined leg weaknesses also constituted an important diagnostic entity in most regions and include such morphologic entities as tibial dyschondroplasia, kinky-back (spondylolisthesis) granulomatous spondylitis and various bone deformities. Transmissible enteritis (bluecomb) in turkeys was not mentioned as a serious problem and a reduction in incidence was noted from western Canada.

X. Comments.

With few exceptions, the incidence patterns of poultry diseases, as brought to the attention of this Committee, did not change drastically from those reported in 1972. However, certain trends that may be of concern to the poultry industry were evident and these are noted as follows: 1) a persistent or increasing level of Mycoplasma gallisepticum infection particularly in commercial layers, 2) an increasing incidence of skin problems in broilers particularly

in the southern states, 3) a persistent or increasing level of skeletal or leg weakness problems, 4) an increasing level of egg production and shell quality problems in the midwestern and southern states, 4) persistence of Marek's disease in the face of reasonably good vaccination procedures, 5) an increasing concern about possible effects of lower quality feed grains and other feed ingredients, and 6) persistent or increasing incidence of enteric disease in both growing and adult chickens and turkeys.

A significant drop in the number of poultry accessions was noted from several laboratories over the past year. This has been attributed variously to fewer infectious disease problems, establishment of a fee schedule in some laboratories, and the general beneficial effect of widespread use of Marek's disease vaccines.

Respectfully submitted,

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