AVIAN DISEASES

REPORT OF THE EDITOR, JULY 1974

Volume 17 (1973) was completed during the change-over of editors. The transition was accomplished without difficulty due to excellent cooperation from Dr. Grumbles, Dr. Hall, Mr. Deming, Mr. Arnold, and the Editorial Board.

Volume 17 was 924 pages made up of 93 articles, 9 case reports and 5 research notes for a total of 107 manuscripts published.

Since assuming the responsibility for all new manuscripts on June 1, 1973, there has been a total of 118 submissions (94 articles, 16 case reports and 8 research notes).

Of these 118 manuscripts 6 were rejected outright and 31 returned to the authors for revision and resubmission. This gave us an initial "turn down" rate of 31%. Thus far, 15 of the 31 manuscripts returned for revision have been found acceptable following resubmission. This leaves us with a 19% overall rejection rate for the past year.

The apparent low number of new submissions in combination with the 19% rejection rate has resulted in smaller issues thus far in Volume 18. However, new submissions seem to be increasing since the first of the year.

Our average time from date of submission until date of publication (date issue received by AAAP members) is now 5.4 months. I believe that is as good as we will ever do with a quarterly journal. This average obviously does not include any manuscripts returned to the authors for revision and resubmission. In the past year we have had 4 manuscripts lost in the mail (2 domestic and 2 foreign).

The Editor's budget for the period May 1, 1973 thru April 30, 1974 was $8,371.00. Dr. Hall's report shows cash disbursements for that period of $8,556.92. However, slightly over $200.00 remained in the postage meter so we actually "lived" within our budget. The May 1, 1974 thru April 30, 1975 budget is presented for your adoption plus a tentative budget for 1975-76.

D. P. Anderson, Editor

AMERICAN ASSOCIATION OF AVIAN PATHOLOGISTS

REPORT OF THE COMMITTEE ON THE CURRENT STATUS OF POULTRY DISEASES - 1974

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 authoritative 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 remarkable trends in long-established 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) has occurred sporadically in the United States during the year. The last isolation of the virus in southern California was from a turkey flock on June 28, 1973. The last quarantine in this area was lifted as of November 3, 1973:VVND virus was isolated from chicks hatched at a Kentuckey hatchery from imported hatching eggs originating in Hungary. Possible exposures from this outbreak were traced to three states (Tennessee, Kentucky and Georgia) but surveillance programs failed to disclose evidence of spread. On February 13, 1974 the VVND virus was isolated from a small flock of chickens in El Paso, Texas. This outbreak and the subsequent surveillance has resulted in the depopulation of 88 flocks comprising 190,570 birds as of April 23, 1974. Exotic Newcastle disease virus has been isolated sporadically during this reporting period from game birds and psittacine species entering the United States. Two cases of VVND were confirmed in the Province of Ontario in July, 1973 but the outbreaks were apparently contained. The progress of eradication efforts has been well covered in the USDA publication "Foreign Animal Diseases Report."

No exotic poultry diseases other than VVND have been brought to the attention of this committee during this reporting period.

III New or Emerging Diseases

Inclusion body hepatitis has continued to present a significant problem in young chickens (both broilers and layer replacement stock) in all major poultry producing regions of the United States and Canada. This disease was reported to this committee for the first time from the western states. Incidence is increasing in the northeastern states and the disease appears to be affecting chickens at an earlier age. Research on the etiology of inclusion body hepatitis appears to have established the etiology as a serologically distinct adenovirus.

Adenovirus - related production slumps continue to be reported in several areas (midwestern and southeastern United States and western Canada) affecting commercial layers and broiler breeders. In specific instances where the associated adenoviruses have been studied, they have proven to be serologically unrelated to the inclusion body hepatitis virus which produces clinical disease in younger chickens (4 to 10 weeks).

A hepatitis of turkey breeder hens associated with decreased egg production, altered egg shell color and texture, and decreased hatchability has been seen in the southeastern states. This condition bears a striking resemblance to the turkey hepatitis described by Snoeyenbos. A virus isolated from affected turkeys has been shown to induce hepatitis when injected into susceptible poults.

Viral arthritis continued as a frequent cause of leg weakness in broilers in the northeastern and southern states. This disease is reportedly emerging as one of the most frequently occurring diseases in broiler breeder replacements and broiler breeder hens in the southeastern states. Viral arthritis has apparently caused increased lameness and elevated mortality over an extended period in infected flocks.

A syndrome known as "the acute death syndrome" or "heart attack", while still undefined etiologically, remains one of the most common conditions in broiler chickens in Ontario. This disease may effect 2% of affected flocks and is particularly evident in rapidly growing well fleshed birds. The only significant lesion at necropsy is pulmonary edema.

Fatty liver - kidney syndrome, a condition well established in young broiler chickens in England, was an apparent problem in a few flocks in Ontario.

Deep pectoral myopathy also known as "green muscle disease" has caused severe economic loss in turkey breeder hens at processing in Ontario. This condition, an apparently inherited weakness, has been observed previously in Oregon and possibly other western states.

A skin condition known as "Scabby hip disease" persists as an important cause of downgrading at processing plants in the southern states. This problem has been related to slow feathering, particularly in strains developed for feather sexing. Additionally,there are apparent relationships to dietary levels of sulfur containing amino acids, hot humid weather and to the use of a commercial coccidiostat. Occasional problems of this nature were reported from the province of Ontario.

IV Viral Diseases

Marek's disease is obviously decreasing in incidence in all reporting regions as a result of routine use of vaccines. Reduction of Marek's disease is accompanied by marked improvement in livability of commercial layers and breeder hens and often an apparent decrease in the incidence of other disease problems.

Lymphoid leukosis was rarely mentioned as a problem deserving of regional input. One report specified a strain predilection for lymphoid leukosis. Obviously our contacts have experienced lymphoid leukosis problems sporadically or rarely during this reporting year.

An increasing incidence of fowl pox has been observed in unvaccinated commercial layers in the midwestern states and in southern New England. In the southeastern states fowl pox has emerged as a serious problem in several broiler flocks. Reportedly the disease has caused downgrading and condemnations at the processing plant and some producers are using tissue culture pox vaccine in conjunction with Marek's vaccine with beneficial results.

Infectious laryngotracheitis has affected several commercial layer flocks in Indiana, Maine British Columbia (Fraser Valley area) and, less frequently, in the prairie provinces of Canada Although many of these outbreaks have been traced to management errors, the strong need for re-evaluation of vaccine programs was expressed by several contacts.

Influenza in turkeys is a disease of significant concern in areas of the midwestern and western states.

Eastern and western encephalomyelitis in avian species has been diagnosed with significant frequency in the New England states and in at least one pheasant flock in Ontario during this reporting period.

Infectious bursal disease was reportedly diagnosed in the prairie provinces of Canada for the first time this past year.

V Bacterial Diseases

Several outbreaks of type-C botulism occurred in broiler flocks in Georgia resulting in high mortality in the affected flocks. The problem has recurred on several farms and,in most instances,the source of the toxin was not identified (no significant concentration in litter, feed or water).

Early chick and poult mortality associated with numerous bacterial egg shell contaminants (Pseudomonas, Staphylococcus, coliforms,etc.) has been a significant problem in virtually all regions.

Mycoplasma infections (M. gallisepticum, M. synoviae and M. meleagridis) received a great deal of attention in all regional reports. It was obvious that all pathogenic species of Mycoplasma are frequent causes of significant and often confusing disease problems in the field. Air sac disease is the common manifestation in broilers and commercial layers with poor feathering, poor growth and skeletal problems occurring in addition to air sac disease in turkeys. Many poultry pathologists have experienced problems with serologic testing and various preventive and therapeutic measures.

Salmonella and coliform infections have remained as frequently diagnosed disease problems in both chickens and turkeys.

Fowl cholera in turkeys persists as a major cause of mortality in turkeys. Doubt is frequently expressed as to the effectiveness of vaccines.

Staphylococcal infections causing arthritis, synovitis or septicemia have apparently increased in incidence in areas of the midwestern and southern states.

Gangrenous dermatitis (clostridium infection) has occurred in conjunction with inclusion body hepatitis in the middle Atlantic and southeastern states. This combination has presented an intractible disease problem attended with high mortality in affected flocks.

VI Mycotic Diseases

Aspergillosis and candidiasis have persisted as common infections of chickens and turkeys. Aspergillosis has reportedly become an increasing problem in the southeastern states in turkeys reared in confinement.

VII Parasitic Diseases

No remarkable change in the incidence or severity of parasitic problems was reported.

VIII Nutritional Diseases

Selenium - Vitamin E deficiency and deficiencies affecting the skeleton (rickets and osteomalacia) were the most frequently mentioned nutritional diseases in regional reports. One regional report notes a decrease in mortality in commercial layers and improved feed conversions in layers and broilers since the 1973 grain harvest has come into use. A decrease in mycotoxins has also been observed.

IX Miscellaneous or Etiologically Undefined Diseases

Necrotic enteritis was reported at a static level in the southeastern states but has increased significantly in Ontario.

Undefined production problems, respiratory diseases and leg weaknesses were reported from all regions.

X Comments

All reporting regions mention a continuing (and in some instances, precipitous) drop in the number of poultry accessions received by diagnostic laboratories. While this bespeaks a generalized reduction in the overall incidence of disease problems, it is noteworthy that certain diseases, as mentioned herein, are holding steady or even increasing in incidence in several areas. Many of the economically important disease problems are clearly recognized (in all areas of the United States and Canada) to be associated with or aggravated by faulty management practices. A substantial increase has been observed in such management errors as drug toxicosis, starve-outs, water deprivation, ventilation deficiencies, etc.

Respectfully submitted,

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