

DISEASE REPORTING IN THE WESTERN REGION

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The objectives of this report are four:

- 1) to discuss the objectives of the AAAP Disease Reporting and Nomenclature Committee.
- 2) to propose the establishment of a permanent Disease Reporting Committee for the Western Region.
- 3) to discuss the format and possible shortcomings of the current AAAP report.
- 4) to demonstrate use of the report in study of avian disease trends.

1. Objectives of the AAAP Committee. The Committee has two primary objectives. The first is to establish a uniform disease nomenclature for use in describing and identifying avian diseases. The second objective is to assemble an annual avian disease report by region (state, province, etc.) for Canada, Mexico and the USA. The goal of standardizing nomenclature has largely been achieved; periodic name changes still occur as "new" diseases are described and as word usage changes. The disease reporting goal has been achieved for over 10 years, although the reports tend to be rather variable in terms of the number of areas reporting. The Committee does not undertake to analyse or summarize the disease reports.

2. Establishment of a Disease Reporting Committee in the Western Region. Since the inception of the AAAP report the contributions of the Western Region have been one-person efforts. Those who have performed this task in recent years feel that the job would be better done by a committee whose members (perhaps 4 to 6) represented all 3 reporting countries. A committee effort would decrease the individual responsibility, and it would probably produce a more complete report. For example, in 1978 only 4 of 13 Western Region States are represented in the report, and the best record achieved for this region was a reporting of 10 of 13 states in 1969. Also, in past years reports from Mexico have usually come from only one source. Mexican committee members would be better able to develop other reporting sources. Reports from Canada currently to present little problem, since these are abstracted from one official government document for the entire country.

3. Format and Possible Shortcomings of the Shortcomings of the Current AAAP Report. The format of the report can be seen in Avian Diseases 24(2):533-568. The author of this WPDC report discussed the AAAP avian disease report with several colleagues and the following possible limitations of the report were noted:

- a) There are no longer any data summaries.
- b) The desirable regional nature of the USA portion of the report has been lost due to the change to complete alphabetic format.
- c) The report is difficult to read, possibly due to number of entries, or due to unnecessary inclusion of zeros.
- d) Two-letter state abbreviations (e.g., AL, AK, AR, AZ) cause confusion, especially for non-USA readers.
- e) The list of diagnoses is too limited; some others should be considered.
- f) Non-reporting regions (states, etc.) should be noted.
- g) Some use of graphics might make the report more "palatable."
- h) Data are not meaningful because populations-at-risk are not specified. Therefore, it is not possible to compute disease rates.
- i) The report does not adequately relate diseases to types (e.g., broiler, layer) or age of poultry. Some felt that the "other" category of birds needed greater definition.
- j) Information is not in retrievable form for analytic purposes. The yearly reports should be stored on computer disk or magnetic tape for easier use in future.

These criticisms will be brought before the AAAP Committee in July 1980 at the AVMA Meeting in Washington, D. C. A report of that discussion will be given at WPDC in March 1981.

4. An Example of Use of the AAAP Report in the Study of Avian Disease Trends. Fowl cholera is an important disease problem of turkeys. During the past decade there has been a profound change in fowl cholera vaccination practices in the USA. There has been a change from almost exclusive use of killed *Pasteurella multocida* bacterins to the use of live orally-administered "avirulent" *P. multocida* vaccines. Reports of results are confusing. Some say that the live vaccine (alone or in combination with bacterins) has solved the cholera problem. Others feel that the turkey fowl cholera problem is still increasing. The problem is one of determining whether the fowl cholera rate has increased or decreased over the past 10 years. My approach to this question was as follows:

- a) Count the number of cases of fowl cholera in turkeys in Minnesota, Missouri, and in the combined states of North and South Carolina for each year from 1969-1977 (Fig. 1). Add all 4 states' data together to get total fowl cholera diagnoses (Fig. 2).
- b) Estimate the number of turkeys grown in each of the states from data given in Agricultural Statistics: 1970-1979 (U.S. Government Printing Office) (Fig. 3). Add these data together to get the 4-state population total (Fig. 4).
- c) Divide the number of fowl cholera diagnoses in each of the 3 regions by the number of millions of turkeys raised in each of the regions to produce a fowl cholera rate of sorts (= number of diagnoses per million turkeys raised). Compute the same rate for the population totals. All 4 rates (Missouri, Carolinas, Minnesota and combined) are shown in Fig. 5.

Results. The turkey populations and the numbers of fowl cholera diagnoses increased during the 9 year period of study (Figs. 1-4). However, the rate of cholera diagnosis appears relatively stable over the 9 year period (Fig. 5). If we assume that disease incidence is the major influence on number of diagnoses, then it appears that the changing vaccination strategy of the 1970's has had little effect on fowl cholera in turkeys. It also appears that fowl cholera was no greater a problem in 1977 than it was in 1969. Failure to reduce the fowl cholera diagnostic rate suggests that new studies of the epidemiology of this disease are warranted.

A similar approach was used to study the trends in diagnosis of Arizona and Mycoplasma gallisepticum in California turkeys (Figs. 6 and 7) and for Marek's Disease in California chickens (Fig. 8) from 1969-1978. There was a marked decline in the diagnostic rate for each of these diseases during the study period. These results suggest that the disease intervention strategies employed (egg dipping, day-old poult injection for Arizona; serologic testing and slaughter for M.g.; vaccination for Marek's Disease) were at least partly successful.

Fig 1. Fowl Cholera diagnoses by state and year.

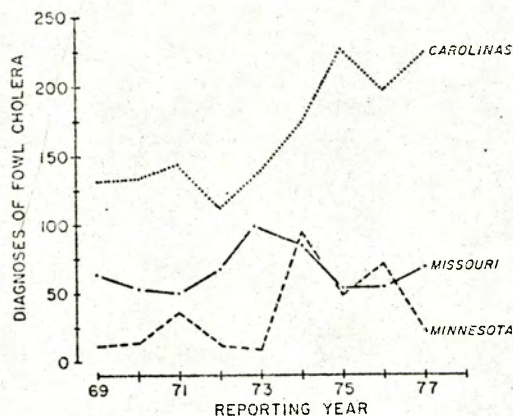


Fig 2. Fowl Cholera diagnoses (accumulated for Minnesota, Missouri, the Carolinas): 1969-77

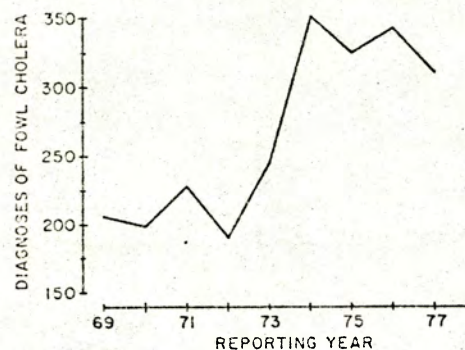


Fig. 3. Numbers of turkeys raised by state and year: 1969-77.

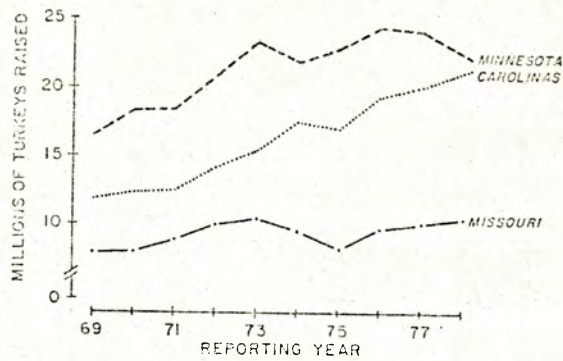


Fig. 4. Numbers of turkeys raised (accumulated for Minnesota, Missouri, the Carolinas): 1969-77.

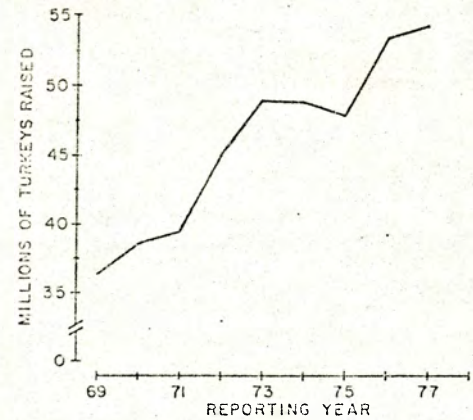


Fig. 5. Fowl Cholera rates (number of diagnoses per million turkeys raised) by state and year.

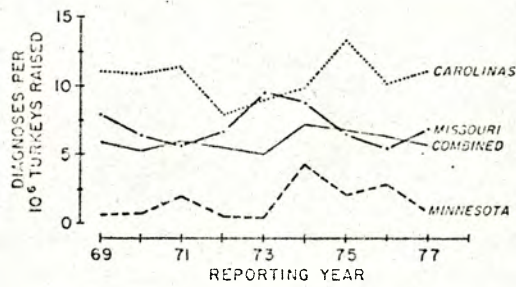


Fig. 6. Arizona rate for California: 1969-78

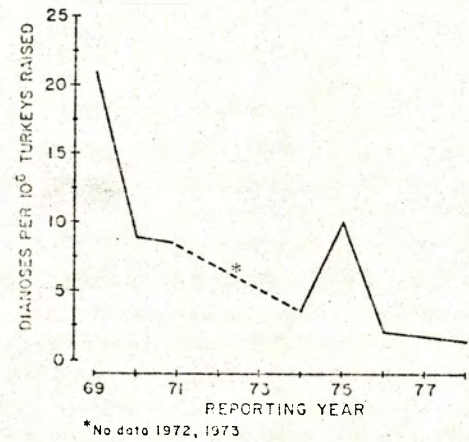


Fig. 7. *Mycoplasma gallisepticum* rate for California: 1969-78.

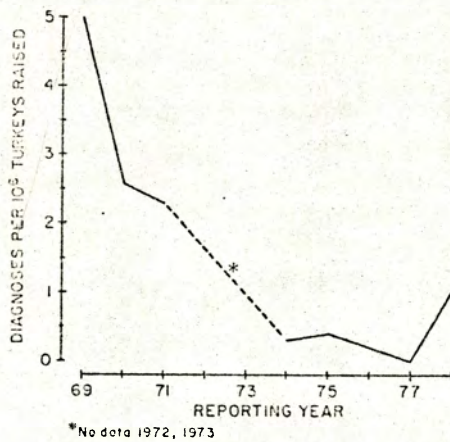


Fig. 8. Marek's Disease rate for California: 1969-78.

