

# The Diagnostic Laboratory and the Poultryman

by J. J. Sheldon\*

All types of livestock and poultry production have faced increased costs and the need for more and more integration to increase production efficiency. As the poultry industry has integrated and concentrated the poultry population in a limited area, the potential disease problems and hazards associated with infectious diseases has certainly increased. Even with increasingly better control procedures available to the producer for the various classes of infectious diseases, the problems encountered in control and cost of disease control have not decreased. To minimize the hazard and cost of infectious disease control the poultry producer is continually faced with developing preventive medicine programs that fit his type of production at the least possible cost. Where the diagnostic laboratory plays a part in preventive medicine is a question in some producers minds. Accurate disease diagnosis is time consuming and expensive but does serve as the only method whereby the poultry producer can maintain accurate information on specific disease problems associated with his type of production and his production unit to constantly re-evaluate his disease control and prevention programs.

The poultry producer faces increasing problems with mixed infection in the flock, antibiotic resistant bacterial infections, strains of coccidia that are difficult to control with most coccidiostats and constant consumer pressure for control of organisms such as, *Salmonella sp.* which may be present in the consumer poultry products. Because of these problems that every phase of the poultry industry faces, it becomes increasingly important to continuously monitor the potential source of infectious disease agents in a poultry flock and to pinpoint, if possible, the source of the problem and continually re-evaluate control procedures.

The diagnostic laboratory can help the producer sort out problems related to mixed infections where more than one agent is involved. Gross examination, isolation of causative agents, strain identification, serologi-

cal typing, antibiotic sensitivity, histopathology, and therapy recommendations can be of definite benefit if the information accumulated is wisely used by the poultryman. Some of these procedures certainly take more time than the producer is able to allow in any given disease outbreak. In these instances controlled procedures must be initiated as early as possible, but the long-term benefits in disease control programming are the major benefits to the poultry producer.

It must be kept in mind that any material submitted to the diagnostic laboratory should be accompanied by as a complete and accurate history as possible. The material or birds submitted must be representative of the problem that the producer faces. It is certainly of no benefit to the producer to submit material such as a bird suffering from leukosis, cannibalism, or other individual bird problems that do not represent the significant problem with which the producer is faced. The history should always include the age of the birds, strain, sex, number of birds of that age group on the premises, and the number in individual housing facilities where the problem is observed. Accurate mortality records up to and including the date the birds or material is submitted to the laboratory should also be included. Medication history, vaccina-

tion history, and overall disease control programs employed in the problem birds should also be included. The history submitted from the hatcherymen, the breeder flock owner, the processor, would certainly be somewhat different than that outlined above, but must be as complete as possible if the diagnostic personnel are going to contribute significantly to pinpointing the source of any given problem. As this information is accumulated, it is important for the producer to maintain records of all of the findings reported by the diagnostic personnel. With this information in hand, periodic review of the disease control program employed can be much more accurate and, in the long term, be a definite cost savings to the producer. With a close working relationship between a diagnostic laboratory and the producer, significant directions of research in poultry diseases aimed at specific problems for any given area can be the outcome. The poultry industry is rapidly approaching the point where federal, state, and local disease control programs, and economic pressure makes it impossible for him to live with poultry disease problems. Minimizing the cost of disease control through the accurate evaluation of problem areas is one factor that can certainly reduce production cost.

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*Harold E. Myers* Dean

to:

\* Associate Professor of Department of Animal Pathology.