TRAINING FOR FIELD TESTING WORK IN THE CONTROL AND ERADICATION OF PULLORUM DISEASE
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Conference on the National Poultry Improvement Plan U.S.D.A.
Chicago, Ill., 1938

The Colorado Poultry Improvement Board, the official State Agency for Colorado, had designated the Pathology Section of the Experiment Station and Poultry Department of Colorado State College to give instruction and conduct examinations on pullorum testing and flock selection. Such delegation of authority is in accord with the National Poultry Improvement Plan sponsored by the United States Department of Agriculture.

This school has been held annually in Colorado for the last three years. In 1937 instruction on diseases other than pullorum disease and on poultry management was included and the duration of the school was greater accordingly.

The school was primarily designed to give hatchery owners and their employees, flock owners, veterinarians, and others instruction on pullorum disease control and on selecting breeding flocks. Since the veterinarians of the state were not as a group interested in this program it was necessary, in order to carry out the blood testing program, to train hatchery owners and their employees to do the work. Following the course of instruction on pullorum testing, written, oral, and practical (laboratory) examinations were given and the numerical grades sent to the Colorado Poultry Improvement Board. This board then issued permits to those passing the examination and participating in the National Poultry Improvement Plan. Since 1936 the following grading system has been followed: Those having a grade of 74 or below failed, those having a grade between 75 and 79 were issued a permit for one year, and those having a grade of 80 or above were issued a
three-year permit with the stipulation that they must be present annually for the course of instruction but need not take the examination.

During 1936-37 an inspector was appointed by the Colorado Poultry Improvement Board to inspect all hatcheries and call pullorum testing done under the National Poultry Improvement Plan. The inspector's duties were as follows: To examine all flocks in order to ascertain their correct classification as to breed requirements; to check the blood testers as to methods and technique of testing, disposal of reactors, cleaning and disinfection of premises, prevention of inter-farm transmission of disease, hatchery sanitation, and hatchery records. The inspector determined whether stained antigen had been approved by the United States Department of Agriculture and if it had been properly refrigerated and was not outdated. An additional check on blood testers the inspector drew a representative number of blood samples which were to be tested by the official State agency (or representative) using the tube and stained-antigen methods. Permits were revoked if, after due warning, improper conditions were not improved and the program of the National Poultry Improvement Plan not properly executed. Due to insufficient funds in 1937-38 the inspector was available only for flock inspection. The inspection of hatcheries and pullorum testers was carried out by the general supervisor of the plan, Mr. O.C. Ufford, Colorado Extension Poultryman. It is regrettable that official supervision in the form of an inspector has not been available throughout the hatching season. An official inspector is an indispensable unit necessary for the proper execution of the plan in this field.
In the past a sufficient number of circulars describing the plan have not been available for distribution to all attending the school. This is an essential publication that should be in the hands of every hatcheryman whether a member or not.

In order to expedite the program of the judging and testing school the group in attendance has been separated into two sections. One section consisted of those who had attended and passed previous schools and the other consisted of new members and those who had previously failed. In order to avoid duplication, both sections were brought together for lectures. The two sections were alternated in order that the same laboratory instruction was given to each.

The instruction on pullorum disease was divided into two parts: First, lectures on basic information regarding pullorum disease and a general discussion of the agglutination test, together with a discussion of the pullorum control and eradication measures outlined in the national plan; second, demonstrations in drawing blood and conducting the rapid whole-blood test together with a discussion of the precautions in testing and factors influencing the accuracy of the whole-blood test. During the laboratory period each individual who has never drawn blood is given an opportunity to do so. Following this, each individual is provided with a glass plate ruled off in one and one-fourth inch squares, a standard loop, six samples of citrated blood (negative, partial, and positive), antigen, clean dry cloth, and a container for water in order to clean the loop.

All antigen used for pullorum testing under the National Poultry Improvement Plan must be approved by the Bureau of Animal Industry, United States Department of Agricultural. It is suggested
that the official State agency contract for the amount of antigen to be used during any one year. The antigen can then be held at a central point (refrigerated) and tested with sera of known reactions before distribution. This plan was followed with very satisfactory results last year in Colorado. In a few cases, other sources of antigen were used but only after those samples were tested by the Pathology Section.

An outline is provided each participant which is to be followed in conducting the test. Importance is placed on the use of a dry loup and the fact that the blood, when conveyed to the plate, should be slightly bulging. The antigen is placed on the plate just before the drop of blood is to be added. To facilitate the reaction and reading, very gentle rocking of the plate is advised. The use of a paper sheet instead of a glass plate is not recommended.

During the course of instruction, mimeographed sheets explaining the disease, its control, and laboratory procedures are distributed to the participants. At the close of the period of instruction a general review is given and the salient points of the subject are again covered. Three different examinations are then given to all members. One is a written examination concerning pullorum disease and its control, the second is an oral examination over the same subject, and the third is a practical laboratory examination based on actual technique of running a series of citrated blood samples, the reactions of which are unknown to the participants.

It is well established that the agglutination test (three recognized methods) is only one factor in pullorum-disease control.
It must be supplemented by prompt removal of the reactors, rigorous sanitation, and incubation fumigation and hygiene. To reach the ultimate goal of pullorum reactors and those birds in the incipient stages of the disease. It is also strongly urged that birds be tested when in production and as near to the hatching season as practical.