REPORT OF COMMITTEE ON POULTRY INSPECTION

1962 ANNUAL MEETING

AMERICAN ASSOCIATION OF AVIAN PATHOLOGISTS

This committee has compiled a list of research in progress related to condemnation of poultry at the processing plant. A form letter was circulated by the committee to certain universities, experiment stations, commercial poultry breeders, state departments of agriculture, and several commercial laboratories in the United States and Canada. A copy of the form letter is attached. A total of 61 replies were received. There were 7 projects reported from 5 states directly related to condemnation. Eighteen states, 3 commercial poultry breeders and 1 commercial laboratory reported 33 projects indirectly related to condemnation. These are important because they are investigations dealing with the cause and control of disease syndromes that are potential causes of condemnation. Twenty-seven replies reported no research in progress and there were 2 projects reported that were not related to condemnation of poultry. Most replies indicated that adequate poultry diagnostic services were available; a few made no comment at all. Georgia reported that chicken producing areas had adequate service but that diagnostic facilities were not available near the turkey producing area.

Summary of Survey

I. Research Directly Related To Condemnation

California

1. Study of the effects of various disease syndromes on the wholesomeness of market poultry.

   Objectives - To more clearly define an objective criteria for wholesomeness of carcasses. To determine the relationship of visible lesions (used by poultry inspectors) and the wholesomeness of all or parts of a carcass in chickens and turkeys.

2. To Investigate the consumer reaction to wholesome poultry carcasses.

   Objectives - To determine the effects of infection and disease upon consumer acceptability factors of poultry carcasses. To determine the effects of infections and disease upon poultry carcass quality characteristics. To investigate the extent to which triming, disjointing, washing, scraping, deboneing, heat treatment or other physical procedures can render condemned whole carcasses or carcass parts wholesome. To determine

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the extent to which the signs, symptoms and lesions currently used as criteria for condemnation of poultry carcasses are recognized by consumers. To investigate the consumer reaction to certain processing methods and technics as regards to consumer's opinion of "wholesomeness".

Georgia - 2 projects

1. A study of the wholesomeness of poultry products for human consumption.

   Objectives - To study the influence of processing procedures on the wholesomeness of poultry products as measured by the microflora present. To determine the incidences of inflammatory or disease processes found in poultry carcasses and to correlate this with the tissues involved, including kidneys, liver, spleen, heart, lungs and airsacs.

2. The influence of slaughter technics upon the microflora of chicken airsacs.

   Objectives - Develop semi-quantitative or quantitative techniques for the enumeration of microorganisms observed in selected airsacs of mature and/or immature chickens. Determine the microbial concentration and genera in the airsacs of normal appearing chickens processed without scalding and in selected airsacs of normal appearing, commercially slaughtered and scalded chickens. Determine the effects of various slaughter techniques and bleeding time on contamination of selected airsacs during scalding in water seeded with a tracer microorganism. Using a tracer microorganism, determine the effect of airsac contamination by commercial scald water on product shelf life.

Kansas - 1 project

Breast blisters in turkeys.

Objective - A study to determine the cause of breast blisters in turkeys.

Maine - Poultry Condemnation in Maine

Objective - Determine cause of condemnations in Maine plants. (2) Study types of neoplasms from chicks and their metastatic properties.

Pennsylvania - PSU - Etiology of Breast Blister.

Objectives - Determine various factors which affect the frequency of breast blister formation. (2) Investigate possible virological etiology.

II. Research Indirectly Related to Condemnation

North Carolina - 3 projects

1. Histopathological characteristics of disease poultry.
2. The use of antigens from several strains of pleuropneumonia-like organisms (PPLO) in the detection of PPLO agglutinins in the sera of chickens and turkeys.
3. Quantitative and qualitative blood studies in relation to disease susceptibility of chickens experimentally infected with respiratory disease viruses.

South Carolina -

Environmental and management factors that affect development of the CRD complex.

West Virginia - 2 projects

1. Control of chronic respiratory disease.
2. Control of infectious synovitis.

California -

Experiment Station - Davis

1. The etiology and nature of avian hepatitis - synovitis syndrome in chickens and turkeys and methods for diagnosis, control and prevention of the disease.
2. Diseases of chickens, particularly those involving the respiratory system.
3. Nature of ornithosis in turkeys and chickens and methods for control and prevention of the disease.
4. Pleuropneumonia-like organisms (PPLO) of chicken and turkey origin.
5. Characterization and egg transmission of mycoplasma of avian origin.
6. The relationship between avian mycoplasma (a pleuropneumonia-like organism) infections and other selected bacterial infections.
7. Diagnosis, pathogenesis and prevention of avian encephalomyelitis in chicks.

8. Epidemiology, immunity, prevention and control of diseases of turkeys.

Kimber Farms - Several projects on leukosis.

Demler Farms - Hemophilus gallinarium immunization with bacterins and vaccines.

Washington - 2 projects

1. Infectious sinusitis of turkeys.
2. Transmission and control of chronic respiratory diseases in chickens.

Utah - Etiological relationships of other avian respiratory diseases to chronic respiratory disease and production of CRD-free stock.

Iowa -

Diamond Laboratories - Development of Erysipelas bacterin for turkeys.

Canada -

Investigation of Salmonella in poultry and poultry products.

Wisconsin - Turkey airsaculitis

Minnesota - Airsaculitis of poultry

South Dakota - The control of Fowl cholera.

Texas - 4 projects

1. Newcastle disease, infectious bronchitis and complicating respiratory infections of poultry.
2. Chronic respiratory disease - airsac syndrome of chickens and infectious sinusitis of turkeys.
3. Ornithosis in turkeys.
4. Poultry disease investigations.

Missouri -

The infectious synovitis complex.

Iowa State University -

All projects are related to the etiology of airsac lesions in turkeys and the control of S-6 PPLO infection, Newcastle disease and infectious bronchitis.

Louisiana - 2 projects

1. Hematology of broilers infected with Newcastle disease and infectious bronchitis viruses.
2. Environmental stress factors in broiler production.

Connecticut - Poultry Respiratory Diseases - Newcastle, airsac, and enteric viruses.

North Dakota - Histomoniasis of Turkeys.

Delaware -

1. Respiratory Diseases of Poultry.
2. Chronic Respiratory Disease.

Massachusetts - Control of Respiratory Diseases (CRD).

Pennsylvania - UP - Studies with strain 13 fowl sarcoma.

Maine - Lipmone Poultry Co. - No. specific Title. (Relationship of environment to production efficiency in broilers).

III. No Research in Progress

Experiment Station

Kentucky
Mississippi
Tennessee
New Mexico
Oklahoma
Nebraska
Montana
Arizona
Colorado
Wyoming
Vermont
New Hampshire
New Jersey

Commercial

Bio Laboratories
Fort Dodge Laboratories
Norden Laboratories
Poultry Health Laboratories
Haver-Lockhart Laboratories
Globe Laboratories
Pennsylvania Farm Bureau Hatchery
Hull Brothers Hatchery-Conn.

Canada

University of Manitoba
B. C. Dept. of Agriculture
Ontario Veterinary College

U.S.D.A.

National Animal Disease Laboratory

Opinions on Areas of Needed Research

Mississippi -

We feel that competent investigation should be made of the relationship of localized disease conditions to other edible parts of the carcass. This in consideration that certain parts are condemned and other parts salvaged for food. Neither the Livestock Sanitary Board or the Department of Agriculture, Meat Inspection Division, are doing or will be able to conduct any research project.

S. A. Cox

Georgia -

A project should be initiated which will correlate poultry condemnations with specific poultry diseases, so that methods can be worked out for their control. The staff of the Poultry Disease Research Center have the facilities and are interested in initiating a project such as this. The cost for initiating such as this is $15,000 per annum.

S. C. Schmittle

West Virginia -

Research is needed in the field of leukosis, CRD and infectious synovitis. Studies in these fields could be expanded if funds were available.

N. O. Olson

Washington

It has been our observation that we have about a like number of respiratory cases in broilers during the summer and winter months. However, the respiratory conditions are more severe during the winter months, resulting in an increased number of condemnations. We need to know more about the relationship of ventilation, temperature, etc., and the severity of respiratory conditions. We have a housing specialist, the diagnostic service laboratory and research laboratory all at this location. This is about the center of the broiler industry in this state and is close to the major processing centers. A cooperative project on the above problem would seem worth while.

Estimated time - 1/4 time housing specialists.

1/4 time poultry pathologists.

1/6 time diagnostic worker.

1/4 time laboratory technician.

Estimated Cost:

First year $20,000 to include remodeling building for controlled ventilation and heat.

Second and third years $10,000 each year.

C. M. Hamilton
W. Wash. Expt. Sta.

Texas

There is a need for additional research on avian leucosis problems and xanthomatosis.

A. I. Flowers

Missouri

The tolerance of birds to variations of temperature and gaseous partial pressures while estimating degree of retention of resistance to disease. Facilities not available at this station at present.

A. G. Groth

Delaware

Detection of carcasses that may be carriers of bacterial infection of public health significance. This institution has facilities for such research and the time would be approximately 1 year and the cost $5,000 - $10,000.

W. C. Krauss

South Dakota

Intensified research to clarify the airsaculitis complex. Intensified research on the leukosis problem. Facilities are presently too limited to contribute on either problem with an organized project.

G. S. Harshfield

Wisconsin

Establishments of airsaculitis-free chicken and turkey flocks.

M. L. Frey

Louisiana

Research is needed:

To find the specific cause for condemnation and determine the wholesomeness of condemned and passed carcasses by histological and biochemical methods.

Cooperative Regional research to develop disease prevention and favorable environment programs for poultry production in common geographic locations. Facilities and equipment are available for both recommendations. Needed support: $20,000 the first year and $17,000 for the second year for salaries, travel and supplies.

J. M. Dixon

Connecticut

The problem of so-called "skin leukosis" and its relationship to the other classifications of the avian leukosis complex definitely need further study. This institution is in a position to make limited contributions in this area and it would require approximately $15,000 per year over at least a period of 3 years.

C. F. Helmboldt

Summary

The results of this survey indicate gross complacency to the 28 million dollars lost by the poultry producers in the United States.

Though the condemnation of broilers was less in 1961, all other classes of poultry suffered an increase in condemnation.

Most of the research carried out in 1961 was a direct result of pressure from the broiler industry. The research resulted in a decrease in broiler condemnation but it did not help other types of poultry.

Recommendations

1. To the Cooperative Experiment Station Services to initiate and coordinate cooperative regional research programs to reduce the condemnation of all poultry.
2. To the Agricultural Marketing Service - Poultry Inspection Division to directly support research.
   (a) In the area of the significance of disease manifestations as they relate to wholesomeness of poultry carcasses.
   (b) Into the relationship of processing techniques to the

fatigue and efficiency of lay and veterinary inspectors.

3. To the Agriculture Research Service - Animal Disease and Eradication Division that they support research directly aimed at the control and eradication of diseases that are related to condemnation.

4. To the Feed Industry and to each State Poultry organization that they support research directly aimed at reducing poultry condemnations.

Daniel Decamp
W. W. Sadler
Dank Morris
M. S. Cover
G. J. Christie
J. M. Dixon, Chm.

_____

_____

_____ Date _____

_____

Dear_____:

The Committee on Poultry Inspection of the American Association of Avian Pathologists is continuing to compile a list of research projects in progress or contemplated that are related to the condemnation of poultry.* This information will enable the committee to determine areas where additional research is needed and to make recommendations to increase the research in the neglected areas to improve poultry inspection and poultry health. Your assistance is solicited in helping develop this information by providing the following information regarding such projects at your institution and returning this communication at your earliest convenience. (please advise if additional copies are needed.

1. Project Title:

2. Date Started: Date it will terminate:

3. Departments and Cooperating Agencies:

4. Project leader or principal Investigator (s):

5. Annual budget:
   Source: State_____ Federal_____ Grant_____

6. Are diagnostic facilities available near:
   (a) Broiler producing areas. yes___ no___
   (b) Egg producing areas. yes___ no___
   (c) Turkey producing areas. yes___ no___
   (d) Processing plants. yes___ no___

7. Projects Objectives (as specific as possible)

* All types of poultry.

8. Brief outline of Methods:

9. Reports of Results.
   (a) Please list published reports:

   (b) Are quarterly or other periodicals reports available and where may they be obtained?

10. Brief outline of any research that you feel is vitally needed in areas related to poultry inspection and indicate whether your institution has facilities available and is interested in conducting this research. If so, estimate the time and cost needed for the project.

Sincerely yours,

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