

Avian Influenza

Since the report of the Subcommittee at the 1979 U.S.A.H.A. meeting, the diagnosis of Avian Influenza in turkeys has been made in three states: California, Minnesota, and Missouri.

CALIFORNIA -

New outbreaks in California were first identified in January, 1980. The outbreaks in 1979 involved primarily Hav5Nav2 and an autogenous inactivated (Binary Ethyleneimine) oil-emulsion vaccine was produced by a California biological company. Breeder flocks in the areas of the 1979 outbreak were vaccinated with the Hav5 vaccine but some flocks broke with avian influenza in 1980. The virus isolated proved to be Hav9Nav2. The clinical disease was obvious but milder than infections observed in the previous year. The industry was alerted and an autogenous vaccine was made available.

MINNESOTA -

The disastrous outbreak of 1978-79 ended early in 1979 and new outbreaks were not identified until the fall of 1979, and were not reported in last year's report. Minnesota has identified AI outbreaks in turkeys each year since 1966 and only once in chickens in 1979. The 1979-80 outbreaks involved 20 farms which were owned or managed by seven different companies. Signs ranged from none to severe respiratory distress with swollen sinuses, coughing, depression, and rales. Morbidity ranged from zero to 100%, and mortality ranged from zero to 45%. The economic loss was estimated at \$2 million. The distribution of virus serotypes in waterfowl from the area, and turkeys were as follows:

Turkeys -

Hav2Neg1
Hav4Nav1*
Hav6N1
Hav6N2
Hav9Neg2
Hav1N1*

*Identified in turkeys by serological means.

Wild ducks -

Hav2Neg1
 Hav3Nav1
 Hav4Nav1
 Hav4N2
 Hav4Neg2
 Hav4Nav5
 Hav6N2
 Hav7Nav1
 Hav7Neg2
 Hav7N1
 Hav7N2
 Hav7Nav5

No breeder flocks were involved in the 1979-80 outbreaks. Extensive vaccination and preventive measures have been taken by the breeder flock owners. Practically all of the turkey breeder flocks are maintained under complete confinement, whereas most of the primary outbreaks in market turkeys occur while the birds are on range.

In cooperation with the Minnesota Turkey Growers Assn., State and Federal Health Services and a commercial biological company, autogenous inactivated oil emulsion vaccines have been available for the various serotypes identified in Minnesota.

The first outbreak in turkeys in 1980 was identified in early September. So far this fall, Hav1, Hav2, Hav4 have been identified in 14 farm flocks.

MISSOURI -

This is the first year AI has been identified in Missouri. Three breeder flocks were identified infected with Hsw1N1 by serological means. The effect on breeder flocks was permanent reduction in egg production with low death loss. There were 8,000 breeders involved in the outbreak.

Surveillance Program in Chickens for AI

Dr. Carl Weston submitted the following information on a serological survey in chickens between December 1979 and March 1980. Serum samples from

77 flocks were tested using AGP antigen furnished by Southeast Poultry Research Laboratory, Athens, Ga. The flocks ranged in age from 6 to 61 weeks. The distribution of the flocks were as follows:

1. Alabama - 9
2. Arkansas - 7
3. Georgia - 9
4. North Carolina - 13
5. New England (4 states) - 29
6. Pennsylvania - 11

A total of 1232 samples were tested with negative results.

National Veterinary Services Laboratories

Dr. J. E. Pearson submitted the following report concerning Import Quarantine Station virus isolations (Table I). The hemagglutinating isolates on inoculation of young chickens and turkeys were not lethal, however the Committee continues to be concerned that there is no information on their effect on poultry health and egg production.:

The Subcommittee wishes to express our gratitude to Dr. J. E. Pearson and the staff at National Veterinary Services Laboratories, USDA-APHIS, and Dr. Virgina Hinshaw and staff at the Influenza Laboratory at St. Jude Children's Research Hospital, Memphis, Tennessee, for their cooperation in the identification and cloning of virus isolates and serological analysis of serums from infected flocks.

Certified VVND Negative Flocks

It was the consensus of the Subcommittee in 1979 that the type of VVND-Negative Flock Certification Program for turkeys was desirable and feasible for chicken egg and broiler-type primary breeding flocks.

The Subcommittee on Certification of Chicken Primary Breeding Flocks as Free of VVND met at the Southeastern Poultry Association meeting in Atlanta, Ga.

TABLE I

Import Quarantine Station Virus Isolations

	Jan.1-Dec.31 1979	Jan.1-Sept.15 1980
Lots of Birds.....	261	177
Specimens Tested.....	30,661	22,681
Velogenic NDV		
Lots Positive.....	22	7
Species Positive:		
Parrot.....	103	21
Cockatoo.....	35	3
Macaw.....	15	0
Conure.....	8	2
Parakeet.....	16	3
Rosella.....	3	0
Finch.....	14	0
Parrotlet.....	0	15
TOTAL.....	194	44
Lentogenic NDV		
Lots Positive.....	1	1
Hemagglutinating Viruses Other Than NDV		
Lots Positive.....	48	49
Species Positive:		
Finch.....	441	382
*Parrot.....	222	82
Parakeet.....	46	7
Mynah.....	14	8
Cockatiel.....	1	13
Cockatoo.....	1	1
Conure.....	7	3
Canary.....	5	0
Hornbill.....	2	0
Waxbill.....	1	1
Robin.....	2	3
Macaw.....	1	3
Crane.....	1	0
Tanager.....	0	1
Sparrow.....	2	0
Lovebird.....	1	3
Mott Mott.....	2	0
Rosella.....	3	3
Combassous.....	0	3
Sunbird.....	2	0
Species not supplied.....	35	0
TOTAL.....	789	511

*One isolate identified as a turkey paramyxovirus, eleven isolates identified as influenza Hav₇N₁.

in January 1980. A workgroup of the Subcommittee was formed with industry, regulatory and research representation. The workgroup met on July 20 and November 9, 1980, and agreement on the requirements of a certification program for chickens was reached. These agreed-upon requirements will be distributed to the full Subcommittee during December. A meeting will be held in January or July 1981 to consider their adoption. It is the intent of the Subcommittee to present a chicken certification program to the Committee on Transmissible Disease of Poultry for discussion during the 1981 U.S.A.H.A. meeting.