

● Marek's
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poultry industry in Georgia approximately 18 to 20 million dollars.

Until recently there were no tests to determine whether a flock of birds was presently infected or had ever been infected with Marek's disease. Research workers in England using the agar gel diffusion technique demonstrated a precipitin reaction between sera from MD infected birds and an antigen prepared from tissue culture cells infected with the MD agent. They found the precipitating antibody in the blood of day-old chicks from MD positive dams which was probably due to passive transfer through the egg, however, it does not appear that this antibody offers any protection against MD.

At the present time there are no means (on the market) to control Marek's disease, however until geneticists can develop a more resistant bird, new approaches for control must be taken. Therefore, the subject of this paper is several possible means for controlling Marek's disease.

Controlled Exposure Using Old Litter

Time, method and degree of exposure to the Marek's agent, in the opinion of Dr. Don Davis and Dr. Frank Siccardi are the keys to successful vaccination. Litter seeding appears to be the simplest method of controlled exposure. This litter is taken from hens that are shedding the virus and if day-old chicks are uniformly exposed and the dosage is not too high, then they are able to overcome the disease.

However, I would like to point out that controlled exposure could be dangerous. (1) When you do not know whether the litter even contains the MD agent and if it does then how much do you have in the litter. (2) Does the exposing material contain other, possible more harmful, disease agents?

There is much evidence which would indicate that reused litter helps to reduce MD condemnations, however, there are other researchers with data which would indicate that reused litter does not lower MD condemnations. At the present time the use of old litter to reduce MD losses is confusing. My sugges-

tion would be if you are having high MD losses and you have nothing to lose then try it, but if your losses are low then I would suggest staying away from the use of old litter for MD control.

Immunization Against Marek's Disease Using an Inactivated and a Live Attenuated Virus
The GA Isolate of MD has been passed many times in cell culture which resulted in the loss of its oncogenic potential for the chicken. Birds inoculated at day of age with the attenuated virus are protected when challenged with infective plasma. This would offer further evidence that herpes-type virus is the causative agent of MD.

Birds inoculated at day of age with a "killed" virus preparation are also protected when challenged with infected plasma.

It would appear that a live attenuated MD vaccine could be made available in the near future, however, whether the USDA will allow a live virus vaccine of this nature to be sold can only be answered by the USDA.

Controlled Exposure With Infective Plasma

Of the 1,400 one-day-old chicks of the parental population injected with the GA isolate, 69% died as a result of MD by 20 weeks of age. The mortality ranged from 51 to 93% for sire families. Peak mortality occurred between 8 and 14 weeks postinoculation. The mortality in the males was 66%, while that of the female was 74%. Cole (1968) found that the female White Leghorn was more susceptible to inoculation with the JM agent. The MD mortality of the selected families (1, 21, 28, 30) were 69, 61, 53, and 55% respectively. Four percent mortality was observed in the control parental population, all of which occurred after 14 weeks of age. There was no mortality attributable to MD in control families, 1, 28 and 30; however, 3 birds in family 21 were found to contain MD lesions.

The inoculation of the parental population with the MD agent should remove the most susceptible individuals from the breeding population so that they would not contribute offspring to the next generation. If the response of the ACRB stock to injection with the GA isolate has a heritable basis, then the progeny of the remaining breeders should be more resistant to injection than those from uninjected families. Mortality in the progeny of the inoculated parental population was 26.8%, while that of the progeny from uninoculated controls was 42.8% with the peak mortality for both groups of progeny occurring between 7 and 11 weeks postinoculation. These differences were highly significant, indicating that resistance to MD in the progeny could be obtained by inoculation of the parental population if the criterion was mortality. Although the total lesions of the progeny from the inoculated parental population were less than for the uninoculated ones (42.5 vs. 52.2%), these differences were of much smaller magnitude than mortality and not significant. Thus, in a selection program, birds selected for resistance to death, only, might show gross lesions which would condemn them on processing.

Control of MD by Raising Chicken in Positive Pressurized Houses

This paper is presented in response to the widespread interest in complete environmental poultry housing and to discuss how four cardinal principles, (1) strict sanitation, (2) isolation, (3) air filtration and (4) positive pressurized poultry house, are utilized to control losses to MD among birds in an experimental poultry flock.

Approximately 200 cockerels of the 687 birds reared in the filtered air, positive pressure houses were necropsied for MD examination during the 40 week observation period. None have died of the disease and no signs or lesions were observed in those

● Farm Calendar

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7:30 P.M. — Agway Garden Spot Annual Meeting, Farm and Home Center.

Wednesday, Nov. 12
12:13 — Pennsylvania Young

Farmer Convention, Pennsylvania State.
5:15 P.M. — Lincoln 4-H Community Capon Exhibit, Legion Hall, Ephrata.
6:45 P.M. — Lancaster County Holstein Banquet, Farm and Home Center.

Friday, Nov. 14
14:15 — State 4-H Horse Show, Farm Show Bldg., Harrisburg.
6:45 P.M. — Lancaster County Guernsey Breeders meet, Spanish Restaurant, Quarryville.

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Annual Meeting

Monday Evening, Nov. 10, 1969

7:30 P.M.

Farm & Home Center, 1383 Arcadia Road, Lanc.

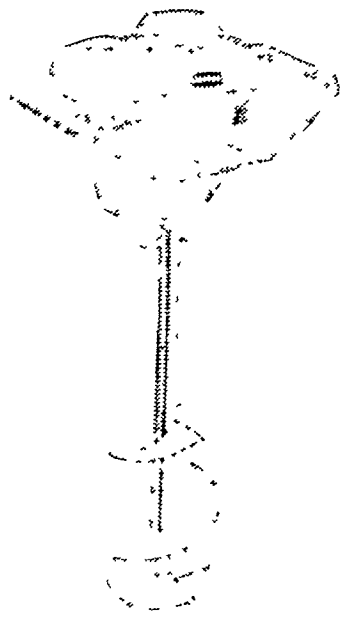
- Guest Speaker — Glenn E. Edick
- Reports on Operations
- Election of four member committeemen
- Vocal selections by the "Trebleaires"

DOOR PRIZES

- | | |
|----------------------------|-------------------------------|
| 1 200 gal. of fuel oil | 12 Inside-Outside thermometer |
| 2 Cook Set | 13 Hand saw |
| 3 1 pair Wolverine shoes | 14 1 gal. paint remover |
| 4 1 extension cord | 15 cook set |
| 5 1 gal. exterior paint | 16 1 gal. outside paint |
| 6 1 1/4" drill | 17 25 lb. Agway cleaner |
| 7 Claw hammer | 18 1 gal. paint remover |
| 8 1 gal. exterior paint | 19 1 set jumper cables |
| 9 Hi-intensity light | 20 1 gal. plastic roof cement |
| 10 1 gal. glazing compound | 21 1 case motor oil |
| 11 50 gal. gasoline | 22 1-5 gal. gasoline can |

REFRESHMENTS

BUY OR RENT A POST HOLE DIGGER
2", 4", 6" or 8" Bits
4 Feet Deep.

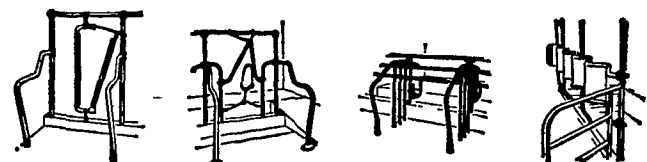


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