

In the course of four trials carried out in infected flocks the author wanted to test in the Muscovy duck the efficiency of the goose serum. Subcutaneous injection of 1 ml or even 0,5 ml per individual during hatching gave good results, especially during the first four weeks.

Mortality almost disappeared compared to 16-30 p. 100 according to the cases on the samples.

On the other hand, there was no action on the final weight of the ducks.

In spite of this interesting result, the use of a serum is not the future method which will allow to control the disease in question.

The real solution of this problem lies in the obtention of an efficient vaccine.

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## MAREK'S DISEASE IN BROILERS

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The existence of Marek's disease in broilers is now well established in France under two clinical forms.

The first one is the same as that seen in pullets.

The second one is developing more slowly with low mortality. However, the losses are high because there is an important percentage of condemnations at slaughter due to the presence of severe cutaneous lesions. These are consisting mainly in hypertrophy of feathers and follicles, and thickening as well as discoloration of the skin. Nervous and visceral tumors are also present. In a sick flock, growth and feed conversions are severely altered.

Histological lesions are characterized by follicles and infiltrations made of lymphoid cells.

The main problem of the diagnosis is the differentiation between cutaneous Marek's disease and leucosis. The nature of epidemiological lesions and the results of vaccination with a live T. H. V. vaccine prove that this disease is a special form of the Marek's disease.

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## PATHOGENY OF AVIAN COCCIDIOSIS : BIOMETRICAL ANALYSIS AND EXPERIMENTAL STUDY OF NON SPECIFIC RESISTANCE

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In experiments with *E. tenella* coccidiosis, biometrical analysis of the relations measured between coccidial inoculation, specific lesions and hemorrhagies, and general troubles as appreciated by depression of growth, food-consumption and food-efficiency, lead to the conclusions that

this production defects are associated with general non specific reaction mechanisms. These mechanisms are independant of the extend and magnitude of specific characters. 5-HT injection prior to coccidial challenge inhibits, partly but significantly, these general troubles without noticeable alteration of the parasitic disease *per se*.

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## SENSITIVITY OF *EIMERIA* OOCYSTES TOWARDS TEMPERATURE

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## BACTERIAL CONJUGATION IN THE INTESTINAL TRACT OF THE BROILER

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Several mechanisms of genetic exchange are known in bacteria and have been extensively studied *in vitro*.

In spite of its great possible ecological significance, genetic transfer *in vivo* has been little studied.

Conjugal transfer of genes between interfertile strains of *Escherichia coli* has been demonstrated in the mouse intestine, but such a transfer has not been reported in poultry.

In order to investigate this possibility, we contaminated axenic (« germ-free ») chicken with an Hfr and an F<sup>-</sup> strain of *E. coli*. The Hfr was thr<sup>-</sup> and Streptomycin sensitive, the F<sup>-</sup> strain was a Streptomycin resistant pro<sup>-</sup> his<sup>-</sup> double auxotroph.

In one experiment we inoculated the F<sup>-</sup> strain first and the Hfr one week later. In another experiment, the Hfr strain was given first.

Faeces were collected daily and appropriate dilutions were plated on LB medium to determine the total number of *E. coli*, and on minimal medium containing glucose and streptomycin to obtain the number of thr<sup>+</sup> pro<sup>+</sup> his<sup>+</sup> Sm<sup>r</sup> recombinants.

During the period when the chicken were monocontaminated with either the Hfr or the F<sup>-</sup>