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BACTERIOLOGICAL SURVEY OF CHICKEN MEAT

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A storage examination of the broiler carcasses, an enumeration of the bacterial population in the cut-up chicken meats from a poultry processing plant, and a survey of the variation of the bacterial population on the surface of the broiler carcasses during processing at the same plant were intended, and carried out, to find out the actual condition of bacterial contamination on the chicken-carcasses and -products produced in Hokkaido.

The results obtained are summarized as follows:

1) The broiler carcasses stored at 3~5°, 5°, and 10°C showed the organoleptic changes on 7~8th, 7th, and 3rd day after storage respectively.

2) Mean value of bacterial count in the various cut-up chicken meats from the poultry processing plant was on a level of 10^5 per gram.

3) The number of organisms per square centimeter on the thigh skin surface increased significantly in the chill tank or during cut-up processing.

4) It is difficult to estimate the grade of freshness or spoilage of carcasses by bacterial count only.

5) Salmonella was negative in all materials examined.

THE ROLE OF THE AUTONOMIC NERVES ON THE MOTILITY OF THE STOMACH OF THE DOMESTIC FOWL

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The aim of the present experiment was to investigate the role of the vagus and sympathetic nerves on the motility of the stomach of the domestic fowl. The chief object of the study was aimed at clarifying whether the non-adrenergic inhibitors fibre, which has been suggested in some mammalians, was present in the vagal pathway to the stomach. Experiments were made in vivo and in vitro. The conclusions obtained from the experiment with the stimulus strength-

response relationship and the effects of autonomic blocking agents were as follows.

The vagus nerve which innervates to the crop, proventriculus and gizzard, and the periarterial nerves of the coeliac artery which innervate to the last two stomachs seem to contain both excitatory and inhibitory nerve fibres, respectively. These excitatory fibres were mainly cholinergic in nature. However, in most experiments, atropine-resistant contractions were also seen in response to the stimulation of both nerves. Such contraction caused by periarterial nerve stimulation may possibly be adrenergic in origin.

The inhibitory fibre in the periarterial nerves to the proventriculus may be adrenergic, whereas those in the vagus were probably of non-adrenergic in nature. The relaxation of the proventriculus in response to vagal stimulation may be partially elicited through the cholinergic ganglionic synapse.

A STUDY OF THE AGAR GEL DIFFUSION TEST ON *MYCOPLASMA GALLISEPTICUM*

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The author conducted research into the agar gel diffusion reaction between *Mycoplasma gallisepticum* (MG) antigens, extracted by sonication, and anti-MG rabbit serums, under different conditions, and also investigated antigenic relationships among 27 strains. Characteristics of agglutinating, HI or precipitating antibody in immune rabbit serums were also investigated.

The results of this study are summarized as follows:

1) Repeat test by gel diffusion did not always give similar results with the same lot of antigen and its antiserum. Increase or decrease in the number of precipitation lines was limited to one line.

2) MG antigens which had about 1.0 mg/ml protein concentration, formed 4 precipitation lines. When the antigens were diluted 2 or 4 times, 1 or 2 of the lines disappeared, and the antigens diluted 16~32 times formed no line.

3) Serums of rabbits injected with MG (S_6 strain) gave 3 precipitation lines about 3 weeks after the onset of the injection. Five lines were observed after about 6 weeks. The number of the lines increased, parallel with agglutinating and HI antibody titers. These three antibodies appeared to be 2-mercaptoethanol resistant.