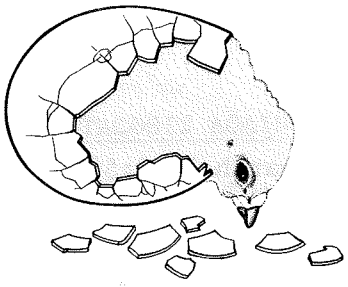

A.V.P.A. NEWSLETTER

No. 12 March 1981

## CAGE LAYER FATIGUE

An article by Mitchell, G.E., in Poultry Digest, April 1980 page 192 indicates that not only is cage layer fatigue a problem in birds in cages but also occurs in birds on the floor. This is a good review of the disease and the author points out that one method of preventing the condition and also preventing weak-shelled eggs is to supply ½ to 2/3 of the calcium supplement in chunky, large particle forms such as oyster shell or calcite crystals. Such pieces of calcium supplement are retained in the gizzard all day, being ground up and dissolved by digestive juice enabling the intestine to provide as much as 2.4 grams of calcium for shell binding daily. No cyclical de-calcification of bones is then needed for making good egg shells.

## "FLIP-OVER" SYNDROME

Hulan H.W. et al (1980) Poultry Science 59:927 describe a condition as flip-over or a sudden death syndrome in broilers. The response to the addition of biotin was statistically significant. The syndrome is described as commencing as early as the first week of age and having a peak mortality at 3 weeks of age. This seems to be a different syndrome from the one called sudden death syndrome or "flip-over" in broiler chickens in Australia. It sounds more like the condition we have described as fatty liver-kidney syndrome and the age incidence tends to confirm this. The photograph of the chicken showing the death posture of birds succumbing to the sudden death syndrome is an absolute classic and should be reviewed by all. It could become a symbol of our association - a chicken on its back with feet in the air!

## ATTENUATED A.E. VIRUS VACCINE

Miyamae T. (1978) American Journal of Veterinary Research 39:3:503 describes an attenuated AE vaccine produced by passaging 34 times in chicken pancreas. The passaged virus caused no detectable viraemia or clinical signs and produced humoral antibodies of high titres.

## GORGING IN BROILER CHICKENS

Randall C.J. and Mills C.P.J. reported in Veterinary Record 106:206 on a mortality of 90 broiler breeders out of 3000 birds over a period of 3 days starting the day after the birds received mash to eat. This condition seems similar to that previously reported in this newsletter and described by New Zealand collagues as "vagal syncope".

## QUAIL SINUSITIS

The quail industry is growing in Australia and members should keep in mind a report by Tiong S.K. (1978) Veterinary Record 103:24:539 in which Mycoplasma gallisepticum was isolated from the sinuses of Japanese quail which were members of a 20,000 bird flock suffering a mortality of 40 to 50 birds daily following signs of respiratory distress, paralysis of limbs and laying of soft shelled eggs.

## ORAL VACCINATION AGAINST FOWL POX

A tissue culture ad pted fowl pox virus vaccine at the 200th passage level has been demonstrated by Mayr, A. and Danner K. (1976) Developments in Biological Standardisation 33:249. The vaccine is administered orally twice at an interval of 3 to 4 weeks at a dose of $10^7 TCID_{50}$. This would be a valuable development in the Australian Poultry Industry if somebody has got the time and facilities to passage the virus 200 times.

## LEUCOSIS CONTROL

Brenton Ellery has drawn attention to an article which may be missed by members. It is by De Boer C.J. et al (1978) from a book "Advances in Comparative Leucaemia Research 1977" published by Ellsevier, North Holland Biomedical Press. This describes the Dutch method of control of Leucosis which includes a "vaccination" stage.

## PSITTACOSIS AGAIN

Brian Healy, the District Veterinary Officer for Orange in New South Wales has reported 3 aviary outbreaks of Psittacosis, all associated with parrots. John Thorpe, Veterinary Officer, Seven Hills also reports a case in parrots in the metropolitan area recently.

## AVIAN INFLUENZA IN W.A.

The report of the Animal Health Laboratory of the W.A. Department of Agriculture for the period ending 29th February 1980 includes the following:

"A further 12 of 14 new isolates of avian influenza recovered by the Department of Microbiology, University of W.A. from cloacal swabs taken from feral birds in Western Australia have been examined in poultry. Small groups of 10 day old commercial broiler chickens were exposed to each virus individually by mouth, nose and cloaca.

The birds remain clinically normal and their weights 3 weeks later compared favourably with the weights of uninoculated broilers. Serology is still being performed on sera from these birds collected 3 weeks after exposure, but so far the serological responses of some groups have been disappointing in spite of the large dose administered".

## CAUSE OF RIDGED EGGS

Over-crowding leading to pressure on the abdomen and thus the oviduct of hens during the period when the shell is being formed leads to the formation of cracks in the shell which are subsequently repaired by sealing with more calcium, forming a ridge around the middle. This comment comes from a poultry specialist with the Saskatchewan Agriculture Department's Veterinary Services Branch and is quoted in Poultry Digest, September 1979 page 509.

## TENOSYNOVITIS

A useful and practically oriented article by Carl R. Weston of Hubbard Farms, appears in Poutlry Digest September 1979 page 510 *

and is derived from the proceedings of the 1979 New Hampshire Poultry Health Conference. The article deals with infectious aspects of poultry leg problems and indicates that they may be caused by bacterial infections including Staphylococcus, Pasturella, E. coli and Mycoplasma Synoviae. He indicates that the Staphylococcus infections respond well to the use of Albamix at the rate of 350g per tonne for the first 2 to 3 weeks of life to prevent the condition. Response to treatment is poor. Tenosynovitis is described as being caused by reoviruses but Dr. Weston indicates that recent research work (no references) involved the possible presence of adenoviruses in Tenosynovitis. He stressed the importance of measuring titres of antibodies in diagnosis and suggests that serum neutralisation tests are more satisfactory than gel precipitin tests.

THE GENESIS OF IMMUNOLOGY Revised Standard Edition

In the beginning God created the antigens and the body. The field was without form and void, and darkness was upon the face of the deep; and the Spirit of God was moving over the face of the fluids.
And God said, "Let there be Immunology", and there was Immunology. And God saw that Immunology was good; and God separated Immunology into a subspeciality Immunology; and the rest of medicine He called Irrelevant, for the moment. And there was evening and there was morning, one day.
And God said, "Let there be lymphocytes in the midst of the plasma, and let them diapedese between intra-and extravascular fluids". And God made the lymphocytes and separated the body fluids into plasma and extravascular fluids. And it was so. And God called the lymphocytes T-cells and B-cells. And there was evening and there was morning, a second day.
And God said, "Let the lymphocytes under the heavens gather into lymphatics, and let the thymus appear". And it was so. God called the gatherings lymph nodes, and where the lymphocytes mixed with red blood cells He called the spleen. And God said, "Let the B-cells put forth antibodies, antibodies to each antigen, of a specificity determined by the affinity of the antibody for the antigen, each according to its kind, upon the earth, in the plasma." And it was so. The B-cells brought forth lgA for secretion, and lgM and lgG for the plasma and lgE for the basophils. And God saw that it was good. And there was evening and there was morning, a third day.

And God said, "Let there be complement in the plasma to aid the immune response". And it was so. And God made many components to complement all to interact in the sequence 1,4,2,3,4,6,7,8,9. And some parts cause opsonization, produce anaphylaxotoxin, and release histamine, and these he designated "Ag-Ab C'1a,4,2a,3". And some are chemotactic for neutrophils, when 5,6, and 7 are added to the complex. And some cause cytolysis, and kill gram-negative bacteria, when 8 and 9 also interact. And God saw that it was good. And there was evening and there was morning, a fourth day.

And God said, "Let the T-cells produce mediators for cellular hypersensitivity". So God created migration inhibitory factor, and chemotactic factors, and lymphotoxin. And God saw that it was good. And God blessed them, saying, "Be fruitful and multiply in response to mitogens and antigens and marshall forth the monocytes from the plasma to join in the immune response". And there was evening and there was morning, a fifth day.

And God said, "Let the earth bring forth living creatures according to their kinds. "And it was so. And God made the bacteria and the fungi according to their kinds, and everything that creeps upon the ground according to its kind. And God saw that it was good.

Then God said, "Let Us make immunologists in Our image, after Our likeness; and let them have dominion over the field of immunology."

So God created the immunologists in His own image, in the image of God He created them; male and female He created them. And God blessed them, gave them white coats, and God said to them, "Be sharp and witty, and invade medicine and subdue it; and have dominion over the lymphocytes and over antigen-antibody reactions and over auto-immune diseases and over cell-mediated responses and over trans-plantation and transfusion reactions and over immune deficiency diseases and while you're at it clear up some of those idiopathic diseases." And God said, "Behold, I have given you a block in the second trimester of the first year, and you shall have medical students to teach. And every test in the lab, and every reference in the library, everything that mentions Immunology shall ye teach." And it was so. And God saw everything that He had made, and behold, it wasn't too bad. And there was evening and there was morning, a sixth day.

Thus Immunology was finished, the whole damn thing. And on the seventh day God finished His work which He had done, and He rested on the seventh day from all His work which He had done. So God blessed the seventh day and hallowed it, because on it God rested while the immunologists gave the students a test.

This is the generation of Immunology when it was created.

## DON'T FORGET INACTIVATED VACCINES, THEY MAY HAVE A PLACE IN YOUR FUTURE

With changes in the economics of the industry it may pay producers to catch birds and inject the high levels of antigen which can be obtained in inactivated vaccines for particular purposes. Apart from the possible use in Newcastle disease control we may have to consider there is a place for inactivated bursal disease antigens already.

Live vaccines seem to result in an eventual drop in titre of serum antibody of breeder hens and thus the chicks have a lower titre on hatching. Inactivated vaccines will produce a booster effect in the hens.

If there is hope of eradicating a disease inactivated vaccines have a place there also, and the EDS 76 vaccine is a candidate for this.

## AVIAN PATHOLOGY - AN INTERNATIONAL JOURNAL

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